

The Expansion of Cellphone Services

This Update describes the growing presence of cellphones in Canadian consumers' telecommunications activities, and highlights related consumer issues. More Canadians own cellphones, use them more intensely and for varied purposes, and are even starting to rely on cellphone service alone for their telephone needs. Technological developments and enhanced service offerings have brought a number of benefits to consumers, while also creating some confusion and marketplace difficulties. Consumer protection considerations will further evolve and require sustained attention as new entrants to the cellphone market, and the transition to ever more sophisticated mobile devices, change Canadians' interaction with the wireless market.

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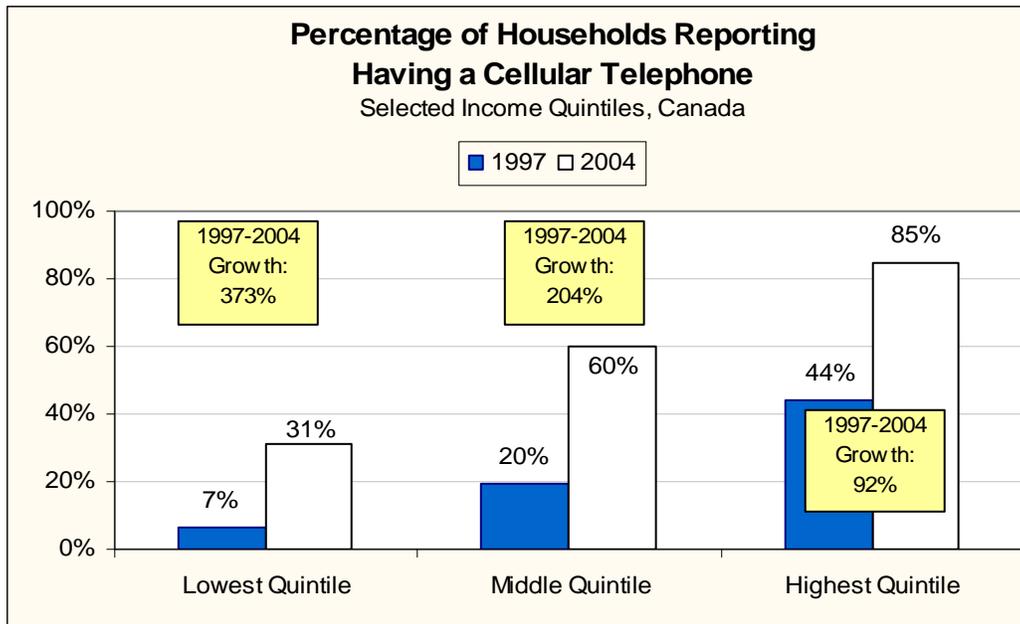
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Cellphones have become ubiquitous in today's society and are now an important part of most of Canadians' telecommunications activities. At the end of the first quarter of 2006, there were 16.8 million wireless subscribers in Canada, implying a strong and sustained year-over-year growth rate of 11.9% (Statistics Canada 2006).¹ There has also been a sharp increase over the last decade in the percentage of households that report having a cellular phone for personal use—from 22% in 1997 to 59% in 2004.² The trend toward increased cellphone use has cut across all income levels; indeed, ownership rates experienced the strongest growth among households in the lowest income quintile (Figure 1).

¹ There are differences in the target population of the various surveys referenced in this report; sources should be consulted for more detailed explanations. For example, the wireless subscribers data from Statistics Canada's Survey of Telecommunications includes all subscriptions reported by service providers, whereas Statistics Canada's Survey of Household Spending measures ownership of cellular phones for personal use at the household level, i.e., among all household members.

² Data accessed from Statistics Canada CANSIM database, table 203-0020.

Figure 1



Source: Data obtained from Statistics Canada, Income Statistics Division.

On a global scale, however, Canada's rate of adoption of wireless telecommunications³ is lagging, with just under 52 subscribers per 100 inhabitants at the end of the first quarter of 2006, a level reached by the United States in the second half of 2003 (Statistics Canada 2006). On average, Organisation for Economic Co-operation and Development (OECD) countries had 53.5 subscribers per 100 at the end of 2001—more than four years ago (Statistics Canada 2006). The OECD average is buoyed by early adopting countries such as Luxembourg, the United Kingdom and Finland; for these nations, in 2004, the number of mobile wireless subscribers per 100 inhabitants was 119.4, 102.8 and 95.6 respectively (Industry Canada 2006, figure 1-6). Canada also lags in terms of the number of wireless carriers where, "although 94 percent of the Canadian population has access to three or more wireless service providers, the maximum number of wireless carriers in any given area is three"⁴ (Industry Canada 2006, 1-21). In contrast, 87% of Americans live in areas with five or more mobile

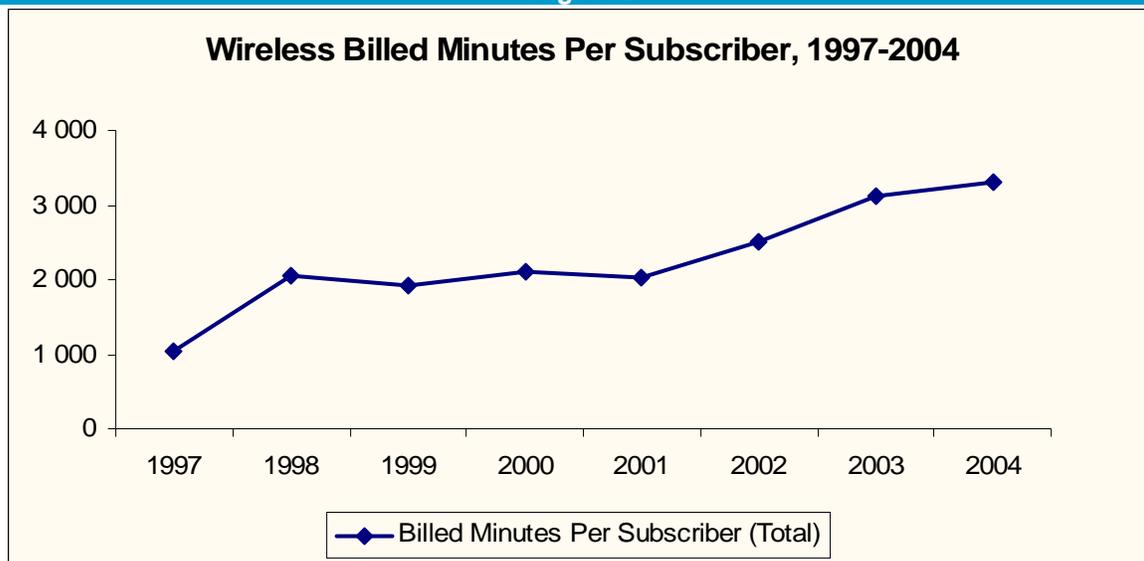
³ In Statistics Canada's Quarterly Survey of Telecommunications, wireless telecommunications is defined as establishments engaged in operating and maintaining switching and transmission facilities to provide direct communications via the airwaves. This includes establishments that provide cellular phone services, paging services and personal communication services.

⁴ "A limited number of larger centres have resellers and MVNOs (mobile virtual network operators), but even these are not all independently owned from the three national carriers." (Industry Canada 2006, footnote 31)

providers, and 41% live in areas with at least six (Industry Canada 2006, 1-21). Consumers will soon benefit, however, from the opportunity that wireless number portability will give them to switch service providers; providers will be required to make such portability available by March 14, 2007 (CRTC 2005). As noted by consumer representatives, “having to change [a] telephone number is inconvenient, disruptive, and potentially costly. In turn, this discourages customers from switching to a different mobile service provider, and hampers competition” (PIAC 2005, 3).

Notwithstanding this international perspective, the rate of Canadians’ adoption of cellphones is growing. In a 2006 survey, among those households which owned or had access to a wireless phone, 57% reported actually having access to two or more wireless phones, up from 25% in 1997 (Decima Research 2006). Furthermore, as of December 2005, 4.8% of households reported relying **only** on cellular, as opposed to landline, phones—this compares to 1.9% in mid-2003 (Statistics Canada 2006b). The trend is stronger for lower income Canadians, as 7.7% of households below Statistics Canada’s low-income cutoff relied solely on a cellular phone at the end of 2005 (Statistics Canada 2006b). Another indication of Canadians’ growing use of wireless services is provided in Figure 2, which shows the increase in the number of minutes billed per subscriber.

Figure 2



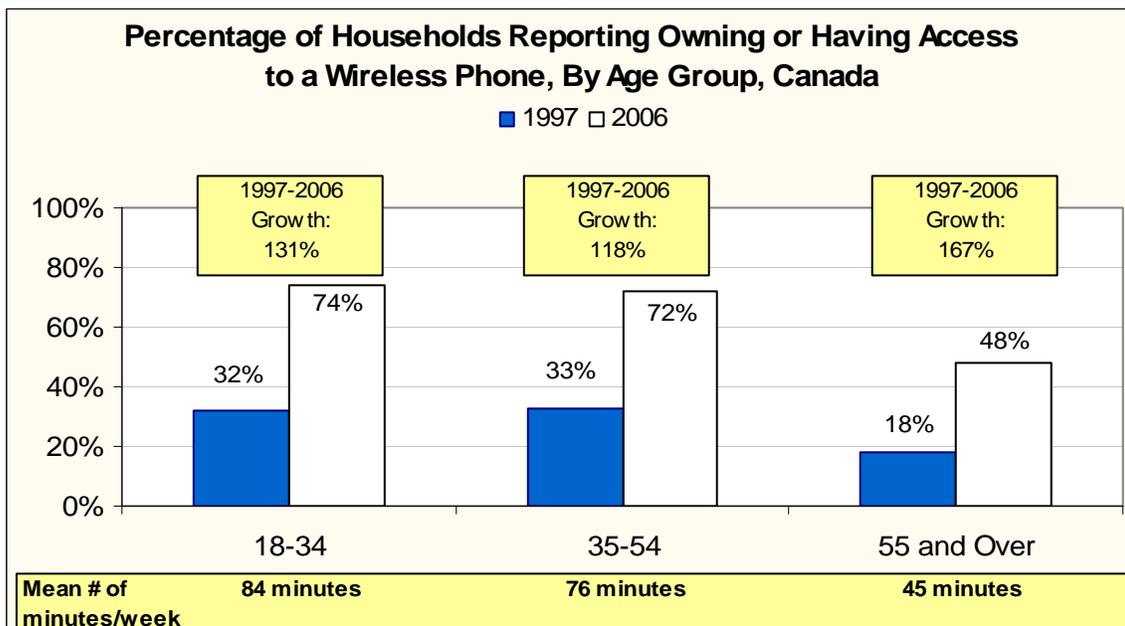
Source: Data obtained from Statistics Canada, Science, Innovation and Electronic Information Division.

The expanding role of cellphones in Canadians' lives

By redefining when and how people can communicate, the cellphone has indirectly affected many other aspects of daily life. The inconsiderate use of cellphones in public can cause lapses in social etiquette, and intrusions into others' personal space. Tales of cellphone rudeness at church services, during university lectures, in cinemas and at live performances have proliferated over the years. Furthermore, although cellphones can contribute to highway safety by allowing the reporting of accidents and breakdowns, they have in turn engendered dangerous behavior, as evidenced by cases of drivers taking or placing calls while trying to navigate traffic. While providing benefits in terms of mobility and personal safety (for seniors and during nighttime travel, for example), cellphones can also blur the boundaries between work and home, and consequently raise stress levels (Warner 2005).

Further insight on cellular uptake in Canada is obtained from the demographic analysis provided in a 2006 wireless market study (Figure 3). As might be expected, wireless ownership is significantly higher among Canadians aged 18-54 than those 55 and over. However, it appears that older Canadians have been doing some catching up since 1997, as demonstrated by the relatively stronger growth illustrated in Figure 3. Age also affects the intensity of wireless usage, as younger wireless users report spending almost twice as much time on the phone as those 55 and over. Other sources have examined cellphone trends among children and teens (see text box on next page).

Figure 3



Source: Decima Research, *Usage of Wireless Technologies in Canada, prepared for: Canadian Wireless Telecommunications Association (CWTA) (April 2006).*

Since their introduction, the evolution in cellphone technology has radically changed the way that consumers use them. Short text messaging, wireless e-mail, personal digital assistant, MP3 player, Internet browser, digital camera are now common cellphone functions, in addition to traditional voice capability. Text messaging in particular has exploded, as the number of person-to-person text messages sent by Canadians reached 1.5 billion in 2005 (CWTA 2006), up from just 174 million in 2002 (CWTA 2005). On an international comparison basis, however, Canada's numbers remain relatively low.⁵

Kds & teens R rely in2 ceL fonez

As evidenced in a 2005 survey, Canadian youth are significant wireless users (Media Awareness Network 2005).

- 6% of Grade 4 children said they owned a cellular phone; by Grade 11, the proportion reached 46%.
- Of those youth with cellular phones, 56% had text messaging.
- Internet access was reported by 44%, and 25% said their phone had a camera feature.

While only 4% of 1500 wireless users surveyed in 2006 reported checking for information on the Internet using their phone, about three-quarters of those respondents said they do so at least once a day (Decima Research 2006). According to analysts in the U.S., cellphone-based Internet use will only increase, as technologies such as voice activation support the expansion of Internet-search marketing. In the context of a two-inch mobile screen, "voice search is more accurate than other searches, which require too many clicks to get to the web or fail over spelling issues" (Cuneo 2006).

What is all this cellphone use costing Canadians? According to a 2005 study, the average Canadian wireless user was paying 60% more than what plans offer in the U.S., and 19% more than with European carriers (The SeaBoard Group 2005). For those Canadian households reporting spending on cellphones and other wireless services⁶, average annual expenditure reached \$629 in 2004.⁷ In comparison, the average expenditure for conventional telephone services (including long distance) was \$696, less than \$70 more. In 1997, the gap in the average expenditure per reporting household exceeded \$200, when comparing conventional (\$738) and wireless services (\$514).

⁵ In the month of June 2006 alone, the level of short text messaging reached 12.5 billion messages in the United States (CTIA 2006). In the United Kingdom, a total number of 3.6 billion messages were sent in August 2006 (MDA 2006).

⁶ When asking respondents about household expenditures, Statistics Canada's Survey of Household Spending includes pagers and handheld text messaging services in the same category as cell phone services. The total costs can include services for more than one cell phone, depending on the number of phones reported by the household, and it does not include expenditures on cellular phone equipment, or expenditures on bundled services if the cost breakdown is unavailable.

⁷ The expenditure data in this paragraph is adapted from Statistics Canada CANSIM database, table 203-0004.

Fast-paced upgrading raises environmental and privacy issues

Cellphones have a very short life expectancy, as consumers reportedly upgrade their phone on average every 18 months (Bridis 2006). Improper disposal of circuit boards and rechargeable batteries is an environmental issue, as they contain a host of hazardous substances, such as arsenic, lead, and mercury (California Environmental Protection Agency 2006). However, the cellular phone's potential for sustainable disposal is significant, as approximately 96% of its weight is recyclable (Bell Canada 2006). Industry responses have included reuse / recycling initiatives – one company's take-back program doubled the number of phones collected since its launch in 2003 (Bell Canada 2006b). While re-selling one's phone is another sustainability option, consumers need to be aware of potential privacy and security issues that may arise if information is not properly erased. Second-hand phones purchased over the Internet have been found to contain sensitive data such as credit card numbers and banking passwords (Bridis 2006).

Various reports suggest a number of other issues arising from Canadians' increasing interactions with the cellphone market. Cellphone information, in the form of both advertising and contracts, can be difficult to compare and decipher, leading to consumer confusion. Examples gathered in a 2004 report by the Service d'aide au consommateur (a Quebec-based consumer organization) included problems of complex and unclear information on costs, coverage, and cancellation clauses (SAC 2004).

In a follow-up report, the Service d'aide au consommateur highlighted further difficulties, such as an inability to obtain contract terms before concluding the transaction, billing problems, and poor quality of customer service (SAC 2006). The ability to evaluate contract terms is particularly important in the Canadian context, where close to 80% of cellphone users have post-paid, longer-term service contracts (CRTC 2006, 82). According to the Canadian

Radio-television and Telecommunications Commission, "most wireless service providers have targeted the post-paid segment of the market in order to retain customers who are generally required to commit to the supplier for a fixed length of time, thus minimizing the churn rate" (CRTC 2006, 82). In comparison, pre-paid mobile subscriptions (about 20% of mobile subscriptions in Canada), where a consumer buys minutes on a pay-as-you-go basis rather than entering into a contract with monthly billing, are significantly higher globally (46% in 2004), and particularly so in Europe (62%) (ITU 2005).

Some cellphone offers make for a challenging read

The following is an example of a cellphone service offer⁸:

[TRANSLATION] *Airtime package: 200 minutes during the day and unlimited calls weekend evenings. Airtime used for local calls made and received on the expanded network not being part of the airtime included in the monthly package and the unlimited option being subject to the company's fair use policy.*

⁸ This offer was reported in Plantevin 2006.

The trend towards cross-bundling of services (with some or all of Internet, cable, and landline services) can further increase consumers' confusion when comparing offers. As noted during an OECD roundtable on demand-side economics for consumer policy, there may be cause for concern:

Utilities, such as electricity, gas, water and telecommunications stand out as a category of goods for which the full benefits of competition have not necessarily been achieved.
(...)

In theory, because in utilities the product characteristics are fixed, the search function should be reasonably simple, being confined to pricing aspects. In reality, however, there is stickiness in these markets – speakers presented empirical evidence from utility markets showing many consumers are not taking advantage of beneficial switching and, in some cases, are switching to higher-cost suppliers. The problem lies in what one speaker called “confusopoly”, relating to the difficulties consumers have in comparing the different bundles of offers from utility firms – with different bases for charging fixed and volume-related fees and offering different bundles of related products (OECD 2006, 11).

The equipment itself appears to be more complicated, from consumers' perspective: 80% of users surveyed in 2006 felt that wireless communications devices are easy to use, compared to as many as 91% of users eight years earlier (Decima Research 2006). In fact, a recent U.S. study links the complexity of new wireless services and products to the steady climb in the number of wireless customers contacting their provider (J.D. Power and Associates 2006).

Cellular phones made the top 10 list of complaints and inquiries received by Ontario's Ministry of Government Services in 2004 and 2005 (Government of Ontario 2005 and 2006). Cellular phone service and supplies was also the business category for which Better Business Bureaus in Canada processed the most complaints in 2005 (CCBBB 2006). Wireless telecommunications are similarly the subject of consumer complaints in the United States. The main subjects of wireless complaints to the Federal Communications Commission (FCC) in the second quarter of 2006 included billing and rates, quality of phone service, early termination of contracts, and marketing and advertising practices (FCC 2006). The FCC has also cautioned consumers against cellphone subscriber fraud (i.e., subscriptions made using fraudulently obtained consumer information) and cellphone cloning fraud (where a legitimate user's bill is charged for a cloned phone's calls) (FCC 2005).

Wireless-related matters also raise compelling questions in other public policy domains. While crash risks are increased by many kinds of distractions while driving, it is recognized that “cell phones and other telematics are at the cutting edge of the issue for the public, legislators, and governments” (TIRF and CAA 2006, 11).⁹ The trend

⁹ Newfoundland and Labrador is currently the only province prohibiting all drivers from using hand-held cellphones. Research has suggested that jurisdictions may wish to consider legislating to prohibit cellphone and other electronic communication device use by youth learner's permits or provisional licenses, a practice applied in a number of American states (TIRF and CAA 2006). A private member's bill on this subject was introduced in Ontario in 2006 (Puxley 2006).

towards including GPS (global positioning system) features, which offer a range of location-based services such as information on the nearest restaurant or parental tracking of children's whereabouts (Shaw 2006), is raising privacy questions - one difficulty with such privacy and tracking issues, however, is that "most vehement complaining takes place after people feel they have been victimised by technology, and long after it has been popularised" (Arthur 2006). Potential safety hazards, following reports of cellphone equipment exploding, have also prompted work in the U.S. on consumer safety tips and standards for batteries (CPSC 2005). While participating in the World Health Organization's ongoing research project into the potential health risks from electromagnetic fields and radiofrequency exposure, Health Canada concludes that "there is currently no convincing evidence, from animal or human studies, that the energy from cell phones is enough to cause serious health effects, such as cancer, epileptic seizures or sleep disorders," and advises consumers to adapt their use of mobile phones to their personal tolerance for unknown risks (Health Canada 2005).

If, as some predict, technological developments expand mobile commerce use, an even more varied list of issues will likely emerge in the future (see text box).

M-Commerce: E-commerce issues, on the move

Canadians have yet to experience mobile commerce as directly as consumers in Japan, where phones can be used to purchase tickets to concerts, books and goods through vending machines. (Yoon 2006). Canada's national wireless service providers, however, are actively working to facilitate the development of new m-commerce services in Canada (Telus Mobility 2005). Accounts from countries with higher wireless penetration already highlight potential issues, such as parents' or guardians', versus service providers', responsibilities when minors enter into contracts using a cellphone (Finnish Consumer Agency and Ombudsman 2006). Other m-commerce concerns identified by the Trans-Atlantic Consumer Dialogue include marketing to children, the applicability of existing laws, and disparity in payment dispute rights (TACD 2005). The Consumer Policy Committee of the Organisation for Economic Co-operation and Development (OECD) has also recognized mobile commerce as an emerging issue to explore (OECD 2006b).

This Update sought to outline the growing presence of cellphones in Canadian consumers' communications activities, and to highlight its related policy considerations. Further updates on marketplace trends of relevance to consumers will be published as new research becomes available and consumer protection policy evolves.

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