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## The Ever-Shrinking Condo

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### *Abstract*

Between 2005 and 2010, the average size of a new condo oscillated between 875 and 925 square feet (Perkins 2014). By 2015, a new condo average size is 797 square feet according to *RealNet Canada*. During this period, we witnessed in Vancouver, Toronto and Montréal, the rise of the micro-condo, which varies, from 226 square feet to 395 square feet. This article examines potential economic, demographic and cultural causes and consequences of the rise of micro-condos and their impact on the urban landscape and public space.

*Keywords:* micro-condo, micro suite, living alone, housing

### *Résumé*

Entre 2005 et 2010, la taille moyenne d'un nouveau condo a oscillé entre 875 et 925 pieds carrés (Perkins, 2014). Par l'an 2015, la taille moyenne d'un nouveau condo est de 797 pieds carrés selon *RealNet Canada*. Au cours de cette période, nous assistons à Vancouver, Toronto et Montréal à l'essor du micro-condo, qui varie de 226 pieds carrés à 395 pieds carrés. Cet article examine les causes potentielles et conséquences économiques, démographiques et culturelles de la montée en des micro-condos et son impact sur le paysage urbain et l'espace public.

*Mots clés :* micro-condo, vivre seul, habitation,

## Introduction

Within the last 10 years, we witness in Vancouver, Toronto and Montréal the rise of the micro-condo which varies from 225 to 495 square feet. While relatively new in Canada, micro-condos and micro-apartments gained “momentum in densely populated cities, like New York, London, Tokyo and Paris, after the 2007 global financing crisis” (Joo 2017:294). This is also the case, for example, in Australia, whereas Sidney and Melbourne saw a rise in micro-apartments of 15.5 square meter (166.84 sq. ft.). Both cities have a high population pressure and a chronic shortage of affordable housing. In Hong Kong, micro suites have existed for a long time, but in the last few years we witnessed the rise of the nano-condo flat less than 200 square feet.

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While a global phenomenon, there is very little academic research and literature on the subject of micro-condos (Been, Gross, & Infranca, 2014; ULI, 2014; Djukic, 2015, Christensen, 2016, Einarson 2016). Furthermore, all of them focus mainly on the United States (New York, San Francisco, and Boston) and to a lesser degree Vancouver. In turn, there is a plethora of non-academic literature found in news articles, journal articles, online content and magazines. This is not so surprising given the recent development of micro-condos in some countries and the challenges of its inception within the financial (mortgage, resale value) and urban (zoning, building codes, etc.) landscape.

In this article, I will examine the potential economic, demographic and cultural causes and consequences of the rise of micro-condos and their impact on the urban landscape and public space. As such, the focus is on three cities, Vancouver, Toronto and Montréal, home of the first micro-condo development within the last ten years. While all previous studies mainly focussed on the economic aspects of micro suite development this article contributes to contemporary research by concentrating on the social demographic and cultural factors which contributed to the emergence of micro-condos within the Canadian urban landscape.

The article is divided into four sections. The first section illustrates how house and condo average size fluctuated over the years and since 2009 both type of housing has shrunk in size. The second section consists of an overview of the various micro-condos development which occurred in Vancouver, Toronto and Montréal. The third section discusses and compares the barriers that micro-condo developments faced (or have faced) in Canada, the United States and Australia. The final section examines potential reasons and causes of the rise of micro condo: economic, demographic and cultural shift, young professional and downtown and technology. As such these various aspects have contributed directly or indirectly to the rise of micro-condo.

In terms of methodology, we incorporated a statistical analysis on the rise of individuals living alone in Canada, given that these would be the prime candidates to live in a micro suite. We also surveyed the average price of houses and condos to contrast the different factors and reason affecting the rise of micro-condos in the three cities. Additionally, the literature review included an extensive search of online materials, news and journal articles, magazines and books using the various monikers used for micro-condos, such as: *micro suite*, *micro-home*, *micro-flat*, *micro-apartment*, *shoebox apartment*, and *Mickey Mouse apartment* or *efficiency dwelling unit*. Finally, we discuss the various changes in technology which impact the footprint of a household. Thus, the overall analysis seeks to examine mainly the non-economic aspects of living and buying or renting a “home” of less than 500 square feet—a phenomenon which 30 or 40 years ago would not have been popular, efficient or practical given the technology, lifestyle and demographic of the time.

## 1- The Ever-Shrinking Home and Condo

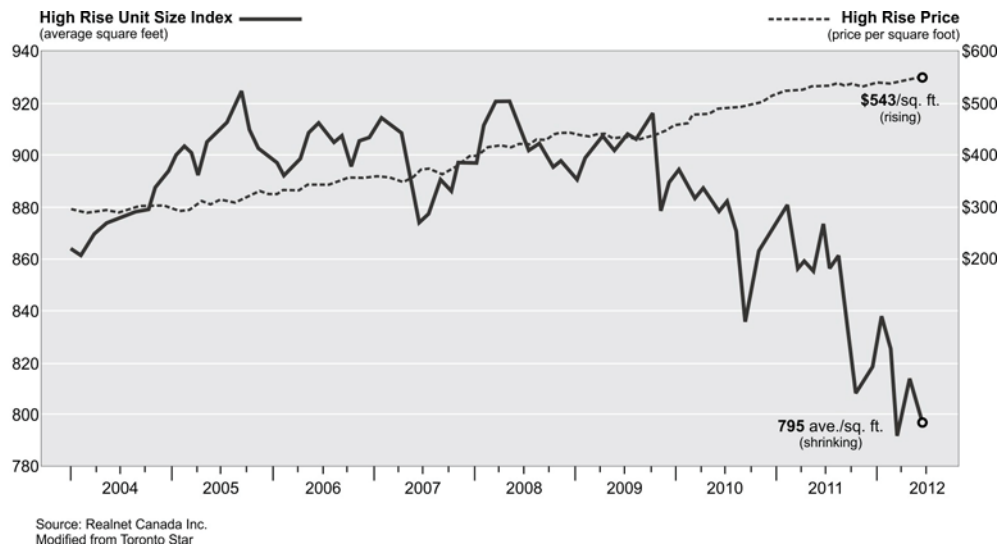
From the bungalow of the 1950s to the 1990s *McMansions*, the Canadian single-home has progressively increased in square feet into one of the largest domiciles in history. In the 1950s and 60s, Canada Mortgage and Housing Corporation (CMHC) offered house designs and plans that were often no bigger than 1,000 sq. ft. In the 1970s, as Canada became more affluent, the average house size jumped from 1,075 to 1,100 sq. ft. and included a walk-in closet, a family room, and an enclosed garage. In the 1980s, the square footage increased again as the Baby Boomers came to home ownership and they wanted big wide hallways, huge entrances and large garages, etc. By the end of the 1990s, the *McMansion* appeared and averaged 2,300 + sq. ft. During that time, Canadians lived in some of the world’s largest houses inhabited by some of the world’s smallest families. By 2002, Canada surpassed Australia, USA and New Zealand as to how many citizens owned a home with more than five (5) rooms (Hopper 2012). By 2007, the square footage growth slowed down and dropped from an average of 2,300 sq. ft. to 1,900 sq. ft.

Why these shifts in house average size? There are various reasons ranging from shrinking lot sizes, skyrocketing land prices and a new generation of homeowners (the millennials) who seem to prefer to settle downtown as opposed to the suburb. Thus, the Canadian house size seems to have reached its apex. Another observation by a chief economist at the TD Bank claimed that we simply ran out of space in many of our cities: “We went from land rich and house poor to land poor and house rich” (Hopper 2012).

The same pattern of diminishing average house size can be observed in the United States. Between 1950 and 2000, the typical American house size more than doubled, rising from 938 sq. ft. to more than 2,200 sq. ft. And today, like Canada, the average size of an American single-home has dropped below 2,000 sq. ft.

In turn, the rise of the condo, as a viable popular form of housing, coincided with the incredible rise in price of single-family homes which in most instances has become out of reach for most first-time buyers. Thus, many buyers have moved to the condo market. This is the case for Toronto and Vancouver, and to a lesser degree for Montréal. In 2005, about 35% of new units built were condos, now it's about 60% (Perkins May 02, 2014). By 2011, condo units accounted for 51% in Toronto, 56% in Montréal and 58% in Vancouver of all new dwellings (Harris 2015 334). This trend continues given that in the first half of 2015, Toronto condo developers sold nearly 11,000 condo units (the third best year on record). Most of these sales have been among presales, consisting of 55 new projects that developers launched in the city of Toronto.

Figure 1: Prices rise as units shrink: Greater Toronto area: Jan. 2004 to June 2012



Similar to the housing market, we are witnessing the same shrinkage of average size for the condo market. Between 2004 and 2009, the average size of a new condo oscillated between 875 and 925 square feet. Starting in 2009, the average condo size declined steadily and since 2012, the average size of a new condo is 797 square feet (see Fig. 1). The decline in size is equivalent to the size of a 10-by-12 foot room, approximately 125 sq. ft. In other words, Toronto, Vancouver and Montréal condo market went from two-bedroom and two-bedroom-plus den suites to one-bedroom and one-bedroom-plus den suites. (Carras 2012).

The decline in square footage is attributable to many reasons. From the point of view of developers, this is due to the ever-increasing rise of land prices over the years, the growing cost to build new buildings, and the abundance of construction that is taking place. The latter raised the demand for many services associated with construction resulting in higher cost. Another interesting aspect is the fact that some developers have cut the ceiling heights. This means more density since “if you take 6 inches per floor over 18 storeys, you get another storey, it does add to your cost efficiency and cost less” (Perkins April 24, 2014). In 2007-2008, the average was 9 inches and we are now seeing a further decrease.

Whereas historically the condo market used to be driven by people who were downsizing and looking for something convenient, smaller and manageable, it seems to be also driven today by affordability. Yet, given the high cost of housing, be it condos or homes, there is also another trend that has affected the average size of the condo market: the micro-condo.

## 2- The Micro-Condo Overview: Canada

**What is a micro-condo?** Generally, a micro-condo is a unit (own or rent) that is between 290 and 495 square feet. In fact, to some degree the size of micro suites are relative to the market in which they exist. In New York and Philadelphia 400 sq. ft. is the minimum size requirement of a new unit. But, for the *adAPT* NYC competition, the rule was dropped for micro apartments and suites between 275 and 300 sq. ft. (including a

fully functioning kitchen and accessible bathroom). In San Francisco, some units are as small as 220 sq. ft. as long as 70 sq. ft. is allocated to a bathroom and a kitchen. In the District of Columbia, the minimum size is 220 sq. ft. and in Boston micro suites minimum requirement is 450 sq. ft. and must be within one mile of public transit. (ULI 2014).

Thus in general, a micro-condo consists of a unit less than 500 square feet and its minimum and maximum requirement will vary according to the city in which they exist. A typical unit might have an island in a kitchen that can be extended into a full-sized dining table and a TV that slides over so that a built daybed sofa can be pulled down. The master bed folds up into the wall, so that the bedroom can be used as living room. Smaller micro-condos (less than 300 square feet), tend not to have a fully functional kitchen (burners as opposed to oven) or a bath for that matter (see Fig. 2). Most micro-condos are furnished with “transformable or modular furniture” and the place is like a Rubik’s cube of an apartment. Ironically, such design of furniture was highly popular within the cultural and avant-garde of the 20<sup>th</sup> century, such as the Futurist and in particular the Russian Constructivist movements.

In Canada, the micro-condo market phenomenon is fairly recent and has grown quite rapidly since 2010. In Toronto, some 467 units of 500 sq. ft. or less were in the occupancy phase in 2014. Micro-condo units consisted of approximately 5% of the new condos coming on stream during that year. An additional 2,868 micro-condos will be occupied by the end of 2015, making up 11% of all the new condos occupied in the City of Toronto. There are also one thousand more in the planning or development stage in 2016-18. Ironically, according to Shaun Hildebrand from *Urbanation*, micro-condos fetch a higher rent per square foot than larger units, as such, “condos over 500 sq. ft. can bring in well over \$3.00 per sq. ft., while the rest of the market average around \$2.50 or \$2.60” (Posadzki February 9, 2015).

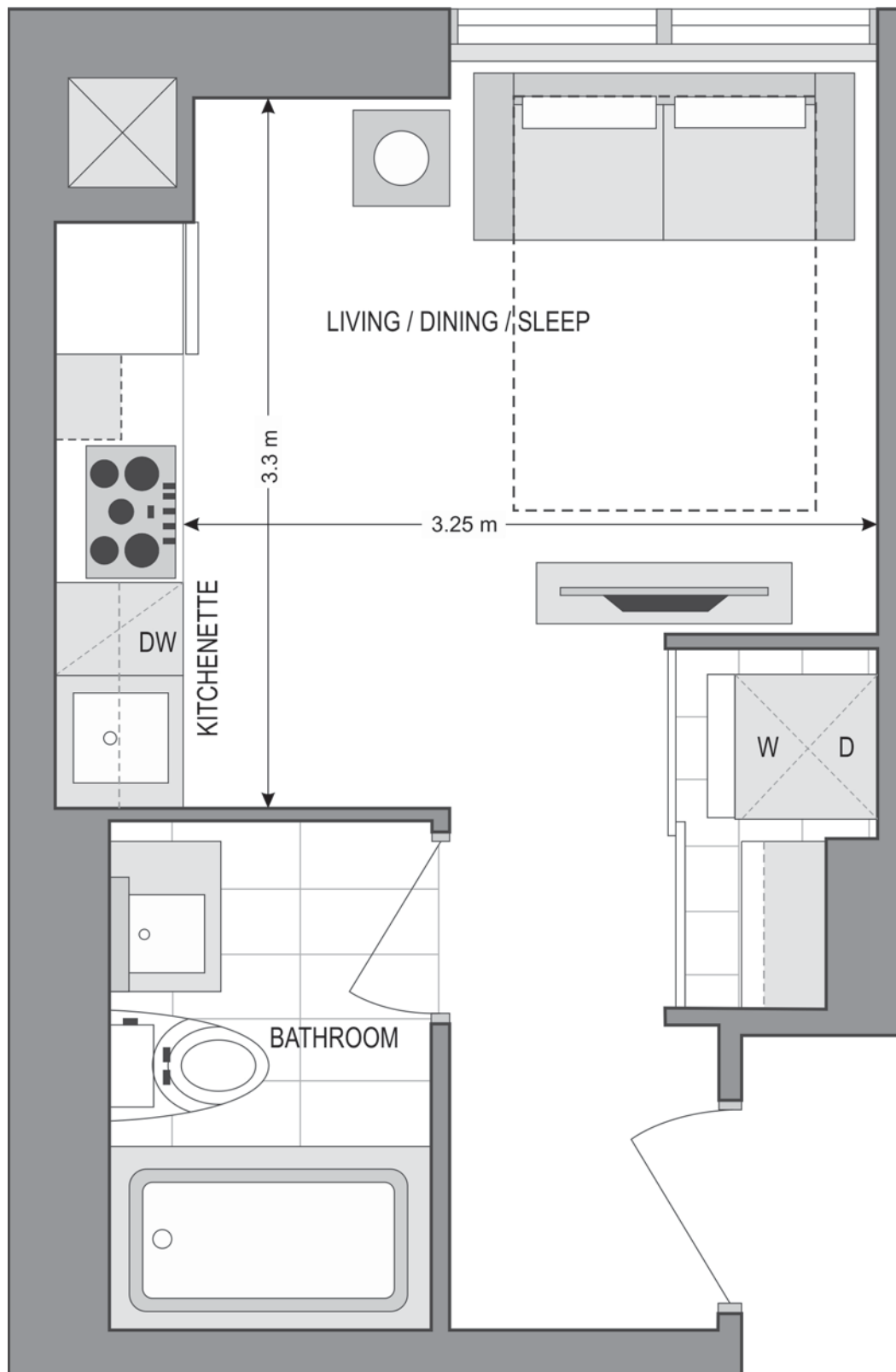
An example of micro-condo development in Toronto is the *Smart House* tower. *Smart House* is a 256 unit condo tower on Queen Street near University Avenue where a third of the units are under 500 sq. ft. and more than 80% have sold. The starting price was \$239,900 and the units varies from 280 to 460 square feet. Not surprisingly, the developers’ sales pitch is the affordability as an entry point into the housing market. Yet, it seems that it is mostly investors catering to a demographic of young professionals who are increasingly flocking to the downtown core that is driving the demand (<http://urbantoronto.ca/news/2013/10/smart-house-ultra-efficient-micro-condos-queen-and-simcoe>).

In Vancouver, one of the first micro-condo developments was *Burn Block* in downtown east side. The five-storey building consists of 30 rental micro-units between 226 and 291 square feet (no oven or kitchen). The building also has a 1,000 sq. ft. rooftop deck and a gastro-pub embedded on the main floor. Given the lack of kitchen and oven in these units, such amenities are necessary. In Victoria (BC), the *Janion* built a 4 storey edifice with 111 units which include a number of micro-condos running from 240-350 sq. ft. The *Janion* offers various amenities such as a rooftop lounge and a private beach access. The average price was originally \$100,000 to \$170,000, though today some unit are currently on the market again for more than \$300,000.

Another example of a micro-condo project is in Surrey, B.C. (468,000 pop.), one of the fastest growing cities in Canada. In Surrey, 27% of the city or one third of its population is under 19, which constitutes a ready market for the future. As such, micro-condos most likely will flourish in Surrey. The *Evolve Tower*, a 36 storey building with 406 units included micro-condos of 316 sq. ft. originally priced at \$93,900. The *Evolve tower* is located next to a Sky Train station and close to Simon Fraser University and Surrey Memorial hospital (Fralic 2015). As such, it provides great connectivity and access to different parts of the city and its services. In Calgary, *INK (Battistella Development)* built a 14-storey building which contains 119 condos, of which 26 units are micro-(368 to 378 sq. ft.) It also offers a number of amenities such as a rooftop gradient etc.

Montréal is no exception, as micro-condos have been built in downtown Montréal, Griffintown and Laval. One of the first downtown micro-condos was the *Complex M9*, now in its third phase. Twenty-five of 157 condos were 377 to 484 sq. ft. In 2014, in the Griffin District, *Devimco Immobilier* had 15 condos out of 312 of 300 to 311 sq. ft., and will build another 25 condos of 344-360 sq. ft. In old Montréal, *21<sup>e</sup> Arrondissement* has built a mix of condos units incorporating micro-condos (335 sq. ft.) and condos up to 906 sq. ft. Thus, there are various projects in Montréal that incorporate a percentage of micro-condo units within their condo development.

Fig. 2 Example of a 270 sq. ft. micro-condo floor plan.



Source: [http://www.infobarrel.com/Micro\\_Condo\\_Trends](http://www.infobarrel.com/Micro_Condo_Trends)

### 3- Barriers to micro-condo development: Canada, USA, Australia

While relatively new in Canada, and given the lack of research on the subject, criticisms of micro-condo development have mainly originated from the United States experience. In the United States, some have claimed that “micro-units [rentals] do not provide affordable housing and may exacerbate high rents in a community” as it seems to have been the case in San Francisco (Infranca 2013 64). For Montréal, Toronto and Vancouver the higher average rents for the micro-condos reflects most likely the fact that they are new construction located within a highly desirable area within the city. Another factor which can impact the price is that the micro-condos in Canada, are for the most part mixed within a condo complex that also incorporates one or two bedroom condos as well as various amenities (rooftop lounge/garden, parking, gym, swimming pool, and terrace).

Another negative factor in the United States was the NIMBY effect in some cities who think that micro-condos (mainly rentals) would flood the neighbourhood with ‘itinerant’ or ‘sketchy’ people and make parking less accessible due to a higher density of people (Infranca, J. 2013). Such criticism has not surfaced in our research, given that the micro-condos market truly aims to young professionals and well-to-do commuters and even the rental units can be quite expensive. The latter is due to investors renting the unit for a higher price per sq. ft.

The key barriers to micro-unit development in the United States are the “local regulatory requirements for minimum unit sizes and parking requirements” (Christensen 2016:5). While “building height, building setback, density and interior space requirements” can also impact the project feasibility (*Ibid* 2016:5). For example, height and setback requirements can be a challenge in regard to providing sufficient light and air to units (*Ibid*). Once again, our research indicates that none of these barriers are or were an issue for the development of micro-condos in Canada.

In Melbourne, Australia, the development of micro-units was accompanied with new by-laws and similar challenges to the USA and Canada in terms of mortgage financing. Melbourne legislated that new micro-units must be greater than 37 square metres (398.26 sq. ft.). Having said this, these minimums do not apply to micro suites in refurbished buildings where units can be as small as 15 square metres (161.46). (Paquette 2014). Since 2006 ninety-three percent of all new housing in Melbourne have been apartment buildings and 40% of these dwelling units are micro-units with an average size of 44 square metres (473.61 sq. ft.). While larger condos have higher price tags, some of these micro-units can sell for \$300,000. Furthermore, out of all new micro-units built in Melbourne since 2006, only an estimated 15% are owner occupied. In some way it is not surprising given the difficulty of obtaining financing without significant down payments due to the reluctance of financial institutions to lend for such small spaces and mortgage insurers will not service loans for properties smaller than 50 square metres (538.2 sq. ft.)

In Canada the micro-condo phenomenon still encounters some barriers either from the banks, in term of mortgage lenders (i.e. getting a mortgage, new regulations or not), or the municipalities, through by-laws. As such, each city has had a different approach to regulate the new burgeoning micro-condo market and construction.

For example, the *Burn Block* micro-condos are rented because the City of Vancouver by-law dictates that condo units can be no smaller than 398 sq. ft. though the city council has occasionally loosened the restriction down to 320 and 290 sq. ft. for rental units only. In regard to banking institutions, since 2014, many major banks, such as TD, Scotia Bank and RBC are leery to provide mortgages on units below 500 square feet. Banks, more often than not, will only finance the construction of micro-units, but not the actual sale of the units. As such, many mortgages are allocated on a case-by-case basis. The banks hesitate for three reasons, 1) the small size of the property, 2) the condo marketability which is determined by factors such as the building location, whether there is a separate bedroom, whether there is a parking lot etc., 3) the fact that there is still a great unknown regarding the value of micro-condos since its value has yet to be established on the resale market. Thus, many developers have built rental micro-condos to get around this problem.

On the positive side, micro-condos may reduce energy consumption, compared to one who inhabits a one-bedroom condo. It could reduce urban sprawl and encourage the development of walkable and transit-rich areas within a city. It also, particularly in Canada, has the potential to retain young professionals in expensive urban areas. Finally, it may benefit large-scale businesses who are concerned about residential opportunities for employees.

#### 4- Potential reasons/causes of the rise of Micro-Condos

The potential causes or reasons for the rise and development of micro-condos are many and we shall endeavour to focus on the i) economic, ii) demographic and iii) cultural aspects, iv) young professionals rejecting the suburbs for downtown and v) technology.

##### A) Economic

In regard to economic reasons, we have already explored some of the causes of the rise of the micro-condos. First and foremost is the increasing price of land and housing, whereas, as of April 2018, the average price for a detached two-storey property sold in Toronto was \$766,000, and Vancouver was 1.92 million (see Table 1). In turn, the average price for a condo in Toronto was \$561,338, and Vancouver was \$974,034 million (see Table 2). Thus, it comes as no surprise that the condo market has boomed over last few years given the cost of a house.

**Table1: Canadian Cities Average Houses Price April, 2018**

Greater Vancouver, BC	\$1,092,00
Greater Toronto, Ont	\$766,000
Greater Montréal, QC	\$341,000
Calgary, Alb	\$450,000

Source: Canadian Real Estate Association ; <https://www.livingin-canada.com/house-prices-canada.html>.

**Table 2: Canadian Cities Average Condos Price**

Greater Vancouver, BC	\$974,034
Greater Toronto, Ont	\$561,338
Greater Montréal, QC	\$325,000

Source: Canadian Real Estate Association; Vancity Condo guide.com/Vancouver-condo-report-February 2018; TREB.

This phenomenon, condo versus house, is not surprising given the price of a home in Vancouver and Toronto. As such, “the typical first-time buyer in Vancouver would need to save 10 per cent of their pre-tax income for 132 months—or roughly 11 years—to be able to afford the minimum down payment on a typical house.” In Toronto, it is estimated that a first-time buyer would need to save for “76 months or more than 6 years to afford the down payment on a low-rise property” (McMahon February 29, 2016). Since the single-family home market has become almost unaffordable in cities such as Vancouver and Toronto, this has encouraged first-time buyers towards the condo market because of the abundance of supply.

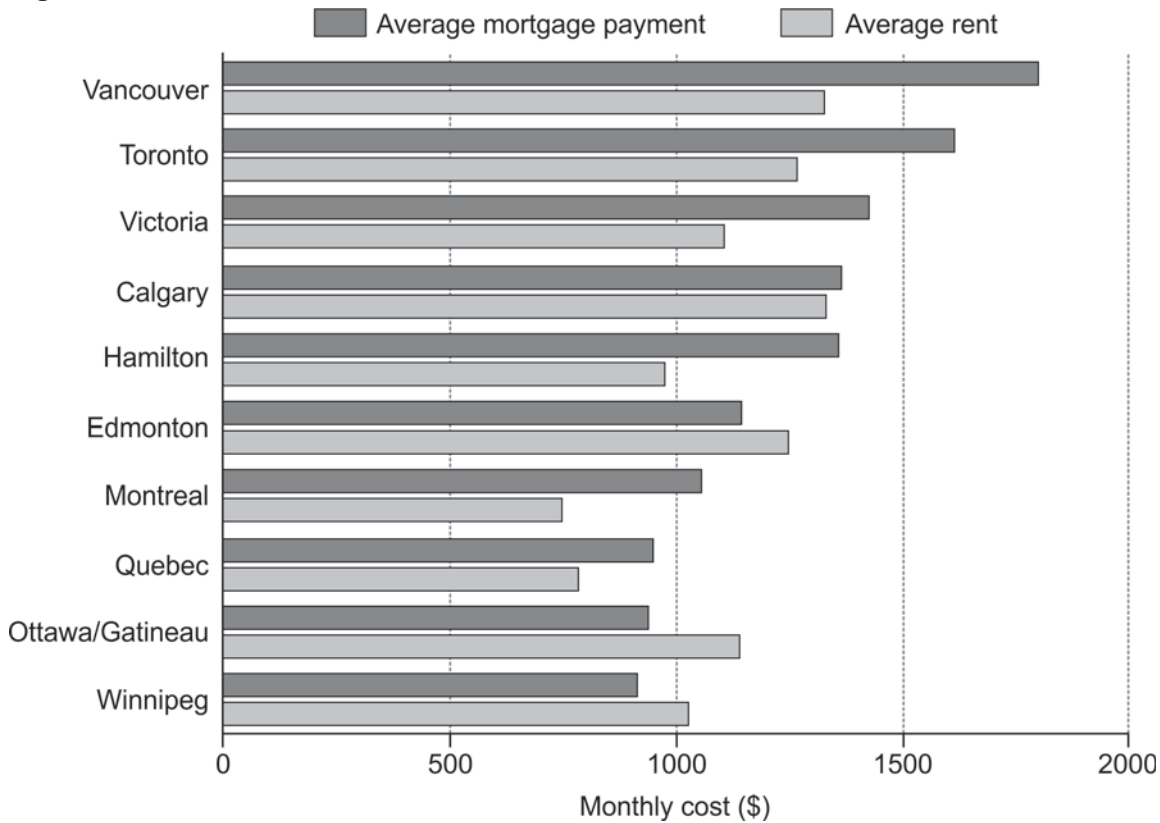
Another factor is the high cost of rent compared to a mortgage payment for a condo. For example, in cities such as Edmonton, Winnipeg and Ottawa, it is now cheaper to make a mortgage payment on a condo than to pay rent (*Ibid*) (see Figure 3).

In turn, the millennial generation in some of the major cities of Canada have been or are slowly excluded from the housing market. Thus, the millennial turned to the condo market, where even there the price can be high or prohibitive. As such, the cost of a micro-condo for a millennial could be considered the first entry point into the housing market. For example, with a 15% down payment, the mortgage payments on a \$93,900 micro condo would be around \$330 per month, plus strata fees for the *Evolve tower* in Surrey. This low mortgage is also due to the fact that we are in a period of low interest rates.

Another impetus for the development of micro-condos, as we mentioned before, are the various costs incurred by developers and investors in the construction of condos. As such, micro-condos are either incorporated within a building with different size of units (+/-800 sq. ft.), like the *Smarthouse* in Toronto and *Evolve Tower* in Surrey, or a condo tower composes only of micro-condos.

The adoption by many cities, like Vancouver, of a more sustainable development plan and their efforts to stop or control urban sprawl contributed to building the city vertically as opposed to horizontally, which encourages a greater number of condos towers.

Figure 3:



Source: Globe and Mail; National Bank of Canada, 2016-17

**B) Major demographic and cultural shift**

Aside from the economic rational, there is also a major demographic and cultural shift that is occurring with the arrival of the millennial into the housing market, and their value and culture.

The first aspect to consider is that living in a micro-condo means, more often than not, that you live alone. A 350 sq. ft. micro-condo is not really suited for a couple let alone a family. Today, living alone is not only a trend, it is also a part of a major demographic shift in Canada and the world. For the first time in history a great number of all ages, in all places, have begun settling down as single. At the global level the number of people living alone has skyrocketed from about 153 million in 1996 to 202 million in 2006. A 33% increase in a single decade. Table 1 ranks the top 9 countries of people living alone as a percent of all households.

Table 1: Living alone Statistics (as percent of all households) 2010-2011

Rank	Country	% of Households
1	Sweden	47%
2	Germany	41.4% (2015)
3	Finland	41%
4	Norway	39.7%
5	Netherland	36.9%
6	Japan	31%
7	United Kingdom	29.4%
8	Canada	27.6%
9	USA	26.7%

Source: Canadian Households in 2011: Type and Growth. Catalogue no. 98-312-X2911003



As we can see, Sweden, Germany, Norway, Finland and Denmark have roughly 40 to 45% of all households inhabited by one person. In terms of cities, Stockholm has the highest concentration of all dwellings occupied by someone who lives alone (60%). In Japan about 30% of all households have single dwellers, and the United States and Canada both have a similar percentage of solo dwellers (28%).

In the United States, where the rise of micro-condos started about 15 years ago, we also witness the rise of living alone. In 1950, 22% of American adults were single and 4 million lived alone, which accounted for 9% of all households. In 2008, 50% of American adults were single and 31 million, roughly 1 out of every 7 adults, lived alone (this excludes 8 million Americans who lived in voluntary or non-voluntary groups quarters (assisted living facility, nursing homes, prisons). Thus, people who live alone make up 26.7% of United States households (2010). Solo dwellers are primarily women (17 million) compared to 14 million men. In terms of cohorts, it represents 5 million between the age of 18-34, 15 million between the age of 35-64 and 10 million for the cohort of 65+. These single individuals cluster together in metropolitan areas, for example, 1 million people live alone in New York City and in Manhattan more than half the residents are one-person dwellings. In Washington D.C., nearly half of the households consist of one person living alone (45.2%), and both Denver and Seattle hover around 40% of one-person household as a share of all households (Infranca 2014).

Canada is no exception to this trend. In 2017, out of a population of 36, 708, 083 million, there were 14,457,979 single individuals as opposed to 14, 242,188 married individuals (not included are the category separated, living common law, widowed, and divorced (Statistic Canada Population by marital status and sex, by province and territory 2016 Census, Table 051-0042 Modified 2017-11-08). As opposed to the United States, in Canada, single males account for a greater portion (7.7 million) than single females (6.7 million). One of the reasons for the rise of single-person households is related to the values and meanings regarding marriage, family formation and delays in conjugal unions. For example, since 2003, the age for first marriage has increase to approximately 30 years for men and 28 years for women.

In 2011, for the first time, Statistics Canada reported that there was “more one-person households (3,673,305) than couple households with children (3,524,915)” (Canadian Households in 2011: Type and Growth. Catalogue no. 98-312-X2911003). By 2016, the number of one-person households exceeded other categories for the first time in the country’s history. (Statistics Canada 2016 Census of Population: Portrait of households and families in Canada, Catalogue number: 11-627-M). In the span of 8 years, the proportion of solo-dwellers increased from 25.7% to 27.6% of all households. This trend will continue upward nationally and globally. That being said, regionally there are some variations (see Table 2).

**Table 2: Percent of one-person households per province**

Province	% of one-person households
Québec	32.2%
Yukon	30.6%
Manitoba	28.2%
British Columbia	28.2%
Saskatchewan	27.9%
Nova Scotia	27.8%
New Brunswick	26%
Ontario	25.1%
PEI	25.1%
Alberta	24.6%
NWT	23.6%
NFLD & Labrador	22.1%
Nunavut	18%

Source: Families and Household Highlight tables 2011, Census, Stat Can (Private household by household type, 2011 counts for Canada, provinces and territories and census metropolitan areas and census agglomerations).

Regionally, Québec (32.2%) and Yukon (30.7%) have the highest percentage of one-person households. Manitoba and British Columbia hover at 28.2%, while Ontario and Alberta are slightly below the Canadian average. The provincial picture does not indicate how within these provinces there is a lot of variations between cities in term of percentage of single-dwellers. This is very much the case for Québec where shares were higher than the provincial average in most census metropolitan areas: Trois-Rivière (36.7%), Sherbrooke (35.7%), Québec (34.6%), and Montréal (32.6%). (Canada Household in 2011: Types and Growth). These variations can be explained in different ways, such as aging population, housing affordability, etc.

**Table 3: Percent of One-person Households in Four (4) Major CMA**

CMA	% of One-person Households
Montréal (QC)	32.2%
Ottawa-Gatineau (Ont)	25.1%
Toronto (Ont)	25.1%
Vancouver (BC)	28.2%

Source: Families and Household Highlight tables 2011, Census, Stat Can (Private household by household type, 2011 counts for Canada, provinces and territories and census metropolitan areas and census agglomerations).

Montréal has the highest percentages of single dwellers (32.57%), about 14% of the population of the CMA, followed by Vancouver (28.24%) with 8.63% of the population; Ottawa-Gatineau rates stand at 28.22% which accounts for 11.63% of the population and Toronto with 23.65% single dweller households (14% of the population) (see Table 3).

There are many factors that can explain the rise of living alone in the 21<sup>th</sup> century. Economically, the wealth generated by our economic development has allowed more and more people to afford to live alone. The low interest rate decade has also contributed to the affordability of condos. One must also take into account the social security provided by the welfare state which somehow enables the increase of single dwellers. Another economic factor is the increasing mobility of the work force in Canada and worldwide.

In regard to culture, the Western culture cult of personality must also play a role in promoting the single lifestyle. In the same vein, the rise and fall of subculture (SINK, hipster etc.), also participated to promote individuality and single life living. We also witness a weaker commitment by various cohorts to place like the suburb and the workplace (online business, working from home, coffee shops etc.). Another cultural factor is the longer period of 'apprenticeship' either for the workplace (internship) or education (university). Another important factor is the impact of the information and technology revolution which permits a social life and entertainment even when we are alone. Finally, in terms of demographics, we have smaller family sizes, later marriages, and longer life expectancy, all of which can contribute to the rise of living alone.

Not surprisingly, commercially, we have witnessed in the last ten years the creation of emerging markets specially catered to the single individual way of live. As such, it generated an unprecedented demand for apartments and condos (not houses), the rise, in Europe and Asia, of one seat cars and motorbikes, the development of a market for transformable or modular furniture and appliances for lodging. Perhaps the worse one, environmentally speaking, and the most indicative of the rise of living alone is the single cup coffee machine. One must also include the rise of all kinds of personal services for single dwellers, such as the "ready meal" market which does more than 4.8 billion dollars in revenue annually in Canada (<http://www.euromonitor.com/ready-meals-in-canada/report> 73 billion annually), and the delivery of "ready meal" at home.

In the past, living alone was a form of social failure, today it is a mark of distinction in terms of professional and personal growth.

### *3) Young professionals to live downtown*

A third aspect is the desire of young professionals to live downtown and its periphery as opposed to the suburbs. As such, in Canada, it is the cohort in their early 20s and mid 30s who are driving the condo market. For example, the cohort between 25 and 34 accounted for 62.5% of population growth in downtown Calgary between 2010

and 2014. Thus, like the millennial generation they are either renting or purchasing condos—which is a dream for both developers and investors.

At first, and still today, the people who bought a micro-condo were commuters who worked downtown and wanted to commute less during the week or they travel a lot and wanted a small “pied-a-terre” (Bonneau 2016). Today, Montréal's micro-condos main buyers are young professionals, single, students, baby boomers (commuters) and investors (who rent for a higher price per sq. ft.). One last interesting aspect about Montréal is the high number of single women buying condos. In 2012, out of the 1,005 people who bought a new condo dwelling in Québec, 62% were women and more than 35% were without a partner. In 2014, 43% of the buyers were single women (Buchanan 2014).

#### 4) *Technology*

One last aspect that facilitated the rise of the micro-condo is the information and technology leap society has achieved in the last 15 years. The information technology revolution, with all its devices and means of communications to the outside world and media, has successfully permitted a social life and entertainment even when we are alone.

On one hand, the cell phone, a misnomer given its capacity to surf the web, with live messaging, gaming and video, as well as tablets and laptops that are highly compact and portable which allow the user to ‘socialize’ and entertain oneself alone without physical interaction with another human being.

On the other hand, household furniture ranging from the television, stove, fridge, microwave, radio, mobile furniture, etc. have become increasingly smaller, less bulky and expensive, transformable, more disposable and more inter-connected. In the past, one’s habitat probably had a radio, a sound system with speakers, a telephone anchor at home and a bulky television set. As such, all of these devices did not interact with one another and required a big footprint within a house or a condo. Today, most of the services these devices offer (music, film radio, gaming, video) could easily fit in the palm of one’s hand.

Today, companies such as Apple, Microsoft and Google market themselves as creating an information and technology ecosystem linking their hardware and software products through the cloud. As such, the devices (iPhone, iPad, MacBook, and Apple TV) mirror each other’s data with no wires and can stream contents in real time from any device. Thus, the information technology ecosystem has, contrary to the past, a very small footprint and is highly portable.

While one might think that the use of ecosystem is just a marketing scheme to appeal to the new environmentally conscious consumers, it also reflects how various individual technologies of the past have become highly integrated, portable, and constitutes a very small footprint. These information and technology ecosystems also contribute not only to redefine our mode of socialization, they also redefine our spatial surroundings and needs, such as the emergence of the micro-condo. There is no doubt that furnishing a micro-condo is less a challenge than it was even 10 years ago. The next step is the advent of “Smart house” based on the ‘internet of thing’ which furthers the networking of household physical objects through monitoring or programming of the (environment, energy, security, etc.) household system. One would not be surprised if the ‘internet of thing’ eventually impacts the size of homes and condos.

#### *Conclusion*

Our objective was to explore the potential reasons or causes of the rise of micro-condos. Given it is a relatively new phenomenon as a form of housing in Canada it is difficult to predict its long-term appeal. Adding to that, in terms of urban land use, urban design, and liveability, micro-condos necessitate different amenities (and building regulations) than the houses in the suburb or even larger condo towers.

Ahead of this trend, at this time is the city of Vancouver who has developed a set of criteria to determine “crucial living qualities” which encompass two categories. The first category is the **Environment**, which consists of view, natural light, security and sound insulation. The second, category of criteria fall under **Spatial**, which refers to entry threshold, efficiency, storage, flexibility of use, separation of spaces. Such basic guidelines are crucial to the livability, a sense of place and community for the development of micro-condos.

In the past, we have made the mistake of creating island(s) of apartment towers (such as *Jane Finch* in Toronto or *Benny Farm* in Montréal) without any amenities, let alone good transportation or green space. The rise of the micro-condos offers us the opportunity to learn from these mistakes and challenges us to create liveable neighbourhoods and social space in the city.

Micro-condo tower design should also incorporate a range of amenities to compensate for small space. For example, *Evolve Tower*, in Surrey, includes large windows, spacious balconies, 8.5 foot ceilings, a fitness room, theatre and several shared common rooms, including a sky-high amenity room featuring a social room with a fully-equipped kitchen and large rooftop patio area. (<http://www.vancitybuzz.com/2015/01/evolve-surrey-development-high-rise/>).

Living alone in a micro-condo could be highly alienating unless your surroundings provide you with amenities such as cafes, restaurants, transportation, night life, green space etc. In other words, for a “micro-condoer” the city must become its living room. As such, the development and location of micro-condos can be an agent of creating a liveable neighbourhood and community.

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