

# Canada's Digital Divides

**TECHNOLOGY AGE INCOME GEOGRAPHY CITIZENS INSTITUTIONS**



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## **Introduction: Canada's digital divides**

The phrase “digital divide” has become common in recent years, and is usually applied to some measure of have-and-have-not with respect to broadband Internet access. The “divide” is often related to urban-rural differences or income differences.

Those definitions are useful and important. However, they do not tell the whole story – there are, in fact, many digital divides in Canada today. Some, like access to broadband, might be considered divides within the Internet's digital universe. But there are other divides – between digital and non-digital media, between new media and legacy or “mainstream” media, between citizens and institutions, and among consumers of fragmented media.

In many cases, new digital technologies have contributed to those divides, by increasing the competition for legacy media, by unbundling revenue sources on which those media depended, and by creating contrasts between technology in the hands of consumers and technology in the hands of institutions.

This discussion paper has been prepared to help create a context for considering a number of these “digital divides”.

### **A new “National Dream”?**

In 2001, the federal government's National Broadband Task Force issued a report titled *The New National Dream: Networking the Nation for Broadband Access*.<sup>1</sup> The analogy referred to the original “National Dream” – the building of the Canadian Pacific Railway in the 1880s. And, while the 2001 report clearly saw broadband connectivity in the same kind of nation-building terms as the great railway project from over a century before, the Broadband Task Force's report added this cautionary note:

We also think it is likely that broadband will have potentially enormous consequences for our cultural institutions, the non-electronic media and traditional forms of cultural expression. This is an area of inquiry so vast and so important to our country's future that it may merit examination in its own right ...<sup>2</sup>

However, while there have been considerable public and private efforts since then to enable the spread of broadband access, there may have been too little public or private policy consideration of the impact that would have on earlier forms of media.

In that context, it is interesting to compare the current situation with the impacts of the great railway projects of the 19<sup>th</sup> Century. The original “National Dream” enhanced and extended the ability to gather and distribute news, within an economic model that underpinned the mass media for much of the 20<sup>th</sup> century.

For example, in 1942, Canada's preeminent economic historian, Harold Innis, made this observation:

The newspaper has been a pioneer in the development of speed in communication and transportation. Extension of railroads and telegraphs brought more rapid

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<sup>1</sup> Canada, Industry Canada, *The New National Dream: Networking the Nation for Broadband Access* (Report of the National Broadband Task Force), 2001.

<sup>2</sup> *Ibid.*, p. 20.

transmission of news and wider and faster circulation of newspapers; and newspapers, in turn, demanded further extension of railroads and telegraph lines. Cables, postal systems, express systems, aviation lines and radio have been fostered and utilized by newspapers.<sup>3</sup>

The new “National Dream” – broadband – continues to enhance news-gathering and distribution, but it overwhelms and disrupts the old economic model on which traditional media have depended.

And while the spread of broadband connectivity should clearly be a national priority, the impacts on established media, and on our ability to continue to support everything from local journalism to high-quality Canadian television drama, should also have high priority as a parallel concern of public and private policy.

### **Canada’s media environment in 2025**

Based on current trends, in terms of both technology adoption and disruption to media business models, we believe the following outline describes how Canada’s media landscape might look in 2025:

- In 2025, it is likely that there will be few, if any, printed daily newspapers in Canada. And it is also likely that their transition to online digital formats will not match their current scope in print.
- In 2025, there might be no local broadcast television stations in Canada.
- It should be obvious that both of those potential developments pose serious issues for the future of local journalism.
- In 2025, we will still watch a lot of television, but the structure of the TV industry will come to look less and less like broadcasting, and more and more like e-commerce for programs.
- In 2025, it will be even more important to be able to give Canadians the tools to produce and to discover Canadian content.
- In 2025, radio will likely still fit within our concept of “broadcasting”.
- And, in 2025, the Internet – and multiple devices for receiving it – will have become even more ubiquitous than today.

We will discuss a number of these elements in greater detail below. While all media will be impacted by technology, we will focus on the media that are likely to change most dramatically – daily newspapers and conventional (broadcast) television.

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<sup>3</sup> Harold A. Innis, “The Newspaper in Economic Development”, *The Journal of Economic History* (Vol. 2), December 1942, p. 31.

## **Newspapers: How will the news continue without the paper?**

We have dealt with long-term trends in daily newspaper paid print circulation and economic performance in two previous discussion papers, one in 2011 and one in 2013.<sup>4</sup>

We noted that, in 1950, combined daily newspaper paid circulation in Canada was equivalent to 102 per cent of households. Paid circulation grew in absolute terms until about 1990, but declined as a percentage of households because the number of households was growing more quickly. By 1995, paid circulation was equivalent to just under 50 per cent of households. As indicated in Figures 1 and 2, by 2014, that had fallen to just over 20 per cent.

As we noted in our 2011 discussion paper, for most of the 20<sup>th</sup> Century, media's role as an intermediary based on scarcity led to its development as a "bundled" or "packaged" product. So newspapers were a product that bundled news, opinion, entertainment, advice, guides, display advertising, and classified advertising – and a product that was able to use profitable parts of the bundle to subsidize unprofitable parts of the bundle.

For newspapers, one might conceptually describe three stages of development since 1950: First, growing circulation, but a decline relative to the number of households. Second, declines in both actual circulation and circulation as a percentage of households. The third stage – economic unbundling forced by technology, did not happen in a major way until after 2005, and it happened most significantly with respect to classified advertising, as Internet alternatives effectively removed that source of revenue (and profitability) from the daily newspaper bundle.

As indicated in Figures 3 and 4, those alternative, online, suppliers of classified advertising have had a major negative impact on daily newspapers, and, in most cases, an impact far greater than one might have expected from the decline in circulation alone.

And we noted this comment from Marshall McLuhan, from 1964, in his book, *Understanding Media: The Extensions of Man*:

The classified ads (and stock-market quotations) are the bedrock of the press. Should an alternative source of easy access to such diverse daily information be found, the press will fold.<sup>5</sup>

Unfortunately, the fulfilment of McLuhan's prediction appears likely to occur within the next 10 years. In Figure 5, we have extended two trend lines to 2025, based on the data for combined daily newspaper paid print circulation as a percentage of Canadian households – one trend line is based on the period from 1995 to 2014, and the other trend line is based on the period from 2000 to 2014. As can be seen in Figure 5, the trend line based on the more recent data indicates a steeper rate of decline.

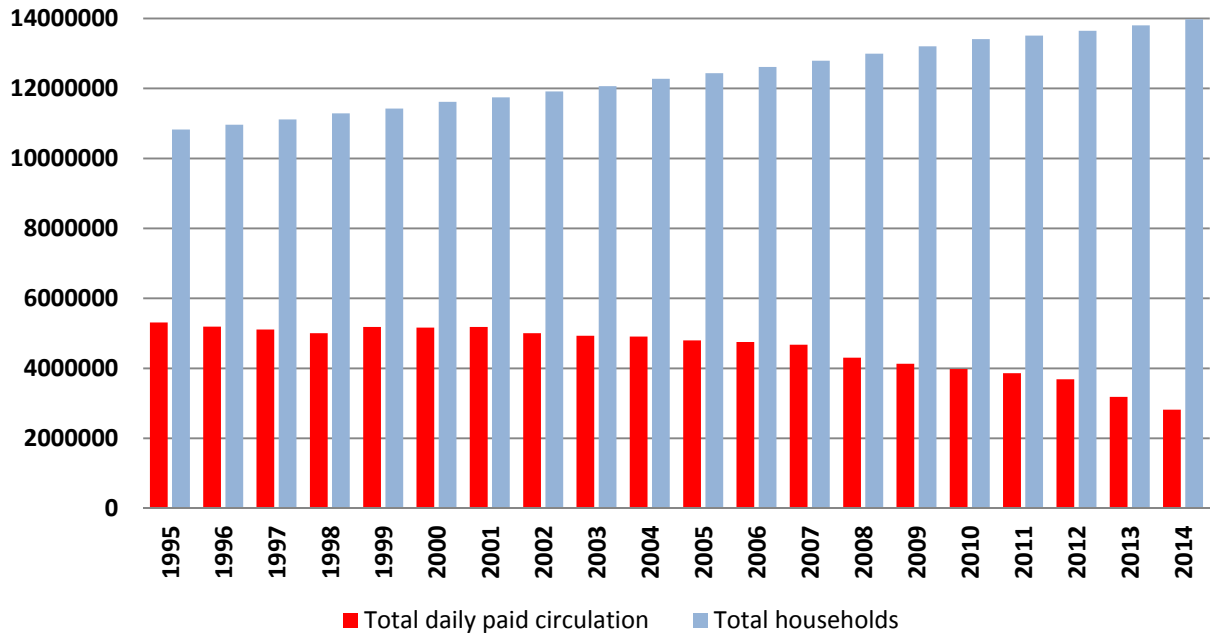
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<sup>4</sup> Both discussion papers are available at [media-cmi.com](http://media-cmi.com).

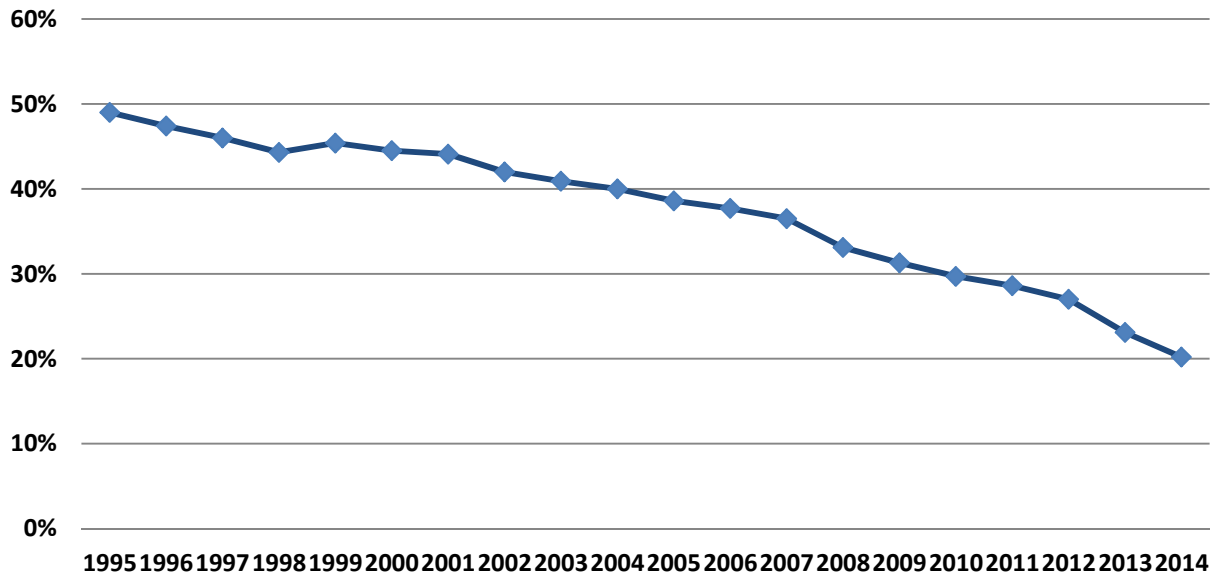
<sup>5</sup> Marshall McLuhan, *Understanding Media: The Extensions of Man*, McGraw-Hill, 1965, p. 207 (originally published in 1964).

1. Total daily newspaper paid circulation, and total households, Canada, 1995-2014



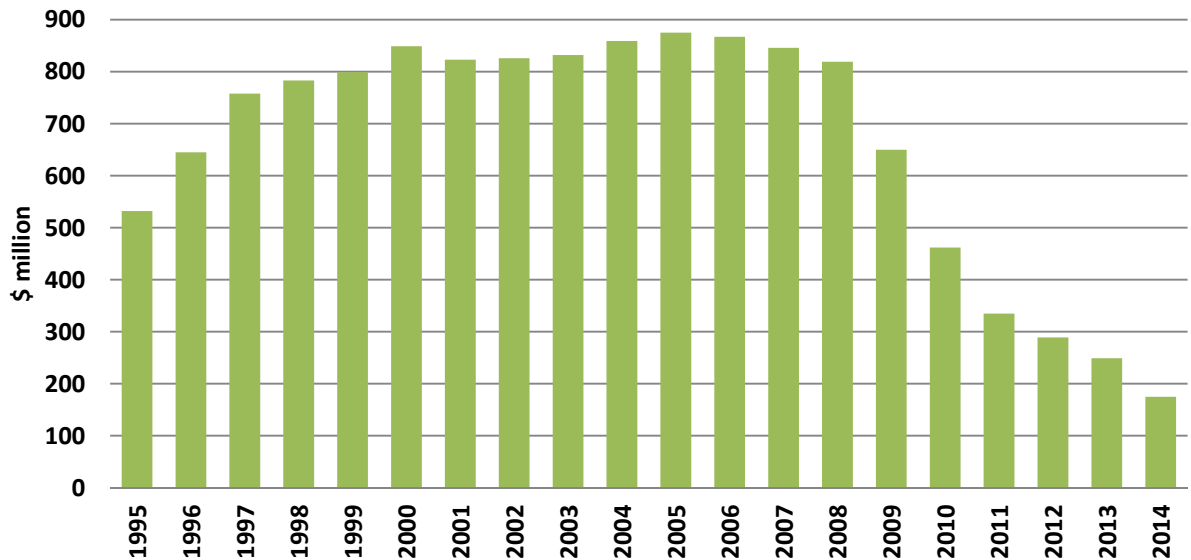
SOURCE: CNA; Newspapers Canada; ABC; AAM; CCAB; Statistics Canada; Communications Management Inc.

2. Total daily newspaper paid circulation as % of households, Canada, 1995-2014



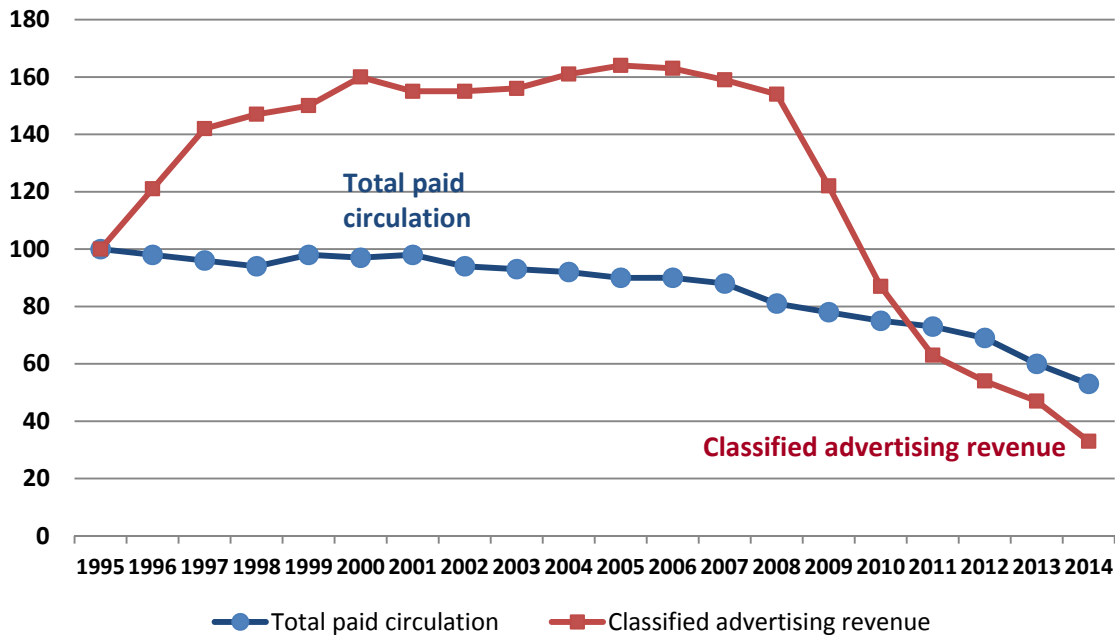
SOURCE: CNA; Newspapers Canada; ABC; AAM; CCAB; Statistics Canada; Communications Management Inc.

3. Total classified advertising revenue, Canadian daily newspapers, 1995-2014



SOURCE: Television Bureau of Canada.

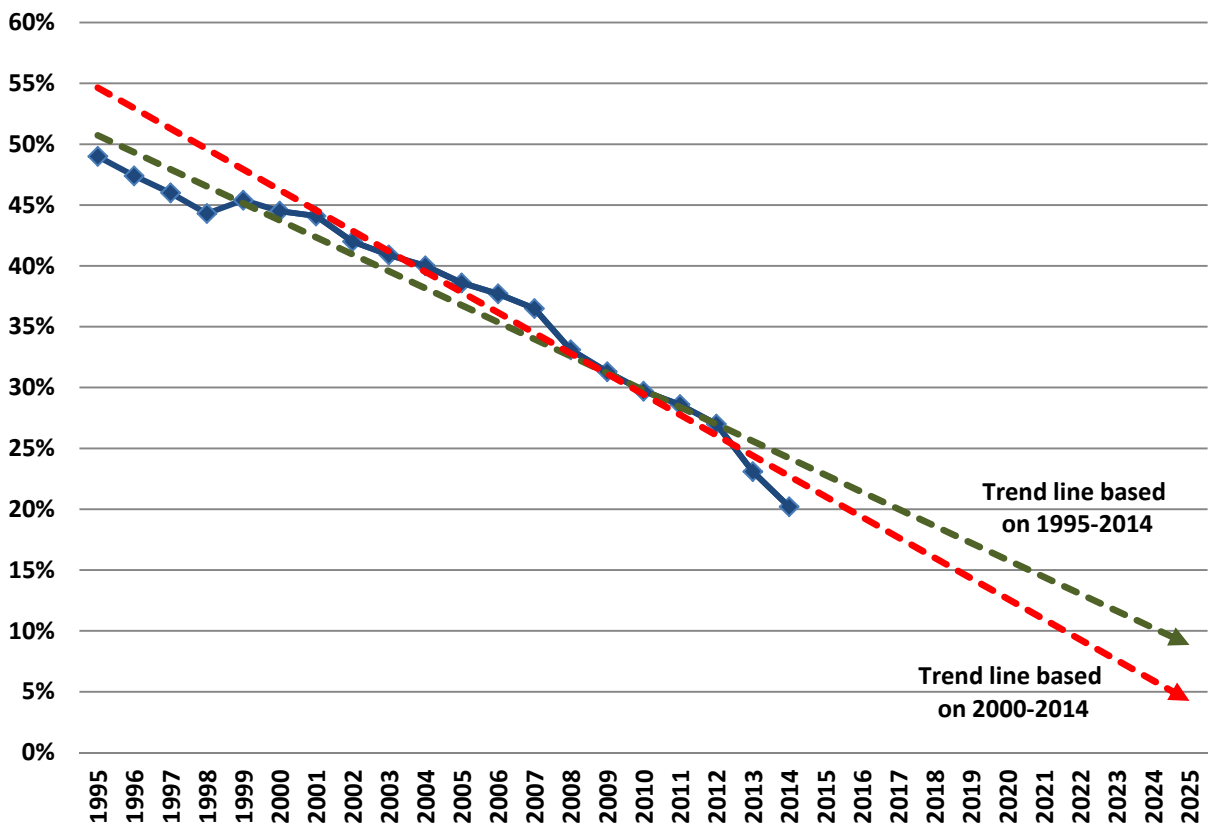
4. Comparison of paid circulation trends and classified advertising revenue trends, Canadian daily newspapers, 1995-2014, Index basis (1995=100)



SOURCE: CNA; Newspapers Canada; ABC; AAM; CCAB; TVB Canada; Communications Management Inc.



5. Total daily newspaper paid circulation as % of households, Canada, 1995-2014, with trend lines to 2025



SOURCE: CNA; Newspapers Canada; ABC; AAM; CCAB; Statistics Canada; Communications Management Inc.

The trend lines indicate combined daily newspaper paid circulation falling to between five and 10 per cent of Canadian households by 2025.

One should always be careful about straight line projections. For example, we have noted in the past that brief “plateau” effects might be possible for daily newspaper paid circulations. However, while those “plateau” effects may modify the timing, they are unlikely to change the long-term direction.

To the extent that the trend lines are realistic, we do not believe that a viable print business model exists for most general interest daily newspapers once paid circulation drops below 10 per cent of Canadian households.

Thus, Canada’s daily newspapers now are engaged in a 10-year race against time and technology to develop an online business model that will enable them to preserve their brands without print editions, and – even more difficult – to try to develop new kinds of economic bundles (or other kinds of economic arrangements) that will enable their online presence to maintain their current journalistic scope.

## **Television: From OTA to OTT**

When television first started in Canada, it was a broadcast medium that could be described as “over-the-air” (OTA) television. Then came cable television, satellite television, and now, with the Internet, “over-the-top” (OTT) television. That evolution has not only changed the terms we use to describe television, but it has also changed the balance of revenue sources and delivery methods within the television system.

At the outset, when television was delivered over the air, the local television station had the benefit of its own type of bundling. All genres of programming flowed to consumers through those local stations – drama, comedy, variety, news, sports, children’s programming, food shows, etc. The profits from some genres helped to subsidize losses on other genres.

When specialty cable channels came on the scene, the local station’s bundle was disrupted, with the introduction of news channels, sports channels, children’s channels, food channels, and many other genres. While consumers gained choice, local stations lost their ability to internally cross-subsidize from profitable to unprofitable genres.

At the same time, the balance of revenue sources also changed. We began, in Canada, with a single publicly-owned conventional television broadcaster, with two main revenue sources – advertising and government grants. Private conventional stations and networks followed, with a single main revenue source – advertising. The new specialty services combined advertising with subscriptions, and the pay services relied on subscriptions only. Most recently, with the advent of Internet-delivered “OTT” services like Netflix, Canadian consumers have been able to add pay (or pay-per-view) services from outside the regulated Canadian television system.

As the television industry went through these stages, the original form of television delivery in Canada – over-the-air broadcast television – became a much less profitable business, and now finds itself, overall, in a money-losing situation. And, not only has broadcast television’s share of total television revenue declined significantly, all television advertising now is under pressure from Internet-delivered advertising.

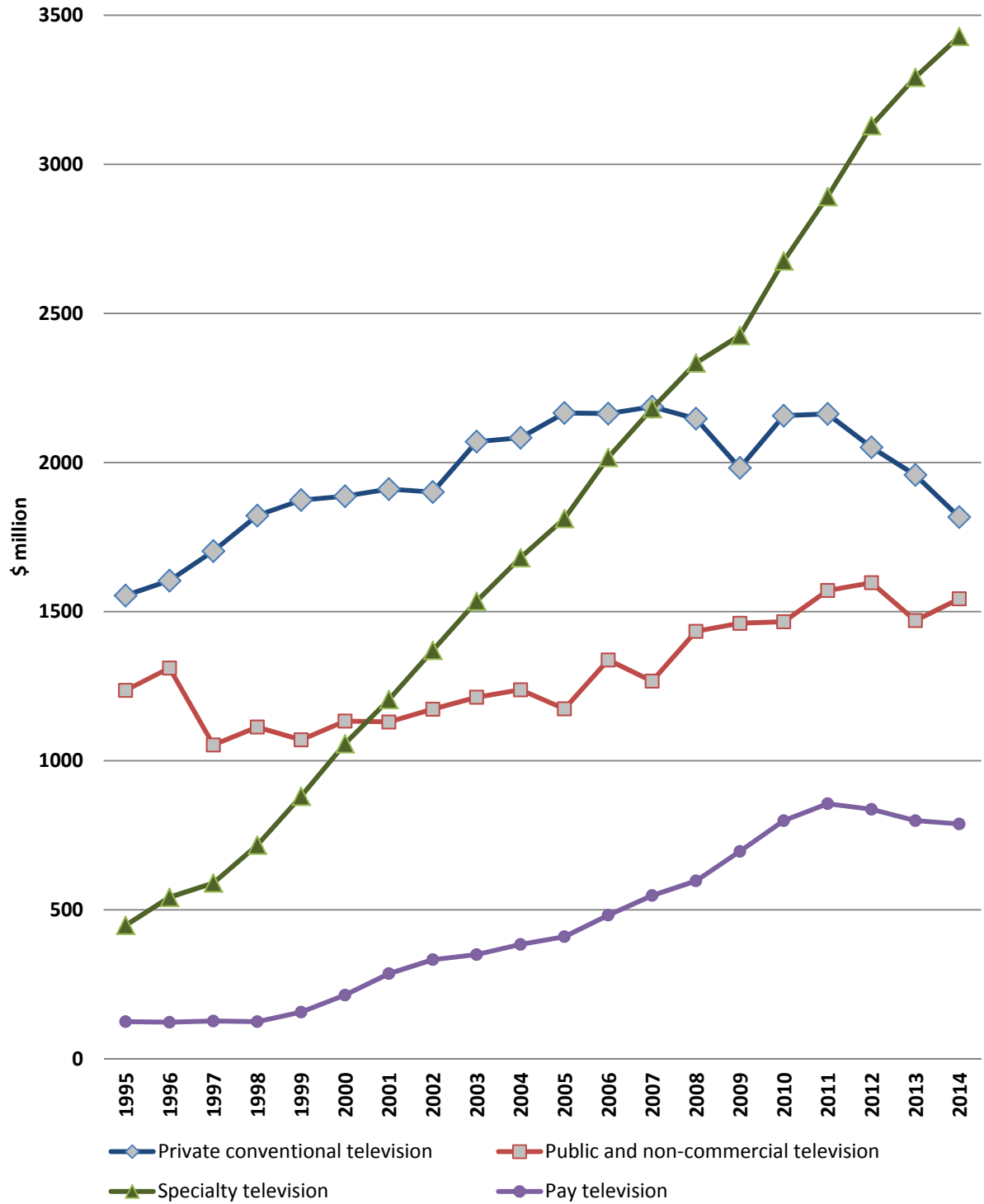
The degree to which conventional broadcast television has been impacted by technology and competition can be illustrated by tracking the data from 1995 to 2014.

Figure 6 presents revenue data for Canadian television programming services. It indicates that, in 1995, private conventional television was the largest component in the Canadian television programming system, and accounted for almost 50 per cent of the revenue of Canadian television programming services. By 2014, among Canadian TV programming services, private conventional television’s share was down to less than 25 per cent, with specialty services holding the largest share.

Figure 7 presents profitability data for private conventional television from 1995 to 2014.

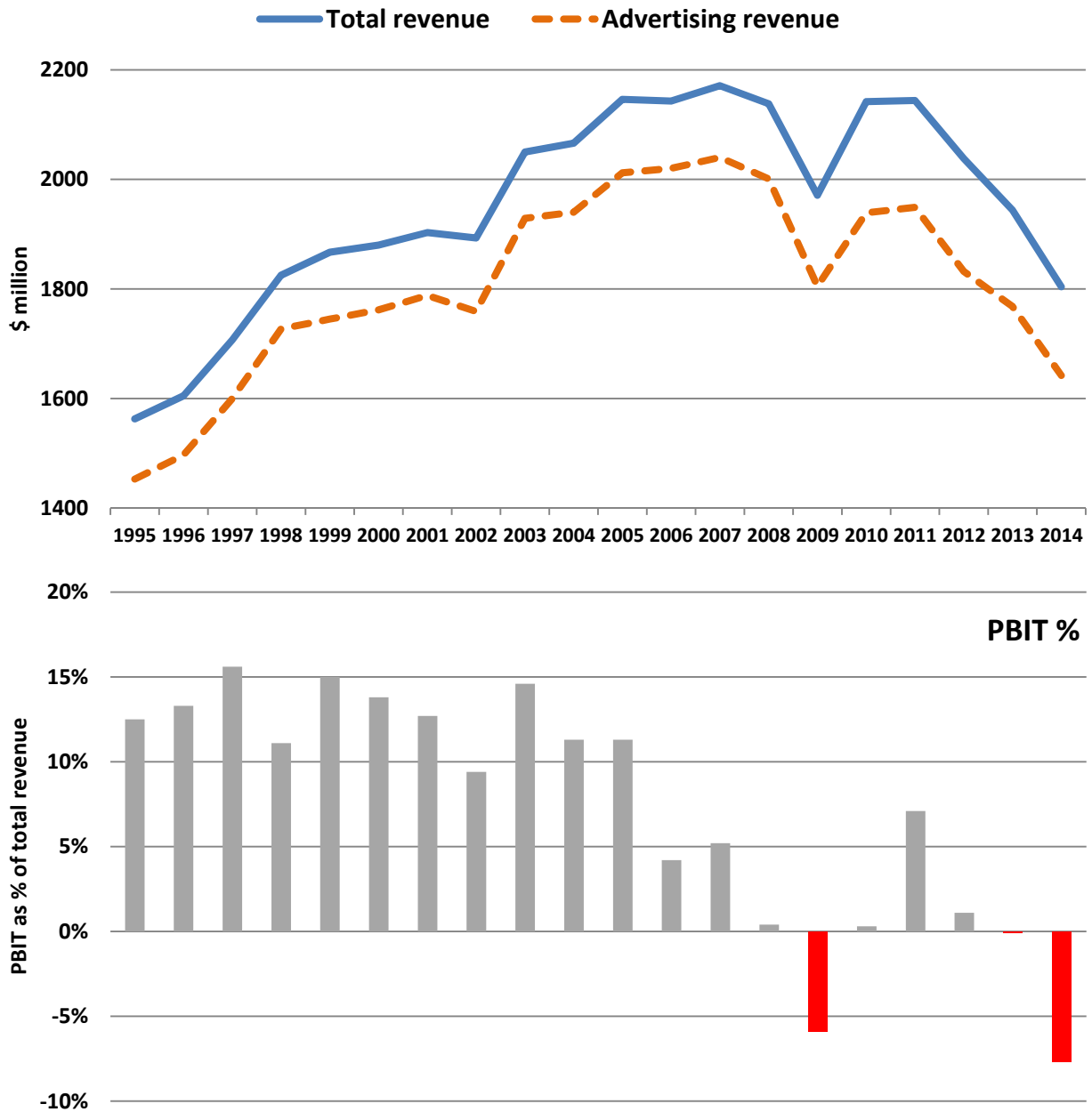
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6. Total revenues of Canadian television programming services, 1995-2014



SOURCE: Statistics Canada; CRTC; Communications Management Inc.

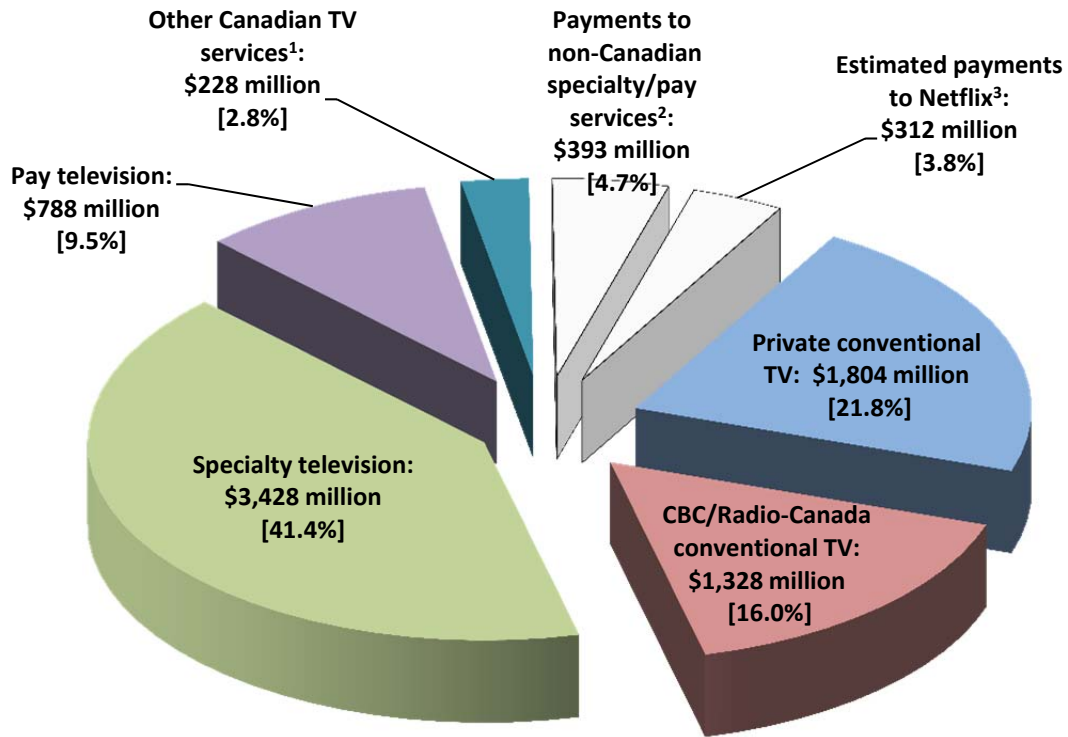
7. Revenue trends and profitability, private conventional TV, Canada, 1995-2014



SOURCE: CRTC.

Figure 8 uses data from 2014 to place the Canadian television programming system into a larger context. As Canadians, we not only directly or indirectly support Canadian services, we also subscribe to non-Canadian services through BDUs, or subscribe directly to OTT services like Netflix. One could presumably add other non-Canadian services that have revenue attributable to Canada, but Figure 8 does help to provide context for the broader programming services market.

8. Revenues of Canadian television programming services, plus revenues attributable to the Canadian market for selected non-Canadian services, 2014



**NOTES:**

1. Includes TVO, Télé-Québec, and a number of other services.
2. Refers to affiliation payments from Canadian BDUs to non-Canadian services.
3. Based on an estimated average of 3.25 million paying Netflix subscribers in Canada during the 2014 broadcast year.

SOURCE: CRTC; Statistics Canada; Communications Management Inc.

We can also see, in the broader programming services market, that Canadian private conventional television now has revenue lower than it was in the late 1990s, and a revenue market share that has fallen, in 20 years, from almost 50 per cent to just over 20 per cent.

Ten years from now, it is possible that most television will be delivered to most Canadians via the Internet. And this is not a phenomenon that will be limited to Canada. In a speech delivered on June 25, 2015, James Harding, the BBC Director of News and Current Affairs, made this prediction:

By 2025, most people in the UK are likely to get their television programs over the internet. By 2030, most likely everyone will.<sup>6</sup>

<sup>6</sup> BBC, “James Harding speech at the Association for Journalism Education conference” [accessed online at [bbc.co.uk](http://bbc.co.uk)].

As noted above, this does not mean that there will be less television, or less watching of television. But it does mean that the industrial organization of the television industry will have changed in fundamental ways – how we receive programs, how we pay for those programs, how those programs are financed, and how those programs are distributed.

### **The impact on journalism**

If the business models for printed daily newspapers and local broadcast television stations become increasingly unsustainable over the next decade, how might that affect the resources available for journalism in Canada?

We estimate that printed daily newspapers and private conventional television are the two largest spenders on journalism in Canada today, followed by specialty TV channels (as a group), and CBC/Radio-Canada conventional television.

If the two largest sources of spending on journalism in Canada today might be gone or much diminished in 2025, what will take their place? A small number of traditional media might be able to make the transition to become national or international online news “brands”, but what will happen to local journalism?

Will we get our news from Apple, Google, or Facebook? Without the current scope of journalistic output, where will Apple, Google and Facebook get their news? And, of course, there are numerous online-only start-ups, often specialized in nature, but few, if any, provide the kind of journalistic scope of our current local daily newspapers or local broadcast television.

Some may argue that none of this is important; that something new will automatically take the place of traditional journalism. But what kind of journalism will that be? We think of journalism in its traditional forms, either print or broadcast, but we must also think of journalism as a process – a process for gathering, checking, editing, verifying, and, if necessary, correcting when it proves to be incorrect. A 2009 comment from an editor at the trade publication *Advertising Age* neatly summed up the problem:

If all the newspaper newsrooms go away, so too does an entire base of knowledge about proper journalism practices. The ethos of the web is very different from that of a newspaper, and not that the web is in itself bad, but it is a different way of looking at how we disseminate information. “Blog first and ask questions later” is not always the most responsible way to report the news.<sup>7</sup>

We raise this here not to start an argument about the degree to which certain media follow proper practices today. The point is that the journalism that is nestled within the current media structure has a set of ideals about practices, and even if one of the purposes of those ideals is to provide a basis for criticism of the degree to which they are actually followed, that still has value. But the whole structure of journalism that is linked to those values – fact-checking, choices on emphasis, etc. – is also linked to the larger economic structure of the overall media industry.

Thus, the question of how to make the transition from traditional media to online media is not only a business question. The current changes in the media ecosystem carry the possibility of

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<sup>7</sup> Simon Dumenco, “Retrain Journalists to Save Biz? OK, But What About Civilians?”, *Advertising Age*, March 2, 2009 [www.adage.com].

profound changes for the way we, as citizens, will pay for and receive journalism. It is also, therefore, a question about how, and how well, Canadians will be informed in the future.

### **The evolution of television: From “broadcasting” to “e-commerce for programs”**

The concept of bundling has been an important element in the development of television. First, as noted above, the original broadcast stations were able to bundle many genres and cross-subsidize internally. While the introduction of specialty and pay services impacted on the bundling by conventional television stations, the new services were, themselves, usually offered to consumers in bundles by broadcasting distribution undertakings (BDUs).

However, that bundling by BDUs now is being modified by the Canadian Radio-television and Telecommunications Commission (CRTC), and there will be a greater consumer ability to purchase smaller packages of channels or even individual channels. We believe this to be a transitional stage in the development of the way television is delivered to consumers.

By 2025, we believe that the building block of the television business model will be the program, not the channel, and most of the transactional relationship between consumers and television will come to be regarded as “e-commerce for programs”.

There are already signs that we are moving in this direction. Consumers are increasingly recording programs on video recorders, or adding channels to packages based on signature or marquee programs. And programming services are recognizing this trend.

On April 16, 2015, *The Wall Street Journal* reported:

At a time when the streaming TV landscape has never been more robust, Netflix told investors it will focus on promoting its original programs — from the Kevin Spacey political drama to newer shows like “Unbreakable Kimmy Schmidt” and “Bloodline” — instead of simply hawking the virtues and price of the service itself.<sup>8</sup>

On July 22, 2015, CNBC reported that the NBA would offer single-game pay-per-view:

Next season, fans can buy individual out-of-market games for the first time, the league confirmed to CNBC on Wednesday. Viewers can purchase a single game for \$6.99, where previously they could only buy all out-of-market games for a season.

The pay-per-view option, which was first reported by ESPN, will be available on broadband for computers, tablets and mobile devices. It was not immediately clear which cable operators would offer single games.<sup>9</sup>

The move to “e-commerce for programs” does not necessarily mean that all programs will be purchased one-at-a-time; nor does it mean that programs will not carry advertising. But it does mean that consumers are less likely to be buying channels (alone or in bundles), and more likely to be buying specific programs (alone or in bundles).

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<sup>8</sup> Steven Perlberg, “How Netflix Is Shaking Up Its Marketing Strategy”, *The Wall Street Journal*, April 16, 2015 [accessed online at [wsj.com](http://wsj.com)].

<sup>9</sup> Jacob Pramuk, “NBA to offer single-game pay-per-view for \$6.99”, CNBC, July 22, 2015 [accessed online at [cnbc.com](http://cnbc.com)].

And part of the transition will be in the type of vendors from whom consumers get their television programs. In their television programming delivery modes, today's cable and satellite companies will come to look more like online stores, where they will compete with other vendors of programs like Apple or Amazon.

Thus, the current debate about “a la carte” channel-buying will give way to an environment in which the buying of programs gradually eclipses bundles and many channels. Video providers will have to create a virtual “store” that will entice and empower video consumers, who will be accessing programs on multiple devices, through multiple delivery systems, and from multiple suppliers (including advertisers).

### **From serendipity to search: The growing importance of “discoverability”**

Until relatively recently, newspapers and television were their own best search engines. As a bundle of news and features, newspapers were able to cross-promote content internally, and readers benefited from a kind of serendipity – flipping the pages, and finding something that they hadn't known about before, but that then captured their interest.

As fewer and fewer citizens get their news from the printed page, that kind of serendipity fades in importance, and finding news becomes a more complex mix of online news sites, search, links within news and non-news Web sites, and social media.

In the case of conventional television, before fragmentation of the television market, a lot of promotion of programming was also internal, and new programs were often scheduled after successful shows (and promoted within those shows) to help build audiences.

And, of course, television guides (and critics) in daily newspapers (as well as publications like *TV Guide*) provided additional information about what was on, and what was worth watching. However, as the television market fragmented, the role of print as a guide to television diminished, our guides to television moved onscreen and/or online, and social media became a competitor for traditional reviews by television critics.

In a fragmented, on-demand world, the process of discovery will become increasingly important. Program guides will be the “table of contents” for the viewing experience, but they will have to become “value-added search” – more intuitive and more informative.

In a policy statement based on its “Let's Talk TV” review, the CRTC recognized the importance of discoverability, particularly in the context of helping Canadians find Canadian programs in our fragmented television universe.

In the introductory section of Broadcasting Regulatory Policy CRTC 2015-86, on March 12, 2015, the Commission stated:

The Commission recognizes that, for Canadian-made programming to succeed, it must be widely available and visible. Canadians need more opportunities to discover Canadian-made programming on multiple platforms. In this respect, the Commission will host a summit to engage directly with stakeholders to discuss ways to work together to develop strategies and mechanisms to improve the



discoverability and promotion of Canadian programs. The Commission is also providing additional tools to incent the promotion of Canadian programming.<sup>10</sup>

In that same policy statement, the Commission noted:

The Commission considers that discoverability is critical to the success of Canadian programming in the future. The migration from scheduled and packaged programming services to a more on-demand and tailored television experience is changing the way viewers are finding and discovering Canadian programming. How the industry adapts its promotional efforts in this new environment will ultimately dictate the success of Canadian programming both here and abroad.<sup>11</sup>

### **More than just discoverability – the Interface**

For television, the evolution of discoverability has, for the most part, been linked to the packaging of programs into channels and channels into bundles. But as television continues to evolve into “e-commerce for programs”, the nature of the techniques used for discovery will also have to evolve.

To the extent that BDUs or other suppliers of video programming start to look more like online “stores”, then the mechanisms for discovery and the mechanisms for choosing/purchasing the programs may become more closely integrated. Thus, we could have two general types of discovery – guides to programming that are independent of the online “stores”, and guides to programming that are part of an Interface that combines finding, describing, rating, and purchasing the programs we will watch.

### **Drivers of technology adoption**

Although the “digital divide” question is most often focused on high-speed or broadband Internet, we believe it is useful to expand that focus to include cellphones (which are, increasingly, smartphones) and television delivered by broadcasting distribution undertakings like cable or satellite. We have done so because the Internet, smartphones and television are becoming inter-related, particularly as video content becomes available on a variety of devices in addition to the television set.

To assess some of the drivers of technology adoption, we have used a number of special tabulations from Statistics Canada’s annual Survey of Household Spending.<sup>12</sup> As of mid-2015, the most recent data from that survey are for 2013. While there will obviously have been some changes in the data since the survey was completed, the survey had a large sample size (11,686), which makes it possible to produce cross-tabulations, as well as data for a number of demographic and geographic variables related to adoption of communications services and devices.<sup>13</sup>

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<sup>10</sup> CRTC, Broadcasting Regulatory Policy CRTC 2015-86, 12 March 2015 [accessed online at [crtc.gc.ca](http://crtc.gc.ca)].

<sup>11</sup> *Ibid.*, Paragraph 63.

<sup>12</sup> It should be noted that the data from the 2013 Survey of Household Spending cover all 10 provinces, but do not include the three territories.

<sup>13</sup> The CRTC has also used data from this survey in its annual *Communications Monitoring Report*. The most recent of those reports, issued in 2014, used data from the Survey of Household Spending for 2012.

Because of the sample size, we were able to have tabulations done by:

- Income quintile;<sup>14</sup>
- Age of household “reference person”;<sup>15</sup> and
- Size (population) of area of residence.

We were also able to have cross-tabulations done by age of reference person and income quintile, to provide some indication of whether age or income were more important drivers of adoption for selected technologies.

In addition, the large sample size enabled us to have special tabulations done – using the same variables – for only those households that did not report subscribing to either cablevision or satellite TV, so we could know more about the characteristics of non-subscribers.

For example, if a household does not subscribe to cablevision or satellite television, but does subscribe to high-speed Internet, that might indicate a decision to use the Internet in place of more traditional television delivery systems.

In fact, the characteristics of households that fall into that category also provide some insights into two sets of “buzz words” that have become common in the industry in recent years – “cord-cutters” and “cord-nevers”, which will be discussed in more detail in a subsequent section.

### **Summary data for Canada**

A basic summary of the overall Canada-wide data appears in Figure 9. While the data are straightforward, a number of items should be noted:

- The Statistics Canada numbers of households with cable and satellite check reasonably closely with the CRTC’s published data for subscribers, and also with data published by the Television Bureau of Canada.
- If we focus only on the data for all households, we find the numbers for cablevision and satellite dish total 11,863,584, or about 85.8 per cent. That would leave an apparent number of 1,956,380 households, or 14.2 per cent, as non-subscribers. However, if we look at the additional tabulation based on households not reporting cablevision or satellite dish, the total is 2,287,142, or 16.5 per cent of households. The difference is 330,762 households, or about 2.4 per cent of the total, and a reasonable inference is that that is the number of households that have both some type of cablevision and a satellite dish.

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<sup>14</sup> The income quintiles are:

1	\$0-\$30,668
2	\$30,669-\$51,804
3	\$51,805-\$79,722
4	\$79,723-\$121,291
5	\$121,292+

<sup>15</sup> The “reference person” is defined as “the household member that is mainly responsible for the financial maintenance” of the household.

9. Summary data for households reporting selected communications/entertainment services and equipment, Canada, 2013

	Estimated number of households	Percentage reporting
<b>Total</b>	<b>13,819,964</b>	<b>100.0 %</b>
<b>Cellphone</b>	<b>11,728,818</b>	<b>84.9 %</b>
<b>Cablevision</b>	<b>8,890,478</b>	<b>64.3 %</b>
<b>Satellite dish</b>	<b>2,973,106</b>	<b>21.5 %</b>
<b>Total for cablevision and satellite dish</b>	<b>11,863,584</b>	<b>85.8 %</b>
<b>Internet from home</b>	<b>11,596,435</b>	<b>83.9 %</b>
Regular telephone connection to a computer	531,513	3.8 %
High-speed telco connection to a computer	3,413,513	24.7 %
Cable connection to a computer	5,514,256	39.9 %
Wireless (e.g., cell phone, digital appliance)	2,194,617	15.9 %
Connection with a satellite dish	299,896	2.2 %
Other type of connection	85,398	0.6 %
<b>Apparent number of households:</b>		
With both cablevision and satellite dish	330,762	2.4 %
With more than one type of Internet connection	442,758	3.2 %
With high-speed Internet connection	11,064,922	80.1 %
Subscribing to cable for Internet only	684,620	5.0 %
<b>NOT reporting cablevision or satellite dish</b>	<b>2,287,142</b>	<b>16.5 %</b>
<b>Percentages based on households NOT reporting cablevision or satellite dish:</b>	<b>2,287,142</b>	<b>100.0 %</b>
<b>Internet use from home</b>	<b>1,725,793</b>	<b>75.5 %</b>
Regular telephone connection to a computer	100,628	4.4 %
High-speed telco connection to a computer	572,278	25.0 %
Cable connection to a computer	684,620	29.9 %
Wireless (e.g., cell phone, digital appliance)	401,186	17.5 %

SOURCE: Statistics Canada; Communications Management Inc.

- If one totals the specific entries for types of Internet connection, it comes to 12,039,193, which is greater than the overall total for the number of households with a home Internet connection. The difference – 442,758 households (3.2 per cent of the total) – appears to be the number of households indicating more than one type of Internet connection.

- We have estimated the number of households with “high-speed” Internet by subtracting the “dial-up” households from the total of households with Internet. This yields an estimate of 80.1 per cent. In the CRTC’s 2014 *Communications Monitoring Report*, the percentage of households with “high-speed” Internet in 2013 was given as 79 per cent, with 67 per cent of all households considered to be “broadband (above 5 Mbps)”.<sup>16</sup> Although there will be variances within sub-groups, we believe it is not unreasonable to consider that about 85 per cent of our “high-speed” total would fit in the “broadband (above 5 Mbps)” category.<sup>17</sup>

### **Technology adoption – key variables**

In Figures 10 through 13, we have indicated the percentages of subscribers for cellphones, high-speed Internet, cablevision and satellite dishes, and also the percentage without either cablevision or satellite dish, based on a number of different variables:<sup>18</sup>

- Figure 10 indicates the results by age of reference person.
- Figure 11 indicates the results by income quintile.
- Figure 12 indicates the results by size of area of residence.
- Figure 13 provides a cross-tabulation of data by age and income. (In Figure 13, we have shaded the percentages that are equal to, or higher than, the overall percentages for the selected categories.)

### **Interpreting the data**

After reviewing the data in Figures 10 through 13, we believe the following observations can be made:

- A key driver for subscribing or not subscribing to BDUs for television, or for having or not having cellphones or high-speed Internet, appears to be the age of the reference person for the household.
- If we focus on households that do not subscribe to either cable or satellite for television, we find that the percentage in that category drops more dramatically from younger to older age groups than it does from lower to higher income groups.
- The size of area of residence does not appear to be as significant, in terms of determining the percentage of households that do not subscribe to a BDU for television (although rural areas have a much higher proportion of satellite subscribers). However, for communities under 30,000 in population (including rural areas), it does appear to be a factor in subscribing to high-speed Internet.

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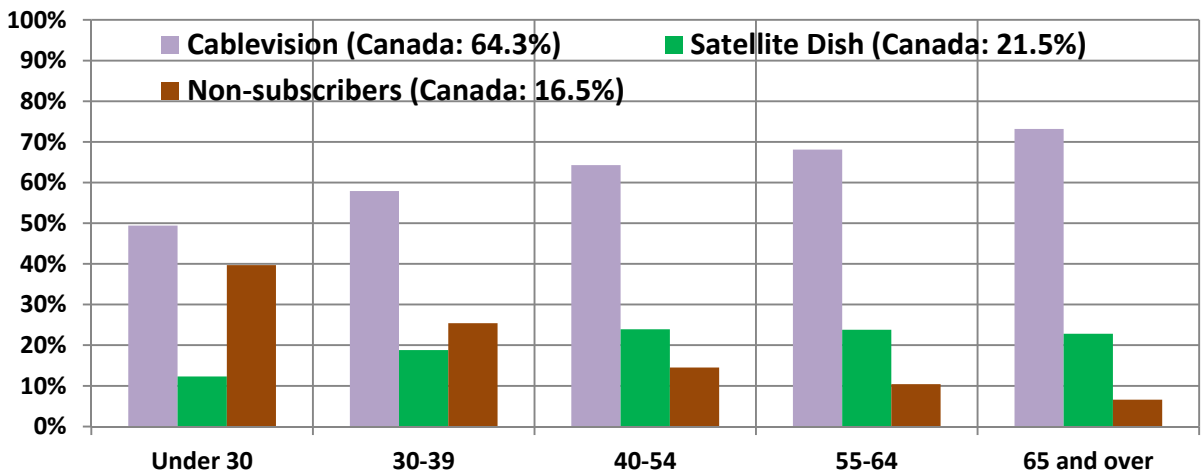
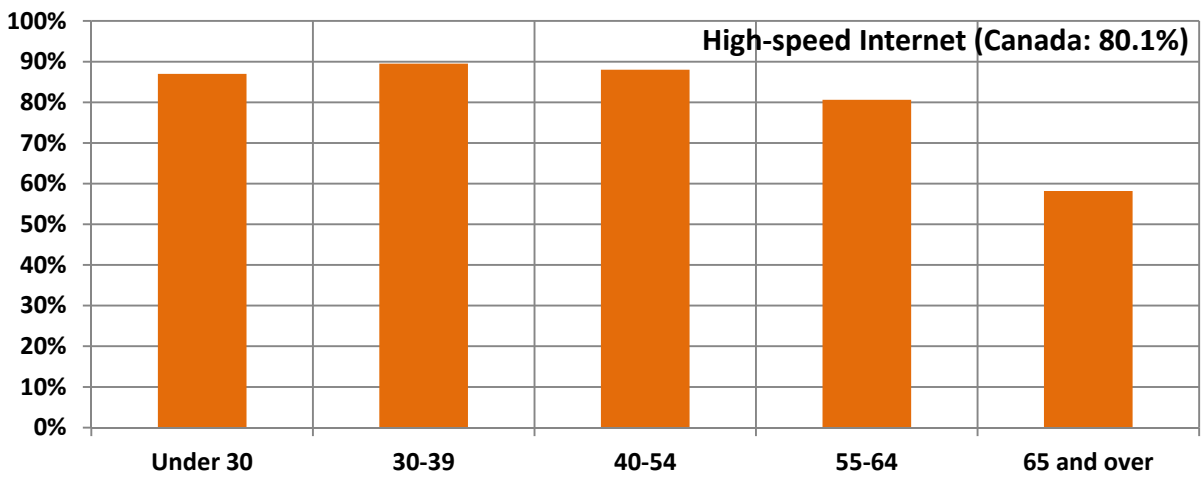
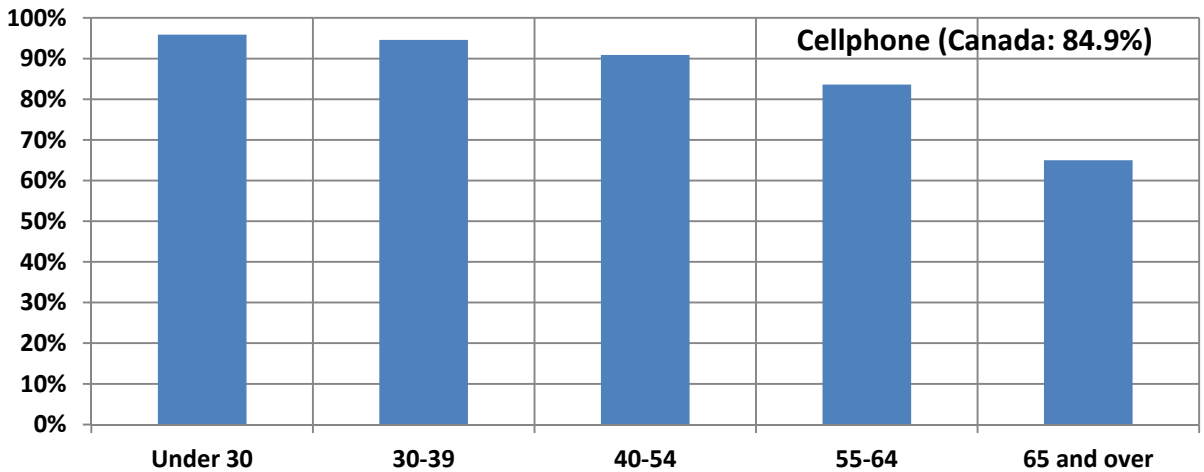
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<sup>16</sup> CRTC, *Communications Monitoring Report 2014*, p. 171.

<sup>17</sup> Using the CRTC data as the basis for estimating,  $67 \div 79 = 85\%$  of “high-speed” households.

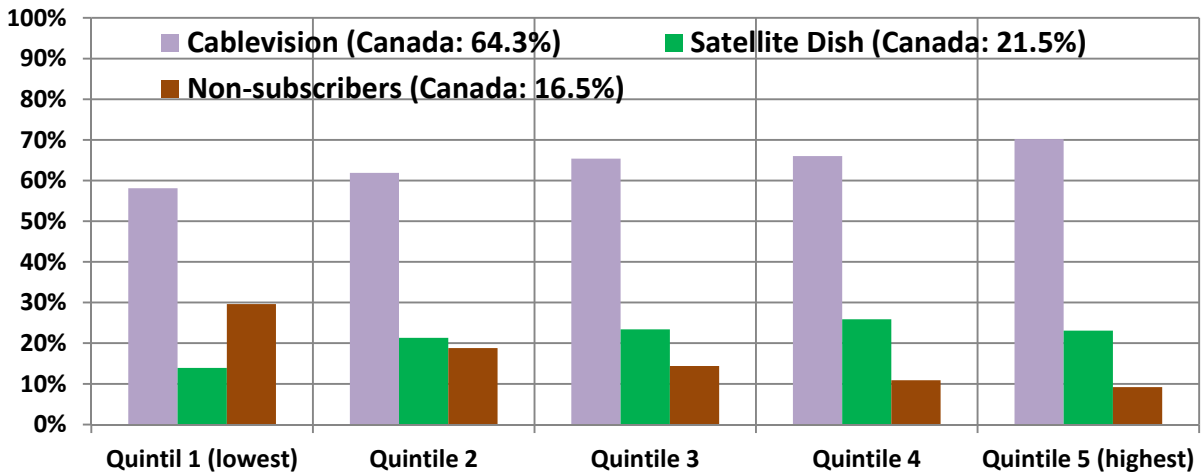
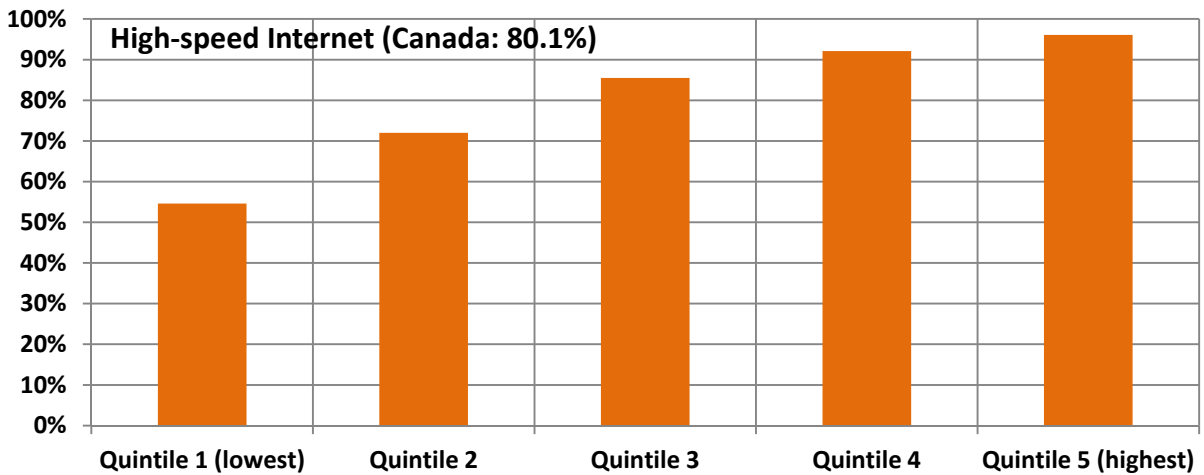
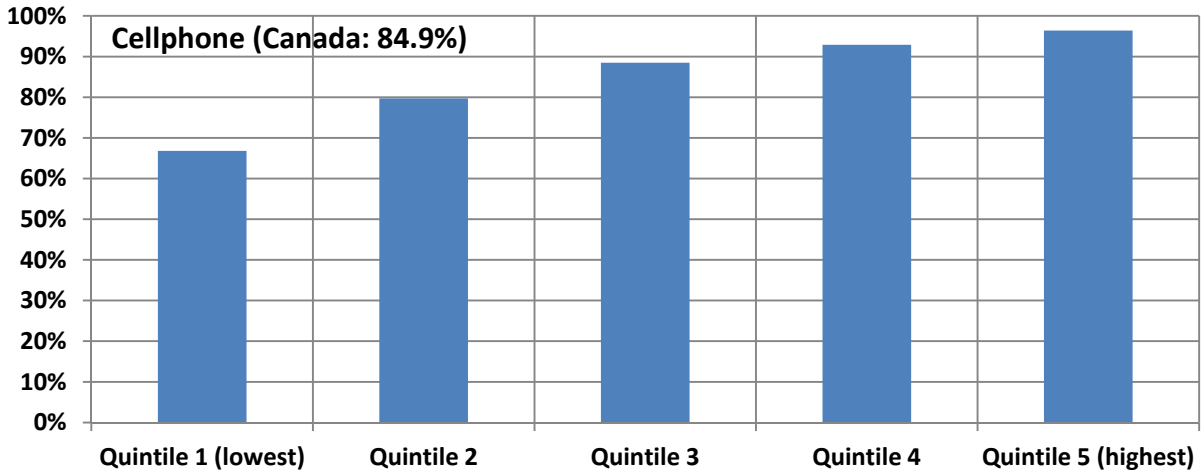
<sup>18</sup> As indicated in Figure 9, across Canada, about 2.4 per cent of households had both cablevision and a satellite dish in 2013. Thus, the totals for cablevision + satellite dish + non-subscribers will be just over 100 per cent.

**10. Percentages of households with cellphones, high-speed Internet, cablevision and satellite dishes, Canada, 2013 – by age of household reference person**



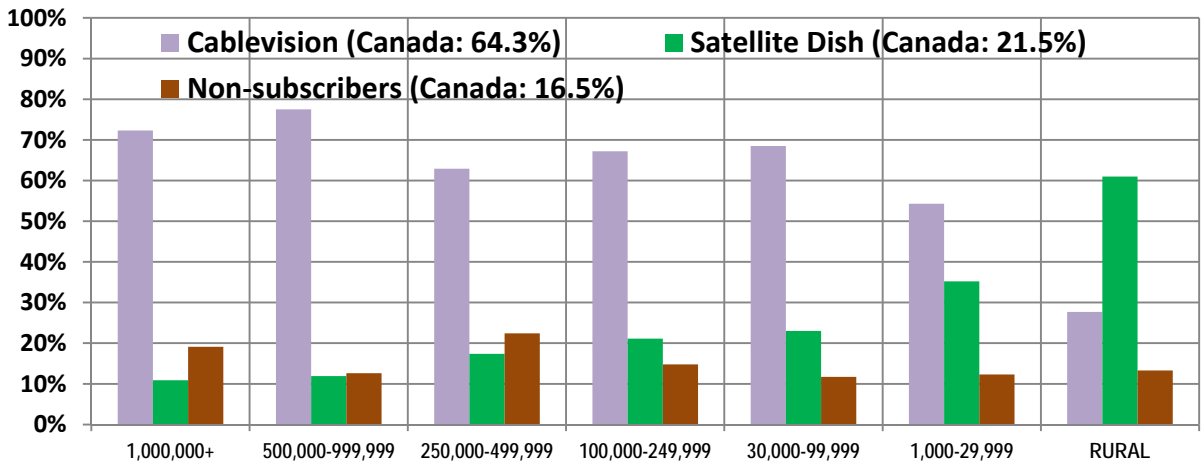
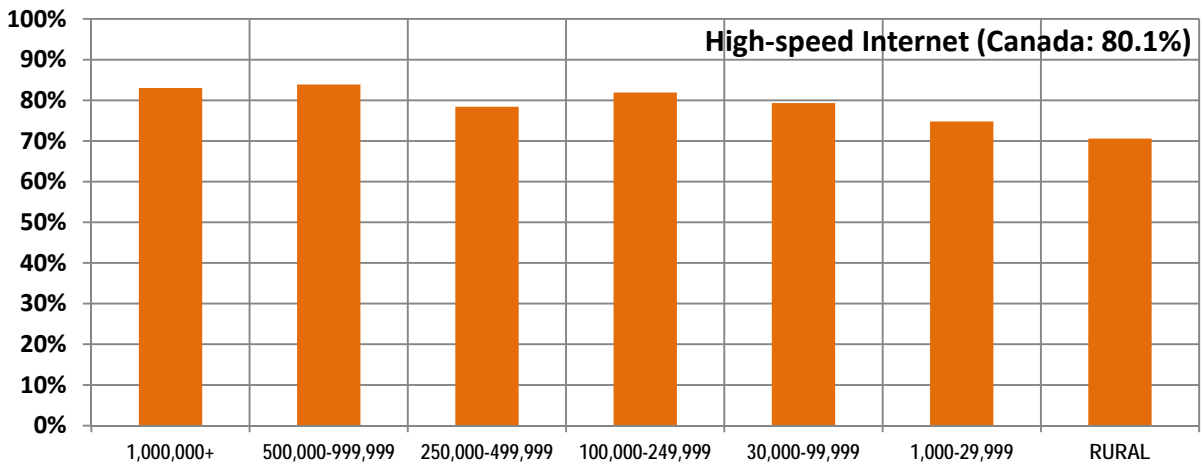
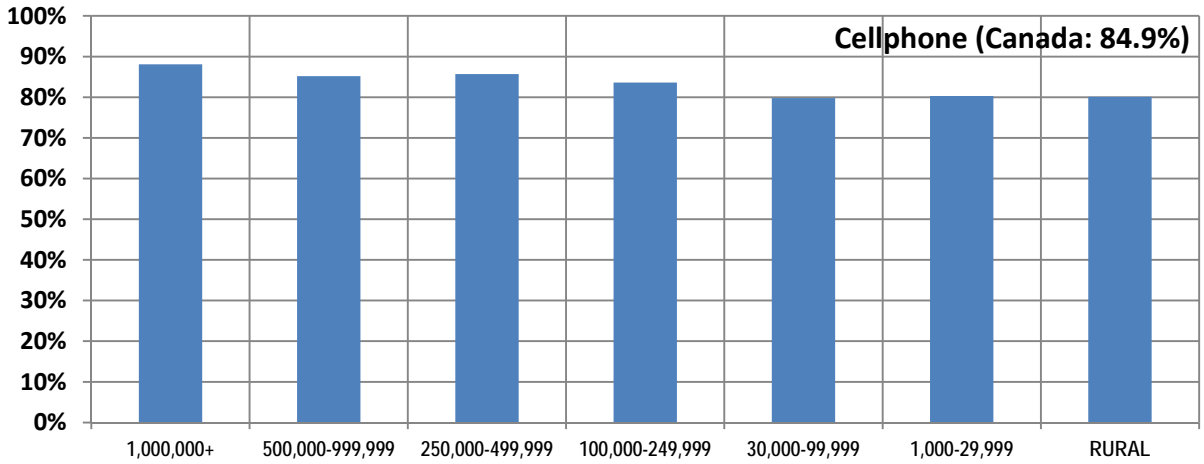
SOURCE: Statistics Canada; Communications Management Inc.

11. Percentages of households with cellphones, high-speed Internet, cablevision and satellite dishes, Canada, 2013 – by income quintile



SOURCE: Statistics Canada; Communications Management Inc.

**12. Percentages of households with cellphones, high-speed Internet, cablevision and satellite dishes, Canada, 2013 – by size of area of residence**



SOURCE: Statistics Canada; Communications Management Inc.

13. Percentages of households with selected services/devices, cross-referenced by income quintile and age group of reference person, Canada, 2013

**Cellphones**

Age group of reference person	Total	Income quintile				
		Lowest	Second	Third	Fourth	Highest
All households	84.9%	66.8%	79.7%	88.5%	92.9%	96.4%
Under 30	95.9%	95.4%	94.6%	96.6%	98.4%	93.8%
30-39	94.6%	83.6%	95.4%	95.2%	97.5%	97.6%
40-54	90.9%	76.1%	88.6%	90.1%	94.1%	96.9%
55-64	83.6%	66.7%	76.2%	88.0%	85.4%	97.5%
65+	65.0%	41.2%	61.2%	78.2%	88.9%	90.7%

**High-speed home Internet connection**

Age group of reference person	Total	Income quintile				
		Lowest	Second	Third	Fourth	Highest
All households	80.1%	54.6%	72.0%	85.5%	92.1%	96.1%
Under 30	87.0%	74.4%	85.7%	91.8%	95.1%	97.2%
30-39	89.5%	71.3%	86.9%	90.9%	96.5%	95.6%
40-54	88.0%	66.0%	79.5%	92.4%	92.8%	97.2%
55-64	80.6%	55.8%	73.7%	83.8%	88.4%	96.6%
65+	58.2%	30.5%	52.7%	71.6%	86.4%	89.4%

**Cablevision and satellite dish**

Age group of reference person	Total	Income quintile				
		Lowest	Second	Third	Fourth	Highest
All households	85.8%	72.0%	83.2%	88.8%	91.9%	93.3%
Under 30	61.7%	47.5%	58.2%	60.1%	77.7%	85.5%
30-39	76.7%	51.2%	70.5%	82.2%	83.0%	87.4%
40-54	88.2%	68.5%	82.0%	91.6%	94.5%	93.9%
55-64	91.9%	78.6%	89.0%	97.2%	96.7%	96.3%
65+	96.1%	90.0%	97.3%	98.6%	101.8%	98.2%

SOURCE: Statistics Canada; Communications Management Inc.



- As noted, in Figure 13, we have shaded each percentage that is equal to, or higher than, the overall percentage in that category. For cellphones and high-speed Internet, we can see that the higher-than-average percentages extend more into lower income quintiles for the younger groups. The process is somewhat reversed for older groups; indeed, for households headed by persons 65+, the percentage with cable or satellite for television is above average across all income quintiles.

Based on these findings, we would conclude that the current levels of subscription to either television by cable or satellite, subscriptions to high-speed Internet, and the ownership of cellphones, are strongly influenced by the age groups in question. In other words, younger groups are prioritizing cellphones and the Internet; older groups are prioritizing more traditional multi-channel television delivery systems.

### **“Cord-cutters” and “cord-nevers”**

To put this issue in perspective, we have presented the data in Figures 14 and 15.

Figure 14 indicates the breakdown of Canadian households into three categories:

1. Households with cablevision and/or satellite dish.

In Figure 14, we have adjusted the data to reflect the fact – noted above – that 2.4 per cent of households had both cablevision and satellite dish. Thus, the figure for cablevision and/or satellite dish in Figure 14 eliminates the duplication implicit in just adding together the percentages for each type of BDU reception.

2. “Cord-cutters” or “cord-nevers” (households that subscribe to high-speed Internet capable of receiving television, but do not subscribe to cable or satellite for television).

**“Cord-cutters”** are defined as households that have subscribed to cablevision or satellite TV, but have stopped doing so, and rely more on programming delivered via the Internet; and

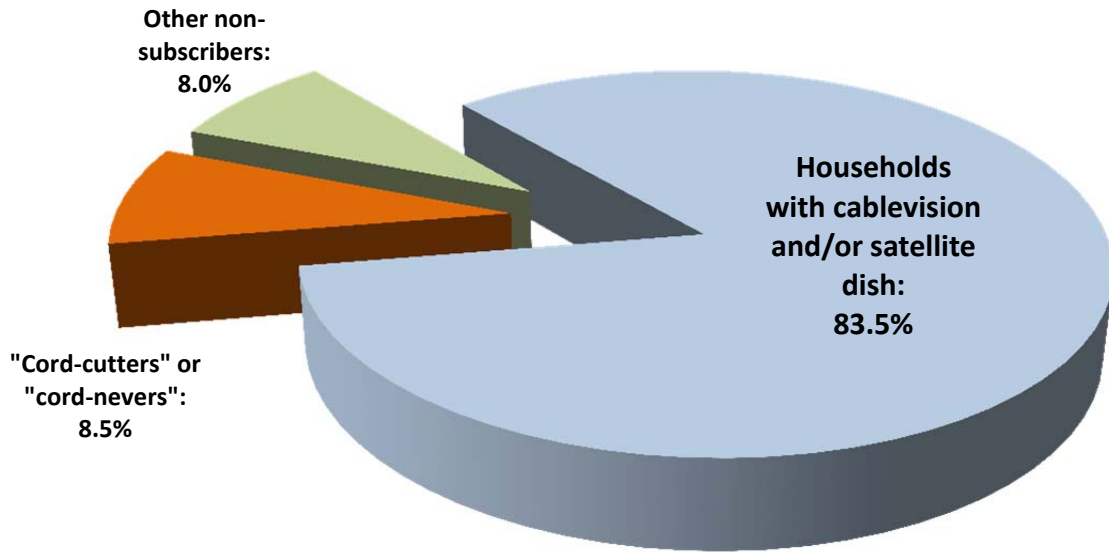
**“Cord-nevers”** are defined as households that use the Internet for video entertainment and information, and have never subscribed to a BDU for television.

3. All other households that do not have cablevision or satellite dish.

In estimating the percentage of households that could be called “cord-cutters” or “cord-nevers”, we have noted the distinctions about Internet speeds set out by the CRTC – i.e., that there are varying “broadband” speeds within the overall “high-speed” category. Thus, we have adjusted the numbers for high-speed Internet to take that into account, and those adjusted numbers form the basis for our estimates of “cord-cutters” and “cord-nevers”.

Within the totals for “cord-cutters/cord-nevers”, we have not attempted to split out the two groups, since the data only tell us the status at the time of the survey, not the previous subscription arrangements.

**14. Percentages of Canadian households that were subscribers or non-subscribers to cablevision and/or satellite television, 2013**



SOURCE: Statistics Canada; Communications Management Inc.

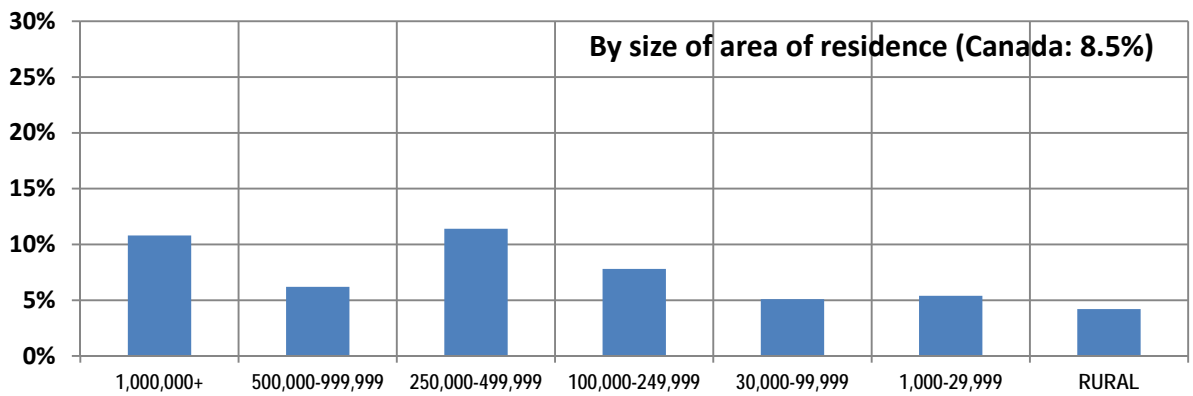
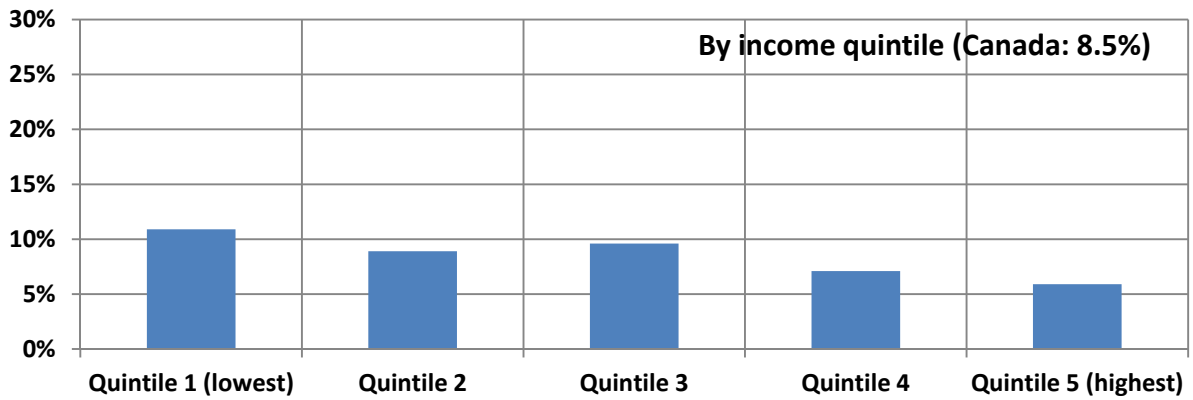
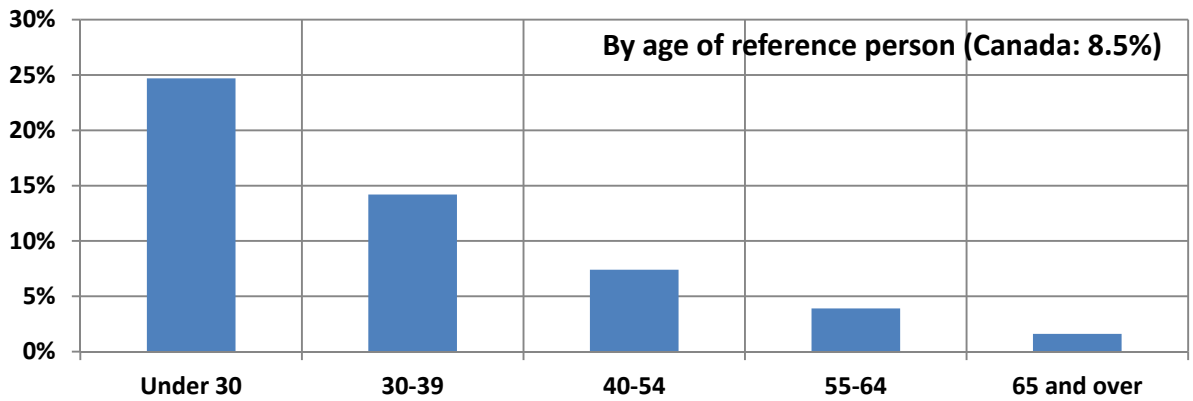
As we can see from Figure 14, we have estimated that, in 2013, 8.5 per cent of Canadian households fell into the “cord-cutter” or “cord-never” categories.

Using the same data, and the same assumptions, Figure 15 presents additional “cord-cutter/cord-never” data for households, subdivided by age of reference person, income quintile, and size of area of residence.

Again, age appears to be the most significant factor, with “cord-cutters/cord-nevers” accounting for almost 25 per cent of households with reference persons under 30.

*Text continues on page 25 ...*

15. Percentages of households that were “cord-cutters” or “cord-nevers”, by age of reference person, income quintile, and size of area of residence, 2013



SOURCE: Statistics Canada; Communications Management Inc.

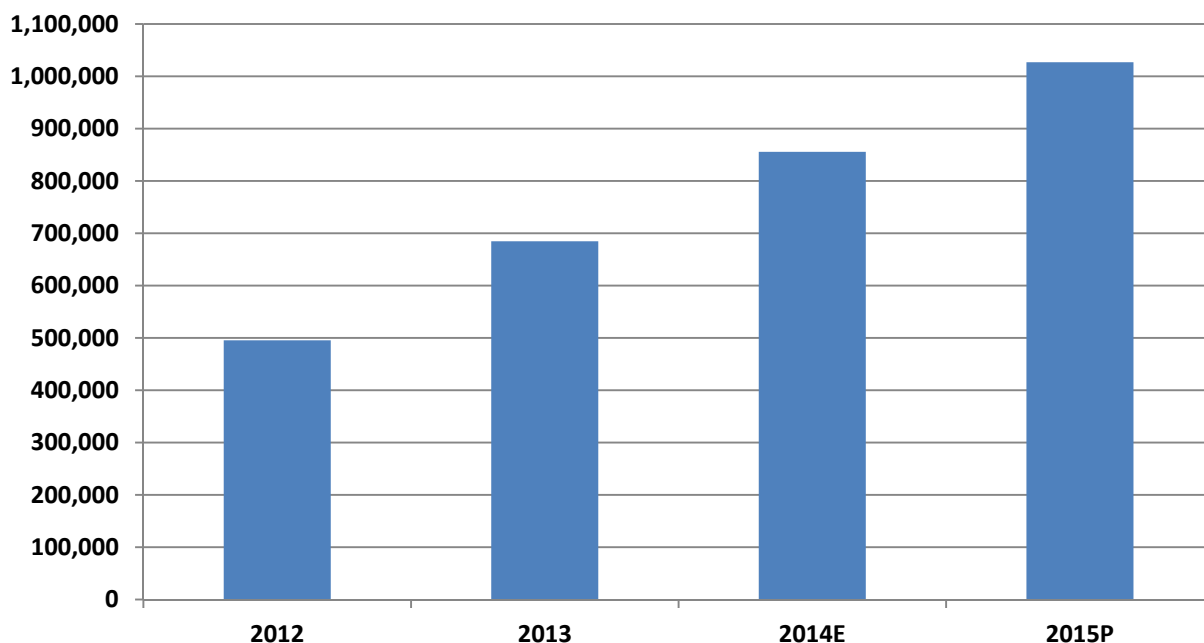
**By the end of 2015, one million Canadian households may be subscribing to cable for Internet only**

As noted in Figure 9, there were, in 2013, 684,620 households in Canada that subscribed to cable for Internet service, but did not subscribe to cable for television service. (The data also indicate that more than 60 per cent of those Internet-only cable subscribers are located in metro areas with population of one million or more.)

In Figure 16, we have used Statistics Canada data for Internet-only cable subscribers in Canada for 2012 and 2013, and then used other sources to develop projected figures for this category for 2014 and 2015.

As can be seen in Figure 16, we expect there to be more than one million Internet-only cable subscribers in Canada by the end of 2015.

**16. Actual, estimated and projected number of Canadian households subscribing to Internet-only from cable companies, 2012-2015**



SOURCE: Statistics Canada; Communications Management Inc.

## **Is there a technology disconnect between citizens and institutions?**

How often have we, as citizens or consumers, contacted a large institution or a government department, and been told that our concern could not be dealt with immediately because their “computer was slow”, or because their technology did not allow what we were requesting? How often have we encountered a Web site that was not only slow but consumer-unfriendly?

In the past, we might have grumbled a bit, and waited patiently until the issue was resolved.

But times have changed. The technology (like smartphones or broadband Internet) now in the hands of individual consumers may be more advanced – or appear more advanced to those consumers – than the technology in the hands of some of our institutions.

It is harder to accept technology excuses from our institutions when you have just spent the last 20 minutes using your smartphone for a video call with a friend half way around the world, or when you have been able to access information almost instantaneously.

When you put consumer-friendly high technology in the hands of the vast majority of citizens, they will have:

1. A different frame of reference for assessing technology excuses from their public and private institutions; and
2. The ability to use social media to comment instantaneously on the performance of those institutions.

And that, too, can be considered a “digital divide”.

### **Fragmentation: The most important “digital divide”**

For much of the 20<sup>th</sup> Century, media benefited from scarcity – for example, a small number of daily newspapers in each area, and, for many years, a small number of television services. However, as news and entertainment options proliferate – from many sources to many devices – that fragmentation is beginning to challenge our sense of shared experience.

In 1991, Newton Minow, former Chairman of the U.S. Federal Communications Commission, made the following observation:

We see 400- and 500-channel systems on the horizon, fragmenting viewership into smaller and smaller niches, and we need to remember that for all their presumed benefits these developments undermine the simultaneous, shared national experiences that comprise the nation’s social glue.<sup>19</sup>

His prediction has clearly come to pass.

And that could lead to the most important issue of all: *How will a modern democracy function if we all have less in common?*

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<sup>19</sup> Newton N. Minow, address to the Gannett Foundation Media Center, Columbia University, New York City, May 9, 1991, p. 17.