

**NO CONSUMER LEFT BEHIND PART II:
IS THERE A COMMUNICATIONS
AFFORDABILITY PROBLEM IN CANADA?**



**PUBLIC INTEREST ADVOCACY CENTRE
LE CENTRE POUR LA DÉFENSE DE L'INTÉRÊT PUBLIC**

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No Consumer Left Behind Part II:
Is There A Communications Affordability Problem in Canada?

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Executive Summary

Canada's current political climate highlights a new "innovation era", where the success of Canada's future society and economy will depend on its ability to become a competitive innovation hub. Strengthening Canada's ability to "Compete in a Digital World," one of the six action areas outlined in the federal government's *Inclusive Innovation Agenda*, can only be achieved where all Canadians have affordable access to home broadband, wireless and other communications services.

While there may be several barriers to the adoption of communications services, this report examines whether there is an affordability problem for these services in Canada. While the term, "affordability", has been employed in many contexts, this report focuses on affordability for *low-income households*. According to Statistics Canada, 13.5% of or about 4.64 million Canadians were considered low-income in 2013. Their median after-tax total income was \$12,570.

In carrying out this research, PIAC conducted an extensive literature review, consulted with a range of stakeholders engaged in the affordability of communications and other essential services, and commissioned a comprehensive survey of 752 low-income individuals across Canada.

There is evidence of a significant affordability challenge faced by low-income Canadians in subscribing to communications services. Left unchecked, this challenge is expected to grow if the price of communications services, and particularly broadband internet service, continues to rise at a rate far greater than the rate of inflation. Competition in the Canadian communication services market is not lowering prices to alleviate the affordability burden facing low-income Canadians. While competition can play a role in price discipline, often it is not enough to fully close the access gap, particularly for rural and low-income users. Nor is the income gap closing—income growth for low-income Canadians has not kept pace with growth in median Canadian income over the last 25 years.

PIAC's survey of low-income respondents highlighted this affordability challenge for low-income Canadians. According to PIAC's *No Consumer Left Behind Part I* report, Canadians should spend no more than 4% to 6% of their household income on communications services. However, PIAC's survey showed that low-income families spend on average an estimated 8% of their income on communications expenditures, with some families spending closer to 10%. This affordability challenge expresses itself in different ways:

- About one-half of low-income respondents had to trade off other household goods or services in order to pay their communications bills—almost 1 in 5 (17%) indicated they went without other essential goods, such as food, medicine or clothing in order to pay a communications bill.
- About 20% of low-income subscribers struggled to pay off their communications bills in the past year, having to make partial payments, suspend or disconnect the service, commit to a payment plan, or be referred to debt collectors.
- More than 1 in 10 respondents (11%) ultimately cancelled a communications service.

If given an additional \$10 or \$20 per month, half of the respondents would use the extra money to help pay for existing communications bills.

Yet, respondents viewed communications services to be equally important as, and in some cases more important than, other household goods and services traditionally viewed as essential. Home Internet service in particular was perceived to be just as important as health care, coming in behind only food and housing, and more important than transportation or clothing. Responses tended to vary by age, with respondents over 55 years predominantly citing paid television service and home phone as essential or important, and those aged 18 to 34 years more likely to select text messaging, instant messaging, public internet access and wireless data as essential or important. Of low-income respondents who wanted another communications service but did not have it, 84% cited affordability as a main reason for not being able to subscribe to that service.

Tackling the affordability of communications services requires political will, a long-term commitment to low-income families, and coordination among governments and regulators.

As a result, the authors make three broad recommendations:

Recommendation #1: Canada needs a National Affordability Plan.

Canada needs a clear vision for access to affordable broadband. While there have been many political announcements to improve broadband access and infrastructure, details on these program announcements are usually slow to arrive. Canada needs the political will to establish a plan, through legislation or support for the mandate of the

regulator, to take action to ensure broadband is both available *and* affordable for low-income households.

Recommendation #2: The CRTC should spearhead affordability initiatives, with federal and provincial political support and coordination.

As the Canada telecommunications and broadcasting regulator, the CRTC is best positioned to establish initiatives which would address the affordability of communications services. The CRTC regulates Canadian communications service providers and also has the mandate and expertise to create targeted programs which would effectively address affordability for low-income Canadians.

Recommendation #3: Affordability initiatives should be led by an end-user subsidy in concert with other policy options.

Addressing the affordability challenges of low-income consumers requires a multi-pronged approach which includes both public and private funding. A flexible end-user subsidy would most effectively address the affordability challenges for communication services by providing the choice and flexibility for low-income Canadians to make telecommunications choices that suit their needs. This subsidy could be complemented by other policy initiatives such as free public Internet access points and reduced sales taxes on communications equipment.

Regulators and decision-makers in communications policy should continue to pay special attention to the digital inclusion of marginalized and vulnerable communities, including low-income Canadians. Without immediate action, a digital divide caused by the lack of affordable access to communications services will likely grow for small but crucial segments of the Canadian population. Policy makers must ensure low-income families will not be left behind as Canada moves forward in a digital reality.

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1. Introduction

This report examines whether there is an affordability problem for communications services in Canada. While the term, “affordability”, has been employed in many contexts, including whether goods or services are “affordable” for the average Canadian, this report focuses on affordability for *low-income households*.

“*Communications services*” include four key services regulated in Canada—landline phone, mobile phone, home internet service, and television service. Although the survey conducted for this report briefly explores the cost of other services such as online applications and services, this report focuses primarily on what is traditionally known as the “pipes”—that is, the means of communicating and accessing information—not the content itself.

PIAC’s first affordability report, *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age*,¹ which consisted of interviews with local organizations and focus groups of low-income Canadians, found that all four communications services—landline phone, mobile phone, home Internet, and television—are important to low-income Canadians as they attempt to meet their societal and cultural participation needs. Even low-income users on tight household budgets would choose to retain, and accept varying price increases on, their communications services rather than cancel them. Yet, many participants said that they were already paying the most they could afford for communications services, and in some cases would even cut other basic expenditures such as food, clothing and health care, rather than cancel their communications services.

In describing what “*affordability*” means, the report determined that one of the defining elements of affordability was ***control***—the ability of an individual or a household to control their expenditures in order to fulfill their needs. Because affordability concerns a household’s control over their budget, affordability is also

¹ John Lawford & Alysia Lau, *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age* (Ottawa: Public Interest Advocacy Centre, 2015), online: PIAC <<http://www.piac.ca/wp-content/uploads/2015/03/PIAC-No-Consumer-Left-Behind-Final-Report-English.pdf>>.

about *choice* which allows a household to access a service offering which meets their needs.² PIAC also found that:

- ∂ The total cost of communications services should be no more than 4% to 6% of a household's income.
- ∂ Communications services should not create undue hardship for low-income families. Low-income users should not be sacrificing other essential household items such as food, shelter, clothing and health expenses in order to pay for their communications services.³

This report will apply these findings through a survey focusing on low-income respondents in order to determine whether there is an affordability challenge in subscribing to communications services.

The report first examines the low-income household and the importance of communications as essential services to the everyday lives of Canadians and the ability to participate meaningfully in society. The report then explains why examining affordability of communications service for low-income Canadians is timely and crucial for policy makers today. This report also analyzes the results of the survey as well as interviews with academic and industry stakeholders. Finally, the report examines initiatives undertaken in other jurisdictions and domestic sectors to tackle affordability challenges for low-income consumers and provides recommendations for the Canadian context.

1.1 Low-income households and communications services in Canada

According to Statistics Canada, 13.5% of or about 4.64 million Canadians were considered low-income in 2013, based on the Low Income Measure (LIM-AT) after-tax.⁴ Their median after-tax total income was \$12,570.⁵

Low income incidence has remained relatively unchanged over the last forty years, experiencing a dip during the 1970s and 1980s before climbing steadily again in the 1990s.

² *Ibid.* at p. 84.

³ *Ibid.* at pp. 84 and 88.

⁴ Statistics Canada, CANSIM Table 206-0041.

⁵ Statistics Canada, CANSIM Table 111-0015.

Figure 1-1. Low-income levels (% of Canadians)



Source: Statistics Canada, CANSIM Table 206-0041

According to a House of Commons' 2010 report on a Federal Poverty Reduction Plan, certain groups of people are more likely to be living in low income than others. These include:

- Children;
- Lone-parent families (particularly those headed by females);
- Women;
- Unattached individuals;
- Seniors;
- Aboriginal people;
- Persons with disabilities;
- Recent immigrants and visible minorities; and
- Low-wage workers.⁶

⁶ House of Commons Canada, *Federal Poverty Reduction Plan: Working in Partnership Towards Reducing Poverty in Canada: Report of the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities* (2010), online: Parl.gc.ca

Indeed, single unattached individuals (persons not in an economic family⁷) do tend to have a higher incidence of low income (29.0% of single females, 26.6% of single males, and 27.1% of single elderly persons).⁸ Youth in particular experience a much higher incidence of low income than any other age category—16.5% or 1 in 6 persons under 18 years is low-income. Notably, 42.6% or **almost 1 in 2 youth** in female lone-parent families are considered low-income.⁹

Low income incidence also tends to be higher in some provinces, such as Prince Edward Island (16.1%), New Brunswick (15.0%) and Manitoba (14.8%); and lower in others, including Alberta (7.6%) and Saskatchewan (12.7%).¹⁰

Information on low-income spending on communications services tends to be highly general and limited. The Canadian Radio-television and Telecommunications Commission (CRTC) publishes the following figure on the percentage of household income spent on communications services by quintile, and a more detailed breakdown by individual service which will be addressed later in this report.

Figure 1-2. Household communications expenditures (2013)

Characteristics	First quintile (household income less than \$30,668)	Second quintile (household income from \$30,669 to \$51,804)	Third quintile (household income from \$51,805 to \$79,722)	Fourth quintile (household income from \$79,723 to \$121,291)	Fifth quintile (household income over \$121,292)	Average of all quintiles
Average annual income	\$18,582	\$41,105	\$64,854	\$98,634	\$199,702	\$84,575
Members per household	1.49	2.11	2.49	2.95	3.34	2.48
Communications expenditures as a percentage of annual income	8.3%	4.9%	3.8%	2.8%	1.7%	2.9%

Source: CRTC Communications Monitoring Report (2015), Table 2.0.3

<<http://www.parl.gc.ca/content/hoc/Committee/403/HUMA/Reports/RP4770921/humarp07/humarp07-e.pdf>>.

⁷ An “economic family” refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption. A couple may be of opposite or same sex. Foster children are included.

See: Statistics Canada, “Economic family,” online: StatsCan.gc.ca

<<http://www.statcan.gc.ca/eng/concepts/definitions/famecon>>.

⁸ Statistics Canada, CANSIM Table 206-0041.

⁹ *Ibid.*

¹⁰ *Ibid.*

The figure shows that the lowest quintile of Canadians typically spends more than 2.5 times the national average percentage of their household income on communications expenditures. The following figure shows communications expenditures also tend to make up a low-income household's fourth largest expenditure, ahead of other basic expenses such as clothing, education and health care.

Figure 1-3. Various household expenditures made by the lowest quintile in Canada, by year

Type of Expenditure	Average Annual Expenditure				
	2010	2011	2012	2013	2014
Shelter	\$9,227	\$9,257	\$9,729	\$9,535	\$10,484
Transportation	\$4,541	\$4,595	\$4,126	\$4,966	\$4,984
Food	\$4,447	\$4,112	\$4,205	\$4,292	\$4,315
Communications services	\$1,484	\$1,506	\$1,538	\$1,609	\$1,667
Cell phone and pager services	\$379	\$395	\$419	\$509	\$527
Television and satellite radio services	\$450	\$453	\$474	\$444	\$467
Landline telephone services	\$416	\$401	\$379	\$349	\$319
Internet access services	\$239	\$257	\$266	\$307	\$354
Clothing and accessories	\$1,448	\$1,333	\$1,562	\$1,663	\$1,585
Health care	\$1,415	\$1,186	\$1,280	\$1,370	\$1,232
Education	\$642	\$738	\$801	\$1,289	\$1,035
Recreation (excluding television and satellite radio services)	\$972	\$901	\$846	\$962	\$898
Gifts of money, support payments and charitable contributions	\$765	\$699	\$706	\$716	\$669
Income taxes	\$231	\$348	\$327	\$421	\$422
Child care	\$89	\$55	\$124	\$63	\$50
Total expenditure	\$29,215	\$29,129	\$29,921	\$31,410	\$31,974

Source: Statistics Canada, CANSIM Table 203-0022

The following sections will elaborate on the importance of communications services generally and why it is timely to examine affordability of these services for low-income consumers now.

2. Methodology

A number of research methods were employed to produce this report examining whether an affordability problem exists for communications services among low-income households in Canada, including:

- Application of PIAC Analysis from *No Consumer Left Behind Part I* report;
- Literature Review;
- Consumer Survey of Low-Income Canadians who use the Internet; and
- Stakeholder Consultations.

This study constitutes the second part of PIAC's first *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age* report, which set out a definition for the affordability of communications services. In this report, the authors conducted a comprehensive quantitative analysis of the affordability of communications services particularly by focusing on several conclusions made in the first report:

- ∂ The total cost of communications services should be no more than 4% to 6% of a household's income.
- ∂ Communications services should not create undue hardship for low-income families. Low-income users should not be sacrificing other key household items such as food, shelter, clothing and health expenses in order to pay for their communications services.
- ∂ Affordability is also tied to control over a household's budget and therefore tied to the concept of choice—a household should be able to access the service offering which best meets its needs.

The literature review sought assessments of affordability and policy initiatives that have been undertaken in other jurisdictions. For instance, this report cites policy activity from South Korea, Sweden, Japan, France, Australia, and the Broadband Commission for Sustainable Development,¹¹ a joint initiative of the International Telecommunication Union (ITU) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The report also includes a thorough literature review of affordability and the communications sector in Canada.

¹¹ Formerly the Broadband Commission for Digital Development.

A source of primary research for this examination was the commissioning of Environics Research Group to conduct an online survey of low-income Canadians in order to examine issues such as:

- The communications services to which they are subscribed and how they use them;
- How much low-income users spend on communications services and how they pay for them; and
- Whether, and to what extent, low-income Canadians face financial challenges paying their communications bills.

The survey was conducted from December 10 to 22, 2015 targeting respondents with annual, pre-tax household incomes of \$30,000 or lower. The results reflect data gathered from 752 respondents from across Canada, excluding the North. They do not reflect a random, representative sample of all Canadians, but reflect responses from a group of low-income Canadians who use the internet. PIAC felt this approach would be the most instructive on questions about the affordability of communications services for low income Canadians, given the cost parameters associated with this exercise.

The authors reached out to an extensive list of representatives from academia and civil society for the purposes of consulting on their views. Of the nearly one hundred invitees, 11 agreed to participate in that consultation. These consultations were conducted from December 2015 until June 2016 and stakeholder positions can be found throughout the report. This methodology has been reviewed by a methodologist.¹²

¹² This report and the underlying methodology were reviewed by Derek Ireland, Fellow, Arthur Kroeger Scholl of Public Policy, Carleton University (<https://carleton.ca/akcollege/faculty-and-staff/college-visitors/derek-ireland/>).

3. Why Now? The Need to Examine and Address Affordability

Communications services have become indispensable to day-to-day living and meaningful participation in the Canadian society and economy.¹³ This section will explore why it is important to examine and address the affordability of communications services for low-income consumers today. Notably, Canada and many developed economies have chosen to increasingly promote and rely on competition to lower prices and provide a range of retail packages and tailored services to consumers. However, growing research shows that competition may not bring any price decrease low enough to solve the affordability challenges of low-income communications users. This is compounded by the growth of income inequality—notably between the lowest quintile of Canadians and the rest of the Canadian population—since regulatory forbearance from the regulation of telephone and basic television rates in the 1990s. Meanwhile, the growing demand for and cost of communications services—particularly broadband (wireline and wireless)—driven by high bandwidth demanding content and applications means the digital divide produced by cost barriers will only increase if affordability challenges are not immediately addressed.

¹³ From Budget 2016:

“Few jobs, sectors or aspects of life are untouched by information and communications technology. Access to better, more reliable broadband connections will provide Canadians in rural and remote communities with new opportunities to participate in the digital economy and to take advantage of advances in telehealth, e-learning and remote access to government services.”

See also Rt. Hon. Justin Trudeau, Prime Minister of Canada:

“...how important it is to have for consumers to have reliable access to high quality phone and internet service. This is something we can't get around in the 21st century, much of our economic growth, much of our entrepreneurship and many opportunities that particularly marginalized or remote communities need are linked to strong affordable access to the internet and to cell service and that is certainly what we are keeping in mind.” Source: Annable, K. “Trudeau Won't Comment on Bell/MTS Deal,” (28 May 2016), *Winnipeg Free Press*.

3.1 Forbearance from rate regulation in Canada

As described in PIAC’s first report, *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age*, the Board of Railway Commissioners was originally granted legislative authority over the regulation of rates, the prevention of unjust discrimination, and the terms and conditions of interconnection in 1906.¹⁴ Thus, the telecommunications regulator’s primary jurisdiction under the *Railway Act*,¹⁵ the *National Transportation Act, 1967*,¹⁶ and *National Telecommunications Powers and Procedures Act*¹⁷ in regards to the protection of telecommunications users was primarily ratemaking—and the regulation of telephone rates specifically—until the 1990s.

As explained by Ryan (2015), “prior to 1993, the [CRTC] had no general discretion to ‘forbear’ from approving carrier rates before they were charged, even where it was satisfied that market conditions were such that a carrier’s rates would be just and reasonable.”¹⁸ This changed significantly under the enactment of the current *Telecommunications Act*,¹⁹ which allows the CRTC to:

34(1)... refrain, in whole or in part and conditionally or unconditionally, from the exercise of any power or the performance of any duty under sections 24, 25, 27, 29 and 31 in relation to a telecommunications service or class of services provided by a Canadian carrier, where the Commission finds as a question of fact that to refrain would be consistent with the Canadian telecommunications policy objectives.

During the early 1990s, the CRTC initiated a process of forbearance from the regulation of landline telephone rates and the promotion of competition in the telephone market. The first of these steps was the CRTC’s framework decision to outline the path to the liberalization of the telecommunications sector from an era of effective monopoly. Thus, in Telecom Public Notice CRTC 92-78, *Review of Regulatory Framework*, the CRTC called for comments on the new competitive approach, but was careful to note that the achievement of greater competition should

¹⁴ Michael H. Ryan, *Canadian Telecommunications Law and Regulation 2015—Release 4* (Toronto: Carswell, 2015), §600.

¹⁵ *An Act to amend The Railway Act, 1903*, S.C. 1903, c. 58.

¹⁶ S.C. 1966-67, c. 69.

¹⁷ R.S.C. 1985, c. N-20.

¹⁸ Michael H. Ryan, *Canadian Telecommunications Law and Regulation 2015—Release 4* (Toronto: Carswell, 2015), §606A.

¹⁹ S.C. 1993, c. 38.

not come at the expense of other foundational principles, the foremost of these being universal service and in particular affordability of the service. The CRTC stated:

[T]he Commission wishes to stress its view that any changes to be made to the current framework in order to enhance the efficiency and effectiveness of regulation must at the same time be conducive to the attainment of the following objectives:

- (1) universal accessibility to basic telephone services at affordable prices.

However, as reflected in the CRTC's decision (Telecom Decision CRTC 94-14, *Review of Regulatory Framework*) the Commission made fundamental decisions about universal service and the role of affordability indirectly, by the way it balanced these two goals with other considerations. For example, in relation to the expected "rebalancing" of rates for long-distance with rates for local service, the Commission found the level of cross-subsidy was too high; that is, the long-distance rates were a subsidy that was "larger than required to achieve universal service objectives." The CRTC also stated: "In the opinion of the Commission, the current subsidy is much larger than necessary to maintain affordable service."²⁰

However, the CRTC, although it could have stopped at that conclusion, went further to "balance" the universal service goals with other policy goals, including innovation of businesses. The next policy goal placed in opposition to affordable local telephone service for individuals was "ensuring sustainable competition in all markets" which was predicated on another goal, namely "open access principles and pricing policies that provide incentives to users and service providers to conduct their business over Canadian networks." The CRTC was concerned at this time that Canadian long distance traffic would "by-pass" the Canadian carriers over U.S. networks which had been deregulated sooner. The CRTC therefore placed the affordability of local service directly in opposition with the concern for the viability of Canadian long distance and local carriers, stating: "In the opinion of the Commission, the objectives under the Act of promoting the use of Canadian facilities and making telecommunications affordable in all regions of Canada are intrinsically linked. The regulatory framework in this Decision attempts to balance economic efficiency and competitiveness with social objectives, including affordability, as required by the Act."²¹

²⁰ See: Telecom Decision CRTC 94-14, *Forbearance – Sale of terminal equipment by Canadian carriers* (4 August 1994).

²¹ *Ibid.*

Since Telecom Decision CRTC 94-14, the CRTC has forborne from regulating rates of the vast majority of retail services offered by telecommunications service providers, including wireless services,²² retail Internet services,²³ VoIP services,²⁴ and satellite services.²⁵ In Telecom Decision CRTC 2006-15, the CRTC determined the appropriate conditions for forbearance from regulation of entire geographic markets (“local exchanges”).²⁶

The CRTC had, until its recent *Let’s Talk TV* television framework review,²⁷ also deregulated the rates of television (broadcasting distribution) services – in particular, the monthly fee of the basic service package. Throughout most of the 1980s and 1990s, the CRTC regulated the monthly price of basic cable service and service installation through various mechanisms under the *Broadcasting Act* of 1968²⁸ and the current *Broadcasting Act* of 1991.²⁹ However, in Public Notice CRTC 1996-69, the CRTC issued a new call for comments in response to Order in Council P.C. 1994-1689, which supported policy to “foster fair competition and an increased reliance on market forces in the provision of facilities, products and services”³⁰ in the delivery of communications services, as well as the CRTC’s own “endorsement of competition in distribution programming” set out in the *Convergence Report*.³¹ As a result, in Public Notice CRTC 1997-25, the CRTC determined that the monthly basic service fee would be deregulated once a cable provider had shown that another cable or satellite television provider was available to at least 30% of households in its licensed area and that its own number of basic service subscribers had decreased by at least 5%.³² In 2004, the CRTC reported about 4.7 million subscribers (or 71% of

²² See: Telecom Decisions CRTC 94-15, 96-14, 98-18 and 2003-53.

²³ See: Telecom Orders CRTC 97-471 and 99-592, and Telecom Decision CRTC 98-9.

²⁴ See: Telecom Decision CRTC 2005-28, *Regulatory framework for voice communication services using Internet Protocol* (12 May 2005).

²⁵ See: Telecom Decisions CRTC 94-20, 94-23 and 99-6.

²⁶ Michael H. Ryan, *Canadian Telecommunications Law and Regulation 2015—Release 4* (Toronto: Carswell, 2015), §606A(b).

²⁷ See: Broadcasting Notice of Invitation CRTC 2013-563 and Broadcasting Notice of Consultation CRTC 2014-190.

²⁸ S.C. 1967-1968, c. 25.

²⁹ S.C. 1991, c. 11.

³⁰ See: Public Notice CRTC 1996-69, *Call for comments on a proposed approach for the regulation of Broadcasting Distribution Undertakings* (17 May 1996), s. I.

³¹ CRTC, *Competition and Culture on Canada's Information Highway: Managing the Realities of Transition* (Ottawa: CRTC, 1995).

³² At para. 27.

all major cable subscribers) were rate deregulated³³; this represented about 93% of all major basic cable subscribers.³⁴

However, in response to public comments in the *Let's Talk TV* hearings that subscription television rates were too high, the CRTC decided in 2015 – fifteen years later – to require all licensed television service providers to offer their customers a low-cost basic service package which would be priced at no more than \$25 per month,³⁵ retail prices for television service packages and à la carte customizable options remain largely deregulated.

Nonetheless, overall the CRTC has since deregulation increasingly relied on competition in the retail market for communications services to discipline prices and provide Canadian consumers with a range of services to meet their needs. As stated by the CRTC in Telecom Decision CRTC 94-19 (in relation to telephone services):

In this environment, users should have the opportunity to choose whatever package of services and whichever suppliers best fit their particular needs. The realization of such a vision demands a reduction in technical, regulatory and economic barriers to entry. Thus, the framework established in this Decision places greater reliance on market forces and attempts to ensure that regulation, where required, is effective. Market forces allow for greater choice and supplier responsiveness and ensure that user applications, not regulators, drive supply considerations.³⁶

The principle of relying on market forces was in part solidified with the Governor in Council's issuance of the *Policy Direction*³⁷ in 2006, which states that the CRTC should “rely on market forces to the maximum extent feasible as the means of achieving the telecommunications policy objectives.”³⁸

³³ Canadian Radio-television and Telecommunications Commission, *Broadcasting Policy Monitoring Report 2004* (2004), online: Publications.gc.ca <<http://publications.gc.ca/collections/Collection/BC9-1-2004E.pdf>> at p 101.

³⁴ Canadian Radio-television and Telecommunications Commission, *Broadcasting Policy Monitoring Report 2005* (2005), online: Publications.gc.ca <<http://publications.gc.ca/collections/Collection/BC9-1-2005E.pdf>> at p 87.

³⁵ See: *Broadcasting Distribution Regulations*, SOR/97-555, ss. 4.1, 17.1 and 46.1.

³⁶ S. II.A(2)(a).

³⁷ *Order Issuing a Direction to the CRTC on Implementing the Canadian Telecommunications Policy Objectives*, P.C. 2006-1534, SOR/2006-355.

³⁸ *Ibid.*, s. 1(a)(i).

3.2 Competition alone cannot solve affordability challenges for low-income users

Despite the regulatory shift towards favouring liberalization policies in the communications market, research emerging since forbearance from rate regulation increasingly shows competition in itself cannot fulfill universal access to communications services.

The CRTC recognized that where competition was insufficiently established, that continued rate regulation of landline telephone would be necessary, however, that situation was the exception to the rule of reliance on market forces to achieve not only just and reasonable rates, but also affordability:

Regulation is necessary to ensure that service is affordable, where market forces are not sufficient to provide that assurance, and to address issues of undue preference and unjust discrimination that arise due to the vertically integrated nature of the telephone companies and their dominance in some markets.³⁹

It is this conflation of affordability, as this report defines it, and “just and reasonable rates” (that is, a fair and reasonable price that the average Canadian could afford – not considering low-income Canadians specially) that has allowed the CRTC over the years since 1994 to largely avoid addressing the issue of whether forbearance can achieve true affordability of communications services for all Canadians.

Already in 1999 however, this conceptual flaw was noted in the U.S. by Cooper and Kimmelman, who argued that pro-competition principles promoted in the U.S. *Telecommunications Act of 1996* in fact contributed to the exacerbation of the digital divide, in particular because they were founded on false assumptions of the demand side and supply sides in the telecommunications market.⁴⁰ First, consumers on the demand side tended to be considered homogenous, whereas in reality there were distinct consumer “sub-markets” depending on a service’s essentiality and the average volume of usage. Second, in the U.S., similar to Canada, the market grew to

³⁹ Telecom Decision CRTC 94-19, *Review of regulatory framework* (16 September 1994), s. II.A(2)(a).

⁴⁰ Mark Cooper & George Kimmelman, *The Digital Divide Confronts The Telecommunications Act of 1996: Economic Reality Versus Public Policy* (1999), *The First Triennial Review* at pp. 1-2.

be characterized by mergers and significant concentration rather than an “eruption of competition.”⁴¹ Ultimately, Cooper and Kimmelman noted that:

Only a small group of premier, intensive telecom users enjoy price breaks and competitive options. The sad, unintended consequence of the Telecom Act is the growth of a costly division between telecommunications “haves” and “have-nots.” These market developments threaten to destroy the very goal many of the Act’s supporters claimed to embrace: the opportunity to harness enormous technological advancements for the social and economic benefit of all citizens.⁴²

Later, Frieden (2008) similarly concluded that the Federal Communications Commission (FCC) had significantly overestimated the success of competition in increasing broadband penetration. The FCC had applied overly broad definitions of “broadband penetration” and relied excessively on the number of service providers in zip code areas without examining other factors such as “location, price per unit of capacity, adoption rates by income, actual throughput speeds, and degree of facilities-based competition.”⁴³ As a result, the FCC’s emphasis on accessibility without affordability distorted the apparent success of deregulation and reliance on facilities-based competition alone in providing “ubiquitous broadband access”⁴⁴—while some urban locales may have enjoyed competitive broadband service, other consumers such as rural residents perhaps had access but at higher prices without robust price competition between providers.⁴⁵

This attitude of access being offered as a substitute for adoption and affordability was unfortunately clearly demonstrated by a later decision of the CRTC in 2011. In the proceeding leading to this decision, the CRTC solicited comments examining what its role should be in advancing high-speed Internet access.⁴⁶ However, despite evidence of exactly the gap referred to above in the literature between policies that promoted competition but then measured only availability of service (access) and actual uptake of service (not to mention affordability) the CRTC was satisfied with statistics such as 95% penetration of broadband (as then defined). As a result the

⁴¹ *Ibid.* at pp. 2-3.

⁴² *Ibid.* at p. 1.

⁴³ Rob Frieden, “Lies, Damn Lies and Statistics: Developing a Clearer Assessment of Market Penetration and Broadband Competition in the United States” (2008), Penn State University Dickinson School of Law Legal Studies Research Paper No. 13-2008 at p. 6.

⁴⁴ *Ibid.* at p. 37.

⁴⁵ *Ibid.* at p. 6.

⁴⁶ Telecom Notice of Consultation CRTC 2010-43 at para. 16.

CRTC ignored subsidy proposals from PIAC and other consumer groups as well as telecommunications providers (MTS) that would have sought to improve not only “accessibility” but actual adoption by lowering access prices to more affordable levels. This was clearly missed opportunity and one which the Commission was forced to revisit in 2015 in the BSO hearing, described below.

At about this time, Gulati and Yates (2010) also found there is “greater broadband diffusion in countries that have an administrative culture of sound governance and make a higher shared financial investment in information and communication technologies (ICT).”⁴⁷ While competition had a positive impact on broadband diffusion in developing countries, where access to information and communication technologies was still expanding, it made little difference in developed countries where the rate of new broadband customers had begun to slow.⁴⁸

Finally, a World Bank (2010) research paper found that while policies which promoted efficient markets through regulation could be effective in closing the “*market gap*”⁴⁹ in access to communications services, Universal Access policy instruments which fostered “access beyond what market forces alone could achieve” were needed to help close the “*access gap*.”⁵⁰ Muenta-Kunigami and Navas-Sabater noted specifically that:

High investment and operation costs make operations in rural and low-income areas unattractive for private operators. Serving these areas would be unprofitable, unless provided with alternatives that could reduce overall costs of providing service. [...]

⁴⁷ Girish J. Gulati & David J. Yates, “The Impact of Governance Indicators and Policy Variables on Broadband Diffusion in the Developed and Developing Worlds” (2010), online: SSRN <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1646637> at p. 12.

⁴⁸ *Ibid.* at p. 11.

⁴⁹ Muenta-Kunigami and Navas-Sabater define the “*market gap*” as “the difference between the level of penetration that can be reached under current plans and conditions and the level that the market could achieve by means of an ideal regulatory and legal environment.” Policy mechanisms which could address the market gap include interconnection, competition, licensing procedures and principles for setting tariffs.

⁵⁰ Muenta-Kunigami and Navas-Sabater define the “*access gap*” as “that portion of the market that even under an ideal legal and regulatory environment would not be covered by operators due to its high cost and/or low income level.” Universal Access policy mechanisms, such as public subsidies, are needed to close this gap.

Arturo Muenta-Kunigami & Juan Navas-Sabater, “Options to Increase Access to Telecommunications Services in Rural and Low-Income Areas” (2010), World Bank Working Paper No. 178 at pp. 11-12.

On the other hand, the inherent characteristics of the demand from population in rural and low-income areas might also become obstacles for service delivery in these areas. Low purchasing power, low usage, and seasonal income are some characteristics that reduce the expected revenues that operators could realize. [...]

To overcome these challenges, different policy instruments can be put in place.⁵¹

Most recently, at the 2014 ITU World Telecommunication/ICT Indicators Symposium (WTIS), Sonia Jorge, Executive Director of the Alliance for Affordable Internet (A4AI) argued that “although competition had proven to drive prices down it was not the silver bullet... many developing countries... had introduced competition and yet prices had not decreased enough to make services affordable for all.”⁵² Ultimately, the Symposium concluded that:

Affordability of ICT prices remained a determining factor for ICT uptake, particularly among low-income sectors of the population, and that competition *and* regulation played a key role in shaping prices and therefore they could be enablers of ICT uptake.⁵³

Therefore, both academic literature and regulatory experience in Canada appear to have demonstrated that while competition in the communications services can play a role in price discipline, often it is not enough to fully close the access gap, particularly for rural and low-income users. Yet, as explained in the previous section, communications services have become more essential for meaningful participation in the Canadian society than ever.

3.3 The income gap is not closing

At the same time, data shows that income growth of low-income Canadians since the 1990s has not kept pace with median Canadian income and, not surprisingly, the upper income deciles. In a report examining change in household income in Canada between 2000 and 2013, Statistics Canada notes the median after-tax income of all

⁵¹ *Ibid.* at p. 11.

⁵² International Telecommunication Union, *12th World Telecommunication/ICT Indicators Symposium (WTIS): Final Report* (2014), online: ITU <http://www.itu.int/en/ITU-D/Statistics/Documents/WTIS%202014_final_report_18%20December.pdf> at para. 50.

⁵³ *Ibid.* at para. 162. [Emphasis added]

Canadian families grew by 16.8% from \$45,800 to \$53,500.⁵⁴ The ninth decile experienced an increase to its upper income limit of about 24.6%.⁵⁵ However, the lowest decile only saw a change to its upper income limit of about 14.6%.⁵⁶

A similar analysis can be undertaken for average after-tax income adjusted to household size dating back to 1994, around the time the CRTC began forbearing from rate regulation.⁵⁷ In 1994, the after-tax average income of the lowest decile (economic families and persons not in an economic family) was about 28.9% of average Canadian income (all deciles) and 13.1% of the average income of the highest decile. By 2013, the lowest decile's average income was 25.1% of average Canadian income and 10.6% of the average income of the highest decile. The slow growth rate in average income is true for the lower deciles generally in comparison with the Canadian average and the upper deciles.

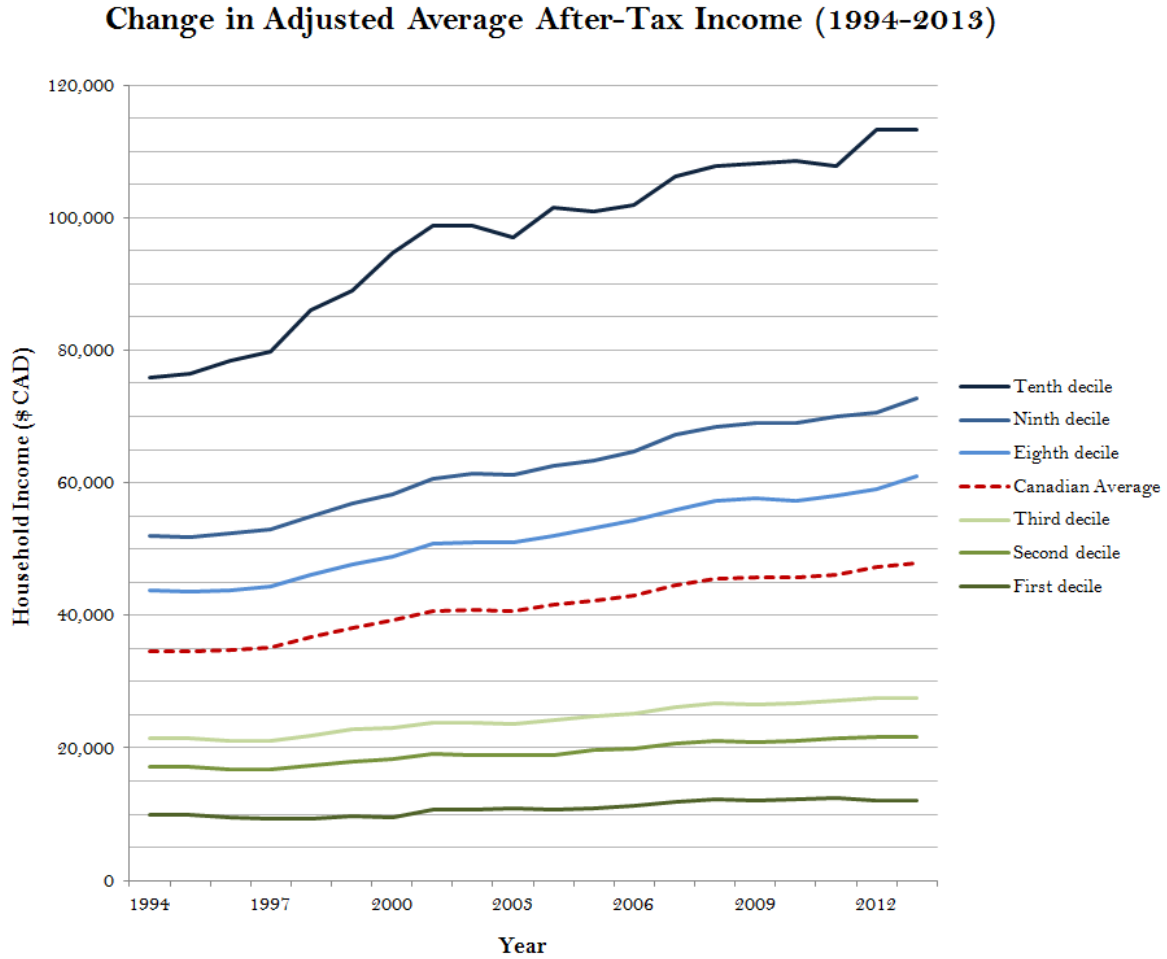
⁵⁴ Statistics Canada, *Income of Canadians, 2000 to 2013* (2015), online: StatsCan <<http://www.statcan.gc.ca/daily-quotidien/151217/dq151217c-eng.pdf>> at p. 1.

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*

⁵⁷ See: Statistics Canada, CANSIM Table 206-0032, *Upper income limit, income share and average of adjusted market, total and after-tax income by income decile, Canada and provinces.*

Figure 3-1. Change in Annual Canadian Incomes By Decile



Source: Statistics Canada, CANSIM Table 206-0032

Statistics Canada also examines share of income held by different segments of the population in order to assess income inequality.⁵⁸ For instance, in 2013 the highest decile accounted for 23.7% of total after-tax income in Canada, a proportion only not even met by the four lower deciles combined (19.8%).⁵⁹ The lowest decile

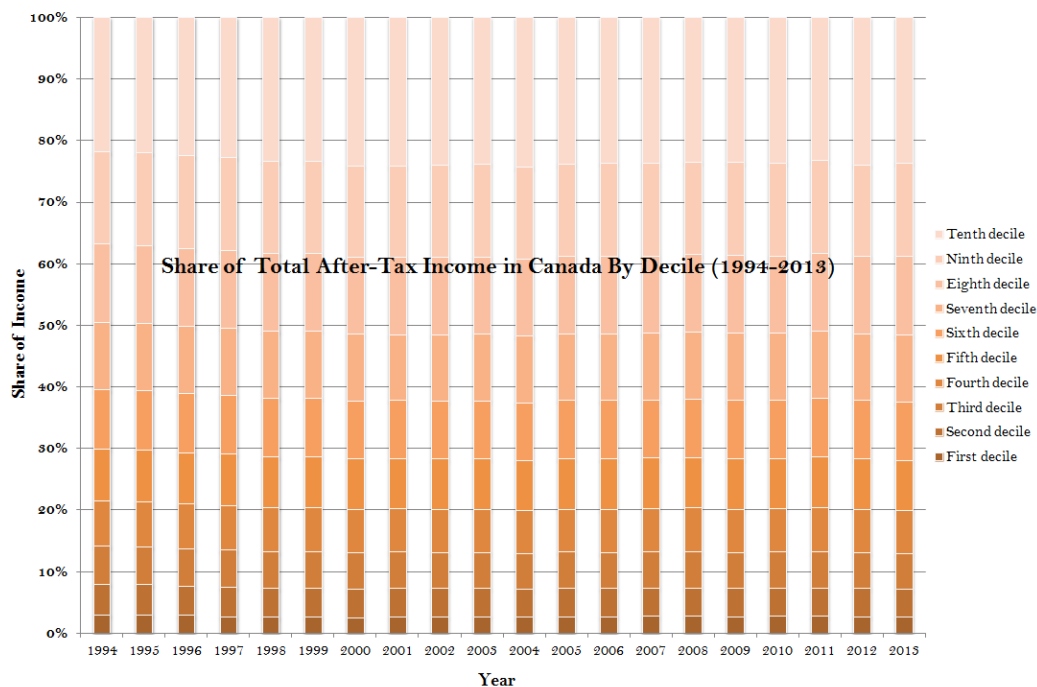
⁵⁸ Statistics Canada, *Canada Income Survey, 2013* (2015), online: StatsCan <<http://www.statcan.gc.ca/daily-quotidien/150708/dq150708b-eng.pdf>> at p. 2.

⁵⁹ *Ibid.*

represented only 2.5% of total income in Canada.⁶⁰ The adjusted Gini coefficient⁶¹ for after-tax income in Canada in 2013 was 0.319.⁶²

Yet, income inequality does not appear to be shrinking. Distribution of income (share of income) has remained approximately the same over the last twenty years—with the higher deciles amassing a markedly larger share of income—and the Gini coefficient has in fact showed growing rather than diminishing income inequality, increasing from 0.290 in 1994 to 0.319 in 2013.

Figure 3-2. Share of Total Income By Decile



Source: Statistics Canada, CANSIM Table 206-0032

⁶⁰ *Ibid.*

⁶¹ The World Bank defines the “Gini coefficient of inequality” as:

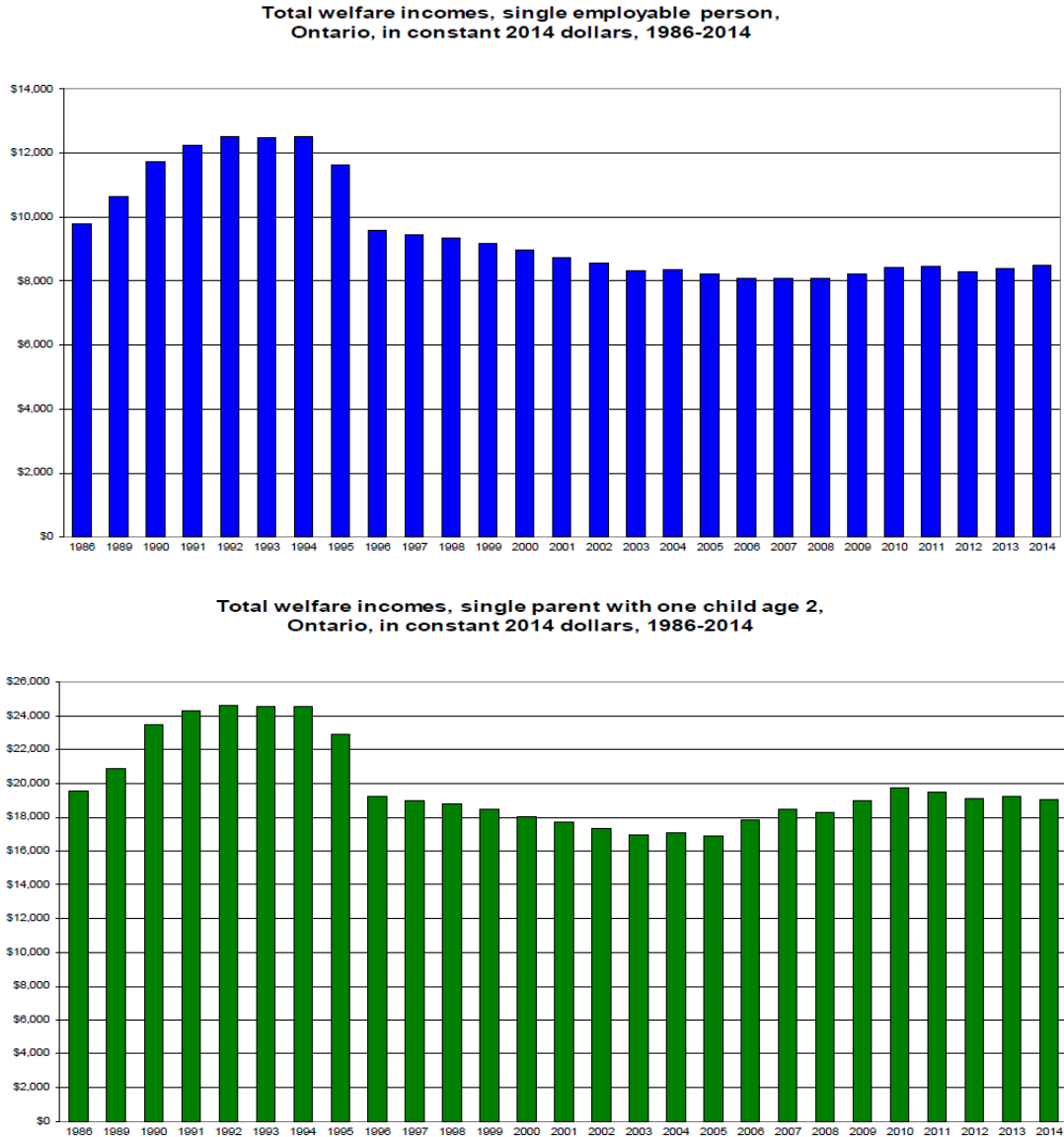
... the most commonly used measure of inequality. The coefficient varies between 0, which reflects complete equality and 1, which indicates complete inequality (one person has all the income or consumption, all others have none).

See: World Bank, “Measuring Inequality,” online: World Bank <<http://go.worldbank.org/3SLYUTVY00>> (accessed 10 March 2016).

⁶² Statistics Canada, CANSIM Table 206-0033, *Gini coefficients of adjusted market, total and after-tax income, Canada and provinces.*

Moreover, social assistance support has in large part stagnated or in fact fallen when inflation is accounted for over the same period.⁶³ The following figures for instance chart the change in total welfare income for a single employable person and a single parent with a two-year-old child in Ontario between 1986 and 2014.

Figure 3-3. Change in Total Welfare Income in Ontario



⁶³ See: Anne Tweddle, Ken Battle & Sherri Torjman, *Canada Social Report: Welfare in Canada, 2014* (November 2015), online: CaledonInst.org <<http://www.caledoninst.org/Publications/PDF/1086ENG.pdf>>.

Source: Canada Social Report 2015, Figures 6a and 6c

The following charts show respective data for other provinces such as Nova Scotia and British Columbia.

Figure 3-4. Change in Total Welfare Income in Nova Scotia

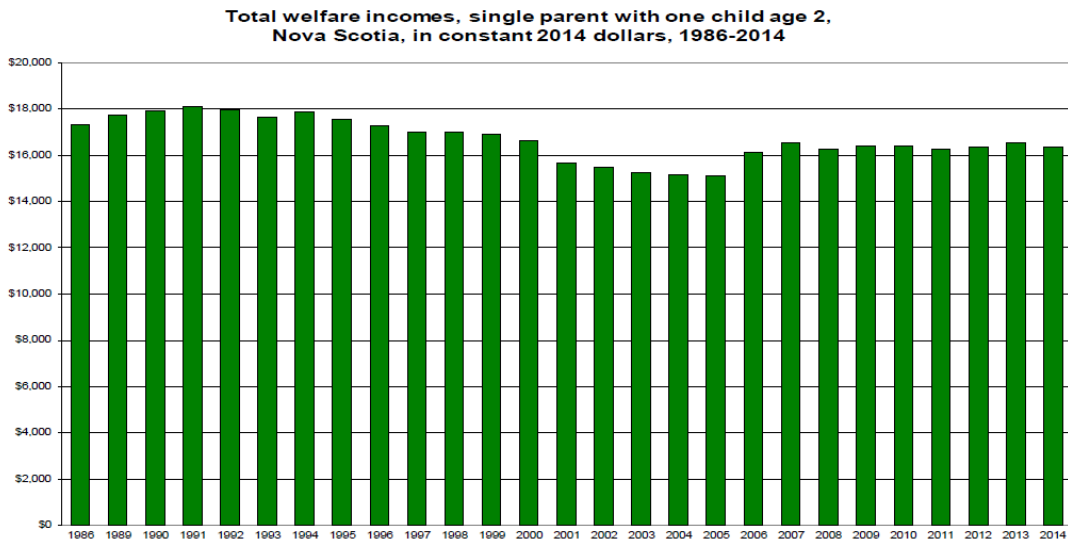
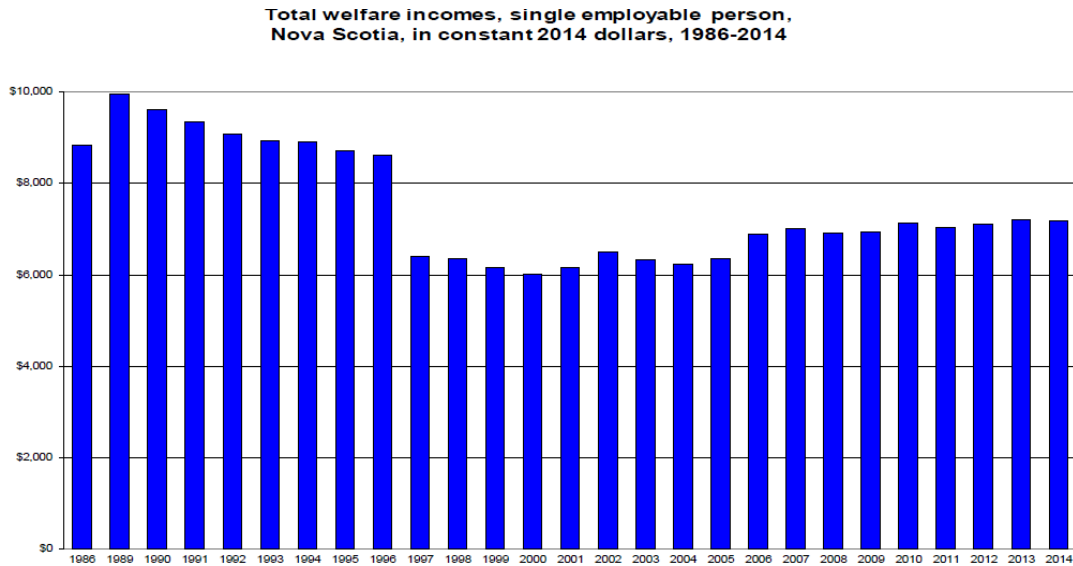
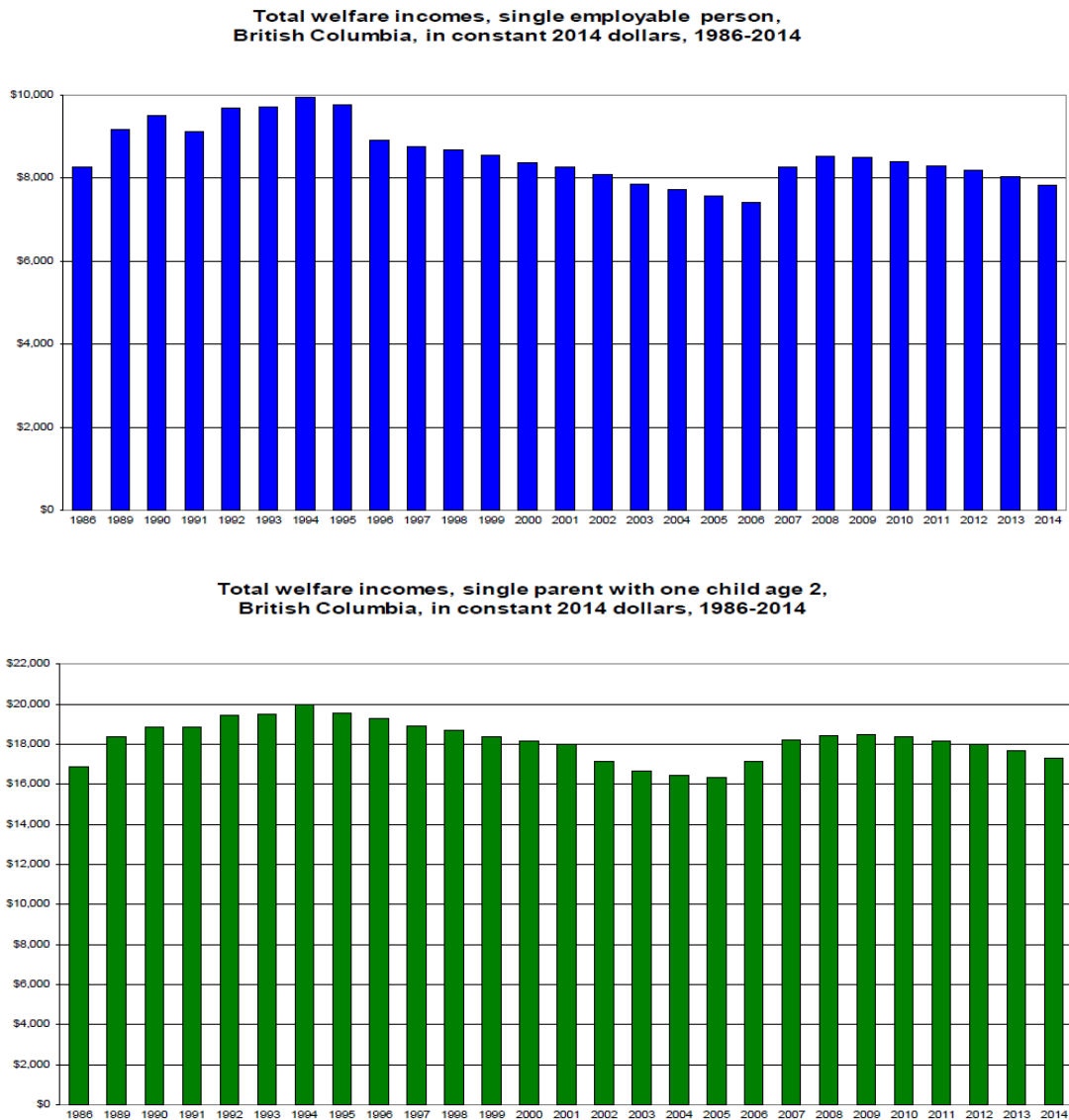


Figure 3-5. Change in Total Welfare Income in B.C.



Source: Canada Social Report 2015, Figures 3a, 3c, 10a and 10c

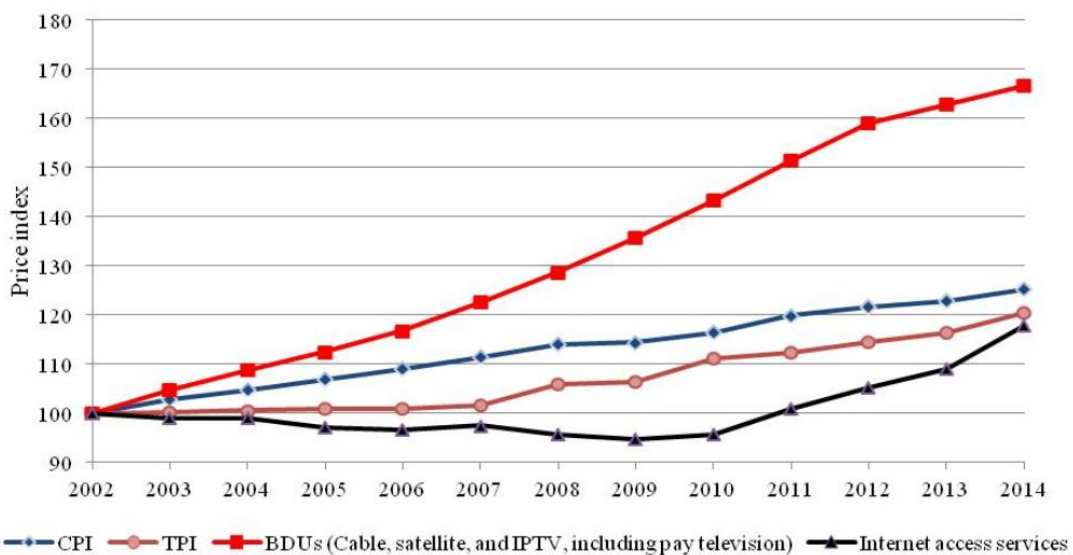
Therefore, while the average Canadian household has seen steady growth in income, families in the lower deciles have only experienced moderate increases in income. Generally, it can be said that low-income Canadians have not generated significantly more income over the last twenty years to cover their household expenditures. Nor has social assistance been able to help close the income gap—in fact, social assistance income has in many cases stagnated or shrunk over the last three decades.

Income inequality generally in Canada has stayed the same—and according to some factors, in fact increased—since the 1990s.

3.4 Yet, the cost of communications services is increasing rapidly

Despite low-income Canadians having not seen significant growth in income compared to average and wealthy Canadians, the cost of communications services continues to rise, in some cases faster than inflation. The following figure charts increase in prices for various communications services in comparison to the Consumer Price Index (CPI) over the last decade.

Figure 3-6. Real Cost of Communications Services Over Time



Source: CRTC Communications Monitoring Report (2015), Figure 2.0.2

CPI = Consumer Price Index

TPI = Telephone Price Index (landline and wireless)

While the price of television service outstripped the CPI and continued to rise significantly over the late 2000s notably, the last five years provided also show substantial increases in the price of telephone and especially Internet access services. Given the rising importance of Internet access services, the steep “hockey stick” rise in the price of Internet access services over the last five years, and projected to surpass the CPI in the short-term, is noteworthy. As noted by the CRTC’s

Communications Monitoring Report, while annual inflation (as measured by the CPI) was 2.0% in 2014, the price of television service increased 2.3% and telephone increased 3.4%, yet the price of Internet access services rose by 8.0% over one year alone.⁶⁴

This report does not assess the value or quality of service provided in comparison with the price of services. Rather, the goal of this report is to examine the impact of the cost of communications services, individual and as a whole, on the low-income Canadian household. The following figure highlights the amount Canadians in the lowest quintile spend on communications services in relation to other quintiles.

It is possible that the quality of a communications service can explain part of the price increases seen in Canada in recent years. However, it is key to remember that access by Canadians, regardless of their income level, to high quality communications services is essential in order for them to participate effectively in the highly competitive digital economy. Therefore no or highly restricted access to higher quality communications services will further disadvantage lower income people and households and they will fall further behind.

⁶⁴ Canadian Radio-television and Telecommunications Commission, *Communications Monitoring Report* (October 2015) at p. 16.

Figure 3-7.

Monthly household communications expenditures, by service and by quintile (\$)

Service	Year	First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	Average of all quintiles
Wireline telephone	2011	33.91	33.51	37.01	42.56	42.39	37.66
	2012	29.06	33.05	34.28	37.18	40.73	34.86
	Growth (%)	-14.3	-1.4	-7.4	-12.6	-3.9	-7.4
	2013	27.92	30.72	31.38	34.55	39.78	32.85
	Growth (%)	-3.9	-7.0	-8.5	-7.1	-2.3	-5.8
	2014	25.24	29.41	31.61	33.51	35.78	31.10
Growth (%)	-9.6	-4.2	0.7	-3.0	-10.1	-5.3	
Mobile wireless	2011	31.58	43.33	58.25	73.00	98.50	60.92
	2012	32.92	48.58	67.92	80.42	107.08	67.42
	Growth (%)	4.2	12.1	16.6	10.2	8.7	10.7
	2013	34.92	50.33	68.67	83.33	109.50	69.33
	Growth (%)	6.1	3.6	1.1	3.6	2.3	2.8
	2014	43.17	56.17	77.58	91.75	126.50	79.08
Growth (%)	23.6	11.6	13.0	10.1	15.5	14.1	
Internet	2011	18.45	25.47	31.80	34.65	39.28	29.95
	2012	21.42	26.49	33.03	35.64	40.32	30.95
	Growth (%)	16.1	4.0	3.9	2.9	2.6	3.3
	2013	21.48	30.53	39.33	40.95	44.74	35.41
	Growth (%)	0.3	15.3	19.1	14.9	11.0	14.3
	2014	24.74	33.82	40.34	45.75	50.05	38.91
Growth (%)	15.2	10.8	2.6	11.7	11.9	10.0	
Cable and DTH	2011	37.99	45.76	52.09	59.35	67.11	52.42
	2012	35.55	46.93	51.79	55.95	70.00	52.02
	Growth (%)	-6.4	2.6	-0.6	-5.7	4.3	-0.8
	2013	37.45	46.77	51.98#	60.20	71.58	53.56
	Growth (%)	5.3	-0.3	0.4	7.6	2.3	3.0
	2014	35.20	46.88	55.14	61.66	70.79	53.95
Growth (%)	-6.0	0.2	6.1	2.4	-1.1	0.7	
Total	2011	121.75	148.03	179.26	209.60	247.34	180.95
	2012	118.94	155.04	187.02	209.18	258.14	185.25
	Growth (%)	-2.3	4.7	4.3	-0.2	4.4	2.4
	2013	121.76	158.35	191.36#	219.03	265.60	191.12
	Growth (%)	2.4	2.1	21.7	4.7	2.9	3.2
	2014	128.35	166.27	204.67	232.67	283.12	203.04
Growth (%)	5.4	5.0	7.0	6.2	6.6	6.2	

Source: CRTC Communications Monitoring Report (2015), Table 2.0.4

The amount per month spent on communications services by the lowest quintile in 2014 (\$128.35) is altogether lower than other quintiles, approximately 63.2% of the average Canadian spend and 45.3% of the amount spent by the highest quintile. However, this amount spent by low-income households is overall increasing and in some cases at a higher rate than the other quintiles. Specifically, low-income communications expenditures grew by 15.2% for Internet service and **23.6%** for mobile wireless service in 2014. Meanwhile, the growth in average Canadian expenditure on those services was only 10.0% and 14.1% respectively in 2014. Low-income Canadians have also been reducing their expenditures on (and potentially cancelling) some services at a higher rate than the Canadian average. This is particularly prominent in the landline telephone and television service sectors, in which the lowest quintile has *reduced* its expenditures by 9.6% and 6.0% respectively. However, overall low-income communications expenditures have steadily increased over the last four years, despite slow growth in average income and stable income inequality.

3.5 Risks of a growing digital divide

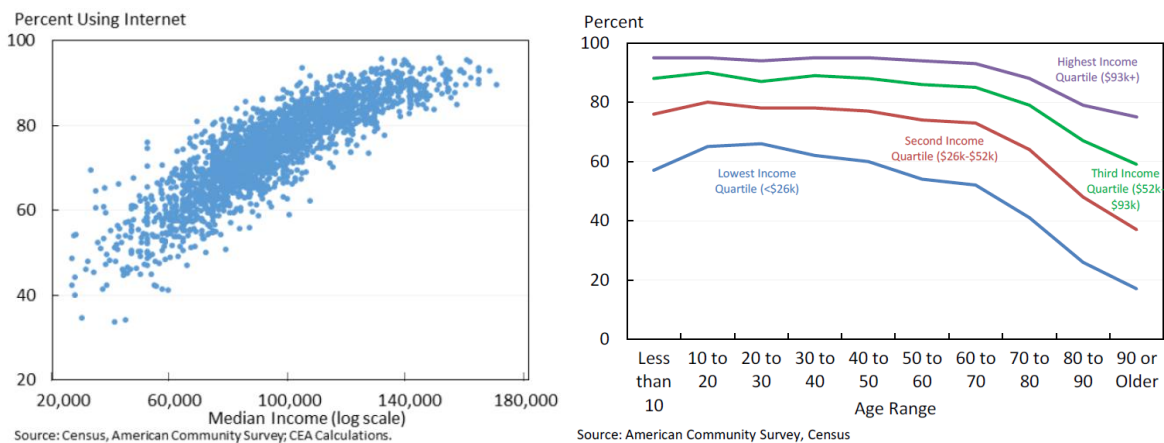
Affordability challenges are not merely present where there is a cost barrier to service adoption. Low-income Canadians who are already subscribed to one or more communications services may still confront affordability challenges.

However, studies show that the cost of communications services remains a key barrier to the adoption of communications services—and broadband Internet in particular. Therefore, if any affordability challenge is not addressed today, the digital divide risks growing larger due to cost leading to expanding barriers to access to higher quality services for lower income households. Higher costs means more limited access to the higher quality services that allow low-income people to compete on more equal terms with those earning larger incomes. It appears that as the technology of communications service advances in Canada, service quality improves and service providers tend to charge higher prices. For low income households with limited prospects for income growth, higher prices mean more limited access to leading edge service. As a result, they are often stuck with older technology and potentially falling even further behind compared to those Canadian households with higher incomes, or they are buying less of other essential goods and services.

Low income remains one of the chief barriers to broadband adoption. A 2015 brief from the U.S. Council of Economic Advisers found a strong positive association between median income and Internet use, writing:

The most affluent [Public Use Microdata Areas] generally have home Internet adoption rates of 80 to 90 percent, while the PUMAs with the lowest median incomes have adoption rates of around 50 percent. Estimates from a linear regression suggest that doubling a PUMA’s median household income is associated with a 20.2 percentage point increase in the expected rate of Internet adoption.⁶⁵

Figure 3-8. U.S. Correlation Between Income and Internet Use

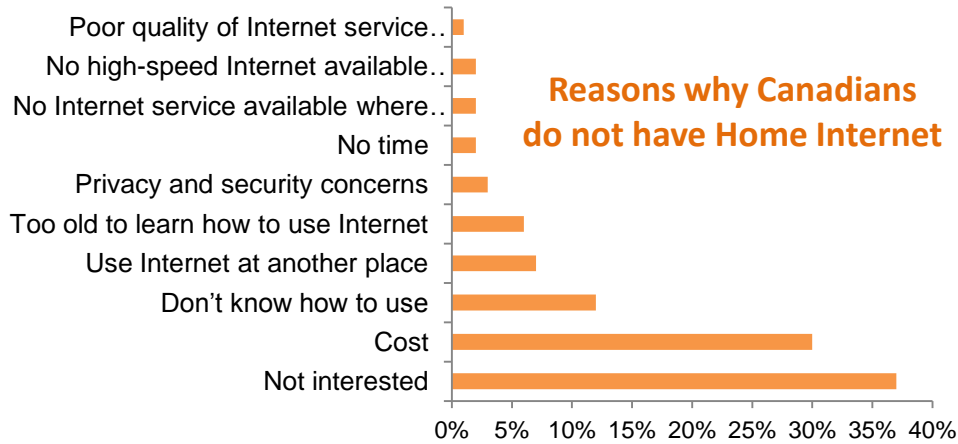


Source: Council of Economic Advisers, Figures 1 and 2

This does not necessarily mean that cost is the only barrier to broadband adoption by low-income users. However, in a 2015 Environics Research Group national survey commissioned by PIAC 30% of Canadians said cost was still one of the main reasons they did not have home Internet service.

⁶⁵ Council of Economic Advisers, “Mapping the Digital Divide” (July 2015), *Council of Economic Advisers Issue Brief*, online: Whitehouse.gov
https://www.whitehouse.gov/sites/default/files/wh_digital_divide_issue_brief.pdf at p. 2.

Figure 3-9. Reasons Why Canadians Do Not Have Home Internet



Source: PIAC, Environics Research Group Survey on Telecom and Broadband Services (2015)

Similarly, a study on “broadband non-adopters” carried out by Carare *et al.* (2014) and funded by the U.S. National Telecommunications and Information Administration (NTIA) reported that while 62.7% of non-adopting households primarily faced non-price barriers to adoption, 37.3% were willing to adopt broadband at a reasonable price.⁶⁶ In fact, the PEW Research Center has consistently found that the cost is a key barrier, noting most recently that:

In some form, cost is the chief reason that non-adopters cite when permitted to identify more than one reason they do not have a home high-speed subscription. Overall, **66%** of non-adopters point toward either the monthly service fee or the cost of the computer as a barrier to adoption. When presented with a follow-up question asking them to identify the most important reason they do not have a home broadband subscription, non-adopters are again more likely to cite the monthly cost of broadband service than any other reason. [...] Many more non-adopters in 2015 say that being without broadband is a major hindrance in some way than said so in 2010. As this view of the importance of a home high-speed subscription has

⁶⁶ Octavian Carare et al, *The Willingness to Pay for Broadband of Non-adopters in the U.S.: Estimates from a Multi-State Survey* (18 November 2014), online: SSRN <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2375867> at p. 10.

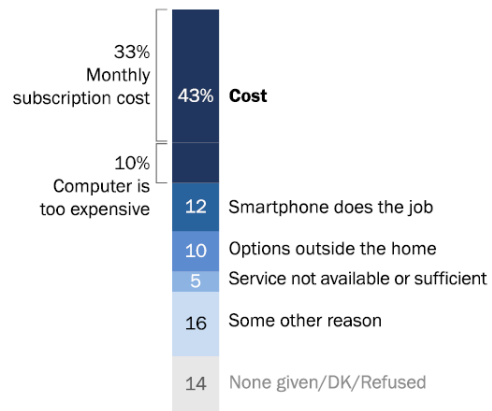
grown, so has the sense that the monthly fee is the sticking point in having home service.⁶⁷

Figure 3-10. Major Reason Americans Do Not Have Broadband Service

Therefore, the cost of broadband Internet—and notably the monthly subscription cost and its implications for the affordability of broadband)—remains one of the chief barriers to promoting broadband adoption when subscription growth begins to plateau. Any affordability challenge thus still has the potential to slow and even hinder the adoption of communications services—ultimately exacerbating the digital divide between the “haves” and “have-nots.”

Cost is the major reason most people do not have broadband connections

% of non-broadband users who cite the following as their most important reason for not having broadband service



Source: Survey conducted June 10-July 12, 2015. Sample size = 2,001

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3.6 An affordability challenge has been identified and addressed in other areas

Finally, many other sectors and jurisdictions currently are inquiring into the importance of detailed studies of the affordability of essential services, including communications, and how to address the gaps.

Many international jurisdictions particularly in Europe had, during the 1990s, implemented rules which created a basic, “no frills” affordable package for landline telephone for low-income customers in response to the Universal Service

⁶⁷ John B. Horrigan & Maeve Duggan, *Home Broadband 2015: The share of Americans with broadband at home has plateaued, and more rely only on their smartphones for online access* (December 2015), online: PewInternet.org <<http://www.pewinternet.org/files/2015/12/Broadband-adoption-full.pdf>> at pp. 15-16. (Emphasis added)

Directive.⁶⁸ These include the “Abonnement social” in France⁶⁹ and the “BT Basic” in the UK (which now also includes a broadband package).⁷⁰

In 1985, the U.S. Federal Communications Commission created the *Lifeline* program that currently provides a \$9.25 per month discount subsidy for landline telephone service for low-income customers.⁷¹ The FCC estimated that there were 42 million households in the U.S. eligible for *Lifeline* support in March 2014.⁷² Lifeline has since been expanded to include wireless service and a newly issued 2016 order now modernizes and expands the program to include support for broadband service.⁷³

Moreover, in Canada the Ontario Energy Board (OEB), on 1 January 2016, began implementing the *Ontario Electricity Support Program (OESP)* to apply credits (determined by a sliding scale) to the monthly household electricity bills of low-income customers.⁷⁴ In its 2014 report to the Minister of Energy, the OEB projected that the OESP would benefit more than 500,000 households.⁷⁵

⁶⁸ DIRECTIVE 2009/136/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2009, *amending Directive 2002/22/EC on universal service and users’ rights relating to electronic communications networks and services, Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector and Regulation (EC) No 2006/2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws.*

⁶⁹ “Abonnement Social”, online: Orange

<http://boutique.orange.fr/ESHOP_mx_ft/?tp=F&ref=3610&IDCible=1&donnee_appel=&id=&type=3>.

⁷⁰ See: BT, “BT Basic,” online: BTplc

<<http://www.btplc.com/Inclusion/ProductsAndServices/BTBasic/index.htm>> (accessed 14 March 2016).

⁷¹ Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund*, FCC 15-71 at para. 1; and

Federal Communications Commission, “Lifeline Program for Low-Income Consumers” (20 June 2016), online: FCC.gov <<https://www.fcc.gov/general/lifeline-program-low-income-consumers>>.

⁷² *Ibid.* at para. 111.

⁷³ Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund: Third Report and Order, Further Report and Order, and Order on Reconsideration*, FCC 16-38.

⁷⁴ Ontario Energy Board, “Ontario Electricity Support Program: Questions and Answers,” online: OntarioElectricitySupport.ca <<https://ontarioelectricitysupport.ca/FAQ>> (accessed 14 March 2016).

⁷⁵ Ontario Energy Board, *Report of the Board: Developing an Ontario Electricity Support Program* (22 December 2014), online: Ontario Energy Board

<http://www.ontarioenergyboard.ca/oeb/Documents/EB-2014-0227/Report_of_the_Board_Developing_an_OESP_20141222.pdf> at p. 14.

These programs will be discussed in greater detail in Section 6 of this report. However, these initiatives show that policy makers in other jurisdictions and domestic sectors have already examined and identified in their areas a need to provide assistance to low-income households to access important services. Therefore, it is timely that Canadian decision-makers too closely examine affordability issues related to communications services.

4. Why is the Affordability of Communications Services for Low-Income Households Important?

4.1 Communications services have become essential to the life of everyday Canadians.

The provision of communications services in Canada encompasses multiple service providers, including telephone companies, cable system operators, Internet service providers, wireless carriers, and satellite operators.⁷⁶ The evolution from the humble telephone, which allowed communication over distance by voice, to the current day variety of services took place over the course of roughly five decades. Whether it be the introduction of facsimile service, the development of video conferencing, e-mail, instant messaging, or web browsing, the goal remains the same, communicating with each other over distance.

Like communication services, the methods of provision has also evolved. Transmission media has also expanded from traditional copper wires to include microwave, terrestrial wireless, satellite, hybrid fiber/coaxial cable, and broadband fiber transport.⁷⁷

In 2015, PIAC noted citizens need communication in order to participate fully in society.⁷⁸ In fact, PIAC contended communication is necessary for maintaining good physical health and helps satisfy social needs, including pleasure, affection, inclusion, relaxation and control.⁷⁹ Moreover, PIAC restated the 2003 United Nations World Summit on the Information Society declaration that “communications is a fundamental social process, a basic human need and the foundation of all social organization. It is central to the Information Society. Everyone, everywhere should have the opportunity to participate and no one should be excluded from the benefits the Information Society offers.”⁸⁰

⁷⁶ Lucky, R. and Jon Eisenberg, Editors. *Renewing Telecommunications Research* (National Academic Press, 2006), <<http://www.nap.edu/read/11711/chapter/3>>. Page 4.

⁷⁷ Lucky, R. and Jon Eisenberg, Editors. *Renewing Telecommunications Research* (National Academic Press, 2006), <<http://www.nap.edu/read/11711/chapter/3>>. Page 5.

⁷⁸ Lawford, J. and Alysia Lau, *No Consumer Left Behind: A Canadian Affordability Framework for consumer Services in a Digital Age* (Public Interest Advocacy Centre, 2015). Page 4.

⁷⁹ Lawford, J. and Alysia Lau, *No Consumer Left Behind: A Canadian Affordability Framework for consumer Services in a Digital Age* (Public Interest Advocacy Centre, 2015). Page 4. From Ronald B. Adler & George Rodman, *Understanding Human Communication*, 9th ed. (New York: Oxford University Press, 2006). Page 10-11.

⁸⁰ Lawford, J. and Alysia Lau, *No Consumer Left Behind: A Canadian Affordability Framework for consumer Services in a Digital Age* (Public Interest Advocacy Centre, 2015). Page 4. From World

In a similar vein, the United Nations Human Rights Council (UNHRC) passed a non-binding resolution in July 2016 declaring public Internet access should not be disrupted by governments or governmental agencies.⁸¹ Both UN declarations appear to stem from the *Universal Declaration of Human Rights* (UDHR), adopted by the United Nations in 1948. Article 19 of the UDHR states:

“Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.”⁸²

The notion individuals have the right to “seek, receive and impart information and ideas through any media” appears to be reaffirmed in the *International Covenant on Civil and Political Rights* (ICCPR). The ICCPR was adopted by the United Nations General Assembly in December 1966 and came into force in March 1976. As of March 2016, the Covenant has been ratified by 168 state parties.⁸³ Article 19 of the ICCPR states:

1. Everyone shall have the right to hold opinions without interference.
2. Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.
3. The exercise of the rights provided for in paragraph 2 of this article carries with it special duties and responsibilities. It may therefore be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:
 - a) For respect of the rights or reputations of others;

Summit on the Information Society, *Declaration of Principles* (12 December 2003), Document WSIS-03/GENEVA/DOC/4-E, online: ITU at para. 4.

⁸¹ Vincent, James, “UN condemns internet access disruption as a human rights violation”, *The Verge* (July 4, 2016), <<http://www.theverge.com/2016/7/4/12092740/un-resolution-condemns-disrupting-internet-access>>.

⁸² United Nations (UN), *Universal Declaration of Human Rights* (December 1948), <<http://www.un.org/en/universal-declaration-human-rights/>>.

⁸³ Office of the High Commissioner for Human Rights (OHCHR), *Status of Ratification Interactive Dashboard*. <<http://indicators.ohchr.org/>>.

- b) For the protection of national security or of public order (ordre public), or of public health or morals.⁸⁴

Thus, it is quite evident the United Nations believes the ability to communicate, regardless of the medium employed, is a fundamental human right worthy of enshrinement. Canada is a signatory to both the UDHR and the ICCPR, and the freedom of expression is found among the fundamental freedoms listed under Section 2 of the *Canadian Charter of Rights and Freedoms*. Justice Peter Cory once wrote that it "is difficult to imagine a guaranteed right more important to a democratic society."⁸⁵

In Canada, the importance of communication services manifests itself in the jurisdiction of the Canadian Radio-television and Telecommunications Commission (CRTC). The CRTC is dedicated to ensuring that the needs and interests of Canadians are at the centre of the communication services system and committed to providing tools that help Canadians make informed decisions in the marketplace. Early in his mandate, CRTC Chairman Jean-Pierre Blais articulated this commitment, and his desire to improve upon previous outreach efforts:

“Most important, we can do a better job of serving the public interest by basing our regulatory framework on the outcomes Canadians want and expect. We can ensure they are truly at the centre of their communication system.”⁸⁶

The CRTC regularly holds public hearings, round-table discussions, informal forums, and online discussion forums designed to gather Canadians' views about broadcasting and telecommunications services.⁸⁷ The intent is to use this information to serve the public interest, as indicated by the Chairman Jean-Pierre Blais in 2013 when he noted “we believe one of the most critical aspects of developing regulations is engaging the Canadian public in their formulation.”⁸⁸

The CRTC is of the opinion telecommunications play an important role in the lives of all Canadians. Modern telecommunications enable Canadians to participate in

⁸⁴ Office of the High Commissioner for Human Rights (OHCHR), *International Covenant on Civil and Political Rights*. <<http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx>>.

⁸⁵ *Edmonton Journal v. Alberta (Attorney General)* [1989] 2 S.C.R. 1326, page 1336.

⁸⁶ Blais, Jean-Pierre, *Remarks to the annual workshop of the Community of Federal Regulators*, (November 4, 2013) <<http://www.crtc.gc.ca/eng/com200/2013/s131104.htm>>.

⁸⁷ Canadian Radio-television and telecommunications Commission. *About Us* <<http://www.crtc.gc.ca/eng/acrtc/acrtc.htm>>.

⁸⁸ Blais, Jean-Pierre, *Remarks to the annual workshop of the Community of Federal Regulators*, (November 4, 2013) <<http://www.crtc.gc.ca/eng/com200/2013/s131104.htm>>.

today's digital economy and provide access to services, such as health care, education, government, public safety, and banking services.⁸⁹ Meanwhile, Canadian television is there to serve our needs and interests and reflect the circumstances and aspirations of Canadian men, women and children.⁹⁰ The CRTC's role under the *Broadcasting Act* is to make sure the Canadian television system delivers compelling and diverse programming in an age of digital technology marked by an abundance of channels and on-demand content.⁹¹

4.2 Which communication services are essential?

The dictionary commonly describes the term essential as an adjective meaning absolutely necessary or indispensable. PIAC contends all communications services are essential for, at the minimum, the following reasons:

- keep in touch with family and friends (83%)
- ability to contact the emergency services (63%)
- access to information, education and entertainment (55%)

These were the three reasons cited most often by low-income survey respondents in a survey commissioned by PIAC in December 2015, with the response rate indicated in parenthesis.⁹² The more challenging task is determining which communication services are essential. PIAC contends a case can be made for landline telephone, mobile telephone, television and internet service to be considered essential – depending on the needs of the individual.

Landline Telephone

For instance, a representative survey commissioned by the CRTC in early 2016 found 13% of respondents currently used a landline telephone service more than

⁸⁹ Canadian Radio-television and telecommunications Commission, *Telecom Notice of Consultation CRTC 2015-134*, <<http://www.crtc.gc.ca/eng/archive/2015/2015-134.htm>>.

⁹⁰ Canadian Radio-television and telecommunications Commission, *Broadcasting Notice of Invitation CRTC 2013-563*, <<http://www.crtc.gc.ca/eng/archive/2013/2013-563.htm>>.

⁹¹ Canadian Radio-television and telecommunications Commission, *Broadcasting Notice of Invitation CRTC 2013-563*, <<http://www.crtc.gc.ca/eng/archive/2013/2013-563.htm>>.

⁹² Environics Affordability Survey. Question 5.

other telecommunication method.⁹³ The survey found landline telephone was relied upon most by seniors (31%).⁹⁴ The notion older respondents depend on landline service in comparison to others is consistent with additional research conducted in Canada in 2015 and in the United Kingdom in 2014. PIAC conducted a survey of low-income Canadians in December 2015 and found 40% of respondents aged 55 and over felt it was essential they had access to voice calls using a landline phone.⁹⁵ Conversely, the same survey found 50% of respondents age 18 to 34 do not have landline phone service at all, compared to just 20% of those age 55 and over.⁹⁶ In the UK, Ofcom conducted a study revealing landline telephone services were considered essential by 61% of those surveyed aged 75 and above, compared to just 12% of 16-24 year olds.⁹⁷

The Ofcom study also found 22% of respondents reporting household incomes under \$40,000 also considered landline telephone services essential.⁹⁸ PIAC's 2015 survey discovered 34% of Canadian respondents with household incomes of \$30,000 or less held a similar view of landline telephone service.⁹⁹ As a result, there is evidence a small but significant portion of the Canadian population would argue that landline telephone service is essential to their daily activities.

Television

In 2015, PIAC found a 58% of low income survey respondents viewed paid television as important, while 29% considered it essential.¹⁰⁰ In December 2013, the CRTC, as part of its Let's Talk TV consultations, surveyed Canadians to reveal their views on the television industry. The study found Canadians consider news programs (local or national) and documentaries are the most important types of television

⁹³ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

⁹⁴ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

⁹⁵ Environics Affordability Survey. Question 4B.

⁹⁶ Environics Affordability Survey. Question 10B.

⁹⁷ Ofcom, *Mobile and internet service now 'essential' to consumers*, (July 23, 2014), <<http://media.ofcom.org.uk/news/2014/essential-comms-services/>>. Ofcom is the communications industry regulator in the United Kingdom.

⁹⁸ Ofcom, *Mobile and internet service now 'essential' to consumers*, (July 23, 2014).

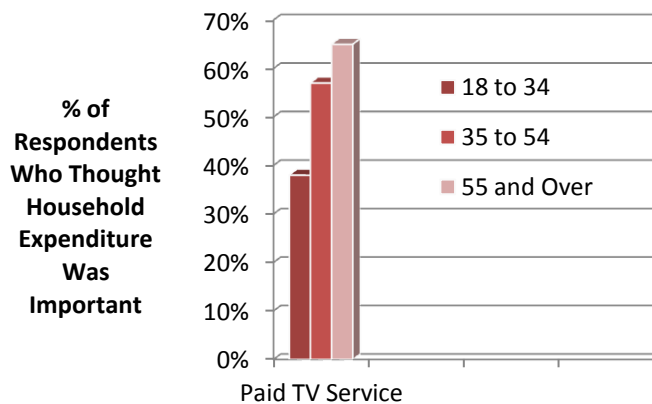
⁹⁹ Environics Affordability Survey. Question 4B.

¹⁰⁰ Environics Affordability Survey. Question 4M.

programming.¹⁰¹ Moreover, the Canadian Media Guild found 74% of Canadians still watch a newscast on television always or sometimes.¹⁰²

PIAC’s 2015 survey provides evidence a determining factor on the level of importance placed on paid television service by low-income Canadians was the age of the respondent. Respondents aged 18 to 34 placed less emphasis on receiving paid TV service than those age 35 or older, as the figure below indicates:

Figure 4-1. Importance of Paid Television Service to Low-Income Survey Respondents, by Age¹⁰³



The figure suggests a majority of respondents over the age of 35 believe that paid television is important, compared to 38% of respondents age 35 and under. In fact, the survey found 48% of respondents age 18 to 34 do not have paid television service at all, compared to just 20% of those age 55 and over.¹⁰⁴

¹⁰¹ Canadian Radio-television and telecommunications Commission, *Let’s Talk TV: Quantitative Research Report* (April 24, 2014),

<<http://www.crtc.gc.ca/eng/publications/reports/rp140424.htm#t3>>. Local news programs were important to 81% of respondents, followed by national news (78%) and documentaries (72%).

¹⁰² Canadian Media Guild, *Elements of a Healthy Canadian television System on Our Public Airwaves*, (Submission to CRTC: Broadcasting Notice of Consultation 2014-190), (June 27, 2014), p. 13. <<http://www.cmg.ca/en/wp-content/uploads/2014/07/ENGLISH-DOCUMENT-FINAL-CMG-Submission-CRTC-2014-190-CANADIAN-TV-June-27-2014.pdf>>.

¹⁰³ Environics Affordability Survey. Question 4M. Response rates indicate how many respondents indicated paid television service was either “essential to me” or “important to me, but not essential.”

¹⁰⁴ Environics Affordability Survey. Question 10F.

Another indication of the waning importance of paid television service in Canada is when low-income survey respondents face financial difficulty, they tend to cut paid television service before other communication services. PIAC's survey found 51% of respondents who canceled a communication service in order to afford the rest of their communications bills chose paid TV as the service to cut.¹⁰⁵

However, there is another method to access television service in Canada – over the air transmission. According to the CRTC, over-the-air transmission provides a widely available and affordable choice for Canadians wishing to access local and other television programming.¹⁰⁶ Over-the-air signals are widely available to Canadians: 97% of the population live within range of a transmitter.¹⁰⁷ Anecdotally, Canadians living in the Vancouver area have access to more than 10 channels while residents of Southern Ontario potentially have access to more than 25 channels using over-the-air signals.¹⁰⁸ Numeris estimates 8.1% of Canadians have chosen to access television service through over the air signals.¹⁰⁹ In 2015, PIAC found 30% of low income survey respondents viewed over the air television as important, while 12% considered it essential.¹¹⁰ Unlike paid TV service, there was no significant change in the response rate based on age. This evidence is seemingly corroborated by the CRTC when it noted in Broadcasting Regulatory Policy 2015-24:

An overwhelming number of Canadians who commented on the topic of over-the-air television viewed the ability to receive television programs inexpensively over the air as important and valuable.¹¹¹

¹⁰⁵ Environics Affordability Survey. Question 15. 67% of respondents age 18 to 34 canceled paid TV service first, as well as 59% of respondents over age 55. However, the question was only applicable to 11.2% of survey respondents. As a result, PIAC questions the reliability of the survey results to this question when broken into age categories.

¹⁰⁶ Canadian Radio-television and telecommunications Commission, *Broadcasting Regulatory Policy CRTC 2015-24*, (January 29, 2015). <<http://www.crtc.gc.ca/eng/archive/2015/2015-24.htm>>.

¹⁰⁷ Canadian Radio-television and telecommunications Commission, *Broadcasting Regulatory Policy CRTC 2015-24*, (January 29, 2015). <<http://www.crtc.gc.ca/eng/archive/2015/2015-24.htm>>.

¹⁰⁸ “Over the Air Channels for Vancouver Area,” *SaveandReplay.com*, <http://overtheair.saveandreplay.com/OTA_Channels_Vancouver.asp>. See also Adam Mayers, “Like the idea of over-the-air TV? Here’s howto get going: Mayers,” *Toronto Star* (February 4, 2015), <https://www.thestar.com/business/personal_finance/2015/02/04/like-the-idea-of-over-the-air-tv-heres-how-to-get-going-mayers.html>.

¹⁰⁹ Canadian Radio-television and telecommunications Commission, *Broadcasting Regulatory Policy CRTC 2015-24*, (January 29, 2015). <<http://www.crtc.gc.ca/eng/archive/2015/2015-24.htm>>.

¹¹⁰ Environics Affordability Survey. Question 4L.

¹¹¹ Canadian Radio-television and telecommunications Commission, *Broadcasting Regulatory Policy CRTC 2015-24*, (January 29, 2015). <<http://www.crtc.gc.ca/eng/archive/2015/2015-24.htm>>.

Clearly, there remains a subset of the Canadian population holding the view the provision of television remains an essential service. While the exact number of Canadians holding this view may be difficult to determine, the evidence gathered by PIAC indicates it may decline in the coming years.

Mobile Phone

A CRTC-commissioned representative survey for its recent review on basic telecommunications services suggested 27% of respondents currently used a mobile phone more than other telecommunication services.¹¹² In addition, 37% of respondents expected to use their mobile phone more than home telephone or home internet service 5 years from now.¹¹³ The survey also indicated that of those respondents who had home phones, home internet and mobile phones, 30% relied on their mobile phone the most, and 44% of those respondents feel they will rely most on their mobile phone 5 years from now.¹¹⁴

In PIAC's survey of low-income Canadians in December 2015, 25% of respondents felt mobile phone service was extremely important to them, and another 19% felt mobile service was important.¹¹⁵ As PIAC found with television, age of respondent appeared to be a determining factor on the level of importance placed on mobile phone service. For instance, 64% of respondents aged 18 to 34 felt mobile phone service was important or extremely important to them, compared to 44% of respondents aged 35 to 54 and 37% of those age 55 or older.¹¹⁶ Moreover, the survey found only 16% of respondents age 18 to 34 did not have a mobile phone, compared to 37% of those age 55 and over.¹¹⁷

Certainly, part of the appeal of mobile phones is their versatility. When PIAC surveyed low-income Canadians, they were asked how important it was to access to a series of 15 communications services or devices. Of these, 7 were accessible via a mobile phone:

¹¹² Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹¹³ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹¹⁴ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹¹⁵ Environics Affordability Survey. Question 3E.

¹¹⁶ Environics Affordability Survey. Question 3 Summary Table.

¹¹⁷ Environics Affordability Survey. Question 10A.

Figure 4-2. Importance Placed on Services Accessible by Mobile Phone by Low-Income Survey Respondents

Service	Overall	Respondents Aged 18 to 34	Respondents Aged 35 to 54	Respondents Aged 55 and Over
Sending and receiving text messages	49%	78%	54%	37%
Voice calls using mobile phone	46%	66%	49%	38%
Sending and receiving instant messages	38%	62%	43%	27%
Internet in public places	36%	67%	38%	24%
Wireless data for mobile phone or smartphone	31%	64%	34%	17%
Online video streaming service	29%	52%	31%	20%
Online audio streaming service	24%	39%	27%	16%

Generally, between one-quarter and one-half of low-income survey respondents found each of the services listed as important, as indicated by the figures in far left-hand column of the table above.¹¹⁸ However, across the board respondents age 18 to 34 placed a greater emphasis on the services listed than others, and usually by a wide margin.¹¹⁹

PIAC’s survey also generated evidence suggesting the size of a household influences the emphasis placed on a communications service by low-income respondents. For instance, 37% of respondents from households with four or more members felt wireless data for a mobile phone was essential.¹²⁰ For single-person households, this figure was just 9%.¹²¹ In addition, half of respondents in households of four or more people felt sending and receiving text messages was not just important, but essential, compared to a quarter of respondents living in one or two-person households.¹²²

¹¹⁸ Environics Affordability Survey. Question 4 Summary Table.

¹¹⁹ Environics Affordability Survey. Question 4 Summary Table.

¹²⁰ Environics Affordability Survey. Question 4G.

¹²¹ Environics Affordability Survey. Question 4G.

¹²² Environics Affordability Survey. Question 4I.

The importance low-income survey respondents placed on instant messaging tells a similar story. Fifty-two percent of respondents from 3-person households and 60% from households of four or more people indicated instant messaging was important or essential.¹²³ Only 33% of respondents from single-person households held a similar view.¹²⁴ From this data, it certainly appears the emphasis placed on specific services associated with a mobile phone change as a family grows in size.

The data collected from consumers by the CRTC and PIAC indicated there is a significant number of Canadians who feel their mobile phone service is essential. Evidence suggests a greater emphasis is placed on mobile phone service among Canadians age 18 to 34 as well as those in households with 3 or more members. The evidence also implies the number of Canadians who feel mobile phone service is essential will grow over the next five years.

Home Internet

An Ipsos syndicated study released in December 2015 suggested 91% of Canadians have access or subscribed to the internet at home.¹²⁵ The CRTC survey conducted for the basic telecommunications services review suggested home Internet is king when compared to other communications services. Almost 6 in 10 respondents (59%) in a representative survey currently used home Internet more than other telecommunication service.¹²⁶ However, only 48% of survey respondents expect they will use home internet most often in five years.¹²⁷

PIAC's survey of low-income Canadians found 77% of respondents feel home internet is important or essential—more than any other communications service.¹²⁸ In addition, more respondents indicated home internet was important or essential than health care (76%), transportation (62%) or clothing (56%).¹²⁹ Only food and housing were cited more of often as important common household expenses.

¹²³ Environics Affordability Survey. Question 4J.

¹²⁴ Environics Affordability Survey. Question 4J.

¹²⁵ Ipsos, *One in Ten (9%) Canadians Do Not Have Internet Access at Home*, December 11, 2015, <<http://www.ipsos-na.com/news-polls/pressrelease.aspx?id=7086>>.

¹²⁶ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹²⁷ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.5, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹²⁸ Environics Affordability Survey. Question 3 Summary Table.

¹²⁹ Environics Affordability Survey. Question 3 Summary Table.

The notion that internet service is essential is not limited to Canada. In January 2015, U.S. President Barack Obama stated, "Today, high-speed broadband is not a luxury, it's a necessity."¹³⁰ Moreover, in September 2015, Facebook CEO Mark Zuckerberg called internet access "a basic human right, like access to health care or water," in an address to the United Nations General Assembly.¹³¹

When PIAC asked low-income consumers "How important it is to you personally that you have access to each of the following communications service or devices," internet from a fixed connection at home was cited far more (84%) than any other communications service or device listed.¹³² There was no discernible difference in response rate based on the age of the respondent. However, there was a noticeable difference in households with 4 or more people. Only 65% of respondents from these larger households felt a home internet connection was important or essential.¹³³ Interestingly, this corresponded with a greater importance placed on wireless data for a mobile phone (54%) when compared to smaller family sizes.¹³⁴ It certainly appears possible that some survey respondents were turning to their mobile device to access the internet in larger households. Alternatively, it is possible some low-income households view the two services as substitutes. Under these circumstances, mobile service may either be cheaper or provides greater family safety and security. The key is that larger lower income households may be forced to see the two communication services as substitutes and to make choices that Canadian households earning larger incomes do not have to make.

¹³⁰ "Mapping the Digital Divide," *Council of Economic Advisors Issue Brief*, (July 2015) p. 1, <https://www.whitehouse.gov/sites/default/files/wh_digital_divide_issue_brief.pdf>.

¹³¹ Hempel, J. "Zuckerbrg to the U.N.: The Internet Belongs to Everyone," *Wired*, September 28, 2015, <<http://www.wired.com/2015/09/zuckerberg-to-un-internet-belongs-to-everyone/>>.

¹³² Environics Affordability Survey. Question 4 Summary Table.

¹³³ Environics Affordability Survey. Question 4 Summary Table.

¹³⁴ Environics Affordability Survey. Question 4 Summary Table.

4.3 Relationship between communication services in Canada¹³⁵

PIAC suggests there is an interdependent relationship between four basic communications services under the purview of the CRTC – television, home telephone, wireless telephone and internet service. For instance, in order for many Canadians to obtain broadband service at home, they must first have home telephone or cable television service. They then used those underlying networks as a conduit. However, once Canadians obtain broadband service at a sufficient speed, they can theoretically obtain the other three services using that platform. Arguably, as the deployment of broadband continues to evolve, it has the ability to steadily encroach on the positioning and market share enjoyed by wireline, broadcasting and wireless services. This encroachment has most recently manifested itself by the growing popularity of applications such as Voice over Internet Protocol and Over the Top technology.

Initially, from a relationship perspective, wireless service overlapped with home telephone service. However, the introduction of smartphone technology and the capacity to access broadband services has altered the relationship between wireless service and broadcasting, wireline and broadband in Canada. Now wireless service is able to harness the other three communications services offered to Canadians from the palm of their collective hands. However, the lynchpin allowing wireless service to obtain this enhanced position in relation to broadcasting and wireline service is the use of wireless broadband data.

As a result, from the consumer perspective, if you have broadband access at a sufficient download and upload capacity, you can practically mimic services such as home telephone and television. A similar argument can be made for wireless service with a smartphone, if a consumer can afford wireless mobile data charges.

This discussion has resulted in PIAC developing the following diagram to display interdependent relationship occurring between wireline, broadcasting, wireless and broadband services in Canada:

¹³⁵ PIAC initially used this description of the relationship between communications services as part of the initial intervention of the Affordable Access Coalition during CTRC proceeding reviewing basic telecommunications services. Source: Affordable Access Coalition, *Telecom Notice of Consultation CRTC 2015-134*, paras. 255-262, <https://services.crtc.gc.ca/Pub/ListeInterventionList/Documents.aspx?ID=224017&en=2015-134&dt=i&lang=e&S=C&PA=t&PT=nc&PST=a>.

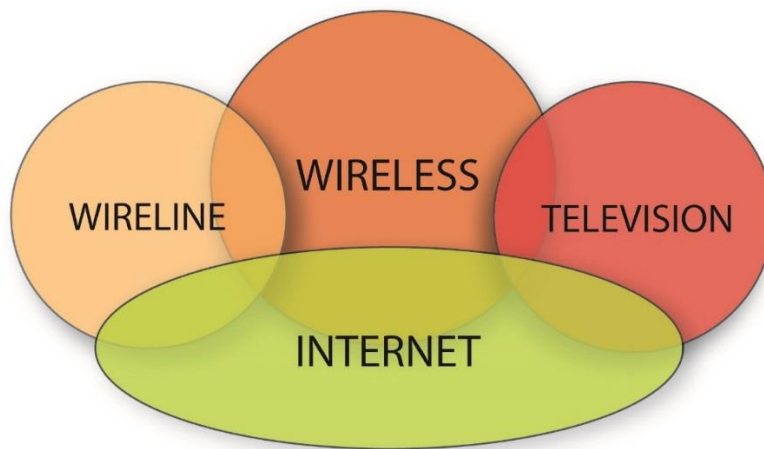


Figure 4-3. The interdependent relationship of communication services in Canada

Therefore, PIAC contends broadband is a basic telecommunications service necessary for Canadians to be able to meaningfully participate in the digital economy. Access to the Internet at a sufficient speed is increasingly becoming the tie that binds the other communications services depicted above. PIAC suggests this is partially the reason 59% of survey respondents to the CRTC said they currently used home internet more than other telecommunication service, and why 77% of low-income respondents surveyed for PIAC feel home internet is important or essential.

However, from the evidence gathered, a portrait emerges indicating that each of the four communications services examined is essential for a significant portion of the Canadian population. There is also evidence the importance placed on a specific communications service will shift going forward. It is apparent broadband and wireless service are collectively increasing in importance to Canadians at the expense of home telephone and paid television service.

4.4 Why is home Internet the current king of communications services in Canada?

“Unlike any other medium, the Internet enables individuals to seek, receive and impart information and ideas of all kinds instantaneously and inexpensively across national borders. By vastly expanding the capacity of individuals to enjoy their right to freedom of opinion and expression, which

is an “enabler” of other human rights, the Internet boosts economic, social and political development, and contributes to the progress of humankind as a whole.”

“Given that the Internet has become an indispensable tool for realizing a range of human rights, combating inequality, and accelerating development and human progress, ensuring universal access to the Internet should be a priority for all States. Each State should thus develop a concrete and effective policy, in consultation with individuals from all sections of society, including the private sector and relevant Government ministries, to make the Internet widely available, accessible and affordable to all segments of population.”

-Excerpts from the *United Nations Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression*, (May 2011).

The notion that unrestricted internet access is a modern human right may remain in debate. However, a 2014 survey of over 23,000 Internet users in 24 countries found 83% of them believe affordable access to the internet should be a basic human right.¹³⁶ This follows a 2010 survey commissioned by the British Broadcasting Corporation (BBC) of more than 27,000 adults in 26 countries that found four in five adults (79%) regard internet access as their fundamental right, while 87% of internet users felt internet access should be “the fundamental right of all people.”¹³⁷ Moreover, there is no doubt that access to the internet is critically important to participate fully in today’s world. It takes greater effort to live without internet access than to live with it.

For instance, Tim Berners-Lee, inventor of the World Wide Web, contends, "It's possible to live without the Web. It's not possible to live without water. But if you've got water, then the difference between somebody who is connected to the Web and is

¹³⁶ Ipsos, *83% of Global Internet Users Believe Affordable Access to the Internet Should be a Basic Human Right*, November 24, 2014, <<http://www.ipsos-na.com/news-polls/pressrelease.aspx?id=6683>>.

¹³⁷ *British Broadcasting Corporation* (BBC), “Internet Access is a Fundamental Right” (8 March 2010), <<http://news.bbc.co.uk/2/hi/technology/8548190.stm>>.

part of the information society, and someone who (is not) is growing bigger and bigger."¹³⁸

This gulf will continue to widen as internet access is increasingly required to win and perform jobs, gather news, participate in politics, receive education, connect with health-care systems, and engage in basic financial services.¹³⁹ It is reflected by many countries asserting the right to internet access in their constitutions, legal codes, or through judicial rulings.¹⁴⁰ In the United States, for example, the Federal Communications Commission (FCC), under the *Telecommunications Act of 1996*, is required to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans" by implementing "price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment."¹⁴¹ The FCC is required to determine on a regular basis whether broadband is being extended to all Americans "in a reasonable and timely fashion" and must "take immediate action to accelerate deployment" if it finds this isn't happening.¹⁴²

What about Canada?

In contrast to the United States, in Canada there is no comprehensive plan to ensure broadband access is being extended to all Canadians "in a reasonable and timely fashion." The regulator, the CRTC, is currently considering proposals to subsidize broadband access and affordability,¹⁴³ however, there are scoping issues that have appeared in its study (such as adoption and the amount of potential subsidy being

¹³⁸ Brodtkin, J. "Internet access "not a necessity or human right," says FCC Republican," (June 26, 2015) *ARS technica*, <<http://arstechnica.com/business/2015/06/internet-access-not-a-necessity-or-human-right-says-fcc-republican/>>.

¹³⁹ Rothkopf, D. "Is Unrestricted Internet Access a Modern Human Right?" (February 2, 2015) *Foreign Policy*, <<http://foreignpolicy.com/2015/02/02/unrestricted-internet-access-human-rights-technology-constitution/>>

¹⁴⁰ Rothkopf, D. "Is Unrestricted Internet Access a Modern Human Right?" Rothkopf cites Costa Rica, Estonia, Finland, France, Greece, and Spain as jurisdictions where the activity has occurred.

¹⁴¹ Brodtkin, J. "Internet access "not a necessity or human right," says FCC Republican," (June 26, 2015) *ARS technica*, <<http://arstechnica.com/business/2015/06/internet-access-not-a-necessity-or-human-right-says-fcc-republican/>>. See also *Telecommunications Act of 1996*, Pub. L. No. 104-104, § 706(a), 110 Stat. 56, 153.

¹⁴² Brodtkin, J. "Internet access "not a necessity or human right," says FCC Republican,"

¹⁴³ See: Telecom Notice of Consultation CRTC 2015-134, *Review of basic telecommunications services*.

inadequate to ensure true access across Canada and true affordability) and therefore it appears that the regulator cannot do it all.¹⁴⁴ There is clear evidence from that hearing, however, that competition is not enough to keep the price of broadband access low or to incentivize the provision of broadband service to all Canadians.¹⁴⁵

Meanwhile, evidence abounds that Canadians enjoy home internet service and are using it to supplant other forms of communications for a suite of tasks. Rogers Communications, in its feedback on this study, stated that:

... broadband Internet service is a basic telecom service that should be available to all Canadians. Canadians use this service to access countless services including government and health services, educational services, business services and entertainment services.

Other stakeholders interviewed had similar findings. York University Prof. Les Jacobs reported that most respondents in his study on how low-income Canadians use legal information report using the internet from home as opposed to a public or community space such as a library. University of Toronto PhD Candidate Michel Mersereau's 2015 study of a Native Men's Residence in Toronto found that basic internet services were a significant social and economic resource for shelter residents:

Participants described the challenges of searching for, and securing employment with limited or intermittent access to the internet or a mobile phone, with several noting that responding to employers is often a time sensitive matter. As many shelter residents had migrated from remote, First Nations communities, maintaining connections to family and friends through social media serves an important role in their personal recovery efforts. Affordability and accessibility limitations force many of these individuals to rely on the limited public access terminals provided by the shelter, or on other external resources such as the public library.

¹⁴⁴ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 18, 2016), paras. 7568-7617.

¹⁴⁵ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 11, 2016), paras. 89, 92, 102-107, 233, 1213-1218. See also CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 12, 2016), paras. 2996-2997, CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 13, 2016), para. 3683, CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5007, 5026-5027, 5060, 5285-5290, and CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 15, 2016), paras. 6934-6935.

Below, PIAC will describe the following uses for home internet service that have been cited by Canadians in various studies in the recent past:

- Shift in the Provision of Government Services
- Shift in the Provision of Financial Services
- Need for Educational Pursuits
- Employment Opportunities
- Pursue Business Opportunities
- Connecting with Family and Friends

Shift in the Provision of Government Services

An increased emphasis has been placed on the internet as a source of information and an avenue to obtain government and other public services. For instance, a multitude of services from all levels of government are now available to be accessed online. In fact, online government services have been so popular in many Canadian jurisdictions that a number of Canadians feel isolated from these necessary services without internet access. Recently, members of ACORN (Association of Community Organizations for Reform Now) Canada appeared before the CRTC to present their views on the affordability of internet services. Here are a few of their comments related to the proliferation of government services online:

“The internet also helps me to check the status of the report of my EI (Employment Insurance) and plan my budget. Otherwise I would have to walk to the employment centre, which is 20 to 30 minutes away since now I can’t afford a bus pass I have to walk there. I am able to easily see the progress and changes to my file or makes on my claim online and I really enjoy doing that. And I really need to have internet to do things like that.”¹⁴⁶

(T. Ford, Ontario)

“In terms of transportation, my only form of transportation is through public transit. Having access to the internet allows me to easily plan my bus trips so I can attend doctors’ appointments, get my wheelchair serviced,

¹⁴⁶ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5815-5816.

participate in power chair sports, socialize, and fully participate in organizations like ACORN.”¹⁴⁷

(B. Cameron, Ottawa)

“I need affordable internet because when I came in to Canada as a new immigrant, I had challenges and I still have challenges because all application forms are being done online, and being online, so that's an internet issue. And for that, (inaudible) a need to pay more money for you to stay connected. So anytime I go to CIC office, I'm given a website, then I'm told, "Okay, go online, go on this website and then open up the application, fill them out online.”

And also EI, Employment Insurance is done online. As an immigrant, I need a job and all the jobs, you are given websites. You go to a job office where they tell you, "Okay." They give you a list of all the companies who need jobs, contracts, and all that is done online. And if you don't have internet, really you can't survive.”¹⁴⁸

(P. Ahpuma, Calgary)

“I have very limited job opportunities and resources such as housing information; knowing tenants rights; what qualifications are required; searching various areas of availability -- this is difficult as newspapers offer very little -- and any low-income housing, if any; also government services; accessing various medical information, new breakthroughs; government forms and different programs offered to assist me in helping my disability.”¹⁴⁹

(L. Tetlock, New Westminster, BC)

In their comments, ACORN members mentioned services delivered by municipal, provincial and federal governments. In fact, interactive voice response (IVR) systems operated by government agencies and departments routinely advise callers to seek further information from various websites. Statistics Canada data indicates

¹⁴⁷ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5798.

¹⁴⁸ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5980-5983.

¹⁴⁹ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 6059.

that over 60% of Canadians in 2010 and 2012 interacted with government websites.¹⁵⁰

In PIAC's own recent interaction with a federal government agency, we found attempting to submit a complaint to the agency without employing a method facilitated by the internet was now the exception, rather than the rule.¹⁵¹ Government forms, information on your rights, applications processes—all are easily accessible online but may require additional (and sometimes exceptional) effort to access via other methods, such as by phone, in person or by mail going forward.

This shift was acknowledged by the CRTC Chairperson during the same CRTC proceeding where ACORN members presented their views. On April 16, 2016, Chairman Blais noted:

Individual Canadians came to testify that they did not choose to face life in poverty or challenged by physical or mental disabilities. Yet governments at all levels have chosen to ask these citizens to seek government services through digital platforms. I myself witnessed departments propose cost-saving business cases while I was at Treasury Board Secretariat, premised on shifting citizenship -- citizen engagement from physical offices and telephone contacts to online. This has had consequences. Vulnerable individuals burdened by social and economic insecurity came to testify that the calculation for the level of social assistance available from governance does not take into consideration the cost of connectivity that is nevertheless essential to schedule medical appointments, ensure success in school for their children, facilitate searching for a job, and to do many of the online activities many of the rest of us take for granted.¹⁵²

¹⁵⁰ Statistics Canada, "Online activities from any location, 2010," *The Daily*, (April 12, 2011), <<http://www.statcan.gc.ca/daily-quotidien/111012/t111012a3-eng.htm>>. See also ¹⁵⁰ Statistics Canada, "Online activities from any location, 2012," *The Daily*, (October 28, 2013), <<http://www.statcan.gc.ca/daily-quotidien/131028/t131028a003-eng.htm>>.

¹⁵¹ PIAC recently sought information from the Canadian Transportation Agency regarding a potential mobility-based transport complaint. PIAC inquired if such a complaint could be submitted by mail. It took multiple contacts with the agency to confirm submission by mail was possible. Meanwhile, the agency has a mobility complaint-intake mechanism on its website.

¹⁵² CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 18, 2016), paras. 7568-7570.

Shift in the Provision of Financial Services

According to the 2013 BMO Mobile Banking Survey, the most popular methods of banking remain in-person or at an ATM (95%).¹⁵³ However, in July 2015, the Canadian Bankers Association stated the Internet is now the main means of banking for 55% of Canadians, and use of the Internet as the primary banking choice is increasing among all age groups.¹⁵⁴ Further, the Association noted 90% of Canadians say innovations have made banking more convenient, enabling them to bank virtually whenever and wherever it suits them.¹⁵⁵ This data is supported by Statistics Canada figures estimating 68% of Canadians conducted electronic banking activities in 2010. This figure grew to 72% in 2012.¹⁵⁶

It's clear from some comments made by ACORN members before the CRTC in April 2016 a portion of Canadians depend upon online banking services:

“It's -- the cost is outrageous. Something's got to be done. It's just banking -- like, I would have to walk to the bank if I couldn't do online banking to pay my bills. I have a broken back. It's not really comfortable walking for a mile down the road to go and pay a bill that takes 10 seconds online.”¹⁵⁷

(R. Liever, Toronto)

“And we can't really ignore this because everything is going online. You need to buy a car? Go online. You need to sell a car? Take pictures and put it online. You need to access anything? Just go online. That means if you don't have internet you can't be able to do anything.”¹⁵⁸

(P. Ahpuma, Calgary)

¹⁵³ Bank of Montreal, *BMO Mobile Banking Survey*, (September 17, 2013), <<https://newsroom.bmo.com/press-releases/bmo-mobile-banking-survey-70-per-cent-of-canadian-tsx-bmo-201309170898511001>>.

¹⁵⁴ Canadian Bankers Association, *How Canadians Bank*, (July 29, 2015), <<http://www.cba.ca/en/media-room/50-backgrounders-on-banking-issues/125-technology-and-banking>>.

¹⁵⁵ Canadian Bankers Association, *How Canadians Bank*, (July 29, 2015), <<http://www.cba.ca/en/media-room/50-backgrounders-on-banking-issues/125-technology-and-banking>>.

¹⁵⁶ Statistics Canada, “Online activities from any location, 2010,” *The Daily*, (April 12, 2011), <<http://www.statcan.gc.ca/daily-quotidien/111012/t111012a3-eng.htm>>. See also ¹⁵⁶ Statistics Canada, “Online activities from any location, 2012,” *The Daily*, (October 28, 2013), <<http://www.statcan.gc.ca/daily-quotidien/131028/t131028a003-eng.htm>>.

¹⁵⁷ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5853.

¹⁵⁸ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5991.

These comments reflect a 2015 study by Accenture suggesting 46% of Canadian survey respondents preferred banking online to banking at branches.¹⁵⁹ The same study revealed 37% of Canadian consumers believe online is the most important channel for banks to invest in over the next five years, followed by in-branch (17%) and mobile (15%) channels.¹⁶⁰ Clearly, a significant number of Canadians appreciate the convenience of online banking.

Canadian financial institutions appear to be using the popularity of online banking in part to justify the removal of branches, especially in rural locations. As early as 2002-2003, the growing trend towards electronic transactions may have been influencing branch closures. According Innovation, Science and Economic Development (ISED) Canada and the FCAC, that year 302 branch closure notices were filed (required and voluntary), 213 complaints concerning bank closures were received and 133 requests for public meetings were processed relating to the closure of 23 branches.¹⁶¹ In 2013, the Canadian Centre for Policy Alternatives (CCPA) noted since 1990, there has been a decline of more than 1,700 bank branches, a 22% drop.¹⁶² In 2012, the Credit Union Central of Canada reported that credit unions were the only financial institution in 380 communities.¹⁶³ The Desjardins Group noted in 2013 that caisses populaires are the only financial institution in 388 towns and villages in Quebec. However, the total number of credit union and caisse locations dropped from 3,603 in 2002 to 3,117 in 2012, a decline of 13.5%.¹⁶⁴

Speaking at a conference in 2015, Bank of Nova Scotia CEO Brian Porter commented, “the average Scotiabank customer visits the branch once every two months and accesses the Internet banking platform twice a month. Traffic is accelerating in the mobile banking application that clients now access an average 18

¹⁵⁹ Harris, R., “Bye-Bye Branches? More Canadians Prefer Banking Online (Survey),” *Marketing*, (May 5, 2015), <<http://www.marketingmag.ca/consumer/bye-bye-branches-more-canadians-prefer-banking-online-survey-145287>>.

¹⁶⁰ Harris, R., “Bye-Bye Branches? More Canadians Prefer Banking Online (Survey),” *Marketing*, (May 5, 2015), <<http://www.marketingmag.ca/consumer/bye-bye-branches-more-canadians-prefer-banking-online-survey-145287>>.

¹⁶¹ FCAC, Financial Consumer Agency of Canada. 2003. *Annual Report 2002-2003*. See also Innovation, Science and Economic Development Canada, “Consumers and Changing Retail Markets,” *Consumer Trends Report*, <<https://www.ic.gc.ca/eic/site/oca-bc.nsf/eng/ca02096.html#fnb105>>.

¹⁶² Anderson, J., *Why Canada Needs Postal Banking*, Canadian Centre for Policy Alternatives (October 2013), p. 5.

¹⁶³ Anderson, J., *Why Canada Needs Postal Banking*, Canadian Centre for Policy Alternatives (October 2013), p. 5.

¹⁶⁴ Anderson, J., *Why Canada Needs Postal Banking*, Canadian Centre for Policy Alternatives (October 2013), p. 5.

times a month. That amount of activity has the potential to increase, over the next four months, to an average of once a day.”¹⁶⁵

Financial institutions deciding to remove branch locations from rural areas are dependent upon online connections in order to retain banking customers in these communities. For instance, when commenting on the announced closure of the only bank branch in the community of Chipman, NB (population: 1,200) in February 2016, Scotiabank stated it will work with customers to transfer, and also encourage customers to sign up for online banking.¹⁶⁶ A TD spokesperson, commenting the closure of the only bank branch in the community of MacTier, ON (population: 2,500), contended, “Customer needs are changing and Canadians are increasingly choosing to take advantage of convenient mobile, online and ATM options for their day-to-day banking activities.” Ironically, when MacTier, ON customers requested the installation of an ATM, a TD responded “there is not a business case for a new installation.”¹⁶⁷

When the last bank branch closes in a community, consumers are left with a stark choice between banking online, going to the nearest community with a brick and mortar branch, or becoming underbanked.

¹⁶⁵ O’Hara, C., “Small Towns to see Branch Closings, Scotiabank CEO Predicts,” *Globe and Mail*, June 11, 2015, <<http://www.theglobeandmail.com/report-on-business/scotiabank-eyeing-small-town-branch-closures-ceo-says/article24926205/>>.

¹⁶⁶ CTV Atlantic, *Closure of N.B. Banks Affecting Rural Communities*, February 27, 2016, <<http://atlantic.ctvnews.ca/closure-of-local-n-b-banks-affecting-rural-communities-1.2795584>>.

¹⁶⁷ Ballingall, A., “Muskoka Town set to Lose its Only Bank,” *Toronto Star*, December 18, 2015.

Need for Educational Pursuits

According to Statistics Canada, in 2005, over 40% of Canadians used the Internet for education, training or school work and nearly 80% of all full and part-time students reported going online for education, training or school work.¹⁶⁸ By 2013, virtually all school age children in Canada had online access outside of school, according to a MediaSmarts survey of over 5,000 students in Grades 4 through 11.¹⁶⁹ Fast forward to 2015, and a study of 4,043 Canadian teachers in grades K to 12 reveals the following:

- 97% say their school has provided them with some kind of networked devices in the classroom
- 59% report students are allowed to bring their own networked device to the classroom
- 79% agree “networked devices make it easier for my students to learn”
- Over 70% report their students access lesson content via online videos.¹⁷⁰

There is evidence of a substantial need for students to access the internet for educational reasons, regardless of age. The 2013 MediaSmarts survey pointed out that 6% of school-age children depended upon local libraries and community centres to connect to the internet.¹⁷¹ Moreover, 35% of the low-income home internet users PIAC surveyed in 2015 noted they could either not afford or barely afford internet access, regardless of household size.¹⁷² It certainly appears there is unrelenting pressure for Canadian parents to provide internet access for educational purposes. This is reflected in a few of the comments made by ACORN members before the CRTC in April 2016:

¹⁶⁸ Statistics Canada, *Internet use by Individuals, by Type of Activity*, CANSIM Table 358-0130, May 10, 2010, <<http://www.statcan.gc.ca/tables-tableaux/sum-som/101/cst01/comm29a-eng.htm>>. See also L. McKeown and Cathy Underhill, “Learning online: Factors associated with use of the Internet for education purposes,” *Statistics Canada*, (October 30, 2007), <<http://www.statcan.gc.ca/pub/81-004-x/2007004/10375-eng.htm>>.

¹⁶⁹ MediaSmarts, *Young Canadians in a Wired World, Phase III: Life Online*, 2014, pp. 1-2, <http://mediasmarts.ca/sites/mediasmarts/files/pdfs/publication-report/full/YCWWIII_Life_Online_FullReport_2.pdf>.

¹⁷⁰ MediaSmarts, *Connected to Learn: Teacher’s Experiences with Networked Technologies in the Classroom*, 2016. <http://mediasmarts.ca/sites/mediasmarts/files/publication-report/summary/ycwwiii_connected_to_learn.pdf>.

¹⁷¹ MediaSmarts, *Young Canadians in a Wired World, Phase III: Life Online*, 2014, p. 2.

¹⁷² Environics Affordability Survey. Question 8D.

“I am a single parents and I have two boys who also need the internet. They are looking for jobs and registering for college courses. They also need to continue to upgrade their computer skills at home to be successful in the world....

If I cannot find work I will go back to school and upgrade my skills and still I need the internet to succeed. And like, I can't not get anywhere; it's really hindering me. If I don't have internet I can't move forward anyway. So it's really, really hard. The internet, lastly, allows me to stay connected to news and civic events since I cannot afford cable or basic information networks.¹⁷³

(T. Ford, Ontario)

“Why don't I let you know why I think internet is essential for people? I'm a single father as well; I've raised my son his whole life. And from junior high on he's had teachers where he's had to hand his homework in online because it's emailed in. So if we didn't have access to the internet it wouldn't be possible. He's now 20 years old and he's applied for York University. He had to do that online.”¹⁷⁴

(R. Liever, Toronto)

“Also, when my children had school assignments they would have to do their research at a library because even though I was working I still couldn't afford internet because I had children to feed, you know? So they had to go to the library and wait for a computer, because, you know, there's limited computers in a library, in order to do their homework sometimes for the next day.”¹⁷⁵

(C. Holland-Downing, Halifax)

“I am on fixed income. I am a senior. It is a hardship to pay the \$65 for high-speed internet that I have. I have had times where I haven't had internet and it was a big hardship on my children. When they go to the library, like you say you have to wait when you get the computer. You are only allowed to have one hour and you can't save anything from the computer. You can't - - you just have to quickly look through and try to do your homework.

¹⁷³ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5811, 5817-5818.

¹⁷⁴ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5845-5846.

¹⁷⁵ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 6000.

Sometimes I didn't want to send my kids in the dark -- I have mobility issues -- to take a bus to go to the library and then to come back. It's not safe. So I got -- you know, I do have the internet now and my children are really happy because as soon as they come home they are on the internet. They do all their projects, all their research and they use it for entertainment as a side.”¹⁷⁶

(M. McGovern, Burnaby)

These comments appear to support those from a Parents Canada study from 2013 gauging how Canadian families use the internet. The following statement from the study highlighted the pressure felt by Canadian parents to provide internet access at home:

"High speed internet seems like a necessity for school-aged children. The pressure to get a tablet, iPad, etc., is not from my own children, but pressure is from other students who are allowed to use their electronics during school. This has created a clear divide between those who can afford them and those who can't. Very sad." - Lori, Cranbrook, British Columbia

"All the kids have them - it's hard to tell your child no. Especially if their homework plan is online. My child is 10 and has to consult the Internet for homework, and the teacher has a website for the class that he needs to refer to, as well." - Jennifer, Quebec

The statistical evidence gathered from teachers, students and Canadians in general indicate the importance attached to home internet access. The antidotal evidence articulates that need and reveals the pressure parents are under to ensure their children are provided as many educational tools as possible in order to prosper going forward. In May 2016, 72% of 1,500 Canadians surveyed moderately or strongly agreed with the following statement: “Ensuring all Canadian children have broadband internet access at home is a worthwhile investment.”¹⁷⁷ Taken together, the evidence supplies a powerful statement in support of the consideration of internet service as a basic need in Canada.

¹⁷⁶ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 6028-6029.

¹⁷⁷ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

Employment Opportunities

Canadians have been using the internet as a portal to employment opportunities for a number of years. In 2007, Statistics Canada reported 32% of Canadians were using the internet at home to search for employment.¹⁷⁸ By 2010, the CRTC reported 37% of survey respondents reported using the internet for activities related to employment.¹⁷⁹ This number grew to 55% in 2015.¹⁸⁰ These “employment activities” recorded by the CRTC included working online, looking for work or submitting applications.

According to 2015 data from Randstad Canada, a human resources company, 40% of Canadians use social media to search for jobs.¹⁸¹ Of that 40%, 60% use Facebook, 51% use LinkedIn, 30% use Google+, 20% use Twitter, and 8% use Instagram.¹⁸² ACORN members before the CRTC in April 2016 to discuss basic service obligations also detailed the importance of home internet access to search for employment opportunities:

“I need the internet at home so I can access different employment centres. I have to apply for jobs online. No employer accepts paper résumés and everything has to be by email... Because I paid this bill I could not buy fruits or vegetables or meat for my family. I am taking money out of my food budget so I can for the internet to find a job and support my family. It’s now a constant struggle every month.”¹⁸³

(T. Ford, Ontario)

“How is the internet a need and not a want? Well, let me explain. My son and I need the internet so we can try to find jobs. These days all the jobs are online and very few are found on paper.

¹⁷⁸ Statistics Canada, *Internet use by Individuals, by Type of Activity*, CANSIM Table 358-0130, May 10, 2010, <<http://www.statcan.gc.ca/tables-tableaux/sum-som/101/cst01/comm29a-eng.htm>>.

¹⁷⁹ Canadian Radio-television and telecommunications Commission, *Let’s Talk Broadband Findings Report* (March 18, 2016), Section 2.4, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹⁸⁰ Canadian Radio-television and telecommunications Commission, *Let’s Talk Broadband Findings Report* (March 18, 2016), Section 2.4, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹⁸¹ Randstad Canada, *How Canadians Use Social Media to Find Employment*, April 27, 2015, <<https://www.randstad.ca/workforce360-trends/press-releases/randstad-news/how-canadians-use-social-media-to-find-employment/>>.

¹⁸² Randstad Canada, *How Canadians Use Social Media to Find Employment*, April 27, 2015, <<https://www.randstad.ca/workforce360-trends/press-releases/randstad-news/how-canadians-use-social-media-to-find-employment/>>.

¹⁸³ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5810 and para 5813.

My son and I use a website called Indeed.com to find work. We have our résumé on file with them and they send me job postings to my email.

If we were not online we would not be able to apply for these jobs in a timely manner. It's hard enough to get work when I am online; imagine how hard it would be if I wasn't."¹⁸⁴

(K. Lalonde, Toronto)

“For us to get jobs, my son has gone to businesses to hand in a résumé and they've been told, “We don't accept résumés. You have to apply online” which makes it -- it's essential to have online, so it's essential to have internet. You can't function any more. Our system is changing; the entire system is changing. Everything's online.”¹⁸⁵

(R. Liever, Toronto)

Whether it is through social media channels or other methods, a substantial number of Canadians are accessing the internet in an effort to seek out their next career challenge. For Canadians with lower incomes, there is evidence they would feel “left behind” without online access to employment opportunities.

Pursue Business Opportunities

At least one of the ACORN members at the 2016 CRTC basic telecommunications services proceeding contended that affordable internet access allows them the opportunity to sell homemade goods online. This would make them less dependent upon other sources of income such as social assistance and help from family and friends.¹⁸⁶ Numerous low-income Canadians are compelled to share an internet connection among numerous roommates in an effort to lower the monthly cost for the service.¹⁸⁷

¹⁸⁴ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5827-5829.

¹⁸⁵ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5848.

¹⁸⁶ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5783.

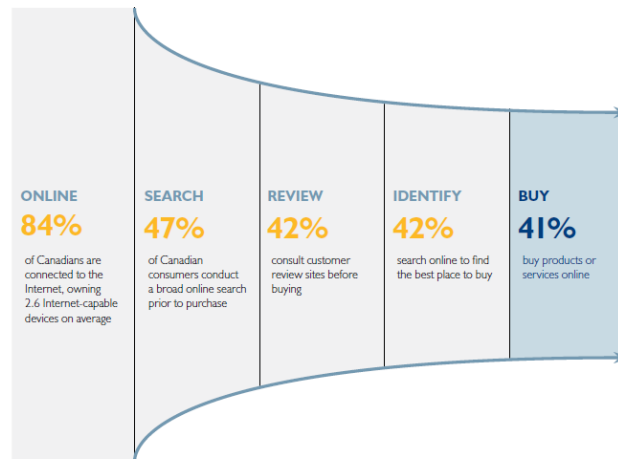
¹⁸⁷ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5800, 5984 and 6019.

Another variable that may be effectively constraining electronic commerce in Canada is the continued existence of data usage limits. In 2011, Professor Michael Geist made the following statement before the House of Commons Standing Committee on Industry, Science and Technology regarding the issue of data usage limits for home internet service:

“It represents a significant impediment on both sides: businesses are unable to take advantage of the technology and consumers have to pay more.”¹⁸⁸

This appears to be at odds with the prevalent desire of many Canadians to seek out information online and, in many cases, make the purchase of a good or service. According to a 2013 report released by Business Development Canada, the following online purchase process was followed by over 40% of Canadian shoppers.

Figure 4-4. Online Purchase Process, According to 2013 BDC Study¹⁸⁹



As a result, the imposition of data usage limits, either for wireless or home internet service, may be inhibiting the use of online resources to make purchasing decisions. Data limits may also be preventing some Canadians from selling goods and services from their home, as well as employing an online channel to conduct business.

¹⁸⁸ Michael Geist, *House of Commons Standing Committee on Industry, Science and Technology*, Evidence, October 17, 2011, 1635, <<http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=5172463&Language=E&Mode=1&Parl=41&Ses=1>>.

¹⁸⁹ Business Development Canada, *Mapping Your future Growth: Five Game-Changing Consumer Trends*, (October, 2013), p. 7, <https://www.bdc.ca/Resources%20Manager/study_2013/consumer_trends_BDC_report.pdf?ref=shorturl-consumertrends>.

However, even with this potential “drag” affecting online commerce, the CRTC reported activity has risen four-fold in buying and selling online in Canada since 2010.¹⁹⁰

Connecting with family and friends

According to a number of psychologists, Canadians’ social connections and relationships are critical to their everyday life and well-being.¹⁹¹ Family and friends provide emotional support and companionship, while social networks involving family, friends and acquaintances have been linked to the availability and accessibility of resources.¹⁹² Strong and diversified social networks can have positive effects at both the individual and community levels, increasing levels of self-esteem and overall life satisfaction, enhancing health outcomes, improving employment prospects, and increasing overall commitment to community.¹⁹³

Unsurprisingly, keeping in touch with friends and family was cited more often (83%) by Canadian low-income survey respondents in December 2015 as the main reason for having access to communications services.¹⁹⁴ There was no significant variation based on age of respondent or the size of a respondents household. PIAC’s survey also found 77% of low-income respondents reported home internet was important to them, more than any other communications service mentioned in the survey.¹⁹⁵ These two findings appear to indicate many low income Canadians highly value home internet access in order to communicate with friends and family.

According to the Statistics Canada 2013 General Social Survey (GSS) on Social Identity, regularly emailing friends or connecting with them on social networking

¹⁹⁰ Canadian Radio-television and telecommunications Commission, *Let’s Talk Broadband Findings Report* (March 18, 2016), Section 2.4, <<http://www.crtc.gc.ca/internet2016/report.html>>.

¹⁹¹ Walton, G.M., G.L. Cohen, D. Cwir, S.J. Spencer. 2012. “Mere Belonging: The Power of Social Connections” *Journal of Personality and Social Psychology*. 102(3): 513-532.

¹⁹² Sinha, M., “Canadians’ connections with family and friends,” (December 2014) *Statistics Canada*, <<http://www.statcan.gc.ca/pub/89-652-x/89-652-x2014006-eng.pdf>>.

¹⁹³ Sinha, M., “Canadians’ connections with family and friends,” (December 2014) *Statistics Canada*, <<http://www.statcan.gc.ca/pub/89-652-x/89-652-x2014006-eng.pdf>>. See also Arshad, I. 2011. “It’s not what you know it’s who you know that counts” *Policy Horizons Canada*. PH4-79/2011E www.horizons.gc.ca, Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster, and Ellison, N, C. Steinfield, C. Lampe. 2007. “The Benefits of Facebook ‘Friends’: Social Capital and College Students’ Use of Online Social Network Sites” *Journal of Computer-Mediated Communication*. 12: 1143-1168.

¹⁹⁴ Environics Affordability Survey. Question 5.

¹⁹⁵ Environics Affordability Survey. Question 3 Summary Table.

sites was mentioned by 57% of Canadian Internet users.¹⁹⁶ A somewhat lower share (44%) used the Internet to connect to family.¹⁹⁷ A number of ACORN members appearing before the CRTC in April 2016 also expressed their desire to keep in touch with family and friends using home internet.

“I also volunteer at ACORN. I am the co-chair of the East York chapter and really enjoy my time working there. Really, it is a community for me and without the internet at home I would not be connected with them. And that is truly very, very important to me.”¹⁹⁸

(K. Lalonde, Toronto)

For me, affordable internet means being connected to places I cannot access and it connects me to programs that help reduce the day-to-day barriers that I face.

Being poor and having to pay for exorbitant internet costs makes me feel that people like myself don’t matter much and don’t deserve consideration. I wouldn’t want to imagine my life without the internet; it’s my access to the world as a disabled person.”¹⁹⁹

(B. Cameron, Ottawa)

The implication is that Facebook is a want and not a need. I consider talking to my family a need not a want. I talk to them on Facebook. I don’t play games on Facebook; I talk to my friends and family. And I need to do that. I don’t want to do it; I need to do it.”²⁰⁰

(R. Liever, Toronto)

¹⁹⁶ Sinha, M., “Canadians’ connections with family and friends,” (December 2014) *Statistics Canada*, <<http://www.statcan.gc.ca/pub/89-652-x/89-652-x2014006-eng.pdf>>. The GSS excluded those who did not use the Internet in the past month.

¹⁹⁷ Sinha, M., “Canadians’ connections with family and friends,” (December 2014) *Statistics Canada*, <<http://www.statcan.gc.ca/pub/89-652-x/89-652-x2014006-eng.pdf>>.

¹⁹⁸ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5833.

¹⁹⁹ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), paras. 5798, 5803-5804.

²⁰⁰ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5919.

“Also, I have a lot of family that live outside of Canada and outside of Nova Scotia. Without the internet access I’m unable to keep in regular contact with my children, my grandchildren, and other family members.”²⁰¹

(C. Holland-Downing, Halifax)

Canadian governments at all levels appear to be more heavily relying upon internet to provide service. Financial institutions, especially those with previous retail operations in rural areas, seem to be encouraging greater online banking by consumers. Employers as well appear to prefer conducting employment searches online. Meanwhile, a significant number of Canadian consumers appreciate the convenience the provision of online services provide. However, concerns remain that providing services online should not completely replace more traditional methods of service delivery.

Governments and other service providers should recognize that access by consumers to their websites is almost entirely dependent upon the retail price of internet service.²⁰² Unlike the 20th century version of a library where access was free or priced minimally due to municipal government administration, the 21st century internet is provisioned by corporations with a profit motive. Thus far, evidence has surfaced that competition has not been enough to keep the price of broadband access low. This high barrier to entry, when combined with a significant shift in the provision of services, has the potential to “lock-out” a segment of the Canadian population from accessing information they once took for granted. The next section will review cost and the other barriers to providing affordable broadband access to all Canadians.

²⁰¹ CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 14, 2016), para. 5999.

²⁰² CRTC, *Transcript of Proceeding*, Telecom Notice of Consultation CRTC 2015-134 (April 18, 2016), paras. 7568-7570.

4.5 Barriers to affordable internet access in Canada

Barrier #1 to Affordable Internet Access in Canada: Political Will

When it comes to providing broadband access, there have been numerous political announcements, such as the one in Budget 2016 that proposes to deliver up to \$500 million over five years to extend and enhance broadband service in rural and remote communities.²⁰³ This follows the *Connecting Canadians* program announced in 2014 that aimed to provide 280,000 Canadians in rural and remote regions of the country with high-speed, broadband Internet access by 2017. When announced, the Government of Canada intended to invest up to \$305 million to address gaps in the delivery of high-speed Internet at speeds of at least 5 megabits per second (Mbps) in rural and remote communities across the country.²⁰⁴ The program also contained a dedicated \$50 million northern component targeting remote, satellite-dependent communities in Nunavut and the Nunavik region of northern Quebec.²⁰⁵ At the present time, PIAC estimates Innovation, Science and Economic Development Canada has allocated up to \$174 million to internet service providers to increase broadband access to up to 285,000 Canadian households under the *Connecting Canadians* program.²⁰⁶

Due to the recent implementation of the *Connecting Canadians* program, there appears to be limited information on the level of success the program has achieved. PIAC can only speculate on the impact of the program and its influence upon internet service distribution in rural and remote regions of Canada. It is expected the program has had a limited and uncoordinated effect thus far. However, until a third party conducts an assessment to follow up on the multiple investment announcements made as part of the program, its true impact will remain elusive. As a result, PIAC contends an assessment of the *Connecting Canadians* program, as well as the distribution of \$500 million announced in Budget 2016 are both worthy of future analysis by researchers.

It is also interesting to note the *Connecting Canadians* program was primarily concerned with providing access to internet service to rural and remote regions. It is

²⁰³ Finance Canada, *Budget 2016* (March 22, 2016), p. 104.

²⁰⁴ Innovation, Science and Economic Development Canada, *FAQ for Canadians*, <<https://www.ic.gc.ca/eic/site/028.nsf/eng/50010.html>>.

²⁰⁵ Innovation, Science and Economic Development Canada, *FAQ for Canadians*, <<https://www.ic.gc.ca/eic/site/028.nsf/eng/50010.html>>.

²⁰⁶ These figures were arrived at by adding the funding amounts and households affected totals contained in media releases since June 2015. Source: <http://www.ic.gc.ca/eic/site/028.nsf/eng/00577.html>

PIAC's understanding the funding distributed to service providers to build the links to the online world. *Connecting Canadians* appears to be silent on the subject of whether those links are priced affordably for Canadians in general, let alone low-income Canadians.

The CRTC until the opening of the BSO hearing, maintained that target speeds for broadband Internet access service of a minimum of 5 Mbps download and 1 Mbps upload are adequate, based on uses that consumers should reasonably expect to make of the Internet. However, during the recent CRTC review of basic telecommunications service, a report commissioned by the Northern Communications Information Systems Working Group was cited identifying 9 Mbps download/1.5 Mbps upload as the minimum recommended average target for the North, which should be achieved by 2019 "in order to meet projected consumer, business and government needs, while recognizing the constraints posed by the backbone infrastructure."²⁰⁷

PIAC's own research, filed in the hearing, estimated a standard today per household that ranges from 14.7 Mbps for a one-person household with a multitasking user, to 26.2 Mbps for a tech-savvy household consisting of three multi-tasking users.²⁰⁸ The need for greater access is partially fueled by the rapid rise in connected devices per household in Canada. In June 2016, J.D. Power estimated the number of connected devices per household increased to 9.9 from 4.5 in 2015.²⁰⁹

Deloitte, in its 2016 edition of *Technology, Media and Telecommunications Predictions*, envisions the future growth of connected devices as follows:

"At the start of 2016, upper quartile homes in developed countries may have already accumulated a dozen connected devices, each of

²⁰⁷ Affordable Access Coalition, *Telecom Notice of Consultation CRTC 2015-134*, para. 241, <<https://services.crtc.gc.ca/Pub/ListeInterventionList/Documents.aspx?ID=224017&en=2015-134&dt=i&lang=e&S=C&PA=t&PT=nc&PST=a>>. See also Northern Communications Information Systems Working Group, *Northern Connectivity: Ensuring Affordable Communications* (January 2014), online: <http://northernconnectivity.ca/>.

²⁰⁸ Affordable Access Coalition, *Telecom Notice of Consultation CRTC 2015-134*, paras. 117-120, <<https://services.crtc.gc.ca/Pub/ListeInterventionList/Documents.aspx?ID=224017&en=2015-134&dt=i&lang=e&S=C&PA=t&PT=nc&PST=a>>.

²⁰⁹ J.D. Power, "Pick and Pay "Skinny" TV Program Packages Provide Cost and Channel Choices, Driving Higher Customer Satisfaction, Says J.D. Power Canadian Study," (2 June 2016), *Media Release*, <<http://www.jdpower.com/press-releases/2016-canadian-television-and-internet-service-provider-customer-satisfaction-studies>>.

which may individually ‘sip’ data, but collectively, at peak time, might ‘gulp’ data. Through 2020 that dozen may well become dozens. And as average data connections get faster, we expect existing services to become steadily more bandwidth consumptive, new formerly unviable data-intensive services to launch, and new ‘data-gulping’ devices to come to market.”²¹⁰

On a rhetorical level, Canadian political leaders note the importance of affordable communication services, especially internet access. Prime Minister Justin Trudeau addressed this point in May 2016 in response to a question regarding a proposed takeover of Manitoba Telecom Services by Bell Canada Enterprises:

“...how important it is to have for consumers to have reliable access to high quality phone and internet service. This is something we can't get around in the 21st century, much of our economic growth, much of our entrepreneurship and many opportunities that particularly marginalized or remote communities need are linked to strong affordable access to the internet and to cell service and that is certainly what we are keeping in mind.”²¹¹

Just days before, the Minister of Innovation, Science and Economic Development, Navdeep Bains, made similar comments:

“The Government of Canada understands the need for accessible, reliable and affordable high-speed Internet so that middle-class and low-income families can fully participate in the digital economy.

“We are committed to increasing higher-speed broadband coverage and supporting competition, choice and availability of services for Canadian consumers and business users. Wholesale broadband is a proven regulatory tool for enabling retail competition in the Internet service market.”²¹²

While these statements are encouraging, the political will to establish a plan through legislation or a formal policy document, or to authorize the regulator to take action to

²¹⁰ Deloitte, *Technology, Media and Telecommunications Predictions 2016*, (2016), page 47.

²¹¹ Annable, K. “Trudeau Won’t Comment on Bell/MTS Deal,” (28 May 2016), *Winnipeg Free Press*, <<http://www.winnipegfreepress.com/breakingnews/trudeau-wont-comment-on-bellmts-deal-381212081.html>>.

²¹² *Government of Canada*, “Statement by Government of Canada on Bell Canada Petition of CRTC Wholesale Decision,” (11 May 2016), <<http://news.gc.ca/web/article-en.do?nid=1063779>>.

ensure all Canadians are at least provided access to the internet does not currently appear to be present. In the meantime, the Chairman of the CRTC expressed the importance Canadians place upon internet access in the following comments:

“Overall, in a nutshell, witnesses that appeared so far have agreed to a self-evident truth: today, in Canada, broadband is vital. Dictionaries define vital as being essential to life, to the existence of a thing, to the matter at hand and to success more broadly.”²¹³

Therefore, if internet access is not made a distinct policy priority in Canada, there is limited hope the affordability of internet service, when available, will be seriously considered.

However, there is hope at the grassroots level. Canadians, when surveyed, appear to strongly support efforts to close the so-called “digital divide” between high- and low-income Canadians and rural and urban households in Canada.²¹⁴ The Angus Reid Institute found 68% of 1,500 Canadians surveyed believe broadband internet is an essential service.²¹⁵ Moreover, 71% say the CRTC should require service providers to build the infrastructure necessary to ensure that every Canadian household has a broadband internet connection.²¹⁶ The same study also revealed more Canadians (56%) ranked “ensuring broadband internet access for all Canadians” as a 4 or a 5 on an importance scale of one to five than any other issue the Angus Reid Institute has asked about in 2016.²¹⁷

The establishment of the *Connecting Canadians* program and intention of investing a further \$500 million to extend and enhance broadband service in rural and remote communities reveals a desire to expand internet access in Canada. Evidence indicates

²¹³ “BSO Hearing Day 6: Blais gets personal: No broadband strategy makes it tough on Commission, Canadians,” *Cartt*, April 18, 2016, <<https://cartt.ca/article/bs0-hearing-day-6-blais-gets-personal-no-broadband-strategy-makes-it-tough-commission>>.

²¹⁴ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

²¹⁵ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

²¹⁶ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

²¹⁷ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

that as the number of connected devices per household increases, so will the required bandwidth to operate them. The notion internet service be more affordable in Canada has yet to permeate to the practical policy level. However, affordable internet access has been increasingly identified in 2016 by prominent Canadian legislators as a priority.

It is against this mixed policy backdrop that PIAC enters its examination of the remaining barriers to achieving affordability of broadband services for low-income households in Canada. These barriers include issues related to cost, access and capacity.

Barrier #2 to Affordable Internet Access in Canada: Cost

There is evidence the cost associated with internet service in Canada effects the online behavior of some households. In terms of the internet activity of Canadian households, cost performs the proverbial gatekeeper role. Cost alone prevents a substantial number of Canadian families from accessing the internet, while limiting the online activity for a significant number of others. For instance, almost one-quarter (24%) of Canadians surveyed as part of the CRTC's recent review of basic telecommunications services stated they limited their use of the internet service during the last 12 months.²¹⁸ Of those limiting internet use, 36% of respondents cited this was largely due to cost.²¹⁹ Thus, over 8% of Canadians surveyed for the CRTC stated they limit what they do online simply because they fear it is going to cost too much.

In comparison, 35% of those low-income Canadians surveyed for PIAC says they can barely afford or cannot afford home internet service.²²⁰ Moreover, when PIAC survey respondents were asked if they were given an additional \$10 per month to spend on their communications bills, 15% stated the would use it to pay for their

²¹⁸ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Table 2.9, <<http://www.crtc.gc.ca/internet2016/report.html>>. Calculation was determined by adding the 20% of urban respondents to the 34% of rural respondents who indicated limiting their use of internet service during the previous 12 months. The survey indicated 71% of respondents were urban and 29% were rural. As a result (71% x 20% = 14.2%) was added to (34% x 29% = 9.86%), and 14.2% + 9.86% = 24.06%.

²¹⁹ Canadian Radio-television and telecommunications Commission, *Let's Talk Broadband Findings Report* (March 18, 2016), Section 2.10 b, <<http://www.crtc.gc.ca/internet2016/report.html>>.

²²⁰ Environics Affordability Survey. Question 8D.

existing home internet plan, while 11% would use the funds to obtain a higher internet speed.²²¹

Figures provided by the CRTC appear to support the sentiment low-income Canadian are struggling to maintain home internet service. In 2011, the fifth of Canadian households with the lowest income spent an average of \$18.45 per month on internet service. By 2014, that figure was \$24.74 – a 34% increase over 3 years.²²²

Overall, according to the CRTC Communications Monitoring Report (CMR), internet service revenues in Canada went up by 8.6% in 2014.²²³ In addition, the average revenue per user (ARPU) for residential high-speed access has increased at an average annual rate of 6.1% since 2010.²²⁴ In absolute terms, residential internet revenue in Canada was \$4.5 billion in 2010, versus \$6.5 billion in 2014 – an increase of 45.4%.²²⁵ In comparison, business internet service revenues increased just 9.8% over the same period.²²⁶ This rate of revenue acceleration makes it clear why some low-income Canadians surveyed indicate they struggle to obtain or maintain residential internet service. It may also be part of the reason for the dramatic description of internet prices by the Chief Content Officer for Netflix in 2013:

"it's almost a human rights violation what they're charging for internet access in Canada."²²⁷

Perhaps it is no surprise only 82% of Canadian households access the internet, even though 2015 data provided by the CRTC indicate 99% of Canadian households have broadband availability.²²⁸ In addition, only 59.7% of Canadian households in the lowest income quintile (lowest 20%) used the internet at home in 2013.²²⁹ Finally,

²²¹ Environics Affordability Survey. Question 20A.

²²² CRTC, *Communications Monitoring Report* (October 2015), p. 15.

²²³ Roseman, E., "Why do phone, internet and tv service prices keep rising? Roseman," (11 January 2016) *Toronto Star*,

<https://www.thestar.com/business/personal_finance/spending_saving/2016/01/11/why-do-phone-internet-and-tv-service-prices-keep-rising-roseman.html>.

²²⁴ CRTC, *Communications Monitoring Report* (October 2015), p. 187.

²²⁵ CRTC, *Communications Monitoring Report* (October 2015), p. 190.

²²⁶ CRTC, *Communications Monitoring Report* (October 2015), p. 190.

²²⁷ Garreffa, A., "Netflix CEO slams Canada's broadband caps," *Tweaktown*, (September 20, 2013), <<http://www.tweaktown.com/news/33035/netflix-s-ceo-slams-canada-s-broadband-caps/index.html>>.

²²⁸ CRTC, *Communications Monitoring Report* (October 2015), p. 23, 187. See also Table 2.0.9 for a breakdown of residential internet subscriptions by downstream speeds per 100 households. The 82% figure used includes those with dial-up access.

²²⁹ CRTC, *Communications Monitoring Report* (October 2015), p. 14, 22. In 2013, the lowest quintile of Canadian households had an average annual income of \$18,582.

even though internet service with a download speed of 5 Mbps or more are accessible by an estimated 95.5% of the population, only 77% of Canadian households subscribe to them.²³⁰ Clearly there is a digital divide based on cost challenging those Canadians wanting to use the internet. Moreover, the evidence suggests current prices are also challenging to a number of Canadians with internet access as well.

Barrier #3 to Affordable Internet Access in Canada: Access

Along with a digital divide based on cost, there exists a technical digital divide, according to a 2011 document from the Library of Parliament.²³¹ The technical digital divide refers to accessibility or the technical ability to have a broadband connection. This phenomenon generally presents itself in Canada as a gap between urban and rural or remote areas.²³² At least one outside observer has characterized Canadians collective access to the internet in this colorful manner:

"The problem in Canada is... they have almost third-world access to the internet."²³³

- Ted Sarandos, Chief Content Officer, Netflix

As noted above, internet service with a download speed of 5 Mbps or more are accessible by an estimated 95.5% of the Canadian population. While broadband internet access is expected in Canadian urban areas, access is not guaranteed in more remote communities.²³⁴ The Canadian Internet Registration Authority (CIRA) has estimated 15% of rural Canadian households do not have the proper infrastructure in place to access high-speed internet, while just 27% of communities are able to connect in Nunavut.²³⁵

²³⁰ CRTC, *Communications Monitoring Report* (October 2015), p. 187.

²³¹ *Library of Parliament*, "Rural Broadband Deployment (In Brief)" (27 June 2011), <<http://www.lop.parl.gc.ca/content/lop/researchpublications/2011-57-e.pdf>>.

²³² *Library of Parliament*, "Rural Broadband Deployment (In Brief)" (27 June 2011), <<http://www.lop.parl.gc.ca/content/lop/researchpublications/2011-57-e.pdf>>.

²³³ Garreffa, A., "Netflix CEO slams Canada's broadband caps," *Tweaktown*, (September 20, 2013), <<http://www.tweaktown.com/news/33035/netflix-s-ceo-slams-canada-s-broadband-caps/index.html>>.

²³⁴ Angus Reid Institute, "Closing the 'digital divide': Most Canadian support CRTC action to provide broadband to all households," (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

²³⁵ Canadian Internet Registration Authority, *The 2014 CIRA Factbook*, <<https://cira.ca/factbook/2014/the-canadian-internet.html#internet-use-in-canada>>. See also, Angus

PIAC, as part of group of organizations called the Affordable Access Coalition (AAC), has stated “in order to enable Canadians to meaningfully participate in this evolved, more intense, and more interactive digital economy, broadband service at a speed of at least 5 Mbps today (based on likely outdated 2013 information) and more likely to be 10 Mbps, must be recognized by the Commission (CRTC) as a “basic telecommunications service”. This service must be accessible and affordable to both urban and rural Canadians.”²³⁶

The AAC reached this conclusion based on the legal test for “basic telecommunication service”, and the “50-80 rule” which considers a telecommunications service as “basic” for the purposes of determining required universal service if 50% of the population subscribes to a service, and 80% of those subscribers do so at given speed. For example, if 50% of Canadian households subscribed to broadband Internet service, and 80% of those subscribing households did so at 5 Mbps, then that is considered, legally, “basic” service. Indeed, in 2013, the 5 Mbps speed appears to have met that test. In 2015 however the AAC believes that “basic” broadband service is closer to 10 Mbps, and expects that “basic” broadband is likely to be 25 Mbps by 2020.²³⁷

In April 2016, the CIRA released a report suggesting rural areas of Canada with internet access are currently receiving service at 75% of the speeds received by their urban counterparts.²³⁸ To reach this conclusion, CIRA’s study reported on 29,451 tests from rural areas and 96,511 from urban centres between May and September 2015.²³⁹ The results are found in Figure 4-5 below:

Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

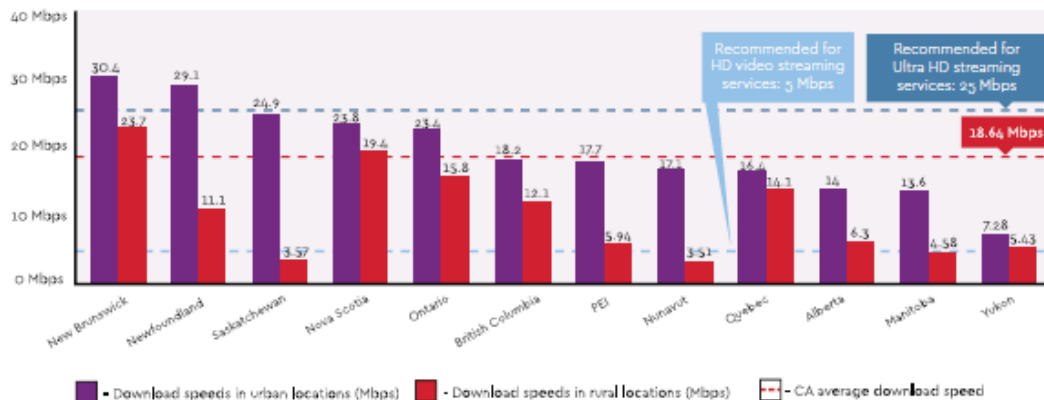
²³⁶ Affordable Access Coalition, *Telecom Notice of Consultation CRTC 2015-134*, para. 49, <<https://services.crtc.gc.ca/Pub/ListeInterventionList/Documents.aspx?ID=224017&en=2015-134&dt=i&lang=e&S=C&PA=t&PT=nc&PST=a>>.

²³⁷ Affordable Access Coalition, *Telecom Notice of Consultation CRTC 2015-134*, p. 68, <<https://services.crtc.gc.ca/Pub/ListeInterventionList/Documents.aspx?ID=224017&en=2015-134&dt=i&lang=e&S=C&PA=t&PT=nc&PST=a>>.

²³⁸ Canadian Internet Registration Authority, *Canada’s Internet Performance: National, Provincial and Municipal Analysis*, (April 2016), p.13. <<https://cira.ca/sites/default/files/public/Canadas-Internet-Performance-Report.pdf>>.

²³⁹ Canadian Internet Registration Authority, *Canada’s Internet Performance: National, Provincial and Municipal Analysis*, (April 2016), pp.3, 14. <<https://cira.ca/sites/default/files/public/Canadas-Internet-Performance-Report.pdf>>.

Figure 4-5. Internet Speeds Found in Canada, by Rural and Urban Areas²⁴⁰



CIRA’s testing found average download speeds of 19.8 Mbps in urban areas, compared to 14.81 Mbps in rural areas. Upload speeds averaged 7.66 Mbps in urban areas, compared to 5.96 Mbps in rural areas.

A 2015 CRTC survey found limiting use of the internet a more common practice among consumers with lower internet speeds, particularly those reporting less than 5 Mbps and those with a monthly data cap of 50 GB or less.²⁴¹ This was also more often the case among survey respondents relying on satellite to provide internet service. Survey respondents with lower speeds, lower data caps and relying on satellite tended to be more dissatisfied with internet service on the basis of reliability as well as speed.²⁴² From this evidence, an argument can be made that some Canadian consumers may not be able to access the internet in the manner they desire due to connection speed or the imposition of a monthly data cap. In some instances, this limitation can be viewed as structural, where consumers literally have few or no other options to access the internet. In other instances, where a monthly cost is associated with a data cap, Canadians face a barrier that appears to be more arbitrary in nature and therefore more easily remedied.

²⁴⁰ Canadian Internet Registration Authority, *Canada’s Internet Performance: National, Provincial and Municipal Analysis*, (April 2016), p.14. <<https://cira.ca/sites/default/files/public/Canadas-Internet-Performance-Report.pdf>>.

²⁴¹ Canadian Radio-television and telecommunications Commission, *Let’s Talk Broadband Findings Report* (March 18, 2016), Section 2.5 a, <<http://www.crtc.gc.ca/internet2016/report.html>>.

²⁴² Canadian Radio-television and telecommunications Commission, *Let’s Talk Broadband Findings Report* (March 18, 2016), Section 2.6 a, <<http://www.crtc.gc.ca/internet2016/report.html>>.

Barrier #4 to Affordable Internet Access in Canada: Capacity

According to the CRTC's latest *Communications Monitoring Report*, Canadians are demanding more bandwidth from broadband service providers. The average monthly amount downloaded by residential subscribers increased 49% between 2013 and 2014 to 66.5 GB per month, and an average of 46% annually over the last 5 years.²⁴³ This led the CRTC to conclude that Canadians are likely using more video content and other high-bandwidth consuming services, while noting uploads have also increased 43% in 2014, reaching 8.6 GB per month.²⁴⁴

The 2015 *Communications Monitoring Report* also revealed a trend when comparing the advertised download speed of internet service packages Canadians were subscribing to between 2010 and 2014. As Figure 3-6 indicates, in 2010, almost 70% of Canadians were subscribing to the internet under a plan advertising download speeds between either 1.5 and 4 Mbps or between 5 and 9 Mbps. By 2014, only 30.6% of Canadian were subscribing to internet plans advertising those speeds. Meanwhile the percentage of subscribers who paid for home internet service under a plan advertising download speeds of over 16 Mbps grew from 2% in 2010 to 41.6% in 2014.

Figure 4-6. Residential Internet service one-month subscriber distribution (%), by advertised download speed²⁴⁵

Advertised download speed	2010	2011	2012	2013	2014
Lite and wideband up to 256 Kbps	0.3	0.4	0.3	0.3	0.2
Wideband 300 to 1400 Kbps	5.8	4.3	2.9	2.7	1.9
Broadband					
1.5 to 4 Mbps	24.2	24.6	18.2	7.3	3.7
5 to 9 Mbps	45.3	45.6	41.3	32.8	26.9
10 to 15 Mbps	22.4	15.6	10.1	25.6	25.6
16 Mbps and higher	2.0	9.5	27.2	31.4	41.6
16 to 49 Mbps	1.8	9.2	23.5	26.3	31.9
50 Mbps and higher	0.2	0.3	3.6	5.0	9.8
Total sample	8,983.1	9,440.3	9,761.1	9,970.1	10,345.1

Source: CRTC data collection

This table indicated that, over time, faster speeds attract more subscriptions. 79.2% of high-speed subscribers take a service that meets the Commission target of 5 Mbps download and 1 Mbps upload, compared to 94.2% that take a service with at least 5 Mbps download and any upload. Eighty-one percent of Canadian households subscribe to some form of high-speed service.

²⁴³ CRTC, *Communications Monitoring Report* (October 2015), p. 188.

²⁴⁴ CRTC, *Communications Monitoring Report* (October 2015), p. 188.

²⁴⁵ CRTC, *Communications Monitoring Report* (October 2015), Table 5.3.10, p. 199.

The Great Repressor – Data Caps and Overage Charges

Canadians capacity to access internet service cannot be discussed without mentioning the great limitation to internet usage posed by the presence of monthly data caps, or usage-based pricing. Usage-based pricing is when consumers pay internet service providers for a specific amount of data they agree to consume (usually on a per month basis) instead of a flat fee for unlimited data. Except for Bell Aliant in Atlantic Canada, all major Canadian internet service providers (ISPs) are now using data caps when billing customers.²⁴⁶

A recent publication released by OpenMedia explains some of the smallest home internet data packages in Canada provide subscribers with 20GB of data per month.²⁴⁷ In comparison, the minimum amount of data capped by major providers in the United States is 150GB — a difference of nearly eight times.²⁴⁸ OpenMedia also provided charts comparing the smallest monthly data caps found across Canadian providers, and the fees associated with exceeding monthly usage.

Figure 4-7. Minimum Data Cap Comparison Wireline Internet²⁴⁹

Company	Package	Data Cap	Region
Bell Aliant	All Packages	Unlimited	NL/NB/PEI/NS
Bell Canada	Fibe 5	20GB	QC
Cogeco	Express 15	70GB	QC
Rogers	Internet 5	25GB	ON/NL/NB
Shaw	Internet 5	65GB	AB/BC/MB/SK/Western ON
Telus	Internet 1	80GB	AB/BC

²⁴⁶ Oboum, E. “Telus bails on unlimited internet, bandwidth plays on for a price,” (22 February 2015) *CBC*, <<http://www.cbc.ca/news/business/telus-bails-on-unlimited-internet-bandwidth-plays-on-for-a-price-1.2965470>>. See also OpenMedia, *Data Caps Summary Report*, (9 June 2016), p. 2 <<https://openmedia.org/sites/default/files/end-data-caps-canada-report.pdf>>.

²⁴⁷ OpenMedia, *Data Caps Summary Report*, (9 June 2016), p. 2

²⁴⁸ OpenMedia, *Data Caps Summary Report*, (9 June 2016), p. 2. See also Danielle Kehl and Patrick Lucey, “Artificial Scarcity: How Data Caps Harm Consumers and Innovation,” *Open Technology Institute*, (June 2015), <https://static.newamerica.org/attachments/3556artificial-scarcity/DataCaps_Layout_Final.a7ef6b9029da4dd_29324757e5710b903.pdf>.

²⁴⁹ OpenMedia, *Data Caps Summary Report*, (9 June 2016), p. 2.

Figure 4-8. Data Cap Overage Charges Comparison Wireline Internet²⁵⁰

Company	Overage Policy
Bell Aliant	No fees, as there are no caps.
Bell	Overage fee is \$3.00/GB to \$4.00/GB, capped at \$100 per month.
Cogeco	For speeds >40 Mbps, overage fee is \$1/GB without a monthly billing limit; For speeds <40 Mbps the overage fee is \$1.50/GB with a \$50 monthly limit. Unlimited data add-on has no overage fees.
Rogers	Overage fee is \$1.50/GB, capped at \$100/month.
Shaw	No overage fees; data caps enforced by suspension of service.
Telus	Overage data sold in "buckets;" First 50GB bucket is \$5, Subsequent 50GB buckets are \$10, up to a monthly maximum of \$45.

As shown in Figure 4-8, each major ISP treats data overage in a different manner. One ISP, Shaw, simply suspends service once the monthly data allotment is reached. Others, such as Bell and Rogers, charge overage fees by the gigabyte (GB) of data used over a subscriber’s monthly allotment. This raises the classic question, what’s in a gigabyte?

According to one CBC reporter, “with one GB of data you can send/receive 105,000 emails, download more than 200 songs, download about 1½ movies or stream about one hour of Netflix.”²⁵¹ However, as pointed out by *The Wall Street Journal* in April 2016, data consumption itself is not easy for people to track.

Just like it is difficult to know how many gallons of water are being used by a shower or dishwasher, it isn’t intuitive or easy to gauge how many gigabytes are being downloaded by different Internet users or devices. Even the same product streamed over different devices can use different amounts of data.

Internet providers can give daily, or even hourly usage to subscribers through online meters, along with alerts when the limit is approached, but they don’t pinpoint the source of the data usage.²⁵²

²⁵⁰ OpenMedia, *Data Caps Summary Report*, (9 June 2016), p. 3.
²⁵¹ Oboum, E. “Telus bails on unlimited internet, bandwidth plays on for a price,” (22 February 2015) *CBC*, <<http://www.cbc.ca/news/business/telus-bails-on-unlimited-internet-bandwidth-plays-on-for-a-price-1.2965470>>.
²⁵² Gryta, T. and S. Ramachandran, “Broadband Data Caps Pressure ‘Cord-Cutters,’” (21 April 2016) *The Wall Street Journal*, <<http://www.wsj.com/articles/broadband-data-caps-pressure-cord-cutters-1461257846>>.

In addition to the challenge of pinpointing the source of the data usage, ISPs in Canada also have a trust challenge regarding data metering. Since there is no third-party such as Measurement Canada routinely measuring whether monthly data usage figures for internet service provided to Canadian subscribers are accurate, Canadian internet users are left in the precarious position of trusting their ISP's to determine if they exceeded their monthly data allotment. This is like trusting the gas station owner to ensure an accurate amount of gas is being pumped into your vehicle without anyone in charge of checking the accuracy of the gas pumps.

In its 2010-2011 annual report, the CCTS stated that some consumers “believed that the tool used by the service provider to capture the amount of data being used was inaccurate”.²⁵³ In one instance, the ISP was unable to show what precisely the consumer had done to exceed the data usage limit under their monthly plan. The CCTS found that data usage during the months in dispute was markedly inconsistent with her regular usage patterns, which prompted the CCTS to state that “despite the existence of third-party data measurement tools, it is challenging for customers to confirm their data usage with precision”.²⁵⁴

This phenomenon was reported by Ellen Roseman in the *Toronto Star* in 2011.²⁵⁵ In one report, Ms. Roseman proposed Measurement Canada, a federal agency that ensures the accuracy of gas and electricity meters, should monitor the meters used by all Internet service providers. This elicited the following comment from Howard Maker, the Commissioner for Complaints for Telecommunication Services:

I don't know much about Measurement Canada, but standardization and transparency in the way usage is calculated would benefit consumers and allow the industry to maintain and regain consumer trust.

²⁵³ CCTS, *CCTS Annual Report 2010-2011* at p. 26.

²⁵⁴ PIAC, *Transparency in Broadband Advertising to Canadian Consumers*, (January 2013), p. 31. See also CCTS, *CCTS Annual Report 2010-2011* at p. 26. There have been reports of ISPs admitting faults with their usage tracking tools for retail customers. See for example, "Bell admits its internet usage meter is faulty" *Digital Home* (February 9, 2011), online: <http://www.digitalhome.ca/2011/02/bell-admits-its-internet-usage-meter-is-faulty/>.

²⁵⁵ Roseman, E. "Roseman: Let's talk about faulty internet meters," (11 February 2011) *Toronto Star*. See also E. Roseman, "Bell admits errors tracking clients' Internet usage," (8 February 2011) *Toronto Star*, <www.thestar.com/business/personal_finance/spending_saving/2011/02/08/bell_admits_errors_tracking_clients_internet_usage.html>.

Perhaps a voluntary industry code that sets out the principles by which usage is measured and explained to customers would be in order.²⁵⁶

The 2015 edition of the CRTC's *Communications Monitoring Report* was relatively silent on the issue of internet data metering. The report noted various ways to monitor data usage, such as usage-tracking tools supplied by service providers or third party applications.²⁵⁷ Meanwhile Canadian consumers, who are largely unaware of the existence of the CCTS when there is a dispute with a service provider, and who know the CRTC is failing to monitor internet usage-tracking, are left to vent their frustrations on various online message boards.²⁵⁸

Rising Prices & Overage Charges = New Infrastructure?

On numerous occasions, Canada's major ISPs will claim revenue generated from price hikes and overage fees are being invested in new infrastructure across Canada and the usage charges will allow them to meet the growing demand for Internet data.²⁵⁹ As mentioned earlier, the CRTC *Communications Monitoring Report* (CMR) noted residential internet revenue in Canada increased 45.4% from 2010 to 2014.²⁶⁰ As a result of this increased revenue, and statements by major ISPs saying additional revenues are justified for infrastructure investment, one would expect a corresponding rise in investment by major ISP's in plant and equipment over the past few years. However, there is evidence this may not be entirely accurate.

²⁵⁶ Roseman, E. "Roseman: Let's talk about faulty internet meters," (11 February 2011) *Toronto Star*.

²⁵⁷ CRTC, *Communications Monitoring Report* (October 2015), Table 5.3.10, p. 205.

²⁵⁸ Examples of online message boards include <http://trueler.com/2012/01/29/rogers-internet-coverage-charges-scam-beware/>, <http://forum.telus.com/t5/Internet-TV-Home-Phone/Home-Internet-Data-Usage-Meter-not-accurate/td-p/58135>, https://www.reddit.com/r/canada/comments/1uobz/60_gigs_of_usage_came_out_of_nowhere_so_i_called/, http://communityforums.rogers.com/t5/forums/forumtopicpage/board-id/Getting_connected/thread-id/14345/page/1,

²⁵⁹ Salerni, N., "Critics Claim Telus is Violating Net Neutrality Principles With new Overage Charges," (21 February 2015) *iPhone in Canada*, <<http://www.iphoneincanada.ca/news/telus-to-start-charging-customers-in-b-c-and-alberta-for-exceeding-monthly-data-limit/>>. See also, *Shaw Communications*, "Internet & TV Rate Changes – Starting August 1, 2015," <<https://www.shaw.ca/Customer-Bulletins/August-2015-Internet-TV-Rate-Changes/>>, Tencer, D., "Shaw's New Pricing Plans Have Internet in an Uproar," (1 January 1, 2015), *Huffington Post*, http://www.huffingtonpost.ca/2015/01/07/shaw-new-internet-prices_n_6430232.html, and CBC News, "Wireless rates rise with hikes in internet, home phone ahead," (19 January 2016), <<http://www.cbc.ca/news/business/telcos-rate-hikes-1.3410425>>.

²⁶⁰ CRTC, *Communications Monitoring Report* (October 2015), p. 190.

The 2015 Communications Monitoring Report displays the following chart outlining the level of investment in plant and facilities from 2010 to 2014. ‘Annual investment in plant and equipment’ refers to the capital expenditures made to ‘replenish’ or upgrade the network of a provider of telecommunications services.²⁶¹

Figure 4-9. Telecommunications investments made in plant and equipment, by type of provider of telecommunications service (\$ billions)²⁶²

		2010	2011	2012	2013	2014	
Wireline	Incumbent TSPs	4.4	4.6	4.7	4.9	4.8	
	<i>Annual growth (%)</i>	5.1	5.4	2.0	4.2	-2.3	
	Alternative service providers	Other facilities-based service providers (including cable-based carriers)	2.1	2.4	2.3	1.9	2.3
		<i>Annual growth (%)</i>	40.2	13.7	-4.6	-17.0	18.7
		Resellers	0.0	0.0	0.0	0.0	0.0
		<i>Annual growth (%)</i>	-35.5	33.6	48.8	1.4	-35.2
		Subtotal	2.2	2.5	2.4	2.0	2.3
		<i>Annual growth (%)</i>	38.7	13.9	-4.0	-16.7	17.6
		Wireline total	6.6	7.1	7.1	6.9	7.1
		<i>Annual growth (%)</i>	14.2	8.2	0.0	-2.8	3.4
	Wireless	1.8	2.5	2.6	2.3	7.5	
	<i>Annual growth (%)</i>	-18.9	35.2	4.9	-11.4	228.8	
	Wireline and wireless total	8.4	9.6	9.7	9.2	14.7	
	<i>Annual growth (%)</i>	4.9	14.1	1.2	-5.1	59.7	

Source: CRTC data collection

While residential internet revenue in Canada increased 45.4% from 2010 to 2014, Figure 4-9 shows that investments made to “to ‘replenish’ or upgrade the network of a provider of telecommunications services” have remained relatively stable during this period, hovering between \$6.6 and \$7.1 billion per year. According to the CRTC, cable-based carriers and other facilities-based service providers spent on average 31 cents from every revenue dollar over the past two years on wireline facilities compared to 32 cents by the incumbent Telecommunication Service Providers.²⁶³ While it is clear ISP’s are investing significant sums into their networks, it is fair to raise the question why prices for residential internet service are continuing to rise when the level of investment to replenish or upgrade the networks used to provide internet service have experienced little increase over the same period.

²⁶¹ CRTC, *Communications Monitoring Report* (October 2015), p. 154.

²⁶² CRTC, *Communications Monitoring Report* (October 2015), p. 155.

²⁶³ CRTC, *Communications Monitoring Report* (October 2015), p. 155.

4.6 Conclusions

The last five decades have seen the introduction and adoption of numerous methods designed to fulfil Canadians' over-arching needs to communicate with each other over distance. International bodies such as the United Nations has made it clear through numerous international agreements and declarations the ability to communicate, regardless of the medium employed, is a fundamental human right worthy of enshrinement. PIAC contends that for a segment of the Canadian population, each communication service we considered, landline telephone, mobile telephone, television and internet service, are considered an essential service.

Those more reliant upon landline telephone service tend to be older, according to evidence collected by PIAC, the CRTC and British telecom regulator Ofcom. Canadians over the age of 35 with low incomes appear more likely to support the view paid television service is important to them, according to survey data. However, there is evidence suggesting low-income Canadians when struggling to pay for their communications services, will cut paid television service before another communications service. Meanwhile a small percentage of low-income Canadians, regardless of age, view over-the-air television as an essential service.

Over a quarter of Canadians surveyed by the CRTC use their mobile phone more than other communications services, while 44% of low-income Canadians surveyed by PIAC consider mobile phone service either important or extremely important. Moreover, survey evidence suggests Canadians' reliance on mobile phone will increase over the next five years. In general, if you are a low-income Canadian, the younger you are, the more likely you will view mobile phone service as important or extremely important.

At the present time, home internet appears to be used more often by Canadians than any other communications service. Among low-income Canadians surveyed, it is cited as important or extremely important more often than other communications services. In fact, only food and housing were cited more often by low-income survey respondents when the importance of home internet service was compared with other common household expenses. Heads of state, communications regulators, and industry leaders regularly use terms such as "necessity", "a basic human right" and "vital" to describe internet access.

Even with all of this public support, Canada remains without a comprehensive plan to ensure broadband access is being extended to all Canadians in timely fashion. The

political rhetoric appears to support the provision of affordable internet to all Canadians. There is further evidence Canadians largely support efforts to close the so-called “digital divide” between high- and low-income Canadians and rural and urban households in Canada.

However, countering this is growing evidence that competition has not been enough to keep the price of broadband access low or to incentivize the provision of broadband service to all Canadians. Survey evidence reveals a number of Canadian households limit their online activities in some way simply in fear of increased costs. That fear is fully justified since CRTC figures indicate that the fifth of Canadian households with the lowest income has seen monthly average cost for internet service rise 34% between 2011 and 2014. Overall, residential internet service revenue in Canada has increased by 45.4% over the same period. This apparently unrelenting cost increase may partially explain why low-income Canadians struggle to retain or obtain residential internet service. It may also assist in explaining why only 59.7% of Canadian households in the lowest income quintile used the internet at home in 2013, even though according to the CRTC the vast majority of Canadian households have broadband availability.

Although broadband internet access may be widely available in Canada, the level of service is largely location-dependent. Recent testing data suggests rural Canadian are receiving internet service at 75% the speed of those received in urban households. Some Canadian consumers may not be able to access the internet in the manner they desire due to connection speed or the imposition of a monthly data cap. In some instances, this limitation may be structural, such as locations where consumers can only obtain internet service via satellite. However, on numerous occasions, it is an arbitrary limitation imposed by internet services providers that strikes fear into the budgets of low-income Canadian households, based on the continued existence of the monthly data cap.

The continued imposition of monthly data caps at current levels shackles internet use for many low-income Canadians. Apparently, the purpose of minimum data cap internet plans by major ISPs in Canada is to ensure customers experience the singular joy data overage fees can bring. Once these Canadians exceed their monthly data allotment, they are either cut-off from internet service completely, are charged for an extra data bucket, or charged by the GB for their data overage.

Only the internet service providers can decide if Canadians have exceeded their monthly internet data allotment. There is no independent party charged with

monitoring whether the ISP's measurement of household internet data is accurate. As a result, Canadian households are left to their own devices when facing off with the ISP regarding data overage charges. For a service (residential internet) that Canadians collectively paid over \$6.5 billion for in 2014, they should demand an organization to take responsibility for ensuring the accuracy of internet data usage. It is perhaps time for the fox to leave the henhouse.

Taken collectively, the evidence provided prompts PIAC to insist broadband service at an adequate speed be recognized by the CRTC and the Canadian telecom industry as a "basic telecommunications service," and be made accessible and affordable to both urban and rural Canadians at all income levels. The lack of a structured plan to ensure affordable broadband access is unfortunate since Canadians clearly enjoy home internet service and employ it to supplant other forms of communications for a suite of tasks. The low-income Canadians who explained the importance of home internet service to the CRTC were clear. When it came the provision of government or financial services, education, employment or simply having a conversation, home internet has encroached or already supplanted traditional methods of service delivery.

5. Survey Results and Discussion

PIAC commissioned Environics Research Group to conduct an online survey during the period of December 10 to 22, 2015 targeting respondents with annual, pre-tax household incomes of \$30,000 or lower. The results reflect data gathered from 752 online low-income respondents from across Canada, excluding the North. They do not reflect a random, representative sample of all Canadians, but reflect responses from a group of low-income Canadians who use the internet.²⁶⁴

PIAC employed this methodology as opposed to a representative telephone survey in an effort to gauge the attitudes of low income Canadians who did use the internet and what they thought about communications services and their ability to afford them. As the sample is drawn from a pool of participants rather than a random telephone sampling, the results cannot be projected on to the general population. However, this decision was felt by the PIAC Team including its methodologist advisor to be the most instructive on questions about the affordability of communications services for low income Canadians, given the cost parameters.

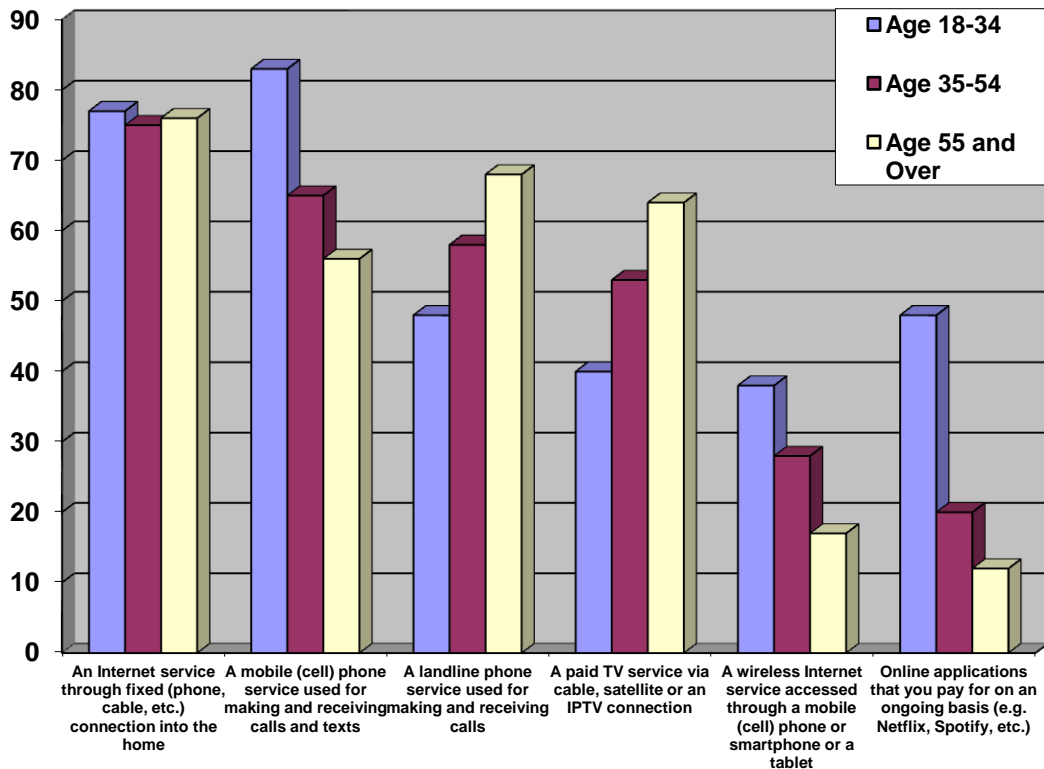
²⁶⁴

Environics Online Methodology:

Environics hosts all online surveys using the Conconfirm Horizons data collection platform. Conconfirm is the de-facto global standard in enterprise feedback management and allows us to leverage a number of key data security and validation features which will ensure we meet the needs of the Agency. Conconfirm is supported by a team of industry leading IT professionals and annually achieves nearly 100% uptime. More information about the features of Conconfirm Horizons can be found at <http://www.conconfirm.com/>. Our online surveys are designed for multiple platforms and to meet Web Content Accessibility Guidelines 2.0. All data are stored on Canadian servers. For this survey we used a blend of the following online panel suppliers, each of which use their panels ONLY for market research purposes. Participants are actively recruited through a variety of methods, including targeted recruitment campaigns using client-provided lists, direct mail, advertising (traditional and online), website intercepts and social media sources (e.g. Facebook). Recruitment is continuous.

5.1 Communications service subscriptions

Figure 5-1. List of Subscribed Communications Services, By Age Group²⁶⁵



The figure above indicates the age of respondents appears to be irrelevant when it comes to the importance of subscribing to home internet access. With little deviation among age groups, 76% of all respondents reported subscribing to internet service at home. This represents the highest overall subscription rate for a communication service among those listed in our survey.

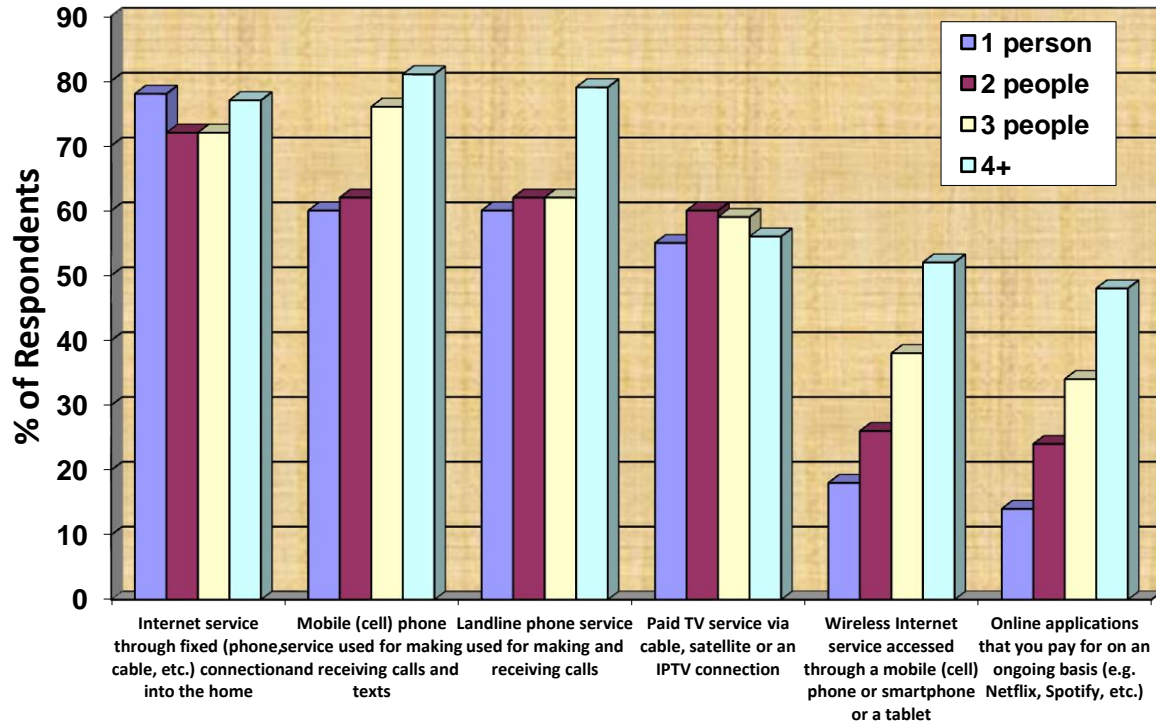
However, for the other communication services listed, age of respondents appears to be a factor when determining subscription rate and use. For instance, a wireless device was in 83% of households for those respondents aged 18 to 34, but only 56% of households when respondents were over the age of 55. A similar trend could be

²⁶⁵ Environics Affordability Survey. Question 1A

found with wireless internet service, where 38% of households had wireless internet service for those respondents aged 18 to 34, compared with only 17% of households where respondents were over the age of 55. This trend line continued when respondents were asked if they paid for an online application such as Netflix or Spotify. Use of paid online applications were reported in 48% of households for those respondents aged 18 to 34, but only 12% of households where respondents were over the age of 55.

According to the survey, older respondents with lower incomes placed greater importance on access to landline phone and paid television service. A landline phone service was used by 68% of respondents over the age of 55, but only 48% of those aged 18 to 34. Meanwhile, 64% of respondents age 55 and over subscribed to a paid television service versus just 40% of respondents age 18 to 34.

Figure 5-2. List of Subscribed Communications Services, By Household Size²⁶⁶



Similar to the age of the low income respondents, the figure above indicates that household size of respondents appears to be irrelevant when it comes to the importance of subscribing to home internet access. Respondents from 78% of households containing a single person had home internet access, compared to 72% of homes with 2 or 3 people, and 77% of households containing 4 or more people. As with the breakdown of the survey data by age groups, greater deviations could be found when other communications services were analyzed by the household size of the respondents.

Regarding the use of some services, three-person households appear to represent a watershed. For instance, respondents who lived in a household with 3 or more people appeared more likely to have a mobile phone, use a wireless internet service, and subscribe to an online application such as Netflix, compared with respondents living in smaller households.

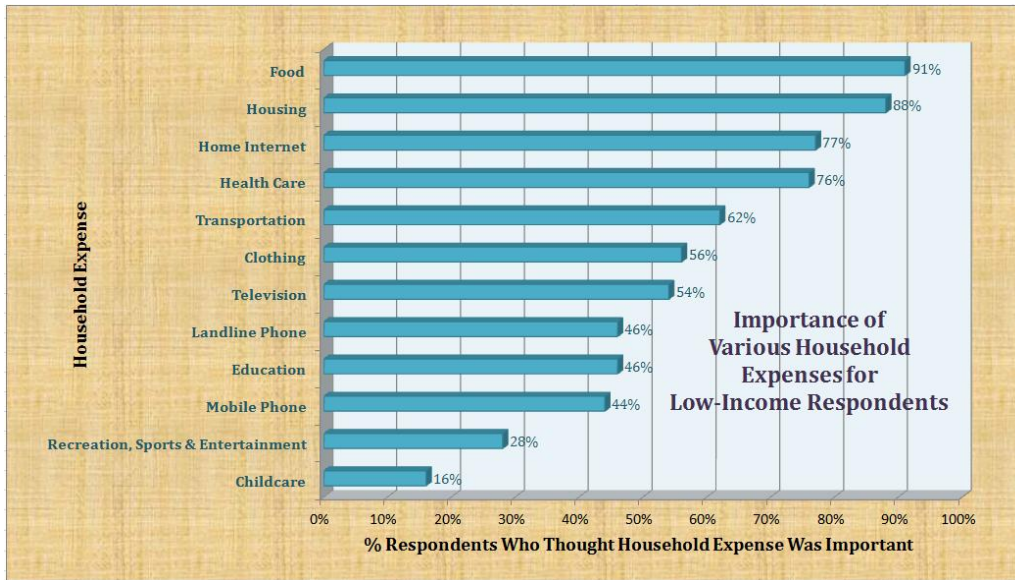
²⁶⁶ Environics Affordability Survey. Question 1A

In some cases, the results for respondents from a household with 4 or more people were even more dramatic. Twice as many respondents from these larger households report using a wireless internet service (52%) and subscribing to an online application (48%) versus survey respondents from 2-person households (26% and 24%, respectively). As a result, the survey indicates certain communication services take on greater importance and apparently become more essential as households grow in size.

5.2 Importance of household expenditures

As part of the survey, PIAC asked low income respondents to gauge the level of importance they would assign to a series of household expenditures. Included within the list were a series of communication services, such as home internet access, television, landline telephone and mobile phone service. PIAC wanted to obtain an indication of the emphasis low-income Canadians placed on communication services in comparison to other household expenditures. Respondents were asked on a scale of one to five how important each of the services listed was to them. Figure 5-3 displays the survey results for this question.

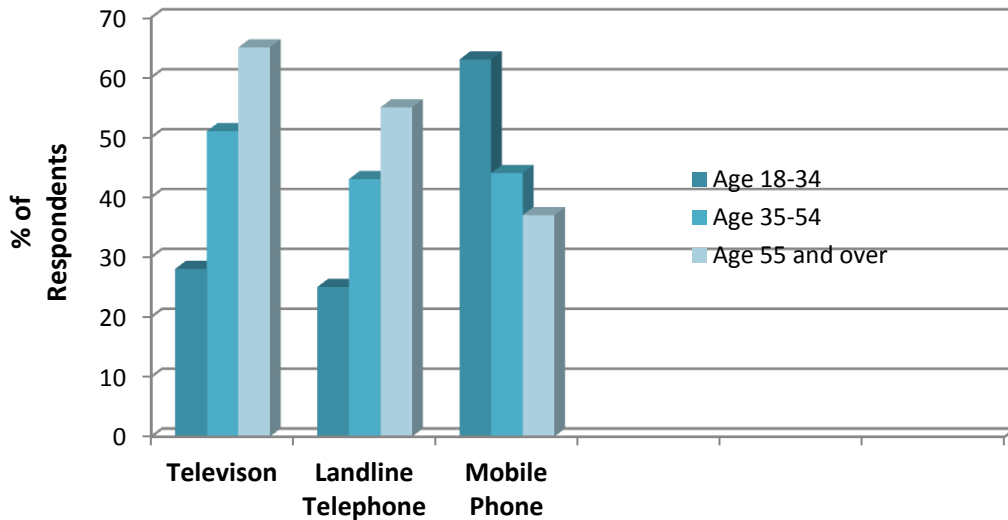
Figure 5-3. Ranked Importance of Various Household Expenses²⁶⁷



The figure indicates that respondents perceive home internet access (77%) as equally important as health care, and more important than all other items listed except food (91%) and housing (88%). Television was viewed as an important service to over half the respondents (54%), just behind clothing. Meanwhile landline phones and mobile phones were cited as almost equally important to each other, with 46% of respondents indicating traditional telephone service is important, compared to 44% who indicated mobile phone service was important.

²⁶⁷ EnviroNics Affordability Survey. Question 3 – Summary Table

Figure 5-4. Ranked Importance of Various Communication Services as Household Expenses, by Age Group²⁶⁸



This figure reveals a majority of lower income survey respondents age 55 and over consider television (65%) and landline telephone service (55%) as important. In comparison, only 28% of respondents age 18 to 34 indicated television as important, while 25% reported that landline telephone service was important. As Figure 5-4 indicates, survey respondents age 18 to 34 tend to view mobile phone service as important (63%), versus 44% for respondents age 35 to 54 and 37% for respondents over the age of 55.

5.3 Importance of access to communication services and devices

PIAC asked survey respondents to indicate how important it is to you personally that you have access to a series of communications services and devices. The respondents were given the following four response options:

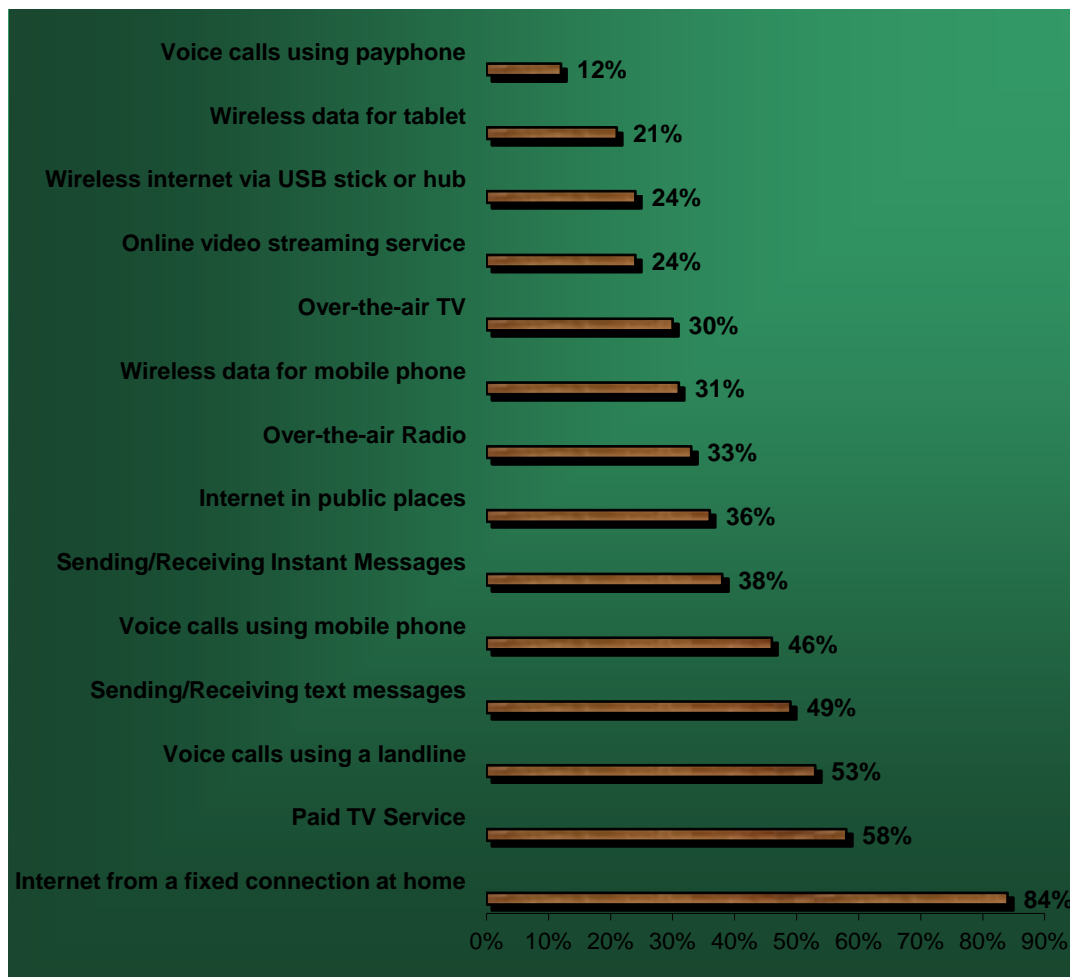
- Essential to me;
- Important to me, but not essential;
- Nice to have but not that important to me, and;

²⁶⁸ Environics Affordability Survey. Question 3 – Summary Table

- Unnecessary to me/I don't need it.

The following figures reveal the results of these questions.

Figure 5-5. Importance of Access to Communication Services²⁶⁹

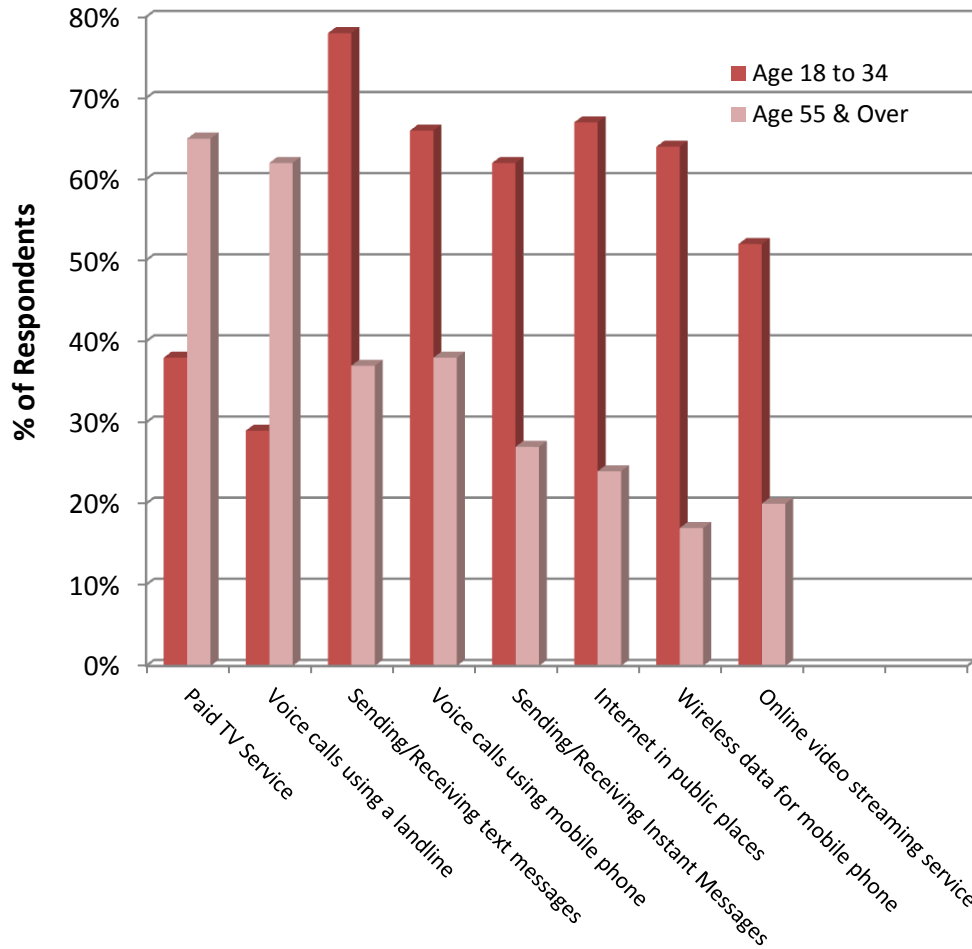


This figure reveals which services were thought of as either "essential to me" or "important to me, but not essential" by lower income survey respondents. By far, the service cited most often as essential or important by low income Canadians in the survey was home internet service, at 84%. The other services cited as essential or important by a majority of the respondents were paid television service at 58% and landline telephone service (53%).

²⁶⁹ Environics Affordability Survey. Question 4 – Summary Table

Unpacking the survey data collected from this question, there appears to be significant differences in opinion depending on the age of a respondent or the size of their household. For instance, for respondents age 18 to 34, paid television service (38%) and using a landline telephone (29%) appear to be less important or essential when compared with texting (78%), voice calls on mobile (66%), instant messaging (62%), using the Internet in public places (67%), accessing wireless data (64%) or video streaming (52%).

Figure 5-6. Importance of Access to Communication Services, By Age Group²⁷⁰

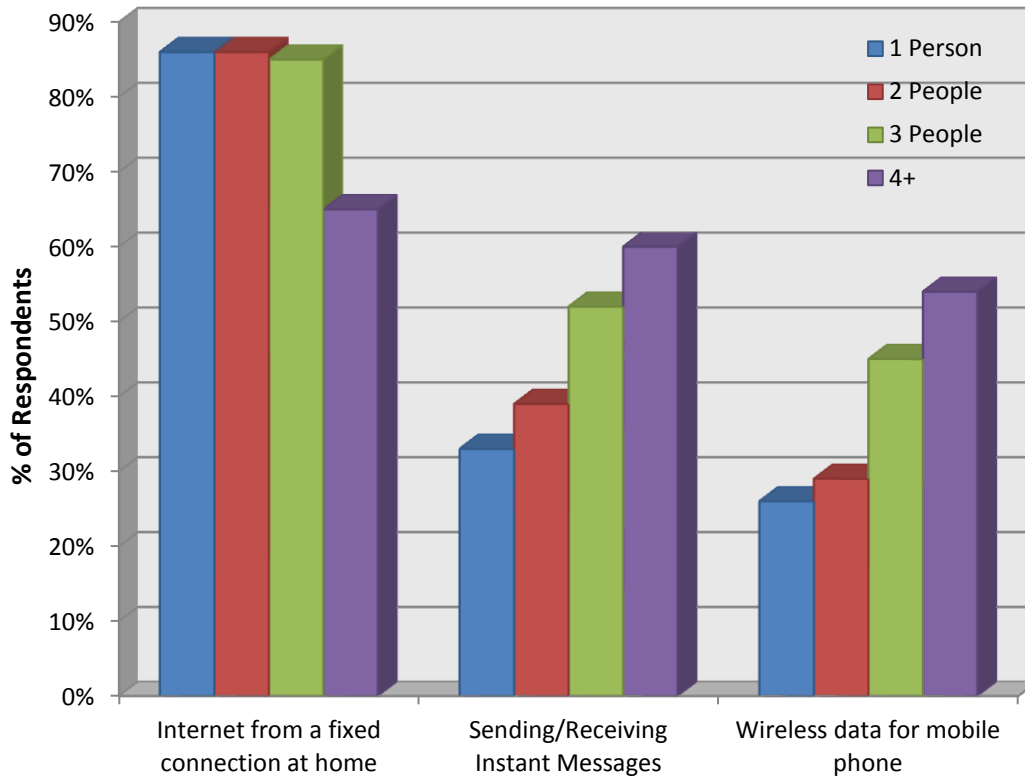


For lower income respondents age 55 and over, paid television service (65%) and using a landline (62%) appear to be more important or essential than texting (37%), voice calls on mobile (38%), instant messaging (27%), using the Internet in public places (24%), accessing wireless data (17%) or video streaming (20%).

When the same data was assessed from a household size perspective, there were a few interesting observations related to the importance of home internet, instant messaging and wireless data.

²⁷⁰ Environics Affordability Survey. Question 4 – Summary Table

Figure 5-7. Importance of Access to Communication Services, By Household Size²⁷¹



It is clear a majority of respondents, regardless of household size, consider home internet access to be important. However the survey results indicate not as many respondents from households of four or more people believe home internet is important (65%) when compared to the rest of the sample. It is possible the comparative decrease in support is due to a structural constraint, such a bandwidth access. With four or more people in a home, it is possible not everyone in a given home could be connected to an online device simultaneously. Moreover, there may be a performance measure related to a families' internet subscription that could be affecting this survey result.

Interestingly, there is a corresponding rise in importance of wireless data among lower income respondents from households of four or more people (54%) when compared to households of one (26%) or two people (29%). It is tempting to speculate this may be partially due to individuals using their mobile device to access

²⁷¹ Environics Affordability Survey. Question 4 – Summary Table

the internet rather than attempting to do so using their home internet subscription. Moreover, the survey results reveal wireless data for a mobile phone as well as sending a receiving instance messages to be of greater importance to households with 3 or more people when compared to smaller households. The increased popularity of instant messaging among larger low income households may be a product of tracking everyone's whereabouts for items such as meal planning and extra-curricular activities.

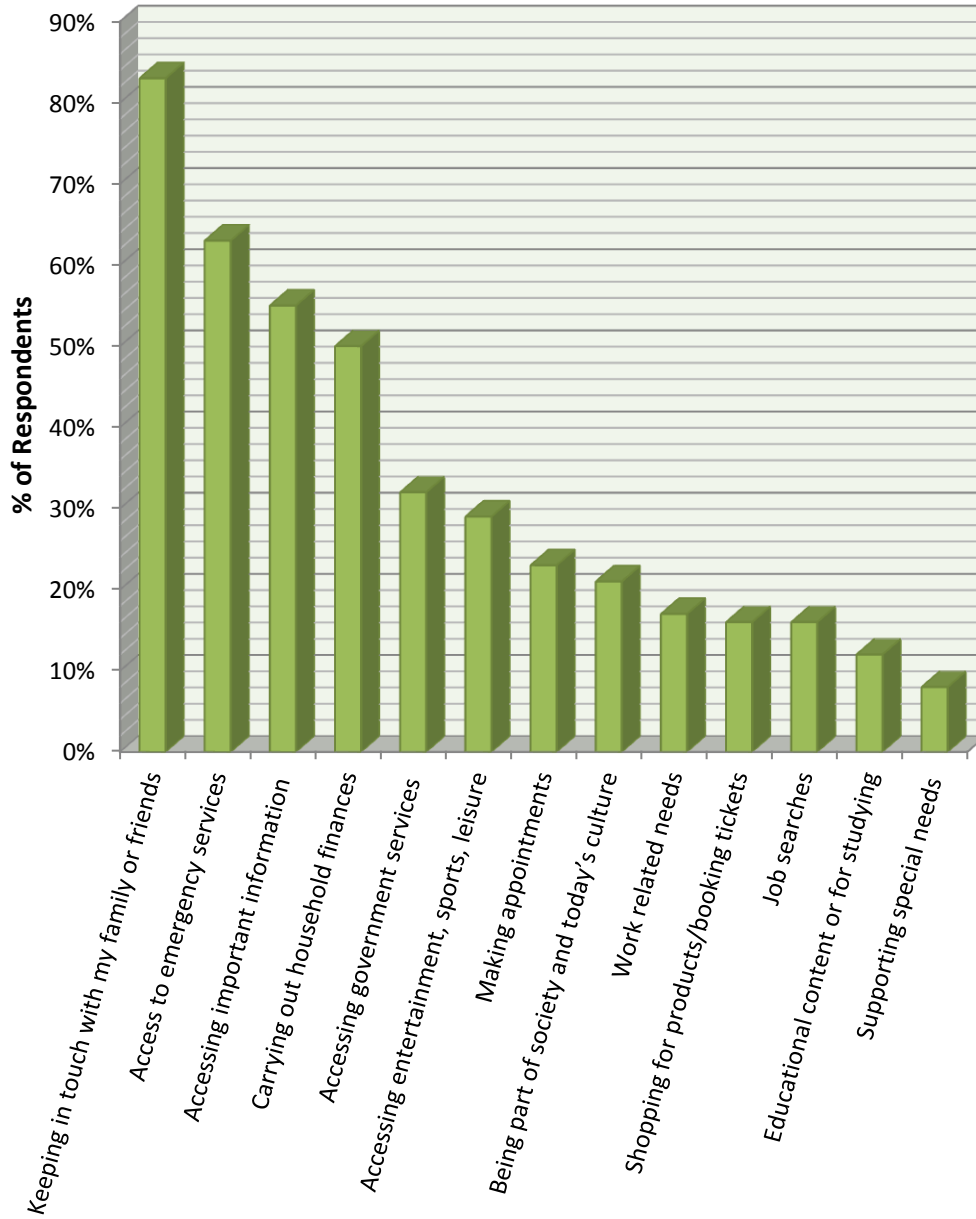
Another potential consideration is that larger low income households view home internet and wireless data access as substitutes and may only be able to afford one or the other. The income and budget constraints associated with a larger low income household may compel these Canadian families to make difficult tradeoffs between communications service options or to recognize that rising Internet costs may be unsustainable for them.

5.4 Reasons for having access to communications services

PIAC asked survey respondents to list "what are the main reasons having access to communications services are important in your day to day life?" The most popular answers, according to the low income Canadians surveyed for PIAC, were to keep in touch with family and friends (83%) followed by access to emergency services (63%). Other reasons provided by a majority of respondents were to access important information such as news or health matters (55%) and carrying out household finances (50%). The remainder of the reasons provided garnered less than 33% support among respondents:

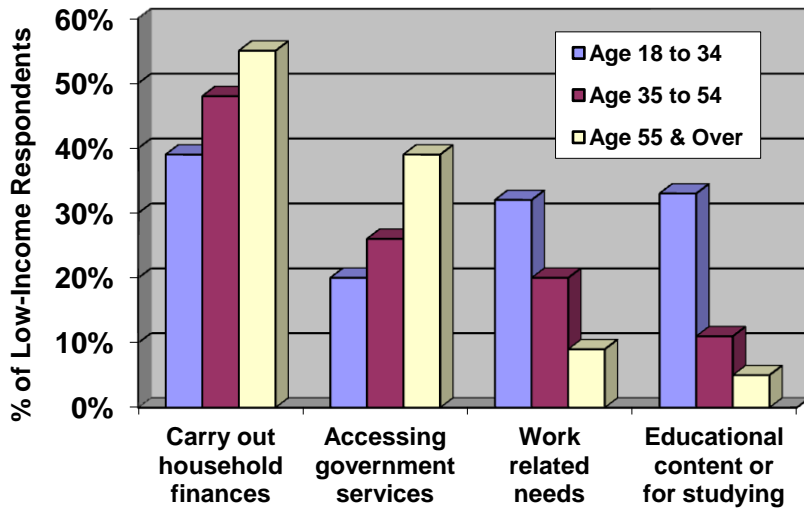
- Accessing government services (e.g. benefits, tax, school applications, driving licences etc) 32%
- Accessing entertainment, sports, my leisure interests etc... 29%
- Making appointments 23%
- Being part of society and today's culture 21%
- Work related needs 17%
- Shopping for products/booking tickets 16%
- Job searches 16%
- Educational content or for studying 12%
- Supporting special needs (e.g. because of a disability) 8%
- Other reason 2%

Figure 5-8. Ranked Importance of Reasons to Access Communication Services²⁷²



²⁷² Environics Affordability Survey. Question 5

Figure 5-9. Ranked Importance of Reasons to Access Communication Services, By Age Group²⁷³



The survey results for this question revealed the age of low income respondents may be a determinant in their reasoning for subscribing to communications services. For instance, respondents aged 55 and over were more likely than respondents from other age groups to cite household finances (55%) and accessing government services (39%) as reasons for why their communications services were important. Conversely, respondents aged 18 to 34 were more likely to cite work related needs (32%) or educational pursuits (33%) compared to the remainder of the survey sample.

5.5 Affordability of communications services

Low-income consumers were asked approximately how much they spent in a typical month in total on all their communications services. According to the CRTC Communications Monitoring Report (CMR) for 2014, the average monthly household spending in Canada on communications services was \$203 in 2014, up from \$191 in 2013.²⁷⁴ The CMR also noted how the price of communications

²⁷³ Environics Affordability Survey. Question 5

²⁷⁴ CRTC Communications Monitoring Report (October 2015), online: CRTC

<<http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2014/cmr.pdf>> at p. 1.

services has outpaced overall consumer prices. From 2013 to 2014, overall consumer prices increased by 2.0% while prices for some communications services increased as follows: 3.4% for home telephone, 2.3% for cable, direct-to-home satellite and Internet Protocol Television (IPTV), 8.0% for Internet and 14.4% for wireless phone service.²⁷⁵

Using CRTC figures, PIAC found that the average Canadian household's spending on communications services has increased an estimated 12.1% between 2011 and 2014.²⁷⁶ According to the Bank of Canada inflation calculator, inflation was 4.5% over that duration.²⁷⁷ Therefore, since the average amount of Canadian consumer spending on communication services is 2.7 times higher than the overall rate of inflation, PIAC decided to compare the monthly communications spending of low income Canadians to the average figures compiled by the CRTC.

²⁷⁵ *Ibid.*, p. 1. Wireless phone figure calculated as follows:

Monthly house spend on wireless 2014: \$79

Monthly house spend on wireless 2013: -\$69

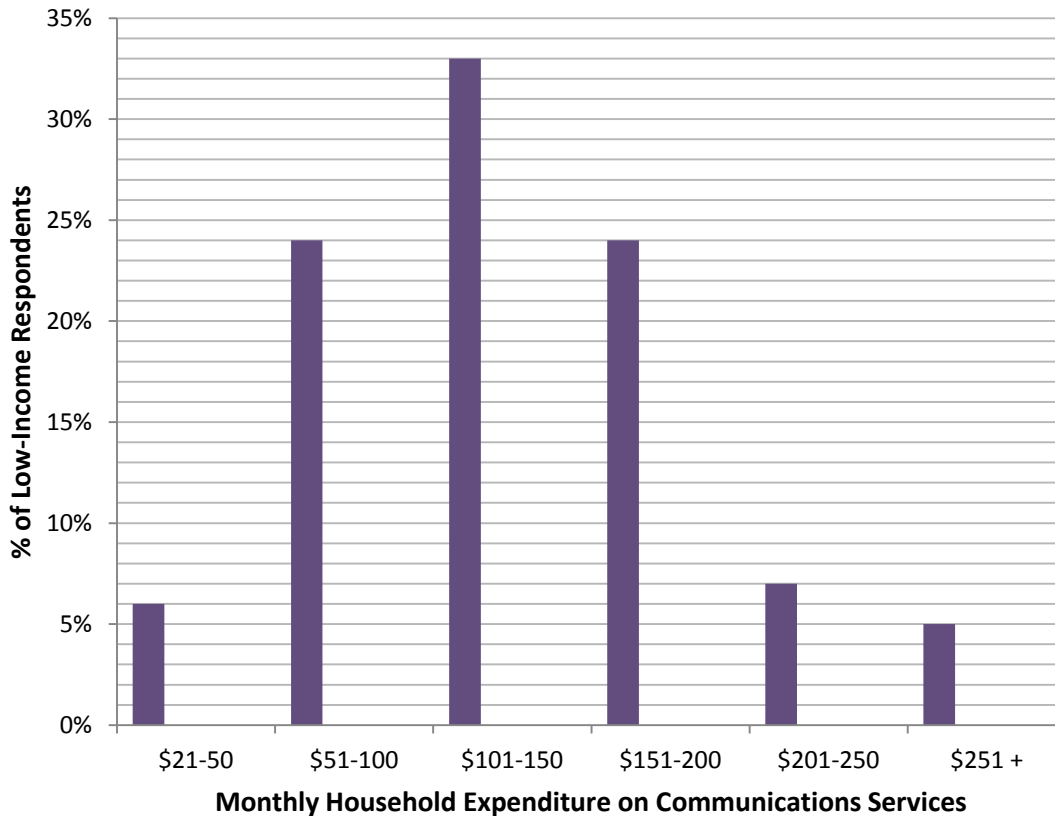
$10/69 = 14.4\%$ increase in monthly household spend for

wireless service.

²⁷⁶ CRTC *Communications Monitoring Report* for 2012, 2013, 2014 and 2015 indicate an increase in average monthly spend by Canadians on communications services has risen from \$181 in 2011 to \$203 in 2014, or 12.1%. CRTC *Communications Monitoring Report* (October 2015), online: CRTC <<http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2015/cmr.pdf>> at p. 1, CRTC *Communications Monitoring Report* (October 2014), online: CRTC <<http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2014/cmr.pdf>> at p. i, and CRTC *Communications Monitoring Report* (September 2013), online: CRTC <<http://www.crtc.gc.ca/eng/publications/reports/PolicyMonitoring/2013/cmr.pdf>> at p. i.

²⁷⁷ Bank of Canada *Inflation Calculator*, Online: <<http://www.bankofcanada.ca/rates/related/inflation-calculator/>>.

Figure 5-10. Monthly House Spend for Communications Services²⁷⁸



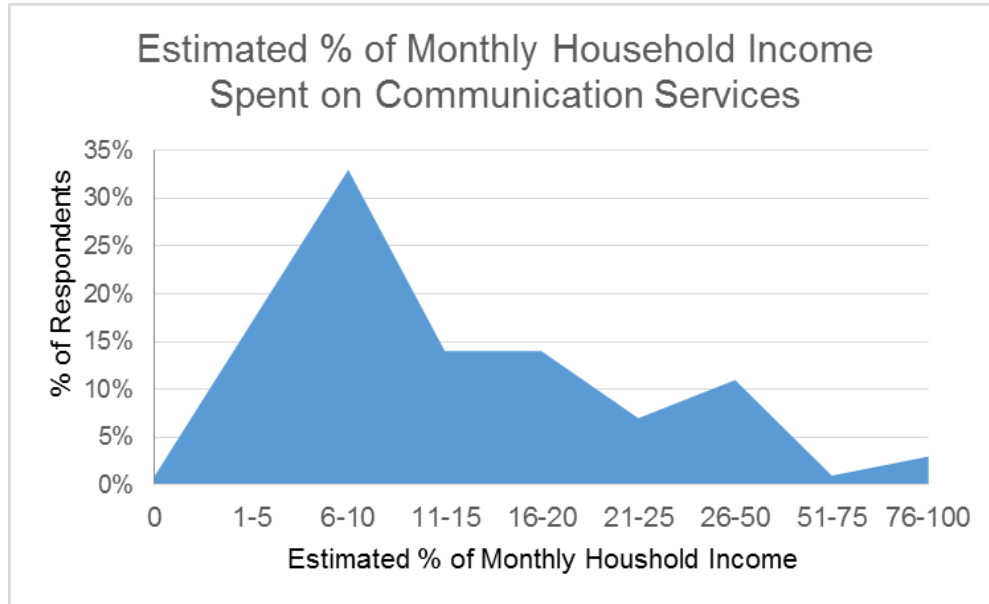
PIAC found the consumers surveyed, who earn \$30,000 or less annually, or an estimated maximum net pay per month of between \$2,080 and \$2,210 (depending where they reside)²⁷⁹ were paying an estimated average of \$145 in a typical month for their communications services. This \$145 equates to between 6.5% and 7% of their monthly net pay. Over one-third of those surveyed (36%) paid an estimated average of over \$150 per month.

In addition to how much, survey respondents were asked what percentage of their household's monthly income they thought was spent in a typical month in total on all their communications services. PIAC asked this question in an effort to see if the reality, revealed in the figure above, match their perceptions, mapped out in the table below.

²⁷⁸ Environics Affordability Survey. Question 6

²⁷⁹ UltimateCalculators.com *Canada Income Tax Calculator*, Online: <http://www.ultimatecalculators.com/canada_tax_calculator.html>.

Figure 5-11. Estimated Percentage of Monthly Household Income Spent on Communication Services²⁸⁰



A plurality of respondents (33%) contend they spent between 6% and 10% of their household’s monthly income in a typical month on their communications services. The dividing line in the response to this question appears to be 10%. Approximately half of the respondents reported that they spent more than 10% of their household’s monthly income in a typical month on their communications services. Meanwhile, over one-third of the respondents (36%) indicated they spent over 16% of their monthly budget on communications services.

In PIAC’s 2015 study on the affordability of communications services, it was suggested that “communications services are “affordable” where, as a guideline, they make up about 4% to 6% of a household’s income.”²⁸¹ When compared to this measure, the results indicate over 45% of survey respondents would not qualify as having affordably priced communications services, based on their perception. Moreover, the monthly average spending for survey respondents found in Figure 5-10 of \$145 for communication services would be considered “unaffordable” using PIAC’s 2015 metric.

²⁸⁰ EnviroNics Affordability Survey. Question 7

²⁸¹ Public Interest Advocacy Centre (PIAC), *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age* (January 2015), p. iv.

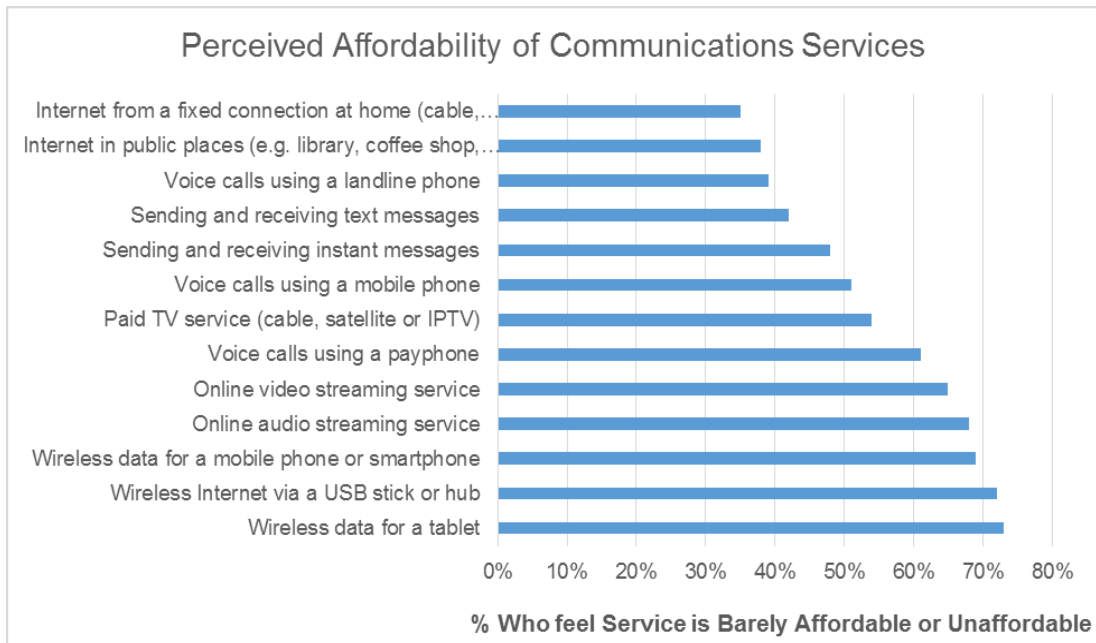
It is also interesting to note that if a survey respondent lived in a household earning an estimated maximum net pay per month of between \$2,080 and \$2,210 (depending where they reside) and spent the average monthly expenditure for communications service cited by the CRTC in 2014 (\$203), that would represent between 9.0 and 9.7% of their net income. Perhaps then, it is not so surprising that survey respondents hovered around the 10% monthly spend figure.

Survey respondents were also asked a series of questions regarding their perception of the affordability of a number of communications services available to them in Canada. Respondents were asked “how affordable are each of the following communications services for you personally,” and provided the following response options:

- Perfectly affordable/I have no problems at all affording this
- Somewhat affordable
- Barely affordable
- Totally unaffordable/I cannot afford this

Interestingly, 35% or more of those surveyed felt that any communication service PIAC listed was either barely affordable or unaffordable. Moreover, the majority of respondents (54%) feel their subscription TV service was either barely affordable or unaffordable. However, the highest figures were for wireless data. Over two-thirds of respondents (69%) felt wireless data was either barely affordable or unaffordable, especially for a tablet (73%).

Figure 5-12. Perceived Affordability of Communications Services²⁸²



In fact, the chart above reveals that more than half of those low-income Canadians surveyed perceive the following services to be barely affordable or unaffordable:

- Wireless data for a tablet (73%)
- Wireless Internet via a USB stick or hub (72%)
- Wireless data for a mobile phone or smartphone (69%)
- Online audio streaming service (68%)
- Online video streaming service (65%)
- Voice calls using a payphone (61%)
- Paid TV service (cable, satellite or IPTV) (54%)
- Voice calls using a mobile phone (51%)

This is startling evidence of a potentially growing digital divide in Canada. The proportion of the Canadian population represented by this survey can be approximated due to the proximity of annual, *pre-tax* household incomes of \$30,000 or lower to the after-tax low income measure (LIM-AT) used by Statistics Canada, which was an *after-tax* figure of \$26,750 in 2013. The concept underlying the LIM-

²⁸² Environics Affordability Survey. Question 8

AT is that all persons in a household have low income if their household income is less than half of the median income of all households.²⁸³ According to the LIM-AT, 4.6 million people, or 13.5% of the population, lived in low income circumstances in 2013.²⁸⁴ Since the *after-tax* income of Canadian economic families and persons not in an economic family was \$53,500 in 2013, half of the median was \$26,750.²⁸⁵

Thus, if over half of those surveyed felt the 8 communications services listed above were barely affordable or unaffordable now, what happens in five years if the pace of communication expenses in Canada continues to grow at over twice the rate of inflation? Recall in Figure 6-12 above, at least 35% of those surveyed felt that any communication service PIAC listed was either barely affordable or unaffordable. This potentially represents hundreds of thousands of Canadians.

Interestingly, for a number of the services, there was an age-based disparity in the responses. For instance, 45% of respondents age 18 to 34 believe wireless data is either barely affordable or unaffordable, compared to 78% of respondents age 55 and over.²⁸⁶

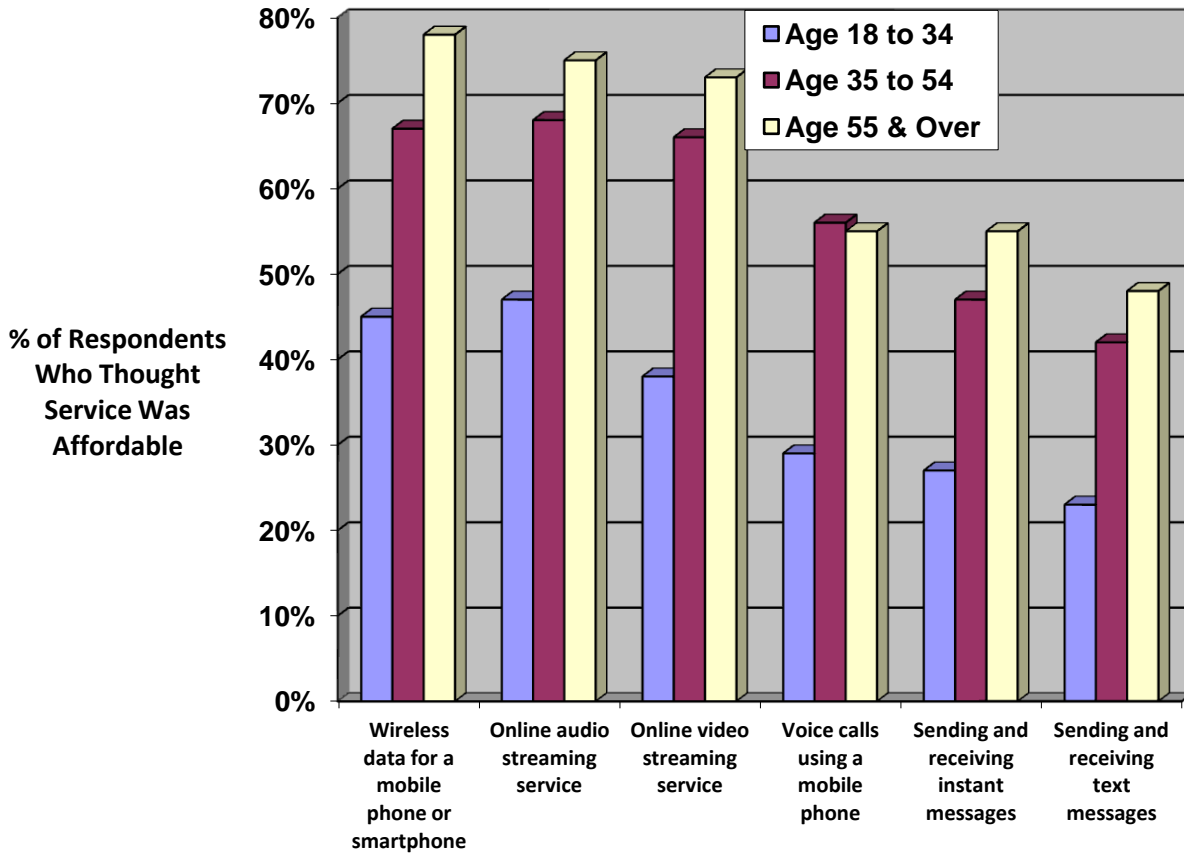
²⁸³ Statistics Canada “Income of Canadians, 2000-2013,” *The Daily* (December 17, 2015). Online: <<http://www.statcan.gc.ca/daily-quotidien/151217/dq151217c-eng.htm>>.

²⁸⁴ *Ibid.*

²⁸⁵ *Ibid.*

²⁸⁶ Environics Affordability Survey. Question 8

Figure 5-13. Perceived Affordability of Communications Services, by Age Group²⁸⁷



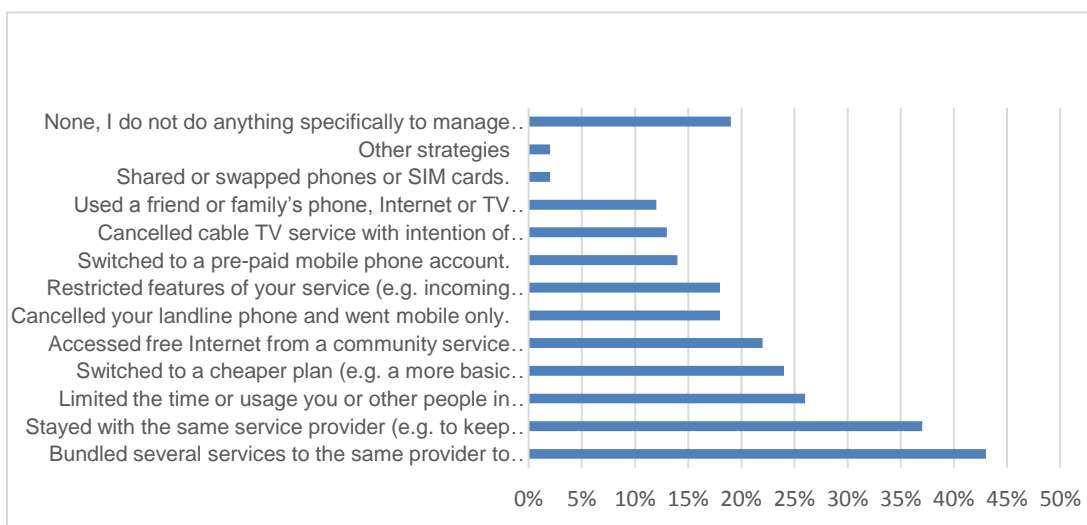
Similar findings were revealed regarding the perceived cost of streaming services. To a lesser extent, this trend also applied to wireless voice calls, as well as the sending and receiving of text or instant messages.

²⁸⁷ Environics Affordability Survey. Question 8

5.6 Strategies to manage spending on communications services

Survey respondents were asked a series of questions to determine what tactics they have employed in an effort to manage their spending on communication services. The results in the table below show the most popular tactic among those presented was the bundling of several services with the same provider in an effort to obtain a discount (43%).²⁸⁸

Figure 5-14. Strategies to Manage Spending on Communications Services²⁸⁹



Only one other tactic was cited by more than one-third of respondents, and that was staying with the same service provider in order to maintain a discount or other consideration (37%). There may be several reasons for this, including consumer inertia, search and switching time and costs, and challenges comparing communications prices and offerings. At times, these factors may be amplified for low-income consumers with less experience and less time.

A number of the tactics listed were employed by between 18% and 26% of low income Canadians surveyed, including doing nothing to manage communications spending:

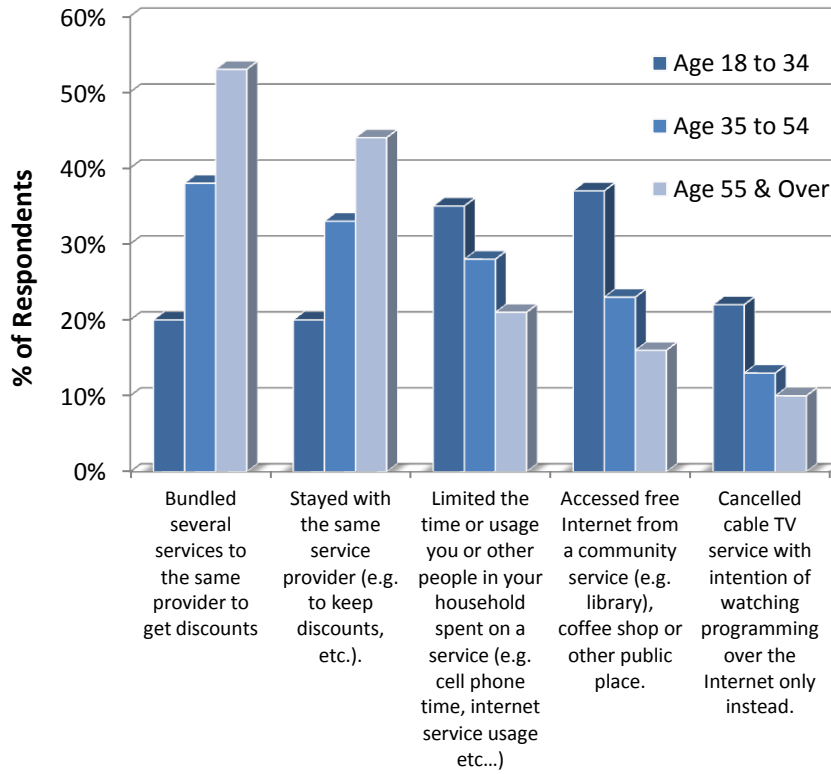
²⁸⁸ Environics Affordability Survey. Question 9

²⁸⁹ Environics Affordability Survey. Question 9

Tactic Employed	% of Survey Respondents
Limited the time or usage you or other people in your household spent on a service (e.g. cell phone time, internet service usage etc...)	26%
Switched to a cheaper plan (e.g. a more basic cable package)	24%
Accessed free Internet from a community service (e.g. library), coffee shop or other public place.	22%
Cancelled your landline phone and went mobile only.	18%
Restricted features of your service (e.g. incoming calls only, not downloading video content, parent-locking the TV to prevent ordering pay per view programs etc...).	18%
None, I do not do anything specifically to manage my communications spending	19%

The survey results indicate that occasionally, the age of the respondent has an impact on their preferred communications expense management tactic. Those age 55 and over were more likely to subscribe to a bundle of services with a single provider or stayed with the same service provider in order to maintain a discount or other consideration than other respondents. In contrast, respondents age 18 to 34 were more inclined to limit their time or usage on a service, access free internet in a public space or “cut the cord” by cancelling subscription television service.

Figure 5-15. Strategies to Manage Spending on Communications Services, by Age Group



5.7 Paying the bills: How have low-income consumers fared in the past year?

Survey respondents were asked a series of questions relating to the payment of their communication services bill over the past year. For each service, low income consumers were provided a series of response options to the following question:

“In the last year, have any of these things happened to you as a result of difficulties in paying for each of the following communications services...”

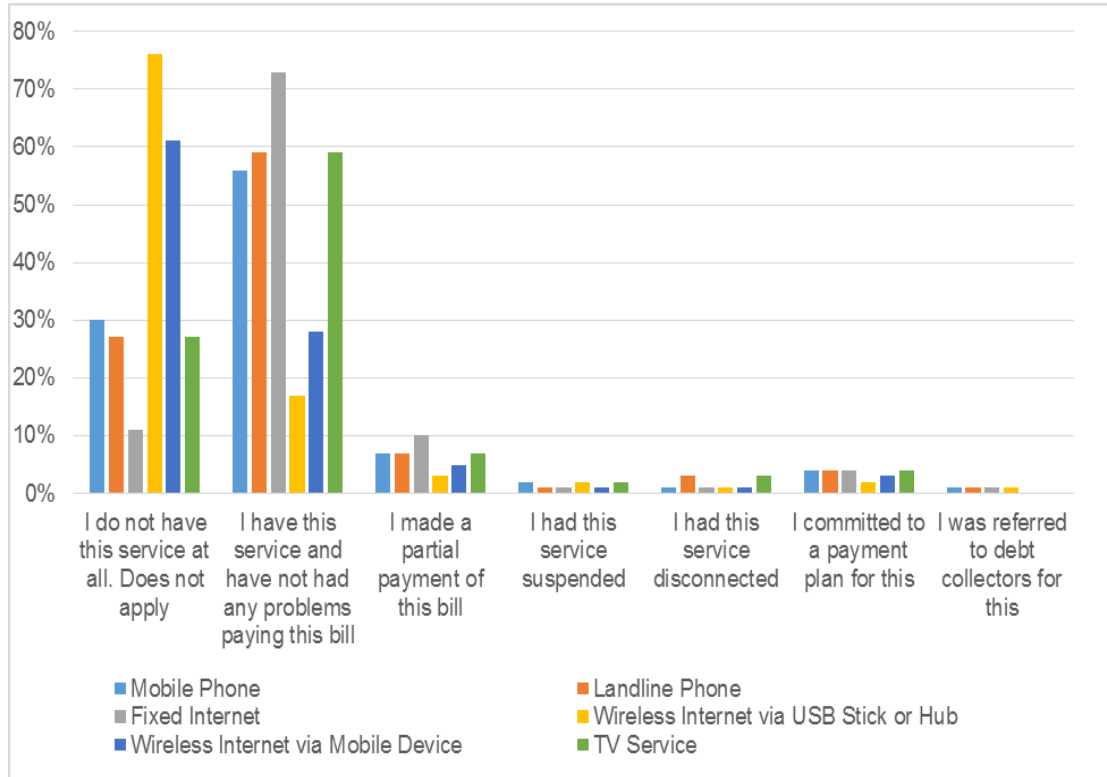
The response options were as follows:

- I do not have this service at all. Does not apply
- I have this service and have not had any problems paying this bill
- I made a partial payment of this bill
- I had this service suspended
- I had this service disconnected
- I committed to a payment plan for this
- I was referred to debt collectors for this

As the figure below suggests, over half of respondents believed they had no problem paying their bill for the following services in the past year:

- Fixed Internet (73%)
- Landline Phone (59%)
- TV Service (59%)
- Mobile Phone (56%)

Figure 5-16. Actions Resulting from Difficulties Paying for Communication Service in the Past Year²⁹⁰



One would suspect that if over 35% of consumers surveyed felt any communication service PIAC listed was either barely affordable or unaffordable, than a considerable number of respondents would not have some communications services at all. Therefore, the “I do not have this service at all. Does not apply” should reflect this sentiment. The survey results indicate a majority of respondents did not have wireless internet, either on a mobile device (61%), or through a USB stick or hub (76%). Figures for the other services were as follows:

- Fixed Internet (11%)
- Landline Phone (27%)
- TV Service (27%)
- Mobile Phone (30%)

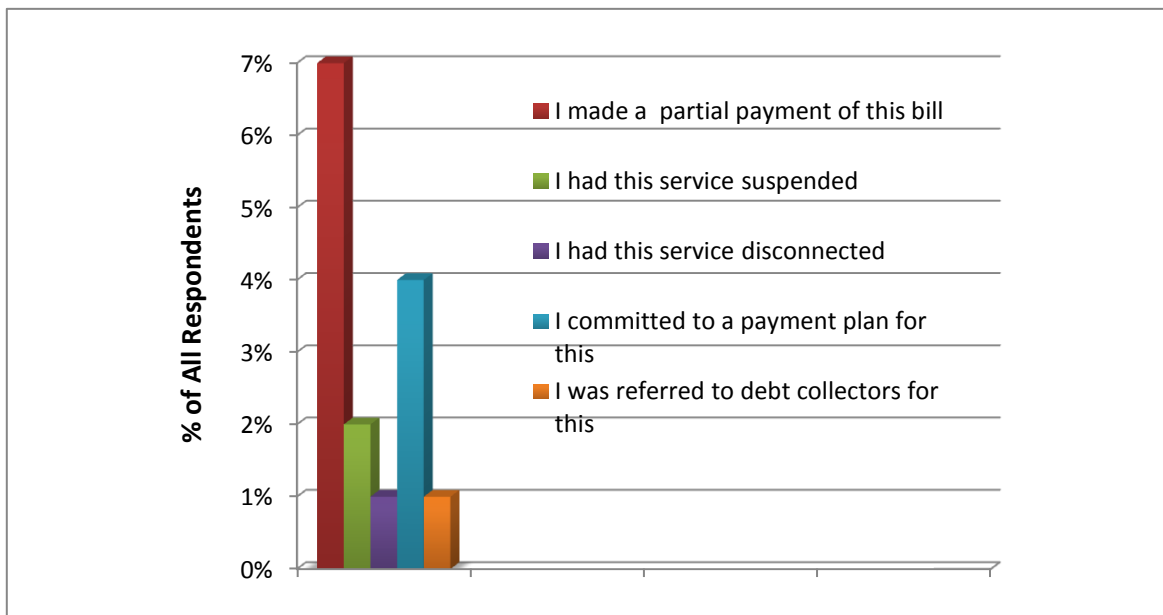
²⁹⁰ Envionics Affordability Survey. Questions 10A to 10F

The difficulty faced with interpreting the results of this question is the notion that some of these survey respondents may not be able to afford a communications service. Others, however, may have chosen not to subscribe to such a service for reasons other than cost.

That being said, it is interesting to look at each of the services individually to get an indication of what portion of those low-income consumers surveyed struggled to pay their communications bills over the past year. The authors contend that when a consumer was referred to a debt collection agency, committed to a payment plan, had service disconnected or suspended, or they were compelled to make a partial payment of a communication service bill, they were seriously struggling.

For instance, 70% of those surveyed had mobile phone service. However, 15% of those individuals apparently struggled to pay for their mobile service over the past year. As a result, it can be contended that 21% of those surveyed having mobile phone service struggled to pay their bill over the past year.

Figure 5-17. Actions Resulting from Difficulties Paying for Mobile Phone Service in the Past Year²⁹¹



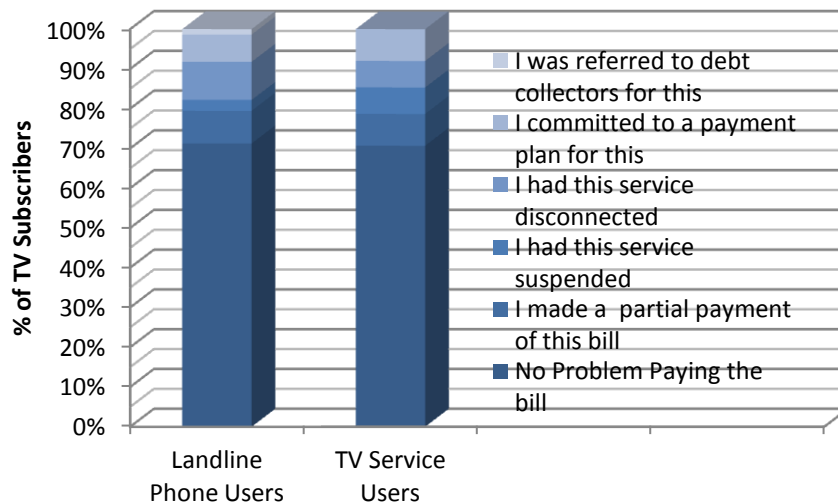
²⁹¹ Environics Affordability Survey. Question 10A

Landline Phone and TV Service Users

A similar picture emerged for landline phone users and TV users. While 73% of those surveyed had landline phone service, 16% of those individuals struggled to pay their bill over the past year. The figures were identical for TV service users.²⁹² Again, this represents over 20% (21.9%) of those surveyed who had landline service or a TV service over the past year.²⁹³

A second look at the survey results for landline users reveals an interesting trend among respondents age 18 to 34. While half report not having this service at all, of those who do subscribe to landline service, 21% noted experiencing some kind of struggle paying their bill over the past bill, as indicated by the figure below. This meant that 40% of landline users between the age or 18 and 34 struggled to pay over the past year. As the figure below notes, TV service users 18 to 34 years of age produced similar survey results. Over 40% indicated some challenges paying for their TV service over the past year.²⁹⁴

Figure 5-18. Actions Resulting from Difficulties Paying for Landline Phone Service in the Past Year, Respondents Age 18 to 34²⁹⁵



²⁹² Environics Affordability Survey. Questions 10B and 10F

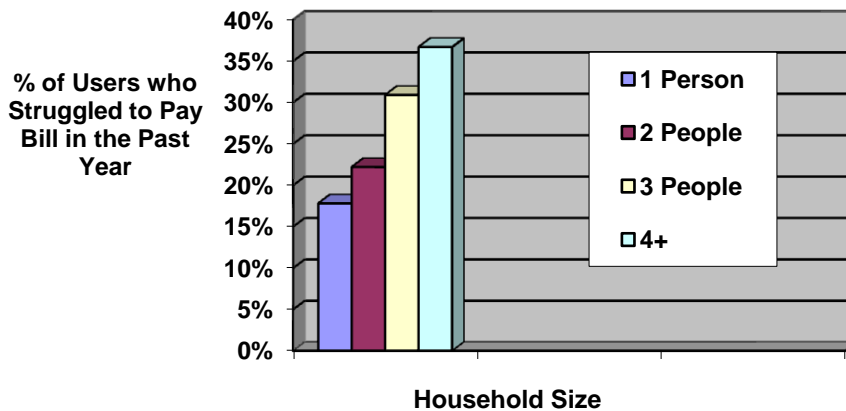
²⁹³ Environics Affordability Survey. Questions 10B and 10F

²⁹⁴ Environics Affordability Survey. Question 10F

²⁹⁵ Environics Affordability Survey. Questions 10B and 10F

For TV users, the survey results indicate as household size grows, so does the difficulty to pay. For instance, 17.8% of TV users from a one person household encountered difficulty paying for TV service over the past year.²⁹⁶ For a household with 4 or more people, 36.7% of TV users encountered difficulty during the same period.²⁹⁷

Figure 5-19. Percentage of TV Users Who Struggled to Pay Bill Over the Past Year, By Household Size



Fixed Internet Users

Fixed internet users followed the same trend as mobile phone users, TV subscribers and landline users. Out of 89% of respondents who had home internet service, 17% indicated they struggled to pay their bill at some point over the past year. This equates to 19% of low income home internet users surveyed.

Wireless Internet Users

For users of wireless internet, either through a mobile device such as a smartphone or a tablet, or through a USB stick, the survey revealed the struggle to pay was greater. For instance, out of the 39% of respondents who indicated they subscribed to wireless internet through a mobile device, 10% struggled to pay their bill over the

²⁹⁶ Envionics Affordability Survey. Question 10F

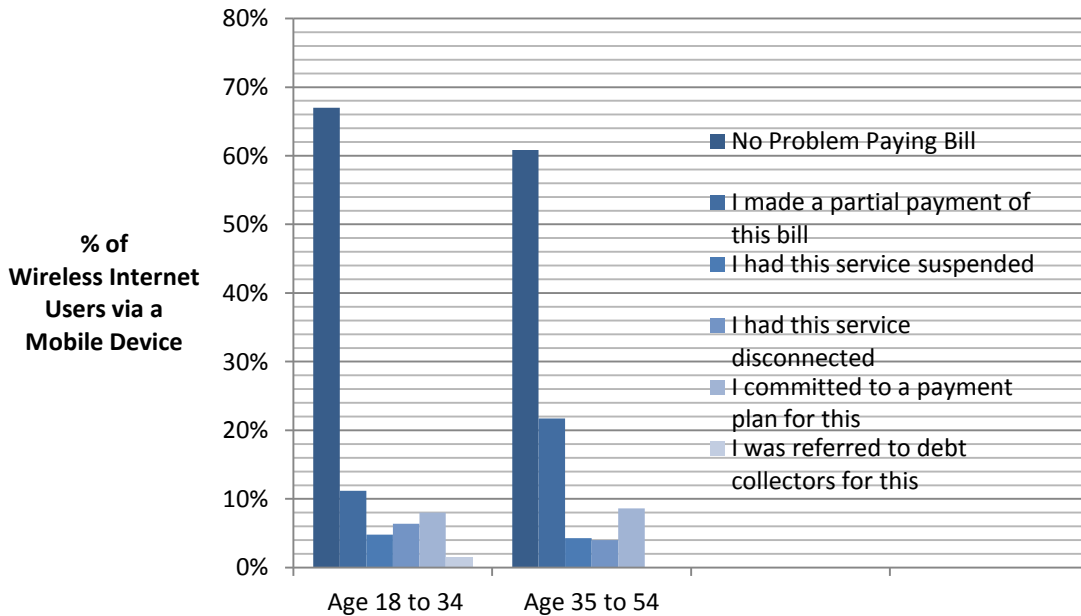
²⁹⁷ Envionics Affordability Survey. Question 10F

past year.²⁹⁸ Therefore a quarter of low income Canadians surveyed having wireless internet through a mobile device struggled to pay their bill last year.

However, if you are under the age of 55 or have a full time job, the chance of you struggling to pay your wireless internet through a mobile device over the past year appears to increase significantly. According to the survey results, 27% of respondents who were employed full time indicated they struggled to pay for their wireless internet on a mobile device last year.²⁹⁹ This represents over 40% of fully employed low income subscribers who were surveyed.

Moreover, as the figure below illustrates, over 30% of wireless internet users surveyed who were 18 to 34 years of age struggled to pay their bill over the past year. That figure was 39% for users of wireless internet from a mobile device if those age 35 to 54.³⁰⁰

Figure 5-20. Actions Resulting from Difficulties Paying for Wireless Internet from a Mobile Device in the Past Year, Respondents Aged 18 to 55³⁰¹



²⁹⁸ Environics Affordability Survey. Question 10E

²⁹⁹ Environics Affordability Survey. Question 10E

³⁰⁰ Environics Affordability Survey. Question 10E

³⁰¹ Environics Affordability Survey. Question 10E

While only 25% of those surveyed had internet service through a USB stick or hub, 8% of respondents struggled to pay their bill last year, or 32% of low income subscribers.³⁰² It appears those low income Canadians who choose to subscribe to either of these services have greater difficulty paying the bill, in comparison to the other services listed in the survey.

Overall, among low income consumers surveyed, if you choose to subscribe to a communications service, there appears to be at least a one in five chance you will struggle to pay your bill. Recalling earlier CRTC figures estimating the average Canadian household's spending on communications services has increased an estimated 12.1% between 2011 and 2014, it will be interesting to observe how many low income Canadians will struggle and will face difficult tradeoffs in the future because of further increases in prices for communications services.

5.8 Approximate total debt for communications bills

Low income consumers were asked, "Thinking about any and all communications-related bills you had problems with in the past year, what was the approximate total debt?" Almost one-quarter (24%) of respondents indicated they had encountered a communications-related debt in the previous year.³⁰³ Of those, 42% noted a total debt of over \$250.³⁰⁴ This represents about 10% of all survey respondents. Moreover, 21% had a total debt over \$500.³⁰⁵ This represents about 5% of all survey respondents.

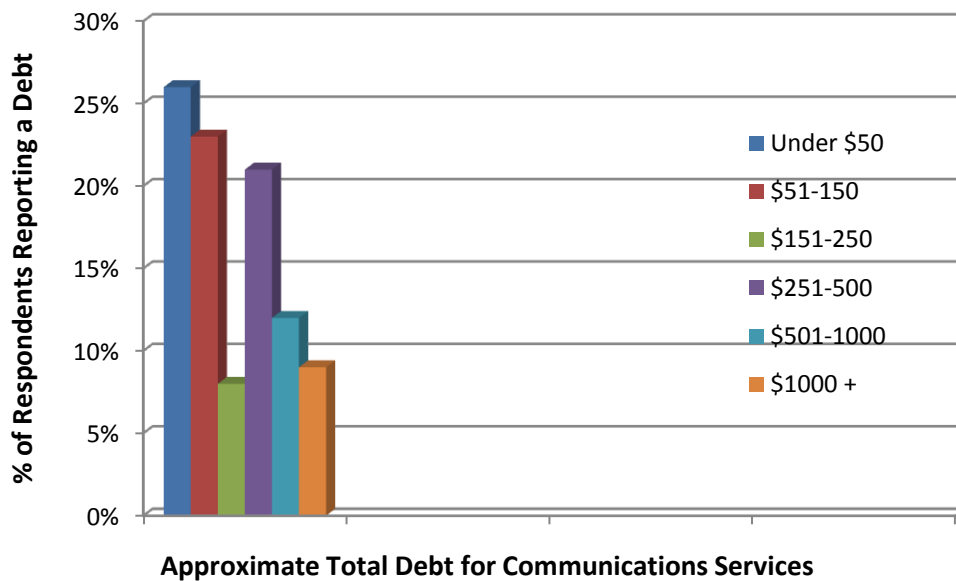
³⁰² Environics Affordability Survey. Question 10D

³⁰³ Environics Affordability Survey. Question 11

³⁰⁴ Environics Affordability Survey. Question 11

³⁰⁵ Environics Affordability Survey. Question 11

Figure 5-21. Approximate Total Debt for Communications Bills, Among Respondents Reporting a Debt³⁰⁶



Even though the sample size is extremely small, PIAC noted those respondents who were unemployed reported a disproportional level of difficulty paying their communications-related bills, with 65% reporting debt of \$250 or more.³⁰⁷

PIAC also inquired whether those respondents who experienced difficulties in paying for communications services received credit counseling or budgeting advice as a result. Only 14% of those respondents indicated they received this advice.³⁰⁸ Of interest, 23% of men and only 9% of women surveyed who had difficulty paying a communications-related bill received credit counseling or budgeting advice.³⁰⁹

Survey respondents who struggled with their communication services bills were also asked whether they had any other debt or defaults or missed payments for other goods and services that were in addition to their communications-related debts they had in the past year. About four in ten respondents (41%) who had a problem paying

³⁰⁶ Environics Affordability Survey. Question 11

³⁰⁷ Environics Affordability Survey. Question 11

³⁰⁸ Environics Affordability Survey. Question 12

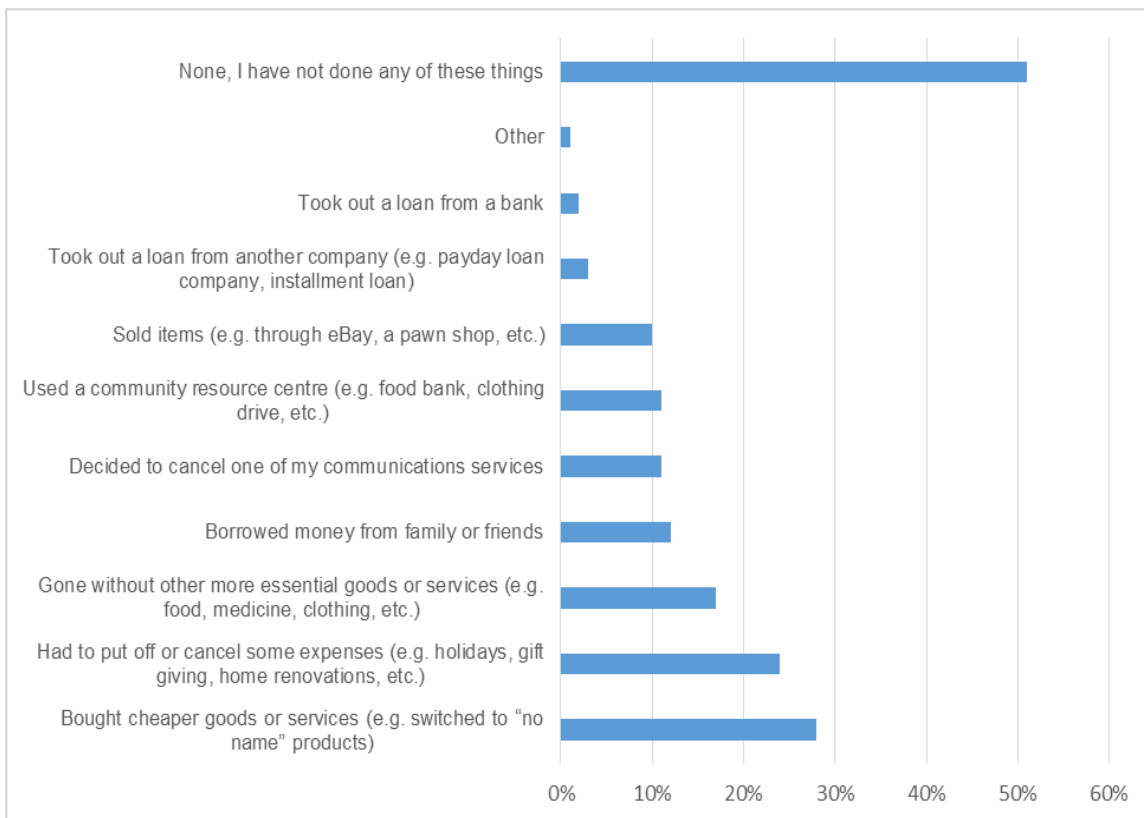
³⁰⁹ Environics Affordability Survey. Question 12

communication-related bills at some point in the previous year also experienced difficulty paying other bills.³¹⁰ Specifically, 19% reported issues paying energy bills, while 15% had issues paying credit card/store card balances.³¹¹

5.9 Trade-offs in order to pay communications bills

Low-income consumers regularly have to make choices with their fixed income in order to help ease the pressure of paying for their communications bills. Almost half (49%) of respondents indicated they had undertaken at least one of the actions listed in the table below in response to paying their communication services bills in the previous year.³¹²

Figure 5-22. Trade-offs to Pay Communications Bills³¹³



³¹⁰ Environics Affordability Survey. Question 13

³¹¹ Environics Affordability Survey. Question 13

³¹² Environics Affordability Survey. Question 14

³¹³ Environics Affordability Survey. Question 14

Following doing nothing (51%), buying cheaper goods (28%) and holding off on certain expenses (24%) topped the list. Interestingly, 17% indicate they went without other essential goods, such as food, medicine or clothing, while 11% cancelled a communications service.

Of those respondents who decided to cancel a communications service subscription, 51% cancelled their paid television service.³¹⁴

- 44% cancelled landline phone service
- 21% cancelled wireless phone
- 14% cancelled home internet³¹⁵

5.10 Other tactics to control cost perceptions of communications bills

In an effort to gain a greater understanding of consumer approaches to controlling costs associated with communications services, survey respondents were presented with a series of cost control statements and were asked whether they:

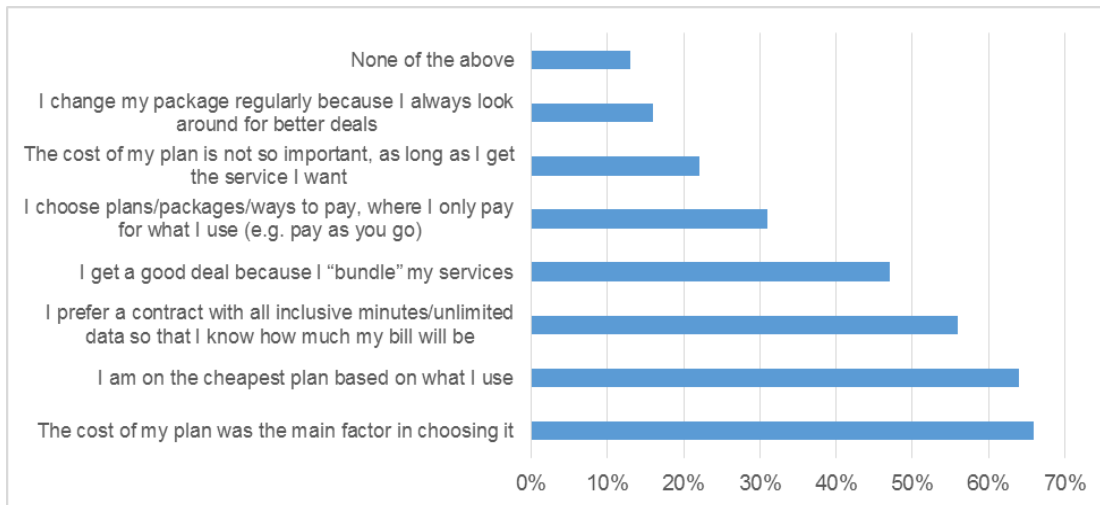
- Agree Strongly
- Agree Somewhat
- Neither Agree or Disagree
- Disagree Somewhat
- Disagree Strongly

For example, 66% of respondents stated they either strongly or somewhat agreed that “The cost of their plan was the main factor in choosing it,” as indicated in the table below.

³¹⁴ Environics Affordability Survey. Question 15

³¹⁵ Environics Affordability Survey. Question 15

Figure 5-23. Control Cost Perceptions of Communications Bills³¹⁶



Almost as many respondents (64%) either strongly or somewhat agreed that “I am on the cheapest plan based on what I use.” Over half (56%) agreed they prefer a contract with all-inclusive minutes/data for bill cost certainty.

While 47% of respondents agreed with the statement that they are receiving a good deal because they bundle services, this view appeared to resonate more strongly with older respondents. Only 28% of respondents age 18-34 say they get a good deal because they bundle communications services, versus 46% of those age 35-54 and 55% of respondents age 55 and over.

Some survey respondents appeared to disregard cost in comparison to their expected level of service. Others gave the impression that shopping for the best price was imperative. For instance 22% of respondents noted the cost of their plan is not important, as long as they get the service they want. On the other hand, 16% indicate they change their package regularly because they are looking for better deals.

³¹⁶ Environics Affordability Survey. Question 14

5.11 Do you have all the communications services you want?

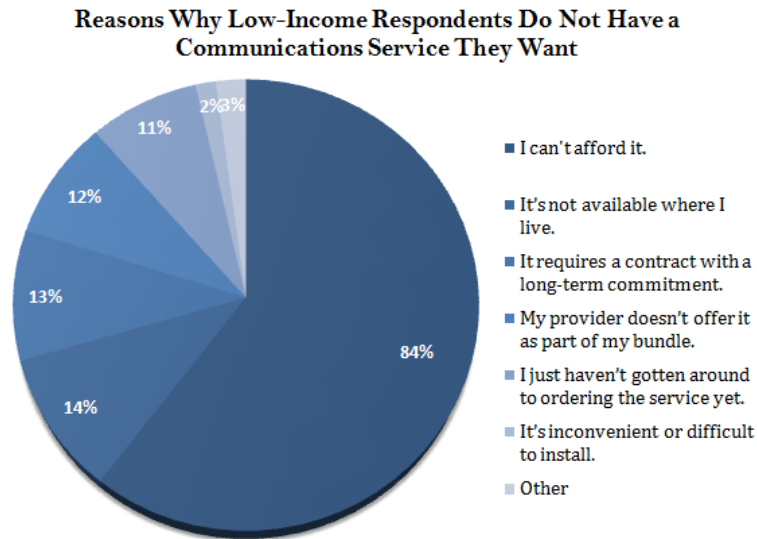
It was suspected that a number of low-income survey respondents would desire subscribing to a communications service they currently did not have. The result of this question was that almost 1 in 3 respondents (31%) said there were communications services they wanted but did not have.³¹⁷ When asked what the main reasons were why they did not have that service, 84% of those respondents said it was because they could not afford it. This represents one-quarter of the total survey sample who feel they cannot afford a communications service that they wanted.³¹⁸ Satisfying this demand for service could be a revenue opportunity for communication service providers. On the other hand, this 25% of survey respondents may well represent the first to be immediately affected by the expanding digital divide in Canada, suggesting that this percentage could continue to increase in the future.

In addition to cost, access is another consideration when respondents were asked about communications services they wanted but did not have. For instance, 14% of respondents indicated a desired communications service is unavailable where they reside. This represents 4.3% of all survey respondents.

³¹⁷ Environics Affordability Survey. Question 17

³¹⁸ 84% of 230 survey respondents “Yes, there are services I want” and cited cost for the reason they did not currently have that communications service. $230 \times 84\% = 193.2/752$ (total number of respondents)= 25.7%. Source: Environics Affordability Survey. Question 18

Figure 5-24. Low-income households' reasons for not having desired communications services³¹⁹

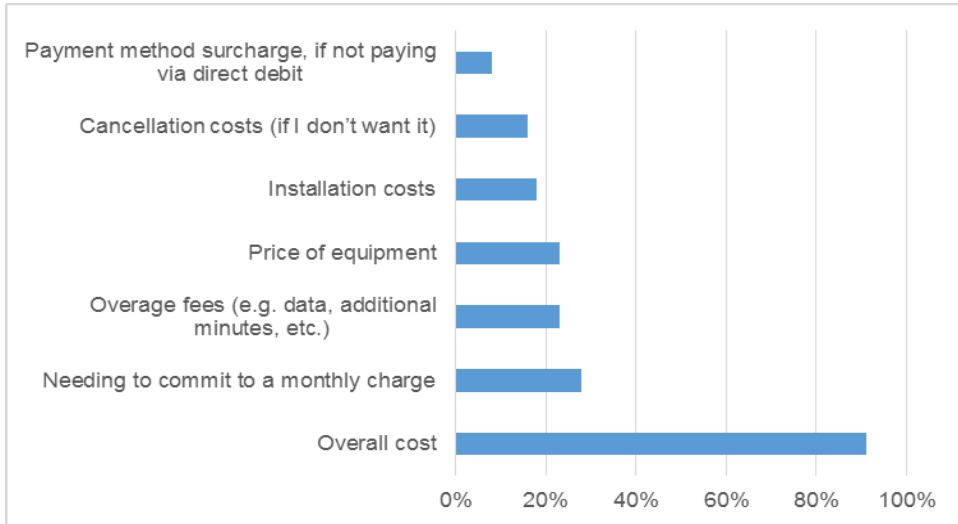


Since cost was the overwhelming reason why low-income consumers surveyed did not have a communications service they wanted, these respondents were asked which specific aspect or aspects of cost has stopped them from subscribing to the communications service they wanted. While the vast majority (91%) simply cited overall cost, other considerations eliciting a response included “needing to commit to a monthly charge (28%), Overage fees (e.g. data, additional minutes) (23%) and the price of equipment (23%).³²⁰

³¹⁹ Environics Affordability Survey. Question 18

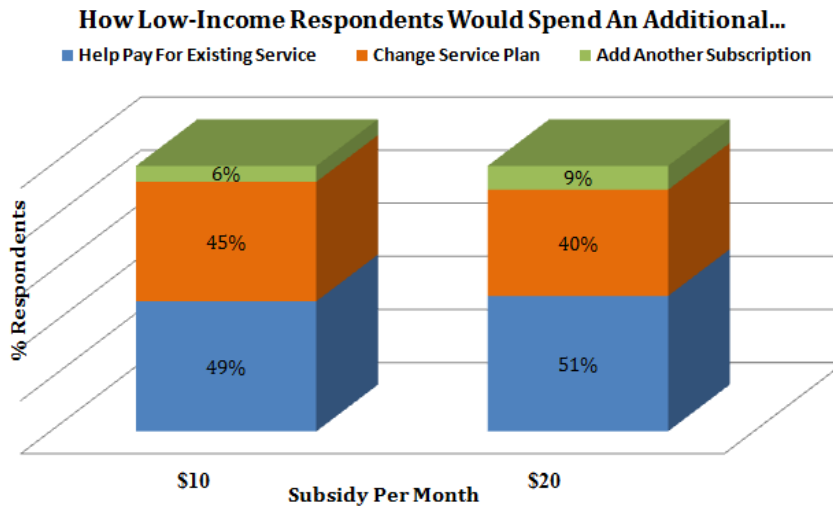
³²⁰ Environics Affordability Survey. Question 19

Figure 5-25. Cost Aspect(s) Preventing Respondents from Subscribing to the Communications Service



Since cost is a determining factor in whether low income consumers were receiving all the communications services they desired, what would occur if low-income Canadians had extra funds each month. PIAC asked low-income respondents what they would do if they were given an additional \$10 or \$20 a month. The graph and figure below reveal the results.

Figure 5-26. How low-income households would spend subsidy for communications services³²¹



The findings show that 1 in 2 respondents would spend the additional amount to help pay for existing communications bills, suggesting the supplement would be used to relieve current affordability pressures. Another 40% to 45% also stated that they would change their plans, and 1 in 10 respondents would actually use an additional \$20 to subscribe to a new communications service. In the PIAC’s view these results indicate the importance to low-income subscribers of having control and choice over how their subsidy amount could be spent to solve their own particular household communications needs in a more affordable manner.

³²¹ EnviroNics Affordability Survey. Questions 20A and 20B.

Figure 5-27. How Low-Income Respondents Would Spend a Monthly Subsidy – Detailed Breakdown

Monthly Subsidy	\$10	\$20
I would use it to help pay for my...	49%	51%
Mobile Phone	16%	20%
Home Internet	15%	13%
TV Service	10%	9%
Landline Phone	8%	8%
I would change my plan for...	45%	40%
TV Service (add channels or pay-per-view)	25%	21%
Home Internet (increase speed or data)	14%	12%
Mobile Phone (add data, minutes or SMS)	6%	7%
I would add a subscription for...	6%	9%
TV Service	2%	3%
Home Internet	1%	2%
Mobile Phone	1%	3%
Landline Phone	1%	1%

5.12 Conclusions

The survey commissioned by PIAC of low-income Canadians who use the internet was illuminating in a variety of ways on questions about the affordability of communications services. The survey revealed that among these respondents, internet service at home was the most popular communications service. However, the importance of other communications services appears to be dependent upon age. The survey indicated older respondents tend to subscribe to home telephone and paid television service. Comparatively, younger Canadians surveyed were more likely to subscribe to mobile phone, wireless internet or online applications (*i.e.* Netflix, Spotify).

Not surprisingly, differences by age also emerged when PIAC asked about the importance of access to a series of communication services. Respondents over 55 years predominantly cited paid television service and voice calls using a home phone as essential or important. In contrast, survey respondents aged 18 to 34 were much more likely to select text messaging, instant messaging, public internet access and wireless data as essential or important.

Size of household also influenced responses in the survey. Respondents who lived in a household with 3 or more people appeared more likely to have a mobile phone, use a wireless internet service, and subscribe to an online application such as Netflix, than respondents living in smaller households.

When compared to a series of household expenditures, survey respondents perceive home internet access to be as important as health care and more important than all other items listed except food and housing. Television service was perceived to be as equally important as clothing. Phone service, either mobile or home phone, was viewed by low-income survey respondents to be just as important as education.

The main reasons why access to communications services is important in the day to day lives of survey respondents included the desire to keep in touch with family and friends, access to emergency services, accessing important information such as news or health matters, and carrying out household finances. However, there is evidence that retaining communication services comes at an increasing cost. As strong as the desire is to access communications services, it is clear many low-income Canadian households surveyed have either reached their financial limit or are exceeding it and are making difficult and at times undesirable choices and tradeoffs in order to maintain access to their communications services.

In 2015, PIAC concluded “communications services are affordable” where, as a guideline, they make up about 4% to 6% of a household’s income. Based on this metric, at least 36% of survey respondents already exceed 6% of their monthly budget to retain communications services. This is taking place during a period when increases in household spending for home internet and wireless service routinely exceed the rate of inflation multiple times over.³²²

This sentiment of reaching the financial brink was partially revealed when 35% or more of those low-income Canadians surveyed felt that any communication service PIAC listed was presently barely affordable or unaffordable. Moreover, the majority of respondents reported their subscription TV service was barely affordable or unaffordable, while almost 7 in 10 respondents (69%) indicated wireless data was either barely affordable or unaffordable. This is unfortunate when, according to the CRTC, the average Canadian household spending for wireless service increased by over 14% from 2013 to 2014.

Overall, half of those surveyed felt that 8 of the communications services listed by PIAC were barely affordable or unaffordable. If prices for communication services increase over the next five years as they have during the last five years, hundreds of thousands more Canadians could struggle to maintain communications services.

At the moment, it appears many low-income Canadians are taking different approaches to reduce their monthly spending on communications services. Whether it is bundling services, switching to cheaper plans, restricting features, or cancelling home phone service to go mobile only, low-income Canadians expressed resiliency in their efforts to retain access to communication services. However, when more than one-in-four survey respondents actively limit time spent or usage of a communications service, that situation can be viewed as either a sound household budgeting practice or a missed revenue opportunity for a communication service provider-or more likely a joint outcome hurting both the consumer and the industry.

In an effort to control the cost of communications services, or at least create the perception of controlling cost, a majority of survey respondents indicate the cost of their communication service plan was the main factor in selecting it. A majority also

³²² Recall from 2013 to 2014, overall consumer prices increased by 2.0% while prices for some communications services increased as follows: 3.4% for home telephone, 2.3% for cable, direct-to-home satellite and Internet Protocol Television (IPTV), 8.0% for Internet and 14.4% for wireless phone service.

agree they are on the cheapest plan based on what they use. There was strong support for offerings with all-inclusive minutes/data for bill cost certainty.

It was encouraging that over half of the low-income survey respondents indicated they experienced “no problem” (no partial payments, suspensions, etc.) paying their communications bills in the past year. However, in general terms, about 20% of subscribers surveyed, regardless of communications service, struggled to pay their bill over the past year. That means one in five low-income subscribers were compelled to make partial payments, suspend or disconnect the service, commit to a payment plan or be referred to debt collectors.

The survey also found almost half (49%) of respondents made some trade-off in their household budgets in order to pay their communications bills. For instance, 28% of all survey respondents bought cheaper goods while 24% held off on certain expenses. In our view, far too many respondents (17%) indicated they went without other essential goods, such as food, medicine or clothing in order to pay a communications bill.

Meanwhile, 11% of respondents simply cancelled a communications service. The most likely candidates for services cancelled were, according to the survey, paid television or landline telephone service. Only 14% of respondents were compelled to forfeit access to the internet from home. PIAC contends once households, regardless of their income level, have internet access at home they are very reluctant to go without.

Almost 1 in 3 respondents (31%) said there were communications services they wanted but did not have. One-quarter of the total survey sample felt they simply could not afford a communications service they wanted. When asked which specific aspect or aspects of cost were preventing them from subscribing to the communications service they wanted, respondents cited the need to commit to a monthly charge, overage fees and the price of equipment.

In anticipation that some low-income Canadians were struggling to pay their communications bills, PIAC asked survey respondents regarding what they would do if they were given an additional \$10 or \$20 a month. Given the recent price increases for Canadian communication services, and that 20% of low-income subscribers surveyed struggled to pay their bill over the past year, it was not surprising that 1 in

2 respondents would spend the additional amount to help pay for existing communications bills.

If given an additional \$10 or \$20 a month, 40% to 45% of survey respondents would change their plans, while 1 in 10 respondents would use an additional \$20 to subscribe to a new communications service. In the PIAC's view these results indicate the importance to low-income subscribers of having control over how their subsidy amount could be spent to meet their own particular household communications needs in a more affordable manner.

Taken together, *these survey results give strong evidence of the reality faced by many low-income Canadians: they are struggling to maintain access to communications services that are deemed essential by them as well as by Canadian governments and service providers.* It appears a vast majority of low-income Canadians believe that access to communications services is important to their households, and are willing to employ a variety of tactics to maintain their level of service. It is clear many low-income Canadian households have reached their financial limit or are exceeding it to maintain access to their communications services. Some families are forgoing other life essentials such as food or medicine in order to retain their services. Additionally, evidence presented here suggests an increasing number of Canadian households will face this harsh reality if the current upward pressure on the price of communication services persists. Any assistance provided in the form of a discount or subsidy would likely be used to pay existing communications bills or to change service plans.

6. How to Solve the Affordability Problem

This section examines the various initiatives implemented to tackle affordability of important services, and communications services in particular, in other jurisdictions and domestic sectors. The authors then provide several recommendations of solutions which could be implemented in Canada.

In *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age*, PIAC identified several indicators of the affordability of communications services, including:

- ∂ The total cost of communications services should be no more than 4% to 6% of a household's income.
- ∂ Communications services should not create undue hardship for low-income families. Low-income users should not be sacrificing other key household items such as food, shelter, clothing and health expenses in order to pay for their communications services.³²³

However, PIAC also concluded that one of the defining elements of affordability was *control*—the ability of an individual or a household to control their expenditures in order to fulfill their needs. Because affordability concerns a household's control over their budget, affordability is also about *choice* which allows a household to access a service offering which meets their needs.³²⁴

The following pages will focus on developing initiatives which can effectively assist low-income Canadians in affording their communications services.

³²³ John Lawford & Alysia Lau, *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age* (Ottawa: Public Interest Advocacy Centre, 2015), online: PIAC <<http://www.piac.ca/wp-content/uploads/2015/03/PIAC-No-Consumer-Left-Behind-Final-Report-English.pdf>> at pp. 84 and 88.

³²⁴ *Ibid.* at p. 84.

6.1 The importance of national broadband strategies

First, a national broadband strategy—which includes a policy for Universal Service—is critical moving forward to ensure that communications services (and notably broadband) are accessible and affordable to all Canadians, including low-income customers.

A study conducted by Cisco and the ITU found that:

The introduction or adoption of a broadband plan is associated with 2.5% higher fixed broadband penetration, and 7.4% higher mobile broadband penetration on average. This result is consistent with National Broadband Plans focusing efforts across industry in coordination with policy-makers, emphasizing the role of broadband as a national priority, and signaling national commitment to the roll-out of broadband.³²⁵

In fact, a clear national broadband strategy which recognizes the importance of Universal Access and Service has been critical to the success of broadband access and adoption in other countries.

South Korea began to promote a “national informatisation” agenda, including the legislation of its 1995 *Framework Act on Informatisation Promotion* aiming to be a highly connected country, in the 1990s,³²⁶ and has since implemented numerous policies, including the Korea Information Infrastructure policies, IT839 and the Broadband Convergence Network policies, and the Ultra Broadband Convergence Network policy.³²⁷

Sweden introduced bills in 1999 with the aim of creating an “information society for all,” an IT policy bill in 2005 aiming to bring efficient and secure high-speed IT infrastructure to the entire country to provide access to public e-services, and a new national broadband policy in 2009.³²⁸ The most recent broadband strategy in particular included as broadband targets:

³²⁵ Cisco & International Telecommunication Union, *Planning for Progress: Why National Broadband Plans Matter* (Geneva: International Telecommunication Union, 2013), online: Broadband Commission <<http://www.broadbandcommission.org/documents/reportNBP2013.pdf>> at p. 49.

³²⁶ Ovum Consulting, *Broadband Policy Development in the Republic of Korea: A Report for the Global Information and Communications Technologies Department of the World Bank* (October 2009) at p. 79.

³²⁷ *Ibid.* at p. 86.

³²⁸ Government of Sweden, *Broadband strategy for Sweden* (2009), online: Government of Sweden <<http://www.government.se/content/1/c6/13/49/80/112394be.pdf>> at p. 14.

- By 2020: 90 per cent of all households and businesses have access to broadband at a minimum speed of 100 Mbps.
- By 2015: 40 per cent of all households and businesses have access to broadband at a minimum speed of 100 Mbps.
- “All households and businesses should have good opportunities to use electronic public services with broadband access.”³²⁹

And, Japan launched its IT Strategy Headquarters and “e-Japan Strategy” promoting broadband deployment and penetration through competition in 2001,³³⁰ and has since followed these strategies with its 2005 IT Policy package and its New IT Reform Strategy.³³¹

Benkler (2010) also estimates that South Korea invested about \$85 USD billion in total between the late 1990s and 2010 in broadband deployment in both public and private investment, and that Sweden invested about \$817 USD million between 2001 and 2007.³³² Swedish municipalities in particular have been especially engaged in broadband deployment, with Benkler noting that together they have invested about \$250 USD million in broadband deployment.³³³

Canada, too, needs a clear vision for access to affordable broadband. In fact, this country did not have a clearly articulated national broadband strategy until the federal government issued the *Digital Canada 150* strategy in 2014.³³⁴ Yet, the short document had few details on the government’s policy for promoting broadband access. In fact, the only concrete goal was the provision of \$305 million in funding to

³²⁹ *Ibid.*

³³⁰ Masaru Fujino, *Broadband Policies in Japan* (2009), online: Telecommunications Industry Association <http://www.tiaonline.org/gov_affairs/events/Japan%27s_policies_on_Broadband_deployment.pdf>, Slides 7-8; and Berkman Center for Internet & Society, *Next Generation Connectivity: A review of broadband Internet transitions and policy from around the world* (2010), online: Harvard University <http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Berkman_Center_Broadband_Final_Report_15Feb2010.pdf> at pp. 286-287.

³³¹ *Ibid.* at p. 287.

³³² Berkman Center for Internet & Society, *Next Generation Connectivity: A review of broadband Internet transitions and policy from around the world* (2010), online: Harvard University <http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Berkman_Center_Broadband_Final_Report_15Feb2010.pdf> at p. 230.

³³³ *Ibid.* at p. 232.

³³⁴ Government of Canada, *Digital Canada 150* (Ottawa: Minister of Industry, 2014), online: Government of Canada <[https://www.ic.gc.ca/eic/site/028.nsf/vwapj/DC150-EN.pdf/\\$FILE/DC150-EN.pdf](https://www.ic.gc.ca/eic/site/028.nsf/vwapj/DC150-EN.pdf/$FILE/DC150-EN.pdf)>.

connect 280,000 households to a target download speed of 5 Mbps,³³⁵ a significantly lower target than other countries such as the U.S. (25 Mbps),³³⁶ the U.K. (24 Mbps),³³⁷ New Zealand (50 Mbps)³³⁸ and Sweden (100 Mbps).

The Broadband Commission for Sustainable Development (formerly the Broadband Commission for Digital Development) has written that:

The role of broadband UAS [Universal Access and Service] policies and strategies as an economic development tool and catalyst for social inclusion must be fully acknowledged. UAS policies should be designed in collaboration with relevant stakeholders, and include ambitious but achievable objectives.³³⁹

Canadian policy makers must set out clear objectives and a Universal Service strategy for ensuring that communications services—and broadband especially—are accessible and affordable for all Canadians, including specifically low-income Canadians.

6.2 Affordability initiatives: Canada & Overview

In Canada, there have been since rate deregulation few public or regulatory initiatives specifically targeted at improving the affordability of communications services. In 2015, the CRTC decided to require all licensed television service providers to offer their customers a low-cost, “skinny” basic package of channels for no more than \$25 per month.³⁴⁰ The basic package would include channels such as local French, English and third-language stations, provincial education and community channels, and public interest channels such as the Aboriginal Peoples

³³⁵ *Ibid.* at p. 8.

³³⁶ Federal Communications Commission, *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, FCC 15-10 at para. 3.

³³⁷ Government of UK, “Broadband Delivery UK,” online: Gov.UK <<https://www.gov.uk/guidance/broadband-delivery-uk>> (accessed 15 March 2016).

³³⁸ Government of New Zealand, “Ambitious target set for rural broadband” (6 October 2015), online: Government of New Zealand <<https://www.beehive.govt.nz/release/ambitious-target-set-rural-broadband>>.

³³⁹ Broadband Commission for Digital Development, *The State of Broadband 2015* (Geneva: ITU and UNESCO, 2015), online: <<http://www.broadbandcommission.org/documents/reports/bb-annualreport2015.pdf>> at p. 69.

³⁴⁰ See: *Broadcasting Distribution Regulations*, SOR/97-555, ss. 4.1, 17.1 and 46.1.

Television Network, Accessible Media Inc. TV, The Weather Network and TV5.³⁴¹ In doing so, the Commission concluded that “the entry-level service offering is meant to provide Canadians with a smaller, more affordable basic service alternative, while continuing to fulfill the important policy objective of prioritizing Canadian TV services.”³⁴² The requirement to offer a “skinny basic” television package took effect in March 2016.

The key regulatory mechanism in the telecommunications sector has been the cross-subsidization of residential telephone service in “High Cost Serving Areas” (identified by the CRTC) through the National Contribution Fund (NCF).³⁴³ The Fund is financed by annual contributions made by telecommunications service providers which generate telecommunications service revenues of \$10 million or more, and is intended to subsidize the cost of providing telephone service in these areas in order to reduce the rates paid by rural subscribers.

However, although both provide some assistance and relief, neither regulatory mechanism was intended to specifically target the needs and challenges of low-income Canadians. Rather, both policies more closely resemble the conventional authority of the CRTC to ensure just and reasonable rates. Most recently in Telecom Decision 2015-533, the CRTC reaffirmed that the NCF “subsidy regime helps to keep residential local telephone service rates just and reasonable, as required by subsection 27(1) of the *Telecommunications Act*.”³⁴⁴ Similarly, in setting the \$25 limit on the basic television package, part of the CRTC’s analysis relied on the average regulated monthly service rates charged by providers in the late 1990s.³⁴⁵ Moreover, the CRTC made it clear that the low-cost basic television service was meant to reflect a reasonably priced package of the most important channels

³⁴¹ *Ibid.*, ss. 17 and 46.

³⁴² Broadcasting Regulatory Policy CRTC 2015-96, *Let’s Talk TV: A World of Choice – A roadmap to maximize choice for TV viewers and to foster a healthy, dynamic TV market* (19 March 2015) at para. 28.

³⁴³ See for instance: Telecom Decision CRTC 2015-533, *Final 2015 revenue-percent charge and related matters* (1 December 2015).

³⁴⁴ At para. 1. (Emphasis added)

³⁴⁵ Broadcasting Regulatory Policy CRTC 2015-96, *Let’s Talk TV: A World of Choice – A roadmap to maximize choice for TV viewers and to foster a healthy, dynamic TV market* (19 March 2015) at para. 23.

reflecting Canadian culture and programming, in accordance with the *Broadcasting Act*.³⁴⁶

The Broadband Commission for Sustainable Development provides the following list of Universal Access challenges and policy solutions.

Figure 6-1. Universal Access and Service Strategies

	Challenges	Strategies
Supply side	Limited financial resources, in general	Levies on operators to finance USFs
	Limited in-country infrastructure, especially national fibre optic networks, and limited or very expensive infrastructure for international connectivity	Additional sources of funding (e.g., from international institutions)
	Limited amount of spectrum available for wireless broadband	Grants to build infrastructure, mandatory infrastructure-sharing
	Inadequate coverage of wireless broadband networks	Prioritization of development programmes based on strict criteria
	Limited prospects for economic growth	Roll-out of public WiFi in public spaces
		Spectrum refarming
Demand side	Low levels of purchasing power, and relatively high service prices	Subsidies for service fees or equipment purchases
	Low levels of education, especially regarding ICT skills	Mandated discounts for certain classes of end-users
	Limited availability of (and high taxes on) consumer electronic equipment	Reduced tax rates for broadband-related services and equipment
	Limited availability of relevant local content	ICT training (e.g. in schools or colleges), public telecentres

Source: *Broadband Commission for Digital Development (2015), Table 4*

This report will focus on those initiatives targeted at promoting the affordability of communications services for low-income users. In other words, the authors will summarize and assess initiatives based on three principal categories:

³⁴⁶ Broadcasting Regulatory Policy CRTC 2015-96, *Let's Talk TV: A World of Choice – A roadmap to maximize choice for TV viewers and to foster a healthy, dynamic TV market* (19 March 2015) at para. 28.

1. Mandated low-income service offerings;
2. Subsidies for service fees or equipment purchases; and
3. Public and community provision of services.

6.3 Mandated low-income service offerings

Mandated discounts or service offerings are often low-cost packages and services which are offered to eligible low-income participants. Many European countries select one “Universal Service Provider”, usually the incumbent local telephone company, which is required to offer the low-cost service. In the **U.K.**, for instance, BT and Kingston Communication are the designated Universal Service Providers. BT offers the *BT Basic* service to recipients of various forms of social assistance and provides a limited landline telephone service for a payment of £15.30 every three months (£4.50 of which may be spent on calls – 1 hour free on weekends, 11.3p per minute within the UK, and a 3.3p set-up fee per call).³⁴⁷ BT Basic subscribers may also add a low-cost broadband service (*BT Basic + Broadband*) for an additional £14.55 every three months. The broadband service includes a download speed of up to 16 Mbps and 10 GB of data per month.³⁴⁸

In **France**, the current Universal Service Provider is Orange, which offers a low-cost landline telephone service for €6.49 per month (*Abonnement Social*),³⁴⁹ or telephone and Internet service for €20 per month, with an additional €3 to rent the modem (*Offre Sociale*).³⁵⁰ The service includes “unlimited” local calling and an Internet download speed of between 512 Kbps and 15 Mbps for recipients of social assistance. The Universal Service Operator is compensated through the Universal Service Fund financed by contributions from the major French telecommunications

³⁴⁷ BT, “What do you get with BT Basic?,” online: BTplc.com <<http://www.btplc.com/Inclusion/ProductsAndServices/BTBasic/Whatdoyouget/index.htm>> (accessed 21 March 2016).

³⁴⁸ BT, “BT Basic + Broadband,” online: BTplc.com <<http://www.btplc.com/Inclusion/ProductsAndServices/BTBasic/BTBasicBroadband/index.htm>> (accessed 21 March 2016).

³⁴⁹ Orange, “Abonnement Social,” online: Orange.fr <http://boutique.orange.fr/ESHOP_mx_ft/?tp=F&ref=3610&IDCible=&donnee_appel=&id=&type=3> (accessed 21 March 2016).

³⁵⁰ Orange, “Offre Sociale,” online: Orange.fr <<https://boutique.orange.fr/internet/offre-sociale>> (accessed 21 March 2016).

companies determined by the regulator, Autorité de régulation des communications électroniques et des postes (ARCEP).³⁵¹

Australia employs a multi-pronged approach. One approach requires by condition of licence the carrier, Telstra, to offer *Access for Everyone* products to assist low-income users.³⁵² These include services such as call control, extensions of payment deadlines and a bill assistance program, and the *InContact* landline phone service—a monthly access charge-free service which allows incoming calls only (except for outgoing calls to emergency services).³⁵³

In **Canada**, some service providers provide discounted services for low-income and other vulnerable Canadians in certain communities. For instance, PIAC reported in its previous study, *No Consumer Left Behind: A Canadian Affordability Framework for Communications Services in a Digital Age*, that Rogers Communications' *Connected for Success* program offers a \$9.99 per month broadband Internet service (with download speeds of 10 Mbps and 30 GB of allowed usage) to households living in Toronto Community Housing.³⁵⁴ SaskTel's *Phones for a Fresh Start* program also donates used mobile phones and prepaid cards to women's shelters.³⁵⁵ There is, however, no current requirement to provide a low-cost service for specific groups of users, including low-income households.

Mandated service offerings can provide some assistance by offering a low-cost package based on features established by the regulator or elected officials to low-income users. However, these types of offerings do not take into account the diverse needs and levels of usage of low-income households. Rather, they tend to constrain low-income subscribers to a prescribed means of accessing and using communications services. This does not conform with the view of affordability as tied to the concepts of choice and control—low-income users should have the flexibility to choose the services and features which meet their household's needs.

³⁵¹ Code des postes et des communications électroniques (26 July 2013), art. L35 notably L35-3.

³⁵² Sarah Wise, *Trying to Connect: Telecommunications access and affordability among people experiencing financial hardship* (2013), online: ACCAN <<https://accan.org.au/Telecommunications%20access%20and%20affordability%20among%20people%20experiencing%20financial%20hardship.pdf>> at p. 4.

³⁵³ Telstra, "Access for Everyone," online: Telstra <<https://www.telstra.com.au/aboutus/community-environment/community-programs/access-for-everyone>> (accessed 22 March 2016).

³⁵⁴ See : Toronto Community Housing, "Connected for Success," online: TorontoHousing.ca <<http://www.torontohousing.ca/connected+for+success>> (accessed 22 March 2016).

³⁵⁵ SaskTel, "Phones for a Fresh Start," online: SaskTel <<http://www.sasktel.com/youthnetwork/community-outreach/phones-for-a-fresh-start-sitearea/phones-for-a-fresh-start>> (accessed 22 March 2016).

However, as communications services become more essential, mandated service offerings may—similar to the “skinny” basic television package—play a role in ensuring that a reasonably-priced entry-level package is available to all Canadians.

6.4 End-user subsidies

Other jurisdictions have implemented programs which provide fixed subsidies towards the telecommunications subscriptions of low-income users.

For instance, in **Belgium**, major telecommunications service providers including Belgacom/Proximus, KPN Group Belgium, and Mobistar are required offer discounts, the *tarif social*, to eligible participants such as seniors, recipients of social assistance, and individuals with disabilities.³⁵⁶ They types of subsidies include, for low-income subscribers:

- ◆ 40% discount on their monthly Internet service up to a maximum of €8.40 per month; and
- ◆ A subsidy of €3.10 per month on landline or mobile voice calls outside of their package.³⁵⁷

The costs for providing these services are reimbursed through a Universal Service Fund financed by contributions from all telecommunications companies based on their service revenues.³⁵⁸

In **Australia**, the federal government provides a quarterly *Telephone Allowance* to eligible recipients on various forms of social assistance such as disability support,

³⁵⁶ See : *Annexe à la loi relative aux communications électroniques*, 2005-06-13/33, art. 22.§1; and Institut belge des services postaux et des télécommunications, « Qui peut bénéficier du tarif social? », online : IBPT <<http://www.ibpt.be/fr/consommateurs/faq/89-qui-peut-beneficier-du-tarif-social>> (accessed 22 March 2016).

³⁵⁷ See: Institut belge des services postaux et des telecommunications, « En quoi consistent ces réductions? » online : IBPT <<http://www.ibpt.be/fr/consommateurs/faq/90-en-quoi-consistent-ces-reductions>> (accessed 22 March 2016); and Proximus, « Avantages du tarif social », online : Proximus.be <http://www.proximus.be/fr/id_cr_socialrate/particuliers/produits/ligne-fixe/tarif-social.html> (accessed 22 March 2016).

³⁵⁸ *Loi portant des dispositions diverses en matière de communications électroniques (cité comme : loi Télécom*, 2012-07-10/04, art. 51.§ 4.

newstart allowance, sickness allowance and parenting payment.³⁵⁹ The Telephone Allowances for the 2015-2016 year are \$27.80 every three months for those who have a landline, fax or mobile telephone connection; and \$41.40 every three months for disability support recipients or youth under 21 years with no dependent children who have a fixed line or wireless home Internet connection.³⁶⁰

One of the longest operating programs which has been closely studied is the *Lifeline* program in the **U.S.A.** The program was created by the Federal Communications Commission (FCC) in 1985 to provide a \$9.25 per month discount subsidy for low-income landline telephone subscribers.³⁶¹ The *Link Up* program, which was phased out in 2012 except for on Tribal Lands, provided a discount of up to \$30 off the installation costs of a landline or mobile telephone.³⁶² Since its launch, the *Lifeline* program has expanded to give recipients the choice to allot the subsidy to either their landline or wireless phone subscription,³⁶³ and a newly issued 2016 order now modernizes and expands the program to include support for broadband service.³⁶⁴ Eligible recipients of the *Lifeline* subsidy must have an income at or below 135% of the federal Poverty Guidelines or participate in a social assistance program such as Medicaid, Federal Public House Assistance, Low-Income Home Energy Assistance Program, and the National School Lunch Program's *Free Lunch Program*.³⁶⁵

³⁵⁹ Australian Government Department of Human Service, "Telephone Allowance," online: [Humanservices.gov.au <https://www.humanservices.gov.au/customer/services/centrelink/telephone-allowance>](https://www.humanservices.gov.au/customer/services/centrelink/telephone-allowance) (accessed 23 March 2016).

³⁶⁰ *Ibid.*

³⁶¹ Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund*, FCC 15-71 at para. 1.

³⁶² Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Lifeline and Link Up, Federal-State Joint Board on Universal Service, Advancing Broadband Availability Through Digital Literacy Training*, FCC 12-11 at para. 14.

³⁶³ See: *Ibid.* at para. 21 and Federal Communications Commission, "Lifeline Program for Low-Income Consumers," online: FCC <<https://www.fcc.gov/general/lifeline-program-low-income-consumers>> (accessed 23 March 2016).

³⁶⁴ Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund: Third Report and Order, Further Report and Order, and Order on Reconsideration*, FCC 16-38.

³⁶⁵ Federal Communications Commission, "Lifeline Program for Low-Income Consumers," online: FCC <<https://www.fcc.gov/general/lifeline-program-low-income-consumers>> (accessed 23 March 2016).

The *Lifeline* program was overhauled by the FCC in 2012 in response to 2010 recommendations made by the Federal-State Joint Board on Universal Service³⁶⁶ and in order to address concerns related to inefficiencies, waste and fraud.³⁶⁷ The 2012 *Lifeline Reform Order* also set aside part of the Universal Service Fund in order to establish the *Broadband Adoption Pilot Program*.³⁶⁸ The FCC estimates that there were about 42 million households eligible for *Lifeline* support in March 2014.³⁶⁹

In **Ontario**, the Ontario Energy Board (OEB)-created *Ontario Electricity Support Program* (OESP), which is a billing credit program for low-income energy consumers, began operating in January, 2016.³⁷⁰ Eligible recipients are identified using the after-tax Low Income Measure (LIM), and the monthly credit amounts are based on a sliding scale approved by the OEB.³⁷¹ OESP eligibility expires after two years, at which time recipients must re-apply.³⁷² The program is funded by a \$0.0011 per kilowatt hour charge on all Ontario energy customers, or about \$0.93 per month for the average residential customer.³⁷³

OESP Credit Amounts

LEVEL OF HOUSEHOLD INCOME (\$)	NUMBER OF PEOPLE LIVING IN HOME						
	1	2	3	4	5	6	7
Less than 28,000	\$30	\$30	\$34	\$38	\$42	\$50	\$50
28,001 - 39,000			\$30	\$34	\$38	\$42	\$50
39,001 - 48,000					\$30	\$34	\$38
48,001 - 52,000							\$30

Source: Ontario Energy Board, *Ontario Electricity Support Program*

³⁶⁶ Federal-State Joint Board on Universal Service et al., CC Dkt. No. 96-45 et al., Recommended Decision, 25 FCC Rcd 15598 (Jt. Bd. 2010).

³⁶⁷ Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Lifeline and Link Up, Federal-State Joint Board on Universal Service, Advancing Broadband Availability Through Digital Literacy Training*, FCC 12-11 at paras. 1-2.

³⁶⁸ *Ibid.* at para. 4.

³⁶⁹ Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Telecommunications Carriers Eligible for Universal Service Support, Connect America Fund*, FCC 15-71 at para. 111.

³⁷⁰ See: <https://ontarioelectricitysupport.ca/>

³⁷¹ Ontario Energy Board, *Report of the Board: Developing an Ontario Electricity Support Program* (22 December 2014), online: OEB <http://www.ontarioenergyboard.ca/oeb/Documents/EB-2014-0227/Report_of_the_Board_Developing_an_OESP_20141222.pdf> at pp. 2-3.

³⁷² Ontario Energy Board, "Ontario Electricity Support Program: Questions and Answers," online: OESP <<https://ontarioelectricitysupport.ca/FAQ>> (accessed 23 March 2016).

³⁷³ *Ibid.*

In its 2014 report to the Ontario Minister of Energy on the development of the OESP, the OEB wrote that it determined a sliding fixed credit scale to be the most appropriate because it was a targeted initiative without unnecessary administrative complexity.³⁷⁴ While the Low-Income Energy Network (LIEN) had advocated for a percentage-of-income based fixed credit to reduce electricity bill payments to an affordable range (*i.e.* low-income consumers would be paying no more than 6% to 8% of total household on their electricity bills), the OEB found that this type of program created a high administrative burden and a fixed sliding credit would encourage energy conservation.³⁷⁵ The OEB estimated that the OESP could benefit more than 500,000 low-income households.³⁷⁶

In the authors' interview with OESP Project Manager Donna Kinapen, Ms. Kinapen stated that reception of the affordability program has been positive among electricity distributors, which have all met system change targets in a short period of time. A significant promotion campaign launched by the OEB included bill inserts; advertisements in bus shelters, libraries and social agencies; and radio advertising. The Ontario Energy Board stated in March 2016 that the OESP had received about 132,940 applications, and about 1,000 applications per day in the first 100 days, and that 41% of Ontarians were aware of the OESP as of January 2016.³⁷⁷

End-user subsidies tend to have the flexibility to be tailored and targeted. The key concerns with programs such as *Lifeline* relate to transparency and consumer choice. Muento-Kunigami and Navas-Sabater (2010), for instance, concluded that subsidies can complement the low income of beneficiaries but identified two primary challenges:

- Initial targeting becomes easily outdated due to the dynamic nature of the intended beneficiaries; and

³⁷⁴ Ontario Energy Board, *Report of the Board: Developing an Ontario Electricity Support Program* (22 December 2014), online: OEB <http://www.ontarioenergyboard.ca/oeb/Documents/EB-2014-0227/Report_of_the_Board_Developing_an_OESP_20141222.pdf> at p. 14.

³⁷⁵ *Ibid.* at pp. 12-14.

³⁷⁶ *Ibid.* at p. 14.

³⁷⁷ Michael Erskline, "Ontario Electricity Support Program numbers improve, but falls short of eligible recipients" (23 March 2016), Manitoulin.ca <<http://www.manitoulin.ca/2016/03/23/ontario-electricity-support-program-numbers-improve-falls-short-eligible-recipients/>>.

- Overall transparency of the mechanism is a concern as it usually involves a large volume of transfers to individuals.³⁷⁸

Hauge, Chiang and Jamison (2009) also highlighted the importance of a program which does not favour one technology over another and that is instead technologically neutral.³⁷⁹ This was the result of findings which showed that low-income users increasingly favored mobile phones at a time when *Lifeline* was still predominantly focused on landline telephone service. The authors conclude:

In general, rapidly evolving technologies and customer preferences make it increasingly problematic for telecommunications regulators and policymakers to develop universal service policies that target specific services. The policies bias markets towards increasingly outdated services, perhaps to the detriment of the very consumers the policies were intended to benefit.³⁸⁰

Therefore, transparency and choice remain key features of an end-user subsidy program. Administration should be straightforward and transparent in order to prevent waste and fraud. The OEB's OESP program, for instance, uses one Central Service Provider to administer the program to prevent fraud, duplicate applicants, etc.³⁸¹ Where multiple services are involved, a subsidy program should also give recipients choice and flexibility so that users may allocate the subsidy towards the service which best fits their needs.

In regards to effectiveness, it should be noted that studies have tended to focus on the impact of the *Lifeline* program on service uptake and adoption. The FCC has found that *Lifeline* has been “instrumental in increasing the availability of quality voice

³⁷⁸ Arturo Muenta-Kunigami & Juan Navas-Sabater, “Options to Increase Access to Telecommunications Services in Rural and Low-Income Areas” (2010), World Bank Working Paper No. 178 at pp. 28-29.

³⁷⁹ Janice A. Hauge, Eric P. Chiang & Mark A. Jamison, “Whose Call Is It? Targeting Universal Service Programs to Low-Income Households’ Telecommunications Preferences” (2009), online: Research Gate
<https://www.researchgate.net/publication/222705468_Whose_call_is_it_Targeting_universal_service_programs_to_low-income_households'_telecommunications_preferences> at p. 26.

³⁸⁰ *Ibid.*

³⁸¹ Ontario Energy Board, *OESP & LEAP Program Manual* (October 2015), online: OEB
<http://www.ontarioenergyboard.ca/oeb/Documents/Documents/OESP_LEAP_Program_Manual.pdf> at pp. 4-5.

service to low-income consumers,”³⁸² and that many low-income users have said that they would not be able to afford telephone service without it. The FCC also found that the telephone penetration gap between low-income and non-low-income households has narrowed from 12% in 1984 to 4% in 2011.³⁸³ Other studies have produced mixed outcomes. Ackerberg *et al.* (2013) found that subsidy programs have increased low-income telephone penetration by about 6.1 percentage points, and are “most effective at increasing penetration among renters and younger populations.”³⁸⁴ They also found that the Link Up program tended to be more effective at increasing penetration because it targeted non-adopters and also helped low-income households overcome the initial barrier of installation charges.³⁸⁵ However, Ward and Woroch’s (2009) *Lifeline* “natural experiment” economic analysis only found a limited program impact on fixed and mobile penetration.³⁸⁶ Ukhaneva (2014) concluded that:

... when the rules of the program are strictly enforced and only eligible households are able to enroll in Lifeline, higher amounts of the subsidy increase the propensity of households to subscribe to telephone service... if the wireless prepaid part of Lifeline were to be eliminated, 147,034 households would cancel telephone services. If the Lifeline program were to be terminated altogether, then over one million households would give up telephone services, which would have increased the rate of households without telephone service from 3.9 percent to 4.8 percent in 2010.³⁸⁷

After extending this analysis to all households in the broader population, Ukhaneva found that “higher *Lifeline* benefits encourage subscription to the telephone network,” but that they have a greater effect on choice of telephone options rather than a decision to subscribe.³⁸⁸

³⁸² Federal Communications Commission, *In the Matter of Lifeline and Link Up Reform and Modernization, Lifeline and Link Up, Federal-State Joint Board on Universal Service, Advancing Broadband Availability Through Digital Literacy Training*, FCC 12-11 at para. 15.

³⁸³ *Ibid.*

³⁸⁴ Daniel A. Ackerberg *et al.*, “Estimating the Impact of Low-Income Universal Service Programs” (2013) CES 13-33 at p. 27.

³⁸⁵ *Ibid.*

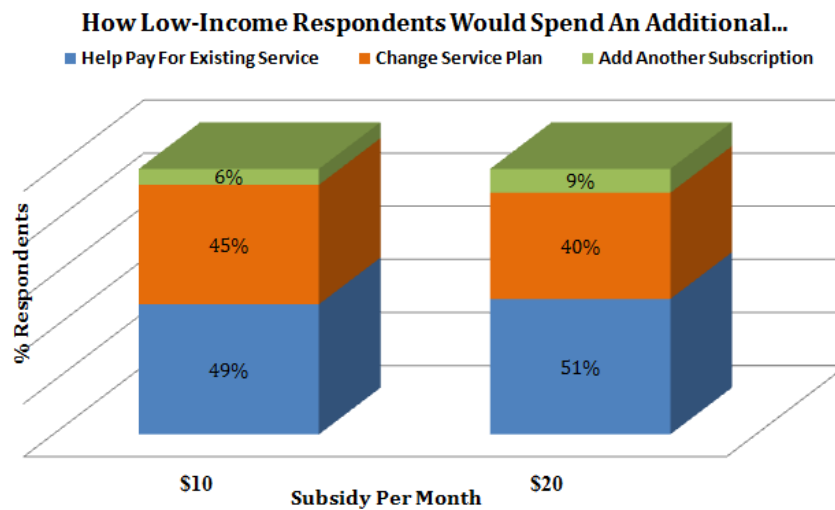
³⁸⁶ Michael R. Ward & Glenn A. Woroch, “The Effect of Prices on Fixed and Mobile Telephone Penetration: Using Price Subsidies as Natural Experiments” (2009), online: SSRN <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1459075>.

³⁸⁷ Olga Ukhaneva, “Universal Service in a Wireless World” (2014), 2014 TPRC Conference Paper, online: SSRN <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2430713> at pp. 19-20.

³⁸⁸ *Ibid.* at p. 20.

These studies generally accord with the results of the survey conducted for this report. The survey found that 84% of low-income respondents cited cost as the reason why they do not have a communications service they want. When asked how much they would spend an additional \$10 or \$20 per month, about half said they would either change their plan or add another service.

Figure 6-2. How Low-Income Users Would Use Additional \$10 or \$20 Subsidy



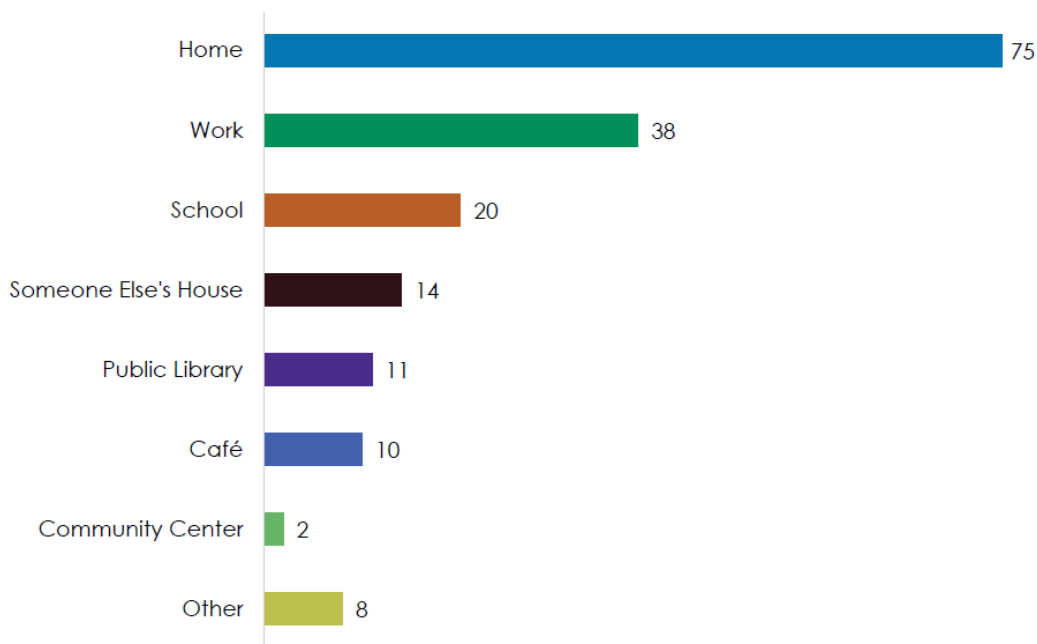
Therefore, an end-user subsidy likely contributes to increasing the penetration of communications services. However, it is also important to note that affordability is not merely related to the adoption of new services but also to the ability to afford existing service subscriptions. In fact, about half of the low-income respondents to the survey indicated that they would use the additional subsidy to help pay for an existing service. Therefore, a future assessment of the effectiveness of any affordability initiative, including a subsidy, must also examine the effect of the policy solution on a household's control over its existing expenses.

6.5 Public and community provision of services

Improving access to telecom services – and broadband in particular – in publicly accessible facilities or important institutions such as schools may also enable citizens to participate meaningfully in the digital economy.

The National Telecommunications and Information Administration (NTIA) found that while 75% of American households used the Internet at home in 2012, 20% used the Internet at school, 11% at the public library, and 10% at cafes.³⁸⁹

Figure 6-3. Locations of Internet use, % of American households (2012)



Source: NTIA Digital Nation Report (2014), Figure 14

The NTIA also found that libraries in particular were important locations for using the Internet across all income and educational brackets,³⁹⁰ and concluded that “while progress continues in home broadband adoption, disparities among groups and areas

³⁸⁹ National Telecommunications and Information Administration, *Exploring the Digital Nation: Embracing the Mobile Internet* (October 2014), online: NTIA <http://www.ntia.doc.gov/files/ntia/publications/exploring_the_digital_nation_embracing_the_mobile_internet_10162014.pdf>, Figure 14.

³⁹⁰ *Ibid.* at p. vii.

persist, and libraries and other public access points provide alternative venues for Internet use.”³⁹¹ A 2010 Social Science Research Council report also highlighted the importance of libraries and other “third spaces” in allowing low-income communities to access the Internet. Dailey *et al.* wrote:

In low-income communities, the tension between low rates of home broadband adoption and growing demand for Internet use falls mostly on “third spaces” that provide Internet access away from home or work. Libraries almost always play a central role in these wider ecologies of broadband access, but community centers, employment offices, and other social service organizations also fill important niches. In addition to providing access, many third spaces also play broader support roles in their communities, from skills development for new users to facilitating access to Internet-mediated social services, employment markets, and educational opportunities.³⁹²

The U.S. Federal Communications Commission was authorized by the *Telecommunications Act of 1996* to implement the *E-rate program*, providing discounted telecommunications services for eligible schools and libraries under the Universal Service Fund.³⁹³ The discount is primarily determined by the location of the school (urban or rural) as well as the percentage of students eligible for the National School Lunch Program.³⁹⁴ The telecom service provider is traditionally chosen by individual E-rate schools through a competitive bidding process.³⁹⁵

The FCC has also created a similar program for rural health care providers under the *Rural Health Care Program*, including the Healthcare Connect Fund,³⁹⁶ after finding

³⁹¹ *Ibid.* at p. 3.

³⁹² Dharma Dailey *et al.*, *Broadband Adoption in Low-Income Communities* (March 2010), online: Social Science Research Council <<http://www.ssrc.org/publications/view/1EB76F62-C720-DF11-9D32-001CC477EC70/>> at p. 38.

³⁹³ Federal Communications Commission, *In the Matter of Modernizing the E-rate Program for Schools and Libraries: Report and Order and Further Notice of Proposed Rulemaking* (23 July 2014), FCC 14-99 at paras 10-11.

³⁹⁴ See: United States Department of Agriculture, Food and Nutrition Service, “National School Lunch Program (NSLP),” online: USDA <<http://www.fns.usda.gov/nslp/national-school-lunch-program-nslp>>.

³⁹⁵ Federal Communications Commission, *In the Matter of Modernizing the E-rate Program for Schools and Libraries: Report and Order and Further Notice of Proposed Rulemaking* (23 July 2014), FCC 14-99 at para. 12.

³⁹⁶ See: Federal Communications Commission, *In the Matter of Rural Health Care Support Mechanism: Report and Order* (21 December 2012), FCC 12-150.

that the Pilot Program was able to fund 50 health care provider broadband networks and 3,822 individual health care provider sites.³⁹⁷

In Canada, the most recent data on public Internet access by low-income Canadians is from 2009.

Figure 6-4. Location of Internet access (% lowest income quartile)

Year	2005	2007	2009
Internet access from any location	58.7	68.8	76.2
Home	52.3	64.3	72.6
Work	10.6	13.1	16.4
School	23.8	32.7	37.1
Public library	14.9	16.6	18.3
Other location	20.2	23.9	30.4

Source: Statistics Canada CANSIM Table 358-0126

Since then, however, the Canadian Internet Use Survey has chosen to focus on home access to the Internet only.³⁹⁸

Public Internet access points clearly play an important role in allowing all Canadians to access and use the Internet. The Canadian data from 2009 follows the U.S. 2012 data quite closely, particularly given the steady growth in use of public Internet access since 2005. Therefore, the authors believe that public policy makers should continue to ensure that public Internet continues to be widely available and accessible. However, the authors note the increasing emphasis both in Canada and the U.S. on home Internet access, markedly through the Canadian Internet Use Survey's decision to focus on private access to the Internet. Therefore, any public program to promote public Internet access should complement initiatives to ensure all Canadians, including low-income Canadians, are able to access and afford Internet service at home.

³⁹⁷ *Ibid.* at para. 2.

³⁹⁸ See, for instance: Statistics Canada, "Canadian Internet Use Survey, 2012" (26 November 2013), online: StatCan.gc.ca <<http://www.statcan.gc.ca/daily-quotidien/131126/dq131126d-eng.htm>>.

6.6 What stakeholders thought

The authors requested interviews with and input from Canadian communications service providers, energy consumer representatives involved in the implementation of the *Ontario Electricity Support Program* (in addition to Ontario Energy Board staff), and academic researchers on effective initiatives to address affordability challenges.

For various reasons, including a CRTC proceeding examining basic telecommunications services at the time, Rogers Communications was the only service provider which agreed to participate in the stakeholder consultation. Rogers' general position was that broadband internet is affordable for all Canadians, including low-income consumers. Rogers offers a broadband internet package of 5 Mbps download speed and 1 Mbps upload speed for \$24.99 per month. As part of its corporate social responsibility initiatives, Rogers' *Connected for Success* program also offers residents of Toronto Community Housing a 10 Mbps download speed home internet plan for \$9.99 per month. Rogers also stated that it believed "the adoption of Internet services is influenced by multiple factors beyond the affordability of the service," including lack of interest or skills.

Consumer representative members of the Low Income Energy Network (LIEN), although generally supportive of the OESP thus far, continue to support a rate assistance program which would reduce electricity bills to an affordable percentage of total household income. Thus, each low-income household's bill would vary depending on household income. Energy consumer representatives believed this type of program would be more targeted based on a low-income family's ability to afford their electricity bill.

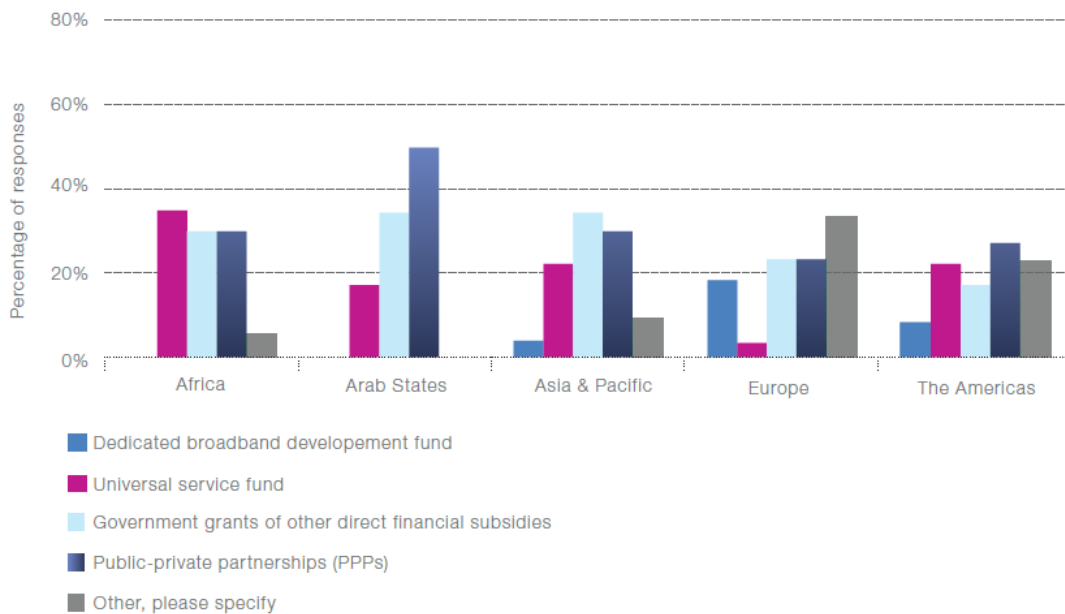
Academic researchers said that affordability of communications services was a problem, particularly in regards to the cost of wireless service. They proposed a number of solutions. Les Jacobs, for instance, proposed greater regulation of the provision of wireless data, and blanket provision of free public WiFi in urban centres. Leslie Regan Shade made several recommendations, including: ensuring basic internet services and addressing the high cost of wireless service; addressing digital literacy skills; providing public access to internet services, including creative solutions such as lendable WiFi hot spots; and ensuring communication rights. Tamara Shepherd also proposed "supply" and "demand" side solutions, including

price regulation; increased competition; local and community networks; adequate speed and quality targets and limits on data caps and latency; and increased digital literacy.

6.7 Funding affordability initiatives

The following figure from Cisco and the ITU shows various means for financing national broadband plans launched in various countries. These funds can be used to finance not merely affordability programs (if any) but other initiative such as broadband build-out, network maintenance, and education and public services.

Figure 6-5. Means of financing national broadband plans (2012)



Source: Cisco & ITU (2013), Figure 6.3

The chart shows that countries tend to use a combination of funding sources in order to ensure that citizens have access to broadband service.

Stakeholders interviewed for this report had different perspectives on sources of funding. Rogers Communications said that any affordability subsidy program “should be the responsibility of government and funded through general tax revenues, as is the case for existing programs to provide assistance to low-income

households for other basic necessities.” Other academic researchers such as Les Jacobs, Leslie Regan Shade, and Tamara Shepherd supported more government funding and support such as for public access to internet service. Some also mentioned that the cost of wireless service—and wireless broadband in particular—should be more closely regulated. Donna Kinapen of the Ontario Energy Board stated that the *Ontario Electricity Support Program* is currently funded by an additional charge to utility consumers based on the amount of electricity they use.

The authors propose that the implementation of an effective, holistic affordability initiative would be best achieved when funded by both the private and public sector—that is, communications service providers and federal, provincial and municipal governments. However, a Universal Service Fund financed by annual contributions from service providers is critical—particularly in order to fund a subsidy program for end-users.

The Alliance for Affordable Internet has concluded that:

USAFs [Universal Service and Access Funds] can represent an important mechanism to promote such cooperation, ensuring equitable participation by all major firms, competitive opportunities to develop needed resources, and a focus on underserved markets. As a central partner in the larger broadband strategy process, the USAF can channel funding where it can be most effective in closing gaps and enhancing demand, helping to accelerate the virtuous cycle of broadband ecosystem expansion. To achieve these lofty goals, however, USAF policies and administrations throughout the developing world require substantial commitment to building their internal planning and operational capacity, while both political and industry forces must embrace, rather than hinder, the Funds’ unique role and responsibilities.³⁹⁹

The World Bank, too, in assessing the effectiveness and viability of various funding mechanisms determined that service provider contributions to a Universal Service Fund were sustainable and only introduced some distortions to the overall economy:

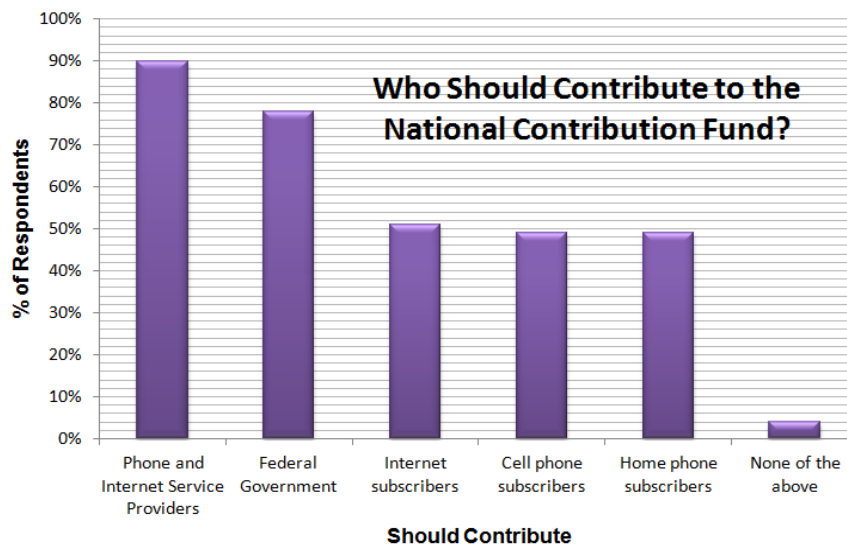
Overall, this mechanism has been the most used around the world. Companies tend to endorse this mechanism as long as its management is

³⁹⁹ Alliance for Affordable Internet, *Universal Access and Service Funds in the Broadband Era: The Collective Investment Imperative* (Washington: A4AI, 2015), online: A4AI.org <http://1e8q3q16vyc81g8l3h3md6q5f5e.wpengine.netdna-cdn.com/wp-content/uploads/2015/06/A4AI-USAF_06.2015_FINAL.pdf> at p. 18.

independent, accountable, and specific only for telecommunications projects (including complementing activities that will increase the chances of success of said projects, such as training and applications development). USFs do introduce some distortions in the overall economy as they represent an additional charge on sector revenues, but by applying them horizontally to the whole sector they end up both representing a small alteration of relative prices and keeping relative prices constant within the sector.⁴⁰⁰

Moreover, in a 2015 national Environics Research Group telephone survey commissioned by PIAC, 90% of Canadians said telecommunications providers should contribute to a national fund which would make telephone and broadband accessible and affordable in all parts of Canada. More respondents thought service providers should contribute than those who thought the federal government (78%) or telecommunications subscribers (around 50%) should.

Figure 6-6. Stakeholders Who Should Contribute to National Contribution Fund



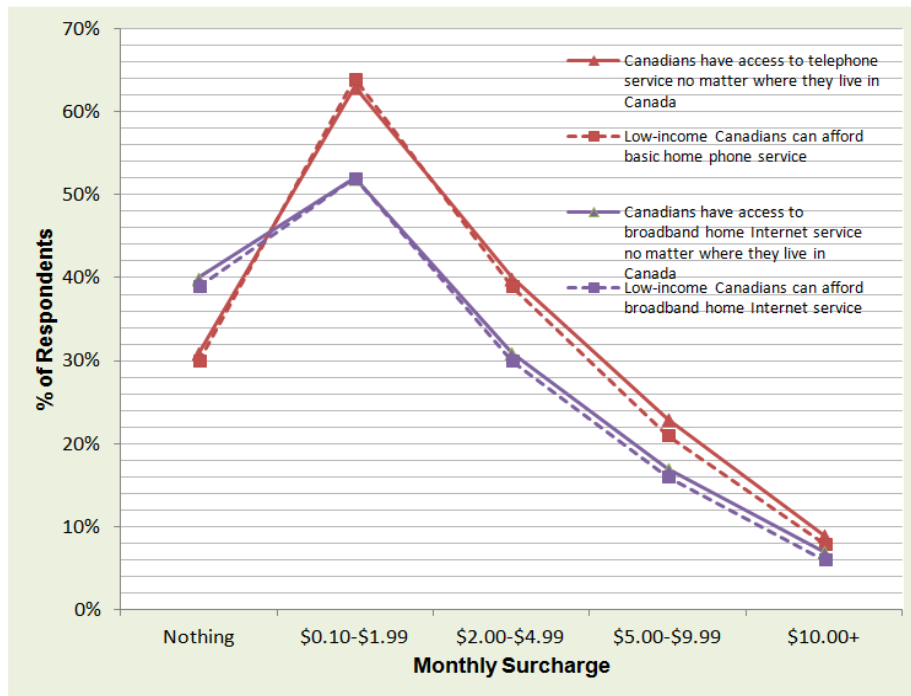
Source: PIAC, Environics Research Group Survey on Telecom and Broadband Services (2015)

⁴⁰⁰ Arturo Munte-Kunigami & Juan Navas-Sabater, “Options to Increase Access to Telecommunications Services in Rural and Low-Income Areas” (2010), World Bank Working Paper No. 178 at p. 32 and Table 5.4.

When asked whether they themselves were willing to pay a surcharge per month in order to ensure that telephone and broadband services were available and affordable throughout Canada, the majority of respondents agreed they were.

Figure 6-7. Amount Canadians Would Be Willing to Pay to Close Communications Gap

How much are you willing to pay as a small surcharge on your monthly bill in order to ensure...



Source: PIAC, Environics Research Group Survey on Telecom and Broadband Services (2015)

Therefore, Canadians agree that telecommunications service providers have a role to play in making communications services affordable for low-income users. In the authors' view, telecommunications service providers should be required to contribute to funding the provision of subsidies for low-income customers. These contributions could, as is common, be based on a percentage of their annual telecommunications revenues. A Universal Service Fund which would finance this low-income user

initiative would likely be more sustainable than general government revenues for instance.⁴⁰¹

In sum, the authors are of the view that the most effective means of funding the recommendations made above would be a combination of public and private funding. However, the authors recommend that a fund financed by telecommunications service providers and administered independently would be appropriate in providing subsidies to low-income customers of telecommunications services.

⁴⁰¹ See: Arturo Munte-Kunigami & Juan Navas-Sabater, “Options to Increase Access to Telecommunications Services in Rural and Low-Income Areas” (2010), World Bank Working Paper No. 178, Table 5.4.

7. A National Affordability Plan for Canada

Recommendation #1: Canada needs a National Affordability Plan

The Canadian *Telecommunications Act* states the following policy objective:

“to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada”.

Previous chapters examined why communications services are important for low-income households. It was learned that each of the four main communications services: paid television, home phone, mobile phone and internet, were considered essential to different segments of the Canadian population. However, when low-income Canadians were asked directly, home internet appeared more important and used by more people.

It has also been determined that numerous low-income households in Canada are currently struggling to pay their communications bills. Data provided by the CRTC indicate the average price for internet service increased 8% from 2013 while wireless rates went up over 14%. Unfortunately, this was not an aberration. The overall cost of communication services in Canada has increased each year since 2010. Thus, the real possibility exists that even more families will continue paying their communications bills at the expense of other necessities if price hikes continue to outstrip inflation.

As a result of the growing challenges faced by low-income Canadian families, PIAC contends it is time to seriously examine a national affordability plan for communications services in Canada.

Canada needs a clear vision for access to affordable broadband. This country did not have a clearly articulated national broadband strategy until the federal government issued the *Digital Canada 150* strategy in 2014.⁴⁰² The short document had few details on the government’s policy for promoting broadband access. In fact, the only concrete goal was the provision of \$305 million in funding to connect 280,000

⁴⁰² Government of Canada, *Digital Canada 150* (Ottawa: Minister of Industry, 2014), online: Government of Canada <[https://www.ic.gc.ca/eic/site/028.nsf/vwapj/DC150-EN.pdf/\\$FILE/DC150-EN.pdf](https://www.ic.gc.ca/eic/site/028.nsf/vwapj/DC150-EN.pdf/$FILE/DC150-EN.pdf)>.

households to a target download speed of 5 Mbps,⁴⁰³ a significantly lower target than other countries such as the U.S. (25 Mbps),⁴⁰⁴ the U.K. (24 Mbps),⁴⁰⁵ New Zealand (50 Mbps)⁴⁰⁶ and Sweden (100 Mbps).

When it comes to providing broadband access, there have been numerous political announcements, such as the one in Budget 2016 that proposes to deliver up to \$500 million over five years to extend and enhance broadband service in rural and remote communities.⁴⁰⁷ However, further details on these program announcements are usually slow to arrive, and routinely fail to live up to the unrealistic expectations placed on them by Parliamentarians.

While the rhetoric is encouraging, the political will to establish a plan through legislation, or to authorize the regulator to take action to ensure all Canadians are at least provided access to the internet does not appear to be present. Therefore, if internet access is not a priority in Canada, there is limited hope that the affordability of internet service, when available, will even remotely be a consideration taken seriously by policymakers.

Canadians, when surveyed, appear to strongly support efforts to close the so-called “digital divide” between high- and low-income Canadians and rural and urban households in Canada.⁴⁰⁸ The Angus Reid Institute found 68% of 1,500 Canadians surveyed believe broadband internet is an essential service.⁴⁰⁹ Moreover, 71% say the CRTC should require service providers to build the infrastructure necessary to

⁴⁰³ *Ibid.* at p. 8.

⁴⁰⁴ Federal Communications Commission, *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, FCC 15-10 at para. 3.

⁴⁰⁵ Government of UK, “Broadband Delivery UK,” online: Gov.UK <<https://www.gov.uk/guidance/broadband-delivery-uk>> (accessed 15 March 2016).

⁴⁰⁶ Government of New Zealand, “Ambitious target set for rural broadband” (6 October 2015), online: Government of New Zealand <<https://www.beehive.govt.nz/release/ambitious-target-set-rural-broadband>>.

⁴⁰⁷ Finance Canada, *Budget 2016* (March 22, 2016), p. 104.

⁴⁰⁸ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

⁴⁰⁹ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

ensure that every Canadian household has a broadband internet connection.⁴¹⁰ The same study also revealed more Canadians (56%) ranked “ensuring broadband internet access for all Canadians” as a 4 or a 5 on an importance scale of one to five, compared with any other issue the Angus Reid Institute has asked about in 2016.⁴¹¹

Similar to a national broadband strategy, a National Affordability Plan would:

- Identify affordability gaps in communications services;
- Create affordability objectives;
- Identify programs intended to help Canada meet those affordability objectives; and
- Delineate the responsibilities of various stakeholders in the communications sector, including various levels of government, regulators, communications companies and not-for-profit organizations.

One can draw from similar national strategic plans for low-income households developed in Canada in the past. For instance, the House of Commons’ 250-page *Federal Poverty Reduction Plan*⁴¹² clearly identified issues related to low-income households as well as specific vulnerable groups; provided an overview of poverty reduction strategies; and delineated the role of the federal government in reducing poverty, including the legislative framework required and support for provincial and territorial initiatives.

Such a plan should focus on **broadband internet service at home**, but be applicable to a consumer’s communications service of choice.

In Section 4 of this report, the reasons why home internet should be considered the focus of a national affordability plan for communications services were outlined. These include, but are not limited to the following trends:

⁴¹⁰ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

⁴¹¹ Angus Reid Institute, “Closing the ‘digital divide’: Most Canadian support CRTC action to provide broadband to all households,” (10 June 2016), *Media Release*, <<http://angusreid.org/internet-essential-service/>>.

⁴¹² House of Commons Canada, *Federal Poverty Reduction Plan: Working in Partnership Towards Reducing Poverty in Canada: Report of the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities* (2010), online: Parl.gc.ca <<http://www.parl.gc.ca/content/hoc/Committee/403/HUMA/Reports/RP4770921/humarp07/humarp07-e.pdf>>.

- Shift in the Provision of Government Services
- Shift in the Provision of Financial Services
- Need for Educational Pursuits
- Employment Opportunities
- Pursue Business Opportunities
- Connecting with family and friends

Recommendation #2: The CRTC should spearhead affordability initiatives, with federal and provincial political support and coordination.

As the Canada telecommunications and broadcasting regulator, the Canadian Radio-television and Telecommunications Commission is best positioned to establish initiatives which would address the affordability of communications services. The CRTC regulates Canadian communications service providers and also has the mandate and expertise to create targeted programs which would effectively address affordability for low-income Canadians.

Programs implemented in other countries show that the telecommunications regulator always plays a key role in administering an affordability program, particularly where the program is funded nationally by telecommunications service providers, such as in France and the U.S. A closer example to home lies in the Ontario Energy Board's recent implementation of the *Ontario Electricity Support Program* (OESP). In that case, the Ontario Minister of Energy determined the regulator was in the best position to design, implement and assess a targeted program for the affordability of residential electricity by low-income consumers.

PIAC believes the CRTC also has the expertise to address other challenges to affordable access to broadband identified in Section 4, such as **access** and **capacity**.

Any affordability initiative launched by the CRTC must be backstopped by political support and coordination. The federal government must publicly declare its ongoing commitment to the affordability of broadband and other communications services. PIAC notes, for instance, that the Government of Canada's recently issued *Innovation Agenda* identifies affordable access to high-speed Internet in one of its action areas:

5. Compete in a Digital World—Canada is at the forefront of economy-wide digital development and adoption

This area of action focuses on maximizing the benefits of current and emerging digital technologies. Innovations in cloud computing, digital manufacturing, quantum computing and driverless cars promise to radically change the business landscape and reshape the nature of work.

These innovations also promise to increase competition among businesses and offer consumers more choice. Canada needs to capitalize on these technologies to give businesses, research institutions and cities a competitive edge.

Canada must also do more to give rural communities and low-income Canadians affordable access to high-speed Internet so that they can participate fully in a digital and global economy for a better quality of life.⁴¹³

Federal political commitment to affordability, particularly through a long-term National Affordability Plan, is critical.

A National Affordability Plan also requires coordination with provincial governments. For instance, in response to the implementation of the OESP in Ontario, the Government of Ontario amended its Ontario Works and Ontario Disability Support Program social assistance regulations to ensure that exemptions to income include:

21. The value of grants, payments, credits, services or items provided by or in accordance with a program funded by gas distribution utilities, local distribution companies, a municipality, the Independent Electricity System Operator, the Ontario Energy Board, the Government of Ontario or the Government of Canada, for the purposes of energy efficiency, conservation or affordability.⁴¹⁴

⁴¹³ Government of Canada, “Positioning Canada to Lead: An Inclusive Innovation Agenda” (14 June 2016), online: News.gc.ca <<http://news.gc.ca/web/article-en.do?nid=1084739>>.

⁴¹⁴ Ontario Regulation 134/98, s 54(1)(21). See also: Ontario Regulation 222/98, s 43(1)(25).

Moreover, the 2016 federal Canadian budget⁴¹⁵ specifically proposed to exempt from income amounts received under the OESP:

ONTARIO ELECTRICITY SUPPORT PROGRAM

The Ontario Electricity Support Program (OESP) is a program of the Government of Ontario that, effective January 1, 2016, provides assistance to low-income households in Ontario for the cost of electricity. The OESP reduces the cost of household electricity by providing a monthly credit on a recipient's electricity bill. The credit depends on household income and how many people live in the household.

This type of assistance received in a year is generally required to be included in income. While an offsetting deduction is provided so that the assistance is effectively non-taxable, amounts received may affect income-tested federal or provincial/territorial benefits, such as child benefits.

To ensure that income-tested benefits are not reduced as a result of OESP amounts, Budget 2016 proposes to exempt from income amounts received under the OESP.

This measure will apply to the 2016 and subsequent taxation years.⁴¹⁶

Moreover, provinces, which have jurisdiction over areas such as education, and municipalities may be better positioned to address other challenges to broadband adoption such as education, digital literacy, and free public internet access.

Therefore, coordination among various levels of government to support any targeted CRTC initiative will be key to ensuring the success of a National Affordability Plan.

⁴¹⁵ Department of Finance Canada, *Tax Measures: Supplementary Information* (22 March 2016), online: Budget.gc.ca <<http://www.budget.gc.ca/2016/docs/tm-mf/tax-measures-mesures-fiscales-2016-en.pdf>>.

⁴¹⁶ *Ibid* at p 15.

Recommendation #3: Affordability initiatives should be led by an end-user subsidy in concert with other policy options

As a result of the detailed analysis undertaken in the current report and in PIAC's earlier 2015 *No Consumer Left Behind* report, PIAC has identified several key characteristics of an affordability initiative which would effectively assist low-income Canadian households:

- ∂ Targeted. Affordability programs should primarily target low-income users only. Eligibility could be determined by indicators such as the Low Income Measure, receipt of social assistance, and other low-income indicators.
- ∂ Non-discriminatory. Generally, all low-income users eligible for a program should be treated equitably regardless of their choice of service or provider. Some characteristics, such as household size, may be differentiating factors.
- ∂ Choice. The program should not constrain a user's ability to meet their household needs. Users should be permitted to choose the communications services and packages which best meet their household's needs.

Generally, the adoption of a **flexible end-user subsidy** would most effectively address the affordability challenges for communication services currently experienced by low-income Canadians. The end-user subsidy would, with proper implementation, empower Canadians to make telecommunications choices that suit their individual needs. Further, this recommended policy vehicle acknowledges the reality that the affordability of communication services has become a critical problem among many low-income Canadians. Due to the importance Canadians continue to place in their communication services, we contend an end-user subsidy is a just and reasonable approach in an effort to assist those Canadians in need.

While a mandated low-income service offering may also provide some assistance to low-income users and would be useful to some extent, decision-makers should be wary of relying solely on a "low-income package" to fully address the affordability of communications services. This is particularly as Canadians' needs in regards to fixed and mobile broadband are evolving rapidly and the low-income package would likely not be able to meet the needs of all low-income Canadian families both now and especially in the future. Mandated low-income offerings in of themselves do not meet the elements of control, choice and non-discrimination.

To accompany an end-user subsidy, the authors also propose the eventual elimination of data caps, specifically for home internet service. Data caps may have once been a justifiable network management tool to address congestion,⁴¹⁷ but today they may merely serve as an additional revenue stream for service providers without adding value and without regulatory oversight. The network congestion explanation is belied by the infinite nature of bits and bytes. Moreover, data caps may wreak disproportionately more harm than good upon already vulnerable groups.⁴¹⁸ However, if data caps remain a fact of life for Canadian internet users, PIAC proposes a minimum data cap of 200 GB/month be established, a cap which would better reflect the reality of Canadian households and meet their needs.

In the authors' views, addressing the affordability challenges of low-income consumers requires a multi-pronged approach which includes both public and private funding. Specific public policies and funding will be required in order to promote initiatives such as:

⁴¹⁷ Bragg Communications Inc. (Eastlink), TNC 2015-134 Transcript, Vol. 13 (27 April 2016) at para. 18005.

⁴¹⁸ See explanations by, *e.g.*, Affordable Access Coalition, TNC 2015-134 Transcript, Vol. 4 (14 April 2016) at paras. 5209-10; Cybera, TNC 2015-134 Transcript, Vol. 13 (27 April 2016) at paras. 18473-75; OpenMedia, TNC 2015-134 Transcript, Vol. 14 (28 April 2016) at paras. 19298-312; and Dwayne Winseck, TNC 2015-134 Transcript, Vol. 1 (11 April 2016) at paras. 1538-41.

- A comprehensive national broadband strategy;
- Free public internet access points;
- Reduced sales taxes on communications equipment, notably those used to access the internet including computers and smartphones.

The regulator, however, also has a role to play in ensuring that service providers assist in providing affordable low-income access to communications services. Notably, based on evidence from other jurisdictions, the authors recommend that the regulator create a Universal Service type fund financed by contributions from all telecommunications service providers which would provide subsidies to eligible low-income subscribers. Low-income users should have the flexibility to choose the service and package to which the subsidy would apply.

The low-income survey respondents all had pre-tax household income of \$30,000 or lower. According to Statistics Canada, this would account for all Canadians in the lowest and second deciles, as well as possibly some Canadians in the third decile.⁴¹⁹ The average after-tax income of the second decile in 2013 was \$21,500 or about \$1,791.66 per month, of which 6% is \$107.49 per month. Based on PIAC's *No Consumer Left Behind Part I* report, therefore, low-income subscribers should be paying absolutely no more than about \$107 per month on their communications services. Yet, the survey indicated that low-income respondents were in fact paying on average \$145.90 per month on communications, with one quarter paying between \$151 and \$200 per month.

Based on the results of this survey, including those which revealed how respondents would use a \$10 or \$20 monthly subsidy, the authors recommend the establishment of a \$20 monthly subsidy—or, if possible, a sliding credit scale similar to the OESP program—for low-income users. Similar to the Ontario OESP program, eligible recipients should include all low-income households based on the after-tax Low Income Measure (LIM-AT). The LIM-AT thresholds were the following in 2013:

⁴¹⁹ The upper total income limits in 2013 were:
Lowest decile: \$17,600
Second decile: \$27,400
Third decile: \$37,800
See: Statistics Canada, CANSIM Table 206-0031.

Figure 7-1. After-tax Low Income Measure Thresholds (2013)

Household Size	After-tax Income
1	\$20,933
2	\$29,604
3	\$36,257
4	\$41,866
5	\$46,808
6	\$51,275
7	\$55,384
8	\$59,207
9	\$62,799
10	\$66,196

Source: Statistics Canada, CANSIM Table 206-0091

In the authors' views, the combination of several policy approaches recommended above would significantly improve the affordability of communications services, which have become increasingly essential to the lives of Canadians and their ability to participate meaningfully in society.

8. Final Conclusions

Canada's current political climate highlights a new "innovation era", where the success of Canada's future society and economy will depend on its ability to become a competitive innovation hub. The Government of Canada's 2016 Budget defined a "new vision for Canada's economy *as a centre of global innovation*."⁴²⁰

Strengthening Canada's ability to "Compete in a Digital World," one of the six action areas outlined in the federal government's *Inclusive Innovation Agenda*, can only be achieved when all Canadians have affordable access to home broadband, wireless and other communications services. This means ensuring that *all* Canadians, in particular vulnerable and marginalized groups, can take advantage of the benefits of being connected to the communications services which meet their needs.

While there may be several barriers to the adoption of broadband and other communications services, this report focuses on the ability of low-income Canadians to afford these services. This is an incredibly important issue because the cost of communications services is climbing, while the household income of the lowest deciles has remained relatively stagnant. Therefore, a digital divide caused by the lack of affordable access is likely to grow for low-income Canadians without immediate action. There is a risk that low-income families will be left behind in education, job opportunity, social connection, and civic engagement.

The authors find in this report that affordability of communications services is a significant challenge for low-income Canadians. According to PIAC's *No Consumer Left Behind Part I* report, Canadians should spend no more than 4% to 6% of their household income on communications services. However, PIAC's survey showed that low-income families spend on average an estimated 8% of their income on communications expenditures, with some families spending closer to 10%. This affordability challenge expresses itself in different ways:

- About one-half of low-income respondents had to trade off other household goods or services in order to pay their communications bills—almost 1 in 5 (17%) indicated they went without other essential goods, such as food, medicine or clothing in order to pay a communications bill.

⁴²⁰ Government of Canada, "Budget in Brief" (22 March 2016), online: Budget.gc.ca <<http://www.budget.gc.ca/2016/docs/bb/brief-bref-en.html>>.

- About 20% of low-income subscribers struggled to pay off their communications bills in the past year, having to make partial payments, suspend or disconnect the service, commit to a payment plan, or be referred to debt collectors.
- More than 1 in 10 respondents (11%) ultimately cancelled a communications service.

If given an additional \$10 or \$20 per month, half of the respondents would use the extra money to help pay for existing communications bills.

Tackling the affordability of communications services requires a long-term commitment to ensuring low-income families are connected, particularly without having to sacrifice other household items – notably essential expenditures such as food, shelter, medical expenses and education. It requires political will and coordination among governments and regulators. It requires a sustainable plan. In this report, the authors made three broad recommendations:

Recommendation #1: Canada needs a National Affordability Plan.

Recommendation #2: The CRTC should spearhead affordability initiatives, with federal and provincial political support and coordination.

Recommendation #3: Affordability initiatives should be led by an end-user subsidy in concert with other policy options.

Meanwhile, regulators and decision-makers in communications policy should continue to pay special attention to the digital inclusion of marginalized and vulnerable communities, including low-income Canadians. Data collected on communications subscriptions, usage and spending in Canada should not merely focus on the average Canadian household nor on geographic regions but also on other factors including income, level of education and identification with a minority community. Further investigation and monitoring are required in this area.

Without immediate action, a digital divide caused by the lack of affordable access to communications services will likely grow for small but crucial segments of the Canadian population. Policy makers must ensure low-income families will not be left behind as Canada moves forward in a digital reality.

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