

# [Analysis of canadian wireless telecom market](https://assignbuster.com/analysis-of-canadian-wireless-telecom-market/)

The Canadian wireless telecommunications industry is fundamental to the Canadian economy. With almost every business relying on cellular network to operate it is important for wireless service providers to be regulated and continually innovate. This industry has gone through a number of significant changes in the past few years. The Canadian Radio-television and Telecommunications Commission (CRTC) is the regulatory authority that sets operational framework for service providers and monitors competition in the industry. During the year 2008, CRTC set aside 40% of the auction spectrum for new entrants to encourage service coverage and competition. Deloitte (2010) found that at the end of December 2009, there were about 22. 8M mobile subscribers in Canada. According to a report from the Bank of America Merrill Lynch, the profit levels of the incumbents are still the highest in the developed world. Rogers, Telus and Bell that control roughly 95% of the wireless telecom market, had earnings of 46. 7% in the first quarter, reaching the highest revenue earned of 21 developed countries tracked by the bank. The incumbent Canadian carriers generate approximately 42. 2% average profit margin, compared to the UK average of 22. 6%. Canadians pay the highest average revenue per user (ARPU) per month with $54. 73, compared to the developed world’s average of $42. 90. With approximately 69%, Canada was ranked among last in penetration among developed countries (Mobilicity, 2010). According to Industry Canada (2006), higher prices, lesser innovation and lower penetration rates is mainly due to presence of lesser competition in the Canadian wireless market than other OECD countries. The Canadian telecom market is essentially collection of oligopolic duopolies due to the fact that all three national wireless service providers (Rogers, Bell and Telus) are also provide landline telecom services. According to Atiyas (2005), economic theory and international experience demand liberalization and regulation in a legal environment to generate competition, investment and growth in the telecommunications industry. The regulatory and legal environment is necessary to effectively curb anti-competitive behaviour by incumbents, and provide confidence among potential entrants that the rules of the game are and will remain predictable and fair (Atiyas, 2005).

The purpose of this paper is to review the recent evolution of the telecommunications industry in Canada and draw an outlook to the future of the new entrants into the Canadian Telecom market.

## 2. Growth of mobile in Canada:

The Canadian Telecom industry is experiencing very fast market growth combined with rapid technological change; regulatory design in setting market structure is playing a very important role; and non-oligopolistic competition is unfolding under various forms. From figure j we can infer that globally the number of subscribers have been growing rapidly while the number of landline subscribers are falling drastically. According to a recent survey by Statistics Canada for year 2009, 8% of Canadian households reported having only cell phones, up from 6. 4% just one year earlier. According to ITU (2006), by end of year 2002 mobile telecom industry had gained equal number of subscribers as wired telecom industry gained in 120 years.

http://www. itu. int/ITU-D/ict/statistics/ict/graphs/am1. jpg

Graph y: Landline vs. cell phone penetration rates for North America, 1996-2006

Source: adapted from ITU World Telecommunication/ICT Indicators Database, 2006

Table 1: Wireless Industry Metrics, 2009

Source: Canadian Radio-television and Telecommunications Commission (CRTC) data collection, Merrill Lynch Global Wireless Matrix.

Figure 2: Canadian wireless revenues continue to grow strongly

Source: CRTC, 2010

In 2008, the Canadian cellular market generated $16. 3 billion, which represents 40% of total Canadian telecommunication revenues. The cellular sector showed a 14% compound growth in revenues in the four years from 2004 to 2008.

The 2003 telephone survey commissioned by the CRTC indicates that consumers decision of choosing a service provide is based upon: price (58%), quality of service (45%), reliability (31%), convenience of single billing (23%), convenience of service package (19%), number portability (19%) (Boyer, 2005). The new service providers invested heavily, during the times of austerity, into setting up the infrastructure to provide cheap, reliable and quality cellular service (Ovum, 2010).

Early this year several of the newly established Canadian cellular operators reported on their subscriber numbers. So far, according to Wireless Intelligence research, WIND Mobile, Public Mobile and Mobilicity have launched services over their newly bought spectrum and analysts estimate WIND Mobile to reach 100, 000 subscribers by end of 2010. Reacting to this, Canada’s three incumbent operators – Rogers Communications (Rogers), Bell Mobility (Bell) and TELUS Communications Company (Telus) have developed counter strategies, which mostly involves undercutting the entrants by offering low cost, unlimited voice and texting plans. For example, Rogers launched a new brand called Chatr and Bell re-priced Solo plans to directly attack the entrants. In addition, incumbents have resorted to using anti-competitive tricks such as avoiding tower sharing to try maintaining their market share (Lacavera, 2010).

On the other hand, the new entrants’ performance is being heavily scrutinized by consumers as they try to capture the market share by heavily subsidising their cell phone offerings and unlimited talk time free for first two months, which may hit their profit margins in the short run. However, according to Croft’s (2010) forecast new entrants’ will achieve 6. 05 million (18. 6% of Canadian cellular subscribers) by end of 2014. But if the new wireless entrants do not maintain lower prices they will not gain a significant number of subscribers. Therefore a strategy of gaining as much market share as possible, even at the expense of profit margins, in difference to the current cooperative Canadian wireless market place is a definite way of moving forward.

## Graphical comparison of three major players in U. S. A wireless telecom market:

— Verizon Communications Inc. — AT&T — T-Mobile

Figure x: Stock price trend of top three players in the U. S market

Sources: Yahoo! Finance

From figure x, we can observe that since the launch of a low priced national carrier (T-Mobile) the soaring costs of incumbents (AT&T and Verizon) has stabilized. However, the entrance of new players in Canadian market may decrease revenues and profits of incumbents because, unlike the entrants in the USA who went after untapped customer base, there is limited exploitable customer base in Canada.

## 3. Liberalization of wireless telecom industry in Turkey, Tunisia, Egypt and Algeria

## Turkey:

It all began with the introduction of competition in 1994 under the revenue sharing agreement according to which call tariffs were initially determined by the then incumbent Turkcell. Later on these mobile tariffs began to be set by the entrant mobile operators which resulted in stiff competition and let to a rapid decrease in the cost of a 3-minute call from over 1 US dollar to around 60 cents within a year of competition’s launch (Table x) (ITU, 2004). From the table x below it can be observed that the number of mobile subscribers have doubled every year since the launch of competition in 1994.

Table x: Mobile Telecommunications in Turkey

Source: ITU World Telecommunications Indicators, 2004

Intermittingly Turkcell had decreased its call tariffs as a response to growing competition in the market. However, the entrants’ ability to grow was quite limited and they stayed only as regional players serving a limited customer base. Turkcell realized that the threat of competition on a national level from new entrants was weaker than anticipated and therefore hiked call tariffs, increasing them to over 9 cents/min in June 2001 and to above 12 cents/min in 2001-2002. (Atiyas, 2005).

## Algeria

Algerie Telecom was the dominant carrier prior to launch of Orascom in Algeria. By year 2006, Algerie Telecom had lost 70% of market share to Orascom. Yari & Sadri (2006) found out the reason for Orascom’s huge success is due to launch of popular prepaid deals, and inflexibility of Algerie Telecom in decreasing connection fees and monthly plans. The price war caused huge price erosion. MoU declined due to the introduction of attractive prepaid packages and increased share of low value customers. Yari & Sadri predicted ARPU to further decline by an average rate of 13% between 2001 and 2009.

## Tunisia

Only after one year of entering into the market, the second entrant gained more than 25% market share at the expense of the incumbent Tunisie Telecom. Tunisiana also captured 99% of prepaid market share. In response to this Tunisie Telecom decreased its prices in order to decrease the price difference between an incumbent and the competitor. Eventually the market stabilized over the years.

## Egypt

Vodafone Egypt launched its network in November 1998. After five years of operations, the company was still on war with the incumbent Mobinil in terms of market share. International backing, strong brand and continuous innovations were success factors of Vodafone. Supposedly due to increasing prepaid share, the MoU dropped between 1998 and 2002. A price reduction in 2003 also halted usage decline. However, ARPU has dropped by an average of 12. 5% between 1998 and 2006.

Since the liberalization of the wireless spectrum in countries such as Turkey, Egypt, Algeria, Tunisia and India, it has been confirmed that existence of an effective regulatory environment in order to facilitate entry and impose ex-ante regulations on incumbents is vital to nourish an environment that is conducive to investment, growth and competition in the telecom industry (Atiyas, 2005). However, one may argue that each country is different in respect to various factors such as varying market forces, legal & regulatory environment, coverage, penetration, GDP levels, pricing strategies, geography etc. But from an international wireless telecommunications experience point of view they have so much in common and therefore general predictions can be made on how the new entrants can grow if they survive. According to Yari and Sadri’s analysis of the above mentioned countries it can be observed from figure x that after the first year of operations, the second entrants had gained on an average 22% market share and 42% after five years of operations.

Figure x: Typical percentage increase in market share of new entrant (year by year)

Source: Yari & Sadri, 2006

Additionally in Figure y, it can be observed that the ARPU dropped by a significant 32% due to decrease in average price per minute.

Figure : Decrease in average price/min after launch of entrant (year by year)

Source: (Yari & Sadri, 2006)

Typically in telecommunications sector new technology is rapidly duplicated and adopted by other providers. As a result, sooner or later all the product offering become homogeneous with very little or no differentiation. Eventually carriers are forced to compete solely on price and marketing. This increase in competition leads to drop in plans prices and makes mobile services accessible for the low-spending consumer segment and the region experiences high penetration rates. As the market begins to saturate and plan costs decrease due to an increasing portion of lower usage customers the revenue growth slows down and may even halt in some situations (Gruber, 2005). Empirical studies also show that price competition is of the Cournot type, i. e. with price above marginal cost and decreasing with the number of firms in the market.

This combined with the high sunk costs for the set up of mobile telecommunications networks leads to the consequence that the market can support only few firms. In Europe, newer technology has prompted more efficient use of radio spectrum, which in turn has led to an increase of newer entrants in to the wireless market. This entry has been consequential and the entrants don’t enjoy the same levels of profit as the incumbents used to. Overall, the industry is headed towards becoming an efficient market.

Figure z: Relationship between penetration rate and ARPU in context of number of firms operating in the market.

Graph x was generated by plotting trends of mobile dissipation into the European market. Key things to observe are inverse relation between penetration rate and ARPU i. e. as the cost of mobile services decreases, penetration rate increases because more and more people can afford maintaining cell phones. Also as the market begins to grow (in terms of customer base), the number of firms providing services increases. In the graph, during year 1 there was only one service provider and ARPU was highest, but after 10 years there are 4 service providers and ARPU is at its lowest.

4. Porter’s 5 Forces Analysis of Canadian Wireless Industry:

Threat of New Entrants (weak to medium): one of the greatest deterrence to enter telecom industry is the initial as well as ongoing intense finance requirement. Due to high fixed costs only serious entrants with lot of cash attempt to enter this industry. The threat of entrants is usually directly proportionate to finance markets conditions. When financing becomes readily available serious threat of new entrants peaks. In addition, acquiring ownership of a radio spectrum licence can represent a huge barrier to entry. In Canada, for example, the CRTC had to allocate 40% of telecom spectrum for new entrants to encourage joining of new members and avoid the big 3 (Rogers, Bell and Telus) from winning the auction. Limited availability of spectrum frequencies for all mobile voice and data applications is another limiting factor. Also, solid functional skills and management experience in the telecom industry are essential (Wallcom, 2010).

Power of Suppliers (weak to medium): due to presence of a number of local and international equipment suppliers/vendors bargaining power of suppliers get diluted. However, due to limited talent pool of professional (engineers and managers), telecom companies don’t have much power in that area.

Power of Buyers (medium, moving towards high): with entry of new cellular providers, the bargaining power of buyers is rising. Technically speaking, cellular and data services do not vary much, regardless of which companies are selling them. For the most part, basic services are treated as a good. Thereby this translates into customers seeking further low prices from companies that offer reliable service. Currently switching costs are relatively high due to presence of early termination fee and inconvenient due lack of number portability option with certain providers. However, with entry of new service providers whose strategy is to acquire market shares by providing cheap and reliable we may see an increase in buyer bargaining power.

Availability of Substitutes (weak to medium): threat from traditional landline telephone providers is decreasing constantly but on the other hand there is a steady rise in demand for non-traditional telecom products and services such as VOIP and WIFI, which may cause serious substitution threat.

Competitive Rivalry (medium to strong): since the inception of companies like Wind, Public Mobile and Mobilicity into the telecom service industry, there has been a surge in wireless market competition. The wave of foreign investment deregulation coupled with availability of radio spectrum reservations lowered the barrier for new entrants. In addition to decreasing profits, due specialized equipments the telecom industry has high exit barriers.

## 5. Challenges faced by entrants:

Changes in ICT and regulations have begun altering the structure of the wireless telecom industry over the last few years. Equipment costs have declined and building networks with much higher capacity and more intelligence have become possible. These changes have significantly reduced the extent of economies of scale, scope and density and facilitated the introduction of competition. New services have been put on the market, and more importantly, with the advent of digital technology, services that were once seen as unrelated are being provided over the same network, leading to a convergence between traditional telecommunications industry and TV broadcasting (between voice telephony, data and content/entertainment), further creating opportunities for competition (Atiyas, 2005).

Traditionally firms decide entering a market mostly based on two criteria: attractiveness of the market and the non-recoverable ‘ sunk cost’ investments required. It’s not essential only to analyse barriers to entry but also barriers to survival. Entrants typically face a number of challenges compared to well established incumbents that are apt to reduce its competitiveness and hence its chances of winning sufficient market share to survive (Cave & Williamson, 1996).

Fixed and Sunk Costs: Telecom industry requires a very high fixed cost and sunk cost. For example, carriers would have to use to same feeder and distribution loop plant to serve customers irrespective of their number (whether it be 10 or 10, 000). This causes the cost of that plant to be fixed regardless of how many subscribers it has. And once the feeder and distribution loop has been established, the carrier will incur a sunk cost that cannot be retrieved even if plant becomes dysfunctional later on. Both of these costs raise barriers to entry (and exit) by imposing very high penalties for failure on potential competitors. A new network operator that wishes to enter the market must carefully weigh its chances of surviving in the long run, particularly when it has to compete against an incumbent with a well-established market presence. Additionally there is an asymmetry in position created between incumbents and entrants due to fixed and sunk costs faced entrants. This may further increase barriers psychologically.

To lower barriers to entry the CRTC applied ex ante regulation. Under this regulation CRTC reserved a portion of the spectrum licensing for entrants. This definitely helped entrants face the incumbents by lowering entry barriers and making the market more contestable. However, CRTC needs to continually monitor entrants performance and ensure not too much of support is provided that may harm the public interest in the long run. Once the entrants have stabilized in the market CRTC should let market’s natural forces come into play.

Marketing attacks: As competition intensifies in Canada’s wireless market, the three new entrants – Mobilicity, Wind Mobile and Public Mobile – have a long and complicated battle ahead of them. Even the big players – Rogers, Bell and Telus along with entrants are engaged in competing among themselves to acquire new customers. According to Chris Diceman, a senior VP at the financial consulting company DBRS Ltd, though new entrants are marketing aggressively based on cost and offers not all are expected to survive individually. This leads to a possible scenario of M&A between two or more entrants to create a stronger brand offering, or simply going underwater. Among the entrants Wind has two major advantages: the first mover advantage and strong capital backing by Orascom. However, according to Statistics Canada (2000), for many new firms, however, life is short and uncertain. One-half of all entrants fail prior to their third birthday. Only one in five survives a decade. (Statistics Canada, 2000).

Another strong part of the challenge pitched by incumbents towards entrants is the newly spin off brands that are similar in offerings to the low-cost, unlimited talk and text plans offered by Public Mobile, Wind and Mobilicity. The low cost brands are specifically designed to exploit market segments not targeted by the big companies. The new brand offerings by incumbents are Virgin Mobile Canada and Solo Mobile (operated by Bell), Fido and Chatr (operated by Rogers) and Koodo Mobile (run by Telus).

From my understanding Bell and Telus are not marketing extensively their newly spun off low cost, unlimited brands due to the fact they have a huge fixed lined customer based and heavily advertising the wireless brand could potentially cannibalize their high revenue fixed line market base. On the other hand, according to Greg MacDonald, a telecom analyst with National Bank Financial Inc. believes that Rogers cares less about their land-line product as they don’t generate high revenue from it. A major dependency major players have is that they are rely on wireless business to support their other businesses such as landline telephone, television networks or cable (Hryciuk, 2010). This limits their ability to decrease prices unchecked.

Customer switching costs: the incumbents have majority of their subscribers locked on into either annual, biennial or triennium contracts that limits customers’ ability to switch to entrants without paying penalties. These switching costs are seen to be significant enough to prevent majority of customers from switching. This kind of strategy can put entrants in to significant advantage.

Interconnection pricing: every time a call is placed between two separate network providers, an interconnection charge is applied to place and terminate the call by the other network provider. Now since entrants have recently launched their network and have very limited subscriber base, most of their calls either terminate on incumbents’ network. The primary problem faced by an entrant is that there will be more traffic terminating at the incumbent’s network than on their own, due to the fact that the incumbent has more subscribers. Mutually agreed fixed per call charges will therefore create far greater amount of charges made by subscribers of the entrant, than those subscribers of the incumbent. The result is a higher average cost for calls for the entrant relative to the incumbents (Hodge & Theopold, 2001).

## 6. Struggle for survival:

The Canadian telecom market, in particular for wireless carriers is capital intensive due to the broad network coverage area and expensive employee base required to provide service. Furthermore, for new entrants there is higher risk associated with their business because majority of the investments is required in advance of attracting subscribers, along with large fixed costs which often means years before they can generate positive cash flow, and meanwhile the incumbents can perform aggressive manoeuvres to impact new carriers business (Mobilicity, 2010). Entrants also potentially face the risk of being acquired by the incumbents. This is what happened when CRTC supported launch of ClearNet and Fido. ClearNet got merged into Telus and Fido was bought by Rogers. This elimination of carriers can lead to incumbents charging higher pricing and create lesser choice for consumers. Therefore, CRTC should not only introduce competition but also place measures to ensure sustainable competition. Nevertheless, the current entrants have more financial backing than the previous ones and can weather more fierce competition. Mobilicity is owned by Obelysk Inc, a private equity firm which manages over $1 billion in investments including the KFC chains and Pizza Hut. Wind mobile’s parent company is Orascom, an Egyptian MNC which is equivalent in size to Rogers (Hryciuk, 2010). According to Gruber (2005), carriers gain the ability to differentiate their product based on the coverage they provide; this may have important implications for entrants’ survival. If the entrants fail to offer equivalent quality of network as the incumbents’, the industry may relapse in to original state of natural oligopolies. However, if the entrants decide to have offerings, at least regionally, that are equivalent in quality to the incumbents’, the scope of product differentiation in terms of coverage will be limited. For instance when PCN launched its brand One2One in U. K, it covered only 40 per cent of the population even five years after having been awarded a licence. However, PCN’s offering was par in quality with the incumbents within the region (Gruber, 2005).

## 7. Where do the entrants stand?

Currently Wind Mobile’s network is available only in Toronto, Vancouver, Ottawa, Calgary and Edmonton (Wind Mobile, 2010). Mobilicity’s network is operational solely within the Greater Toronto Area (GTA) (Mobilicity, 2010). Public Mobile’s home network covers GTA and Montreal. None of the entrants plan on setting up networks outside Canada’s major urban metropolitan areas. This is a further sign that the entrants want to compete with the incumbents on a regional basis and that too in a highly populated narrow band of area. This strategy will prevent them from incurring huge capital investment required to build towers and limit fixed costs; whereas the incumbents face the obligation of expanding their reach geographically to add on new customers.

Public Mobile is positioning itself at many locations by setting up dealership agreements with local stores all across GTA. The picture below is of a portal placed outside a convenience store at Scarborough TTC station. Clearly Public Mobile and other new entrants are going after the low cost mobile market segment. According to O’Brien (2010), Public Mobile offered free metropass to TTC travellers if they purchased a phone and signed up for $40 plan. The entrants’ plans don’t have contracts, require credit checks and their service is good in GTA.

D: BlackBerrypicturesIMG00118-20101112-1507. jpg

Figure x: One of the hundreds sale portals in GTA. This one was seen at

Source: taken by author on 2010/11/12

According to Wind Mobile, by July it had gained 100, 000 new subscribers and is well placed on track to achieve its goal of 1. 5 million in three years. Nationally, Wind accounted for 15 per cent of all new wireless subscribers in the first half of 2010 and is continuing to grow. According to Moretti (2010), nearly one year after entering the Canadian wireless market in competition with the incumbents, Wind Mobile has been successful at increasing competition in regional wireless service market causing a decline ARPU. According to CEO of Wind Mobile Anthony Lacavera, Canadians are seeing the lowest prices for the first time without customer service and offerings going down. Iain Grant, a telecoms analyst at the SeaBoard Group suggests that while Wind’s roughly 200, 000 subscribers is insignificant compared to Rogers, Bell and Telus’ more than 25 million customers, their impact shouldn’t be underestimated. Another recent report by the Conference Board of Canada said the telecom giants won’t see the phenomenal profit growth they have seen previously due to new market pressures.

## 8. Strategies for growth:

Increase network coverage area: Unarguably network coverage area is the most important deciding factor for customers to go with a service provider. Presently the new entrants’ coverage area is limited to major cities such as Toronto, Montreal, Quebec City in the east and Vancouver, Edmonton in the west. This kind of coverage is suitable to customers who aren’t too mobile outside these cities. If a customer is always present in a narrow area that is covered by all competing networks, he/she doesn’t care about coverage but only about the price he/she will pay. For such a customer, these networks provide homogeneous services and price becomes a differentiating factor between service providers. But if the customer is mobile and travels outside entrants region of coverage, then irrespective of how low entrants plan may cost the consumer would subscribe for incumbents’ coverage. Therefore, network coverage is a criterion for vertical quality difference.

Creation of new market segments: With the introduction of competition in the market and mobile penetration increasing rapidly, entrants need to find innovative ways of getting customers on board besides by offering traditional voice plans that incumbents used to offer. For instance, one such current area of growth is in the tablet data service market. Tablets can provide good incremental growth to counter falling voice and messaging revenue (Suo-Saunders, Grant, & Morrish, 2010). Tablets can create a new market segment for the entrants and generate revenue stream. Entrant carriers bank on the opportunity to establish direct distribution channels by partnering up with Tablet manufacturers and enhance margins through the sale of tablets through those channels. The plethora of tablets coming onto the market will provide new opportunities for operators to increase revenue through established distribution assets. Tablets will also provide mobile operators with an opportunity to create and deliver new multi-device tariff plans. As operators seek to reduce churn and tie customers into their services venturing in to this sector before incumbents may be a good idea. Whitehouse argues that ubiquitous online access will introduce a new generation of devices to take advantage of the service. “ Once you’re always online, you’ll be doing more than sending short text messages on your phone or tapping out brief email replies with your thumbs on your BlackBerry. I think you’ll see new, vest-pocket sized devices with full keyboards that allow you to do everything you now do from your desktop while you’re on the go” (Fagstein, 2010).

Schumpeterian Competition: Schumpeterian competition comes from introduction of new technologies. New entrants have to be aware of the rapid change of technology in the telecommunications industry in general and in wireless markets in particular (McFetridge, 2007). For instance, wireless industry is already facing Schumpeterian competition from wireless VoIP providers including Vonage, Skype Wireless, Google Talk, Yahoo and others. These technologies have the potential to scourge revenues off the entrants business. Smart phones can be used to make calls using Skype or other services once connected to WiFi network (Belkin, 2010). Other global carriers have begun offering dual mode handsets that uses either cellular or WiFi networks to make calls (Techlive, 2010). According to (Techlive, 2010), until now due to heavy regulations by CRTC due to implications of VoIP on wireless phone service providers have resulted in poor market penetration in Canada. However with beginning of telecom liberalization this market is beginning to open up and it’s important for new entrants to seriously consider this threat. At the end of 2008 it was estimated that only about 10% of Canadians were using the technology (Techlive, 2010). Speculation suggests that in order to grow entrants will have no choice but to offer VoIP even though they may substantially decrease ARPU (Martin, 2006).

Pre-paid cards: So far pre-paid card system has gained low popularity in Canada mainly due to the RPP (Receiving Party Pays) principle and high per minute usage charges. All the firms being discussed in this paper provide pre-paid plans to customers However, Wind mobile and Mobilicity provide nationwide very attractive low price pre-paid plans that literally blow off incumbents’ offerings in the pre-paid market segment (Mobilicity, 2010). Under a RPP system, the receiving party pays for calls not initiated by the receiver. Therefore, a lot of subscribers find this system a nuisance as they have less control on expenses. Usage patterns may be affected, too, as users, in order to avoid paying for unwanted incoming calls, may keep their handsets switched off, or may be less inclined to give away their number (Atiyas, 2005). This is also one of the reasons as to why Canada lags behind other OECD count