

Vancouver's Housing Affordability Crisis: Causes, Consequences and Solutions

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Foreword

This report is intended to help Vancouverites sort through many of the conflicting claims being made about the current real estate situation. Influential people in the world of real estate and government have an interest in telling a particular story which allows the status quo to proceed unchecked. These defenders of the status quo need to be confronted, and this report provides data and argumentation to do just that. Many of the arguments and counter-arguments in the report have been made before, but I provide the data to dismiss some claims more firmly than before. The hope is that citizens will then be able to more confidently reject the excuses for inaction.

I have tried to write this report in an accessible and engaging way. That means that I drop the standard academic tone. I have also kept economic and political jargon to a minimum, to the extent possible. There are only two sections where the material gets a little technical, but the reader can skip these parts without missing much of the argument. I have put most of the technical material in an appendix, in case the reader wants to delve further.

I do not claim any expertise in this area, at least beyond what I present here. My academic work is far removed from this area. My arguments thus stand or fall on their merits, and I'm happy to have people engage or critique them. The arguments simply derive from having followed the debate closely, from having some background in economics, and from a straightforward (social) scientific intuition: if you want to explain the extreme real estate prices in Vancouver relative to other Canadian cities, then you need to come up with causal factors that are unique to Vancouver or that exist in a pronounced way here. At a minimum, the patterns across cities need to be consistent with the hypothesized relationships. If the relationships or correlations do not exist, or are very weak, then the alleged cause is unlikely to be relevant. As the report documents, this simple insight allows us to rule out a host of possible factors, many of which are pointed to by defenders of the status quo to distract the issue.

Before proceeding, the issue of 'racism' should be addressed. This report puts a lot of the blame for the housing crisis on foreign buyers, and buyers from China in particular. It does so because this is where the evidence points, not because of some anti-Chinese animus. The problem is that the money is foreign, and that it is sufficient to seriously distort the housing market, not that it is Chinese money.

The desire to protect the local real estate market from the influence of 'foreign' money is a common reaction from locals. Most citizens want to be able to have a chance to buy decent real estate if they work hard and play by the rules; in Vancouver that is becoming increasingly difficult, in large part because of massive flows of money from abroad. Measures to restrict foreign money are therefore present in many jurisdictions, as this report will show. Prince Edward Island, for example, has long restricted 'foreign' real estate buying, subjecting prospective buyers to stringent tests to make sure that such purchases are consistent with local priorities. Canadians beware, though, these restrictions are also directed at you! These measures exist not because PEI residents are 'xenophobic', they simply want local priorities and needs met first. This is what is driving the broad concern about money from China currently, not racism.

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1. Introduction

The housing situation in Metro Vancouver has reached a crisis point. As this report lays out, the city has become one of the least affordable places to live in the developed world, and the crisis shows little sign of abating. The standard measure of housing affordability is an average house price to average income ratio of around 3 or lower. A ratio over 5 is considered ‘seriously unaffordable’. Vancouver currently sits at 11-13, depending on the measure.¹

This affordability crisis brings a number of obvious harms. Much of the city’s young generation is being pushed to live far away from their friends, family and work in search of homeownership. Others, lacking sufficient means, are being shut out of the real estate market altogether and are forced to pay sharply rising rental rates. Debt levels are surging dangerously for many first-time buyers. Communities are being weakened by empty or under-used houses and condos. Entrepreneurs are having a hard time attracting or retaining talent. And the list goes on.

Little of this is lost on the region’s residents. A poll in June of 2015 by Angus Reid documented the frustrations of Vancouverites in stark terms.² 79 percent of respondents said that high housing costs are hurting Metro Vancouver. Even among homeowners, supposedly the ‘lottery ticket winners’ in the situation, 75 percent of respondents said that real estate prices were unreasonably high. Less than 5 percent of respondents thought that prices were either “maybe a bit low” or “reasonable overall” in the region. Meanwhile, 87 percent are worried that the next generation won’t be able to afford a house here. Astonishingly, 43 percent of respondents have “seriously considered” leaving the city because of high housing prices, especially the young and educated.

Nor are many Vancouverites confused about the sources of the crisis. 35 percent believe that foreign ownership is the biggest factor in generating the crisis, while another 47 percent believe foreign ownership is “one of a few major causes”. Less than 3 percent believe that it is “not a factor”. As this report will show, this interpretation of the crisis is largely accurate: foreign ownership and investment is far and away the most important driver of the housing affordability crisis. If anything, many have placed insufficient importance on this factor. Other alleged factors, when examined closely, cannot explain the surge in prices witnessed in the past decade.

If it is so obvious that something has gone wrong in the housing market, why haven’t the relevant governments stepped in to do anything? Even back in June of 2015, which seems like a very different place in the debate, there were strong majorities in support of a host of policy measures to address the crisis.³ 69 percent supported a speculation tax on flipping and 79 percent supported an extra property transfer tax on foreign buyers, for example. Yet both the federal and provincial governments have sat on their hands, to the intense frustration of many Vancouverites.

Part of the problem in this respect is that there continues to be at least some uncertainty about the causes of the crisis, and for a time many have shied away from being frank about the matter due to potential accusations of ‘bigotry’ or ‘racism’.

¹ For a discussion of this measure of affordability see Rob Carrick, “A house for three times your income? Think again”, *The Globe and Mail*, November 5, 2015. Another measure is discussed in Appendix A.

² Angus Reid Institute, “Lotusland Blues”, June 2015. Available at <http://angusreid.org/vancouver-real-estate/>.

³ Subsequent events will likely only have reinforced these attitudes and conclusions, as section 2 shows.

Another part of the problem is that there has been a misunderstanding about the nature of home equity gains, both on the part of citizens and policy-makers. Basking in the appearance of wealth gains, many have been wary of addressing the challenge of unaffordability for fear of hurting their own home equity. However, properly understood, home equity gains have a zero-sum nature for most Vancouverites. The benefits of rising home equity are therefore largely illusory (see Section 3). Indeed, as the survey results cited above indicate, many Vancouverites intuitively understand this.

Yet another factor has been the absence of a relatively coherent and plausible policy plan that could address the crisis. Many residents therefore likely see the crisis as ‘out of their hands’, despite their demonstrated support for certain policy remedies. As a result, a curious combination of resentment and resignation has emerged.

This report aims to tackle these sources of political inaction by compiling much of the debate’s key information and arguments in a single place, and showing how many of the arguments of what might be called the ‘bubble defenders’ are wrong. Specifically, the report presents an analysis of, and offers conclusions to, three key questions: (i) What has caused the affordability crisis? (ii) What are the implications of the crisis for the city’s well-being? (iii) What can be done policy-wise to tackle the crisis?

By linking the crisis unambiguously to foreign ownership and investment, documenting the major harms of the affordability crisis, and proposing a policy route out of the current mess, the report hopes to harness the city’s resentment and dispel its resignation. Mobilized and informed, residents can ideally hold municipal, provincial and federal political leaders feet to the fire.

This is the hope, at least. Ultimately, this evidence and argumentation may not mean much in the short run to the current governments at the provincial and federal level. This report is not naïve about the politics at play. The provincial government in particular has become hooked on the tax revenues and short-term economic growth that the housing bubble has generated.⁴ The real estate sector (i.e., construction and real estate services) now constitutes a quarter of the province’s GDP. Lacking a realistic path to sustainable and broad-based economic growth, especially as the commodity sector has slumped, governments such as BC’s have been loath to clamp down on the areas where ‘growth’ is occurring: residential construction, equity-fueled consumption, and debt leveraging. As this report will show, however, this is not a viable strategy in the long-term. The Irish, Spanish, and Americans can tell you that. But in a crass political strategy for re-election in 2017, the provincial government has apparently thrown caution to the wind and is trying to ride the bubble just long enough that they do not pay a heavy political price for getting the city into this mess.

The more this crass political move is apparent to citizens, the better. And who knows, perhaps they’ll change course.

⁴ David Parkinson, “Look out if B.C.’s boom goes bust”, *The Globe and Mail*, February 17, 2016.

2. Causes

Understanding the real causes of the affordability crisis in Vancouver is essential to getting the policy prescriptions right. If the analysis of the problem is flawed, so too will be the solutions proposed.

A tempting answer to the question of ‘causes’ is that the crisis is the product of a host of different factors, and many of them are basically inevitable. In this telling, there are so many different factors that we can only hope to make a partial dent in the problem, especially because some of the alleged factors are beyond the control of Vancouverites and British Columbians. This answer then leads into political apathy or resignation, and allows the crisis and its beneficiaries to continue on their current path.

Sometimes this type of answer is accurate, and the forces behind major social problems are many and resistant to policy remedies. Thankfully for the residents of Metro Vancouver, this is not broadly true of the affordability crisis. One factor, foreign ownership and investment, is overwhelmingly responsible for the present situation. (And can be addressed; see Section 4.)

How do we show this? The easiest way to do this is to demonstrate that most of the other alleged culprits can’t account for the crisis. Then, once we have eliminated the other possible suspects, or shown how they could only be limited accomplices, we can turn to indictment of the true culprit.

This is the approach I adopt here. First, I look at all of the other potential ‘suspects’, factors that are often alluded to by bubble defenders: low interest rates, the ‘desirability’ of Vancouver, a strong local economy, geographic/natural boundaries on development, restrictive zoning, and low investment in social housing.⁵ While two of them, low interest rates and geographic/natural boundaries have some purchase on the problem, it will be shown that the others play virtually no role at all. And these two contributing factors (or ‘accomplices’) cannot account for much of the major increases in prices that we have witnessed.

Second, the evidence for the role of foreign money is presented. While precise data on this front is lacking, thanks mostly to intentionally inept government oversight, we still have enough evidence to see that it is by far the most important driver of the problem. This is evident in three ways: the history of the Business Immigrant Program, the studies done by Andy Yan and others about the ethnic make-up of high end buyers, and the coincidence of capital outflows from China with rising prices. For Vancouverites the anecdotal evidence is all around them, but it is helpful to get some more concrete evidence too.

The striking thing we see when we sort through the evidence is that a strange alliance of parts of the political Left and Right has sought to downplay the role of foreign money. They have done so for different reasons, but the effect has been the same: weakening the resolve of Vancouverites to tackle the crisis. By taking these pundits on directly, the distractions they proffer can be tossed to one side and we can get on with the business of tackling the real problem.

In sum, we have mostly a demand problem, not a supply problem, and it is foreign demand.

⁵ Two typical examples are Andrew Coyne, “Don’t blame Chinese billionaires for soaring house prices”, *National Post*, January 21, 2016, and Terence Corcoran, “Welcome to B.C., Chinese homebuyers (and your money too)”, *National Post*, March 30, 2016.

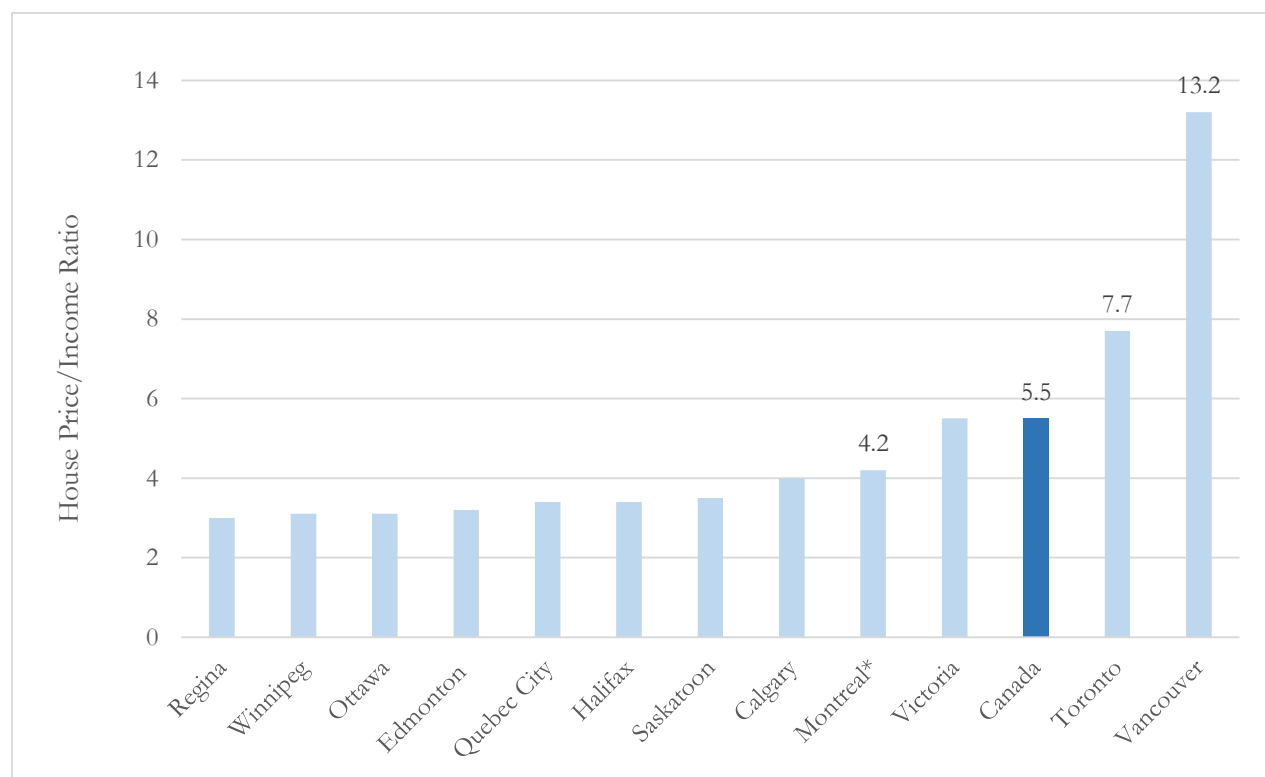
2.1 (Not a total) Distraction #1: “Low interest rates are driving the crisis”

Relatively low interest rates allow property prices to rise above their long-term averages by enabling buyers to purchase homes and condos somewhat beyond their ‘normal’ means. The lower the interest rate, the lower the mortgage rate, and the higher the price of a house that a given income can afford, all else equal. And there is no doubt that interest rates are at historic lows, at least relative to the past half-century or so.

So, open and shut case, right? Wrong.

This is for a very simple reason: if low interest rates were a major cause of rapid property price gains, then we would see booming housing markets across the country. We don’t. Figure 1 shows this starkly.

Figure 1: Estimated house price to household income ratios in eleven major Canadian cities (as of January 2016)



Source: BMO Nesbitt Burns, *Housing Market Scorecard*, January 2016. *Montreal’s figure is from February 2015.

As noted, the historical average for the “house price to household income” ratio is around three. As Figure 1 shows, Canada presently sits at 5.5, around where the U.S. stood prior to its housing collapse. But what is also evident is that this high ratio is driven almost entirely by Toronto and

Vancouver. Were it not for these two markets, there would be a fairly typical price/income ratios relative to the historical average. But the whole country faces the same low mortgage rates. So how can low interest rates account for the extremely high ratio in Vancouver? They can't.

At most, low interest rates have allowed Vancouverites to stretch themselves thinner as they pursued higher priced homes in an effort to be in the neighborhoods of their choice. But something apart from low interest rates must be enticing them (or forcing them) to stretch themselves: you guessed it, it is largely foreign money.

This story is so familiar today that it doesn't shock Vancouverites anymore. A series of local bids for houses are easily beaten by an extravagant offer from a foreign source, or from contractors or insiders who see the opportunity to flip the property to these people in short order. This encourages higher bids subsequently, often well above asking, and inevitably drives up prices. Nor does this just affect the high-end neighborhoods, where foreign money is most prevalent (see below). Now the better off families or individuals that may have bought in a more 'upscale' market bring their extra purchasing power to a 'lower-end' area and bid up the prices. And so on cascading outwards from the prime areas in the Westside of Vancouver, West Vancouver, and increasingly the Eastside of Vancouver to the rest of Metro Vancouver.

The same is happening in Toronto, where there has been substantial foreign investment too. Indeed, the fact that Toronto and Vancouver are the outliers in Figure 1 is telling. Both are preferred targets for investment in surveys of high net worth individuals (see Section 2.7.3).

Lacking this initial impetus of foreign money, Canadians in other cities are not forced to raise their bids beyond what they can realistically afford with more 'normal' interest rates. (Nor are there windfall gains that are passed on from parents to children to assist high bids.) As a result, the pattern never gets started, and housing remains relatively affordable. Just look at Figure 1 (or Appendix A).

This is not to say that interest rates are unimportant moving forward: precisely by allowing families to overstretch themselves financially, a modest increase in interest rates could generate many defaults and put the housing market into turmoil. (As Section 3 shows, Vancouver households are dangerously indebted.) That the situation in Vancouver is dependent on rock bottom interest rates to avoid a major correction is therefore highly worrisome.

2.2 Distraction #2: “Vancouver is so desirable, it's inevitable that prices are so high”

Vancouver is a beautiful city. It is safe, clean, and has great restaurants. The people are polite and there is a stable political situation. It is routinely near the top of world rankings in terms of 'livable cities', at least setting affordability to one side.

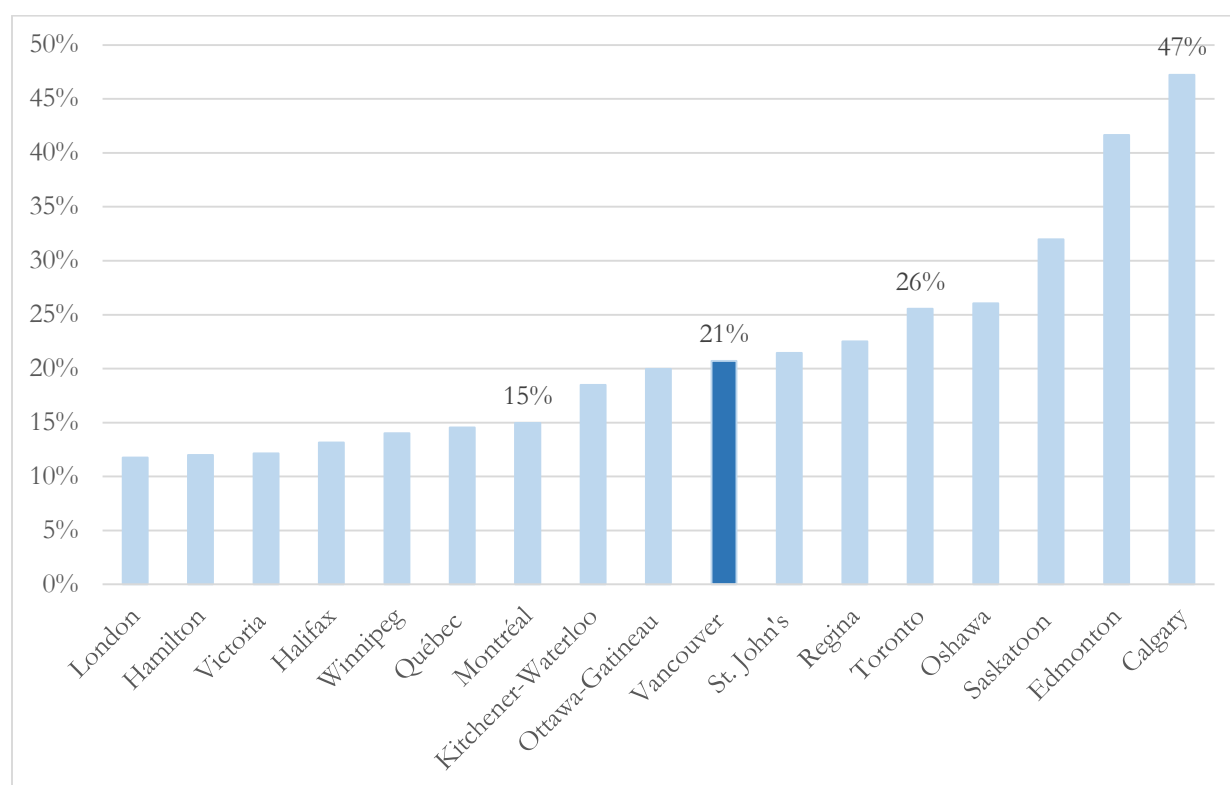
Vancouverites usually don't need to be convinced of these things. They apparently love it too. (More on this shortly.) Interestingly, though, the rest of Canada isn't as enamored with the city as we are. Net in-migration to Vancouver from the rest of the country has been essentially *zero* since 1990.⁶

⁶ David Ley, “Global China and the making of Vancouver's residential property market”, *International Journal of Housing Policy*, December 2015, p. 13.

There was an uptick in 2015, granted, but this was due to the collapse of the oil economy in Alberta, as many British Columbians who had migrated there for work moved back.

The only long-term source of increased population is from immigration, then, and this has certainly been substantial. But this reflects the fact that Vancouver is a big city, on the Pacific coast, with sizable diaspora communities.⁷ Other major metropolitan regions in Canada have also seen substantial increases in immigrant populations, and population growth more generally. In fact, Vancouver's population growth rate in the past decade or two is not particularly high among the largest Canadian census metropolitan areas (CMAs), as Figure 2 shows. Nor does this conclusion change if we use a more recent period, such as from 2010-2015.

Figure 2: Percent population growth in the seventeen largest Canadian cities, 2001-2015



Source: CANSIM.

Perhaps more to the point, for such a 'livable city' the people here are pretty unhappy: out of Canada's 33 census metropolitan areas, Vancouver ranked dead last in terms of "life satisfaction" from 2009-2013.⁸ (And this predates the recent spectacular worsening of housing affordability.)

⁷ Pre-existing (self-same) ethnic population is by far the largest determinant of location choice for most new immigrants. For a seminal US study, see Ann Bartel, 1989, "Where do new US immigrants live?" *Journal of Labor Economics* 7(4): 371-391.

⁸ "Vancouver Named Unhappiest City", *Vancity Buzz*, April 20, 2015.

Whether it's the rain, the reserved culture, the weak community integration, or whatever, something is amiss.

For such a 'desirable' city, this is pretty stunning. What it likely reflects is that Vancouver is in large part a very desirable city, *if you're already wealthy and housing secure*. As Sections 2.3 and 3.4 argue below, economic opportunities are not great in the city for most people, especially young educated people. Where Vancouver does seem to excel is in attracting wealthy foreigners. Indeed, a recent *New Yorker* article documents how Vancouver has become one of the most sought after destinations for investment and migration from Mainland China, such that it is now seen as something of a status symbol to have a house or apartment here.⁹ This trend is not new either: between 1980 and 2012, around 200,000 wealthy migrants settled in Metro Vancouver, or around 8-9 percent of the current regional population, through the Business Immigrant Program, as I document below in Section 2.7.1.¹⁰

But this is a very different kind of 'desirability' than what the bubble defenders usually have in mind. The argument about 'desirability' is therefore far from a slam-dunk. If anything, a closer look at the matter focuses our attention once more on the real culprit: foreign demand.

2.3 Distraction #3: "Vancouver has a strong local economy!"

The provincial government would like this to be true, but the evidence suggests otherwise. A strong local economy would be one where incomes were high and rising. If economic growth merely reflected a growing population (and a foreign-led housing bubble), then per capita incomes would be low and/or stagnant.

So what does the evidence say? Figure 3 and 4 tell the basic story. Not so good. Other measures of income tell essentially the same story. Of all the main ways of measuring average or median incomes that I worked with from the CANSIM data, Vancouver fell in the bottom half of the major CMAs in nearly every one.¹¹

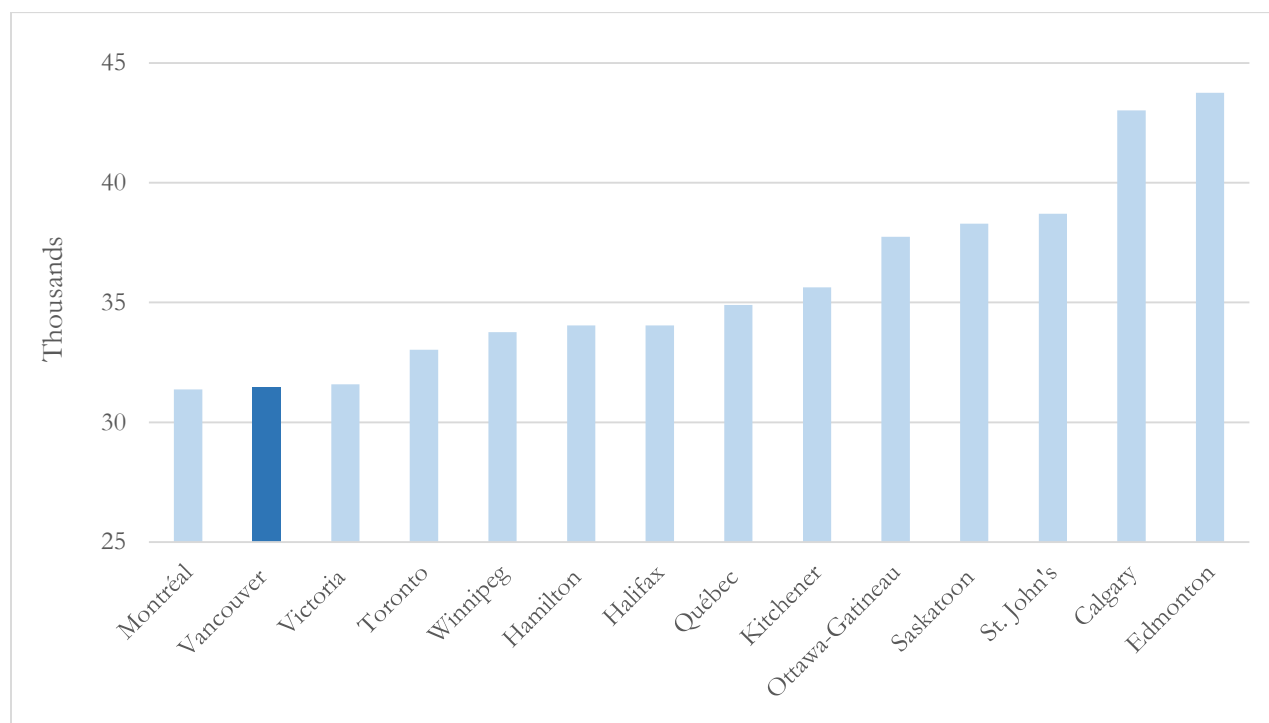
BC Premier Christy Clark has taken to bragging about the province's growth record in the last year or so, but that's a bit like the leaders of Ireland and Spain bragging about their growth in 2007: it's mostly based on a foundation of unsustainable debt. (See Section 3.2.) It's also putting the cart before the horse: it's the housing bubble that is driving short-term growth, not the reverse. (See Section 4.)

⁹ Jiayang Fan, "The Golden Generation: Why China's super-rich send their children abroad", *New Yorker*, February 22, 2016.

¹⁰ David Ley, 2015, "Global China and the making of Vancouver's residential property market", *International Journal of Housing Policy* (December): p. 16.

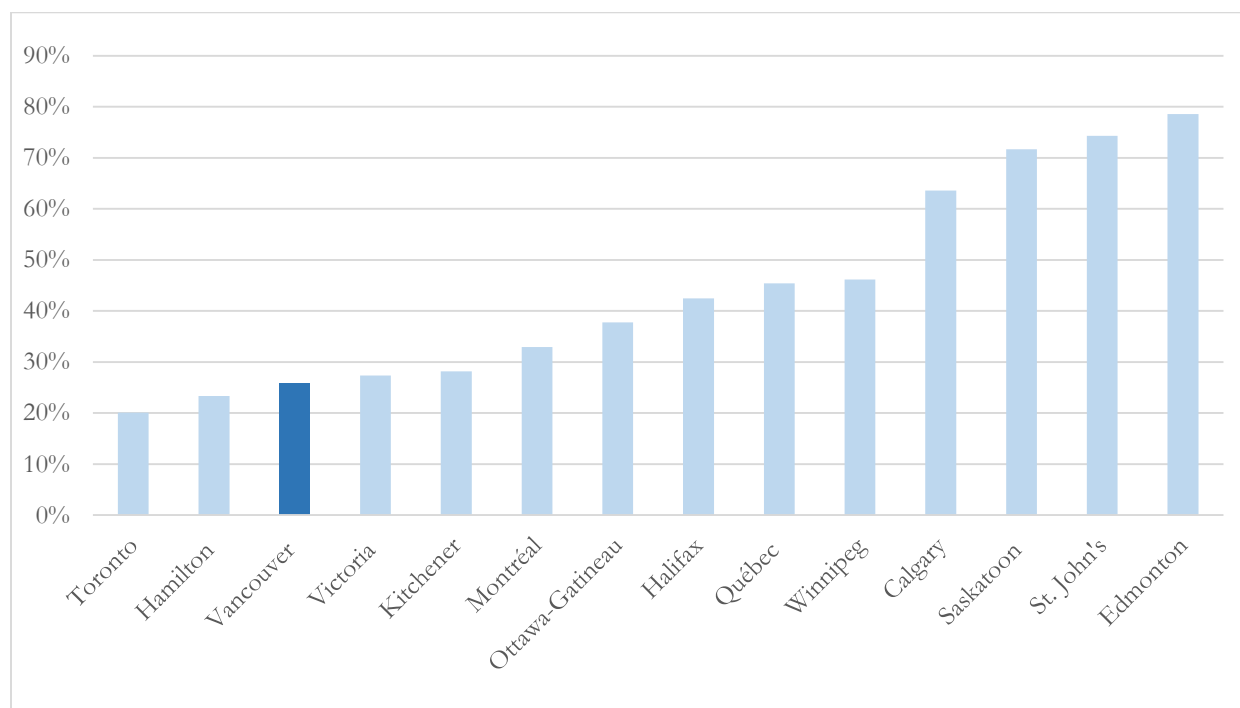
¹¹ Unemployment rates in major Canadian cities also tell a similar story: Vancouver is not the worst in the housing boom years (e.g., 2005 onwards), but it's by no means the best either.

Figure 3: Individual Median Employment Income, Major Canadian CMAs, 2013



Source: CANSIM.

Figure 4: Change in Individual Median Employment Income, 2000-2013, Major CMAs, Unadjusted for Inflation



Source: CANSIM.

2.4 (Not a total) Distraction #4: “The mountains and ocean block the development of new houses, constraining supply”

The previous three ‘distractions’ essentially focus on other potential sources of *demand* to explain the extremely high housing prices in Vancouver. As we have seen, they don’t fare particularly well when confronted with the evidence.

The three distractions discussed below focus on the supply side of the equation: each in their own way suggests that Vancouver is not building enough new housing supply to meet the demand. The reasons are different in each case, but the basic logic or mechanism is the same. If demand is growing, either due to population growth or income gains or whatever, then a stagnant or sluggish supply will mean higher prices.

I diagram this in the technical appendix (Appendix B), where I detail and back up the claims I make below. Because many readers may not be interested in the technical arguments, I simply present the main conclusions from that appendix. For those readers that are, and I encourage the reader to give it a shot, the appendix adds an important element to the current debate by putting some of the more plausible arguments of the bubble defenders to the test.

So what does the technical appendix conclude?

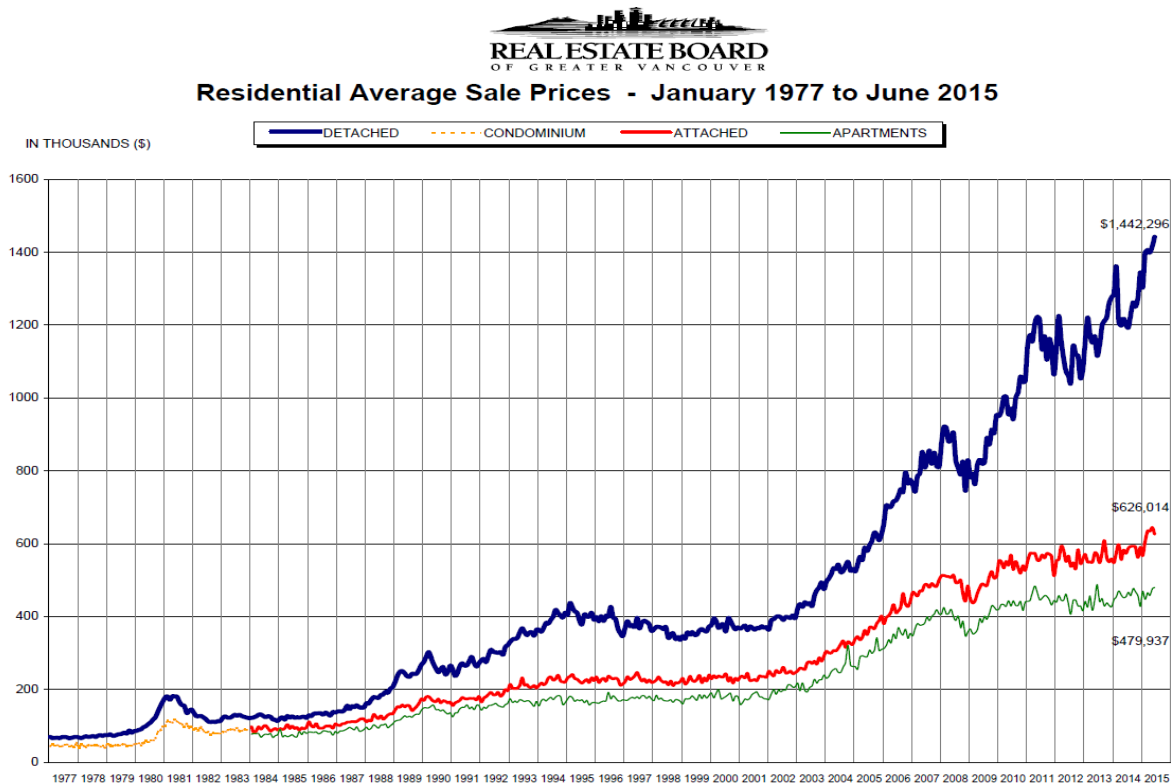
- Supply of single detached houses did not grow from 1991 to 2011, and measured from 2001-2011, fell around 9 percent. There is a good case to be made that this is due to geographic boundaries, as well as the region’s Agricultural Land Reserve, which limits sprawl and will pressure the re-zoning of land from detached housing to multi-unit buildings. This limited supply will indeed push the prices of those houses up, since they are prized by Vancouverites, and has led them to increase in value much faster than other kinds of residential property.
- While this is true, the debate then turns to the *magnitude* of the price increase that will result from this limited supply dynamic. How much of the price increase can be explained with reference to limited land?
- Despite single detached housing supply being stagnant or falling somewhat, *overall housing supply has increased sharply in recent decades and years and has kept up with population*, at least in terms of the average number of occupants per housing unit. Even the Urban Development Institute, a developer-funded group, says new construction has been in a “healthy range” in recent years.
- As cities get bigger, after a certain threshold, density starts to increase as people trade ‘location for yards’. When this happens, housing construction moves ‘upward’. This increased supply of apartments and condos will then take a lot of the price pressure off single detached housing prices, since they are substitutes, albeit imperfect ones.
- Since there are so few cities in Canada that have reached the requisite size to be strongly ‘pushed upwards’, we must look to the U.S. for guidance on what the magnitude of the price effect will be. Thankfully there is excellent research on this. This research does indeed find that large cities with less ‘developable land’, due to geographic constraints,

have higher house prices, and consistently so. However, this research does not find an impact on prices that is nearly sufficient to explain the housing prices in Vancouver. *In various estimations I undertake, it could explain about 15-30 percent of the difference in housing prices between Vancouver and other major Canadian cities, even with the most 'generous' assumptions provided for this view.*

- Studies of the impact of population density, which will proxy or capture these types of forces, also find consistent effects on housing prices, but not of a sufficient magnitude to explain more than a fraction of the price difference between Vancouver and other cities.
- All of these studies predict higher housing prices as a function of limited developable land; however *the economic models underlying them also predict higher than average wages in these cities relative to other cities.* This is because workers will have to be compensated for higher housing costs if they are not to move away, and because businesses will have to become more productive in order to stay alive/profitable in the national market. Yet, as we have seen, *Vancouver does not have such high incomes. This means that one of the only ways higher prices could be seen on a continuous, long-term basis is through the importation of 'demand' from elsewhere.* What this amounts to is an 'un-coupling' of housing prices from incomes, precisely what we have seen in Vancouver, as I present in Section 2.7.2. As a result, properly understood, this factor points again back to the crucial role played by foreign demand.

For those unlikely to skip to Appendix B at any point, I provide a few of the crucial charts below.

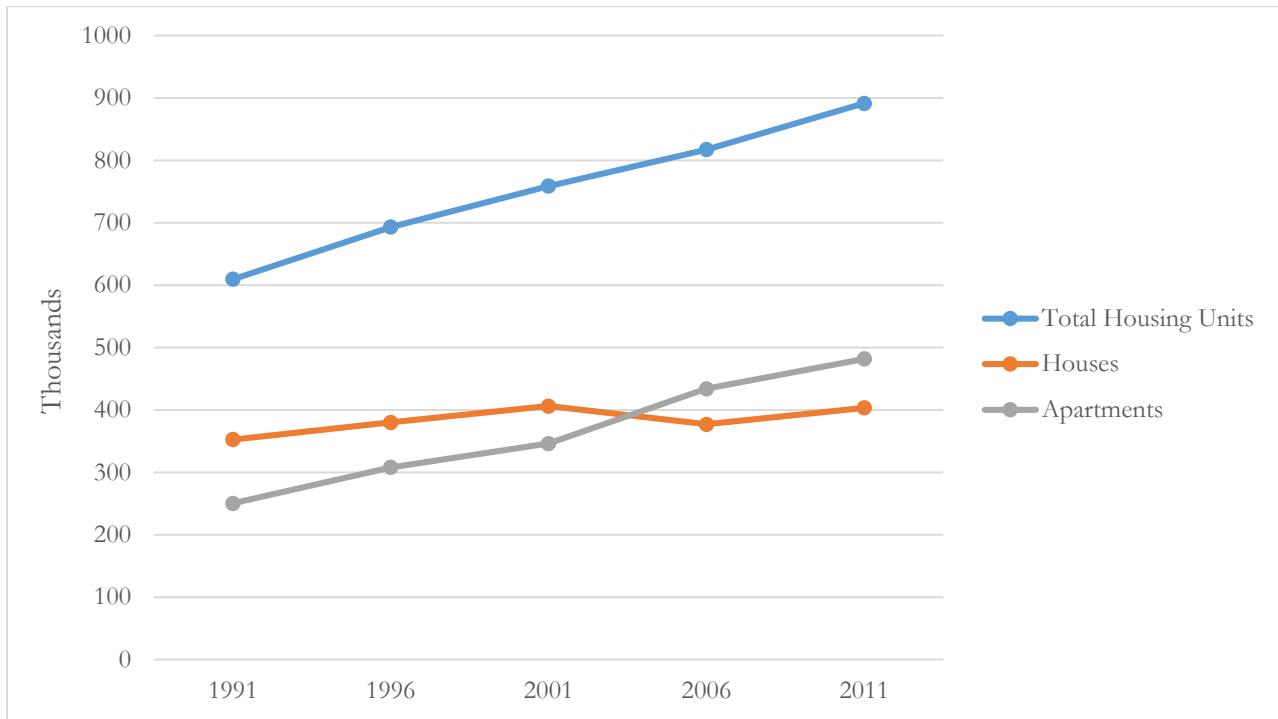
Figure 5: Residential Average Sale Prices, 1977-2015



NOTE: From 1977 - 1984 condominium averages were not separated into attached & apartment.

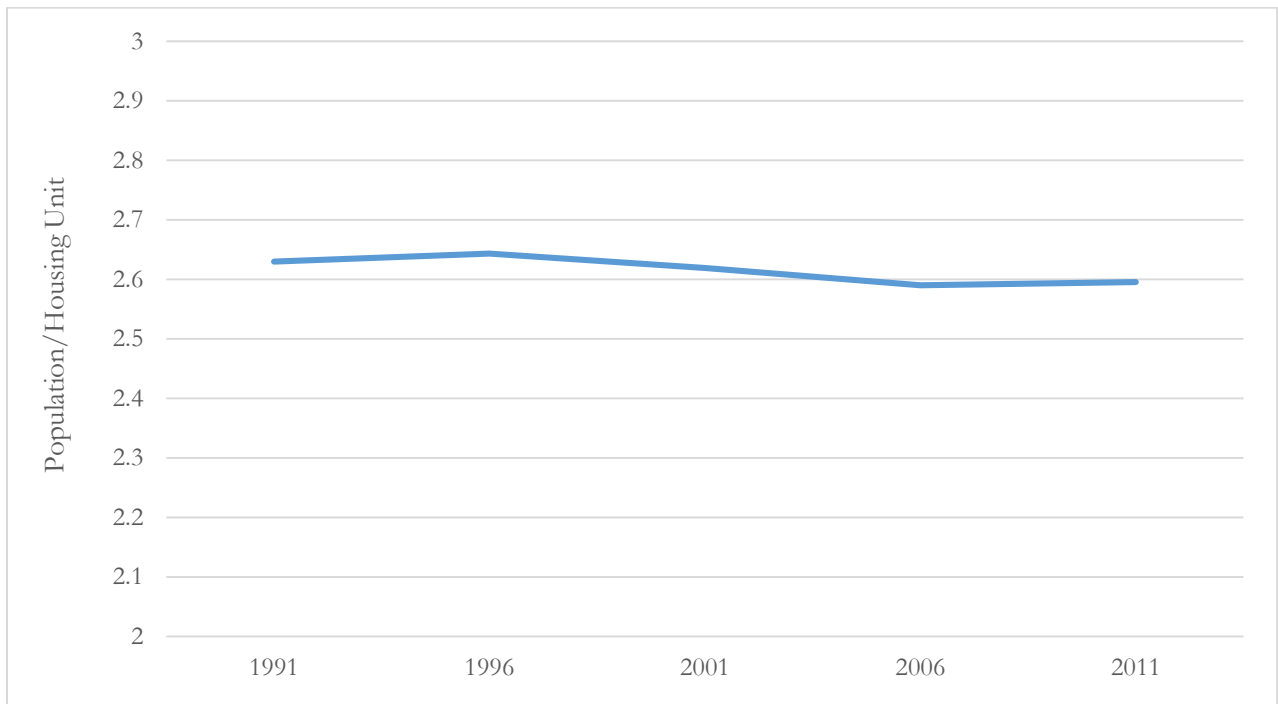


Figure 6: Housing Stock in Metro Vancouver (CMA), 1991-2011



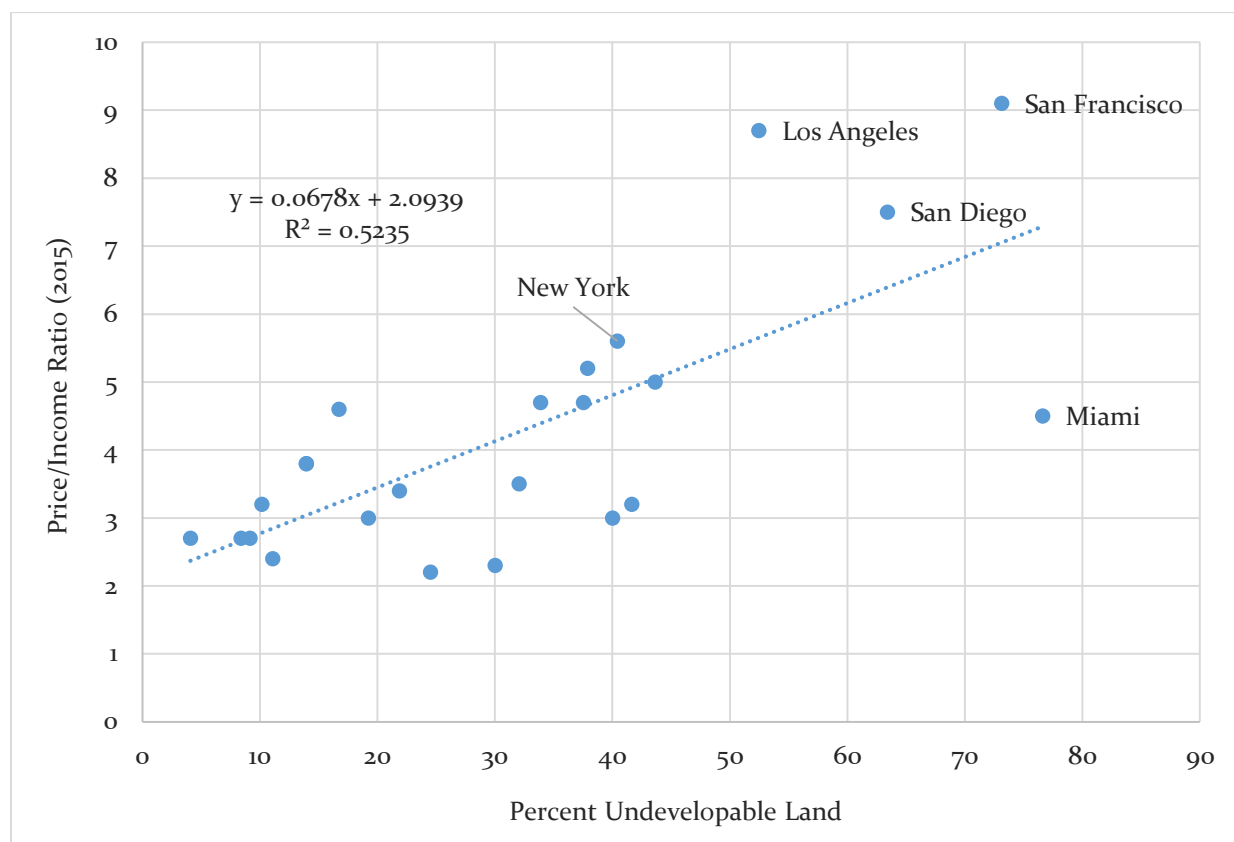
Source: Statistics Canada. Houses: single- and semi-detached homes and row houses. Single detached homes represented about 75 percent of all such houses in 2011, a somewhat smaller share than previously.

Figure 7: Ratio of population to housing units, Metro Vancouver (CMA)



Source: Statistics Canada.

Figure 8: Price/Income Ratio versus Share of Undevelopable Land, 2015, Major US Cities



Sources: Saiz, 2010; Economist Magazine (Online).

The last chart, Figure 8, merits brief comment. It plots the percent of undevelopable land, due to natural geography (e.g., oceans, lakes, rivers, mountains, etc.) against the house price to income ratio in 24 of the largest US cities. (I explain the basis for the chart and measure in Appendix B.) What it shows is that there is indeed a relationship between land constraints and price/income ratios. What it also shows is that the strength of the predicted relationship is driven largely by Los Angeles, San Diego and San Francisco. As I show in Section 2.7.3, this should make us highly cautious already, since these cities have seen a large influx in recent years of foreign money too, again especially from China. If we measure the relationship in 2000, before the impact of foreign money would have been strongly felt, the relationship becomes much less potent in explaining higher prices. Appendix B shows this result. Lastly, and perhaps most importantly, even if we assume that Vancouver has some of the most constraining natural geography of any major North American city, on a par with San Francisco or Miami, then its 'predicted' price/income ratio is around 7 (the dotted trendline), well below the 13.2 it currently sits at. (In 2000, when most of these cities were already bigger than Metro Vancouver is today, the 'predicted' price/income ratio is around 5.) In sum, even with the most generous assumptions, this factor could only explain a fraction of the relatively high prices in Vancouver.

2.5 Distraction #5: “We have terrible zoning and municipal building regulations!”

Related to the last argument is the claim that Metro Vancouver’s zoning and building restrictions have made it very difficult to expand housing supply at a rate that matches population growth. Yet as we have seen in the previous sub-section (Figures 6 and 7), total housing supply has kept up with population (on an average occupant/housing unit basis). Contentious or not, the condos and apartments are being built and densification is happening!

Few people would accuse Vision Vancouver, for example, of being ‘anti-development’. A look at the City of Vancouver website shows that on any given day, around 100 re-zoning applications are being processed or recently approved.¹² Some are big projects, some are small, but the re-zoning of Vancouver is happening day by day.

It turns out then that this is mostly a convenient argument for developers and their friends: we apparently need to open the city up to development everywhere and ‘let them at it’. To an extent this is already underway, but naturally they want it to move faster and with fewer restrictions or concessions. The more development, the more profits to be had for them.

Am I claiming that we have good zoning currently, or that it won’t need to change in the future? No. Better and continuous re-zoning will have to occur to foster denser, community- and environmentally-friendly housing development and continued supply expansion. Zoning can indeed affect housing prices, in the same way that geographic constraints can. But to this point re-zoning in support of densification has largely occurred as needed, as Figure 7 suggests, and it cannot explain the surging prices we see.

One way of seeing this is to turn to the work by housing economists in the US, which I discuss in Appendix B. Albert Saiz, in the paper I discuss there, combines measures of ‘geographic constraints’ and an index of ‘regulatory constraints’ in different US cities to estimate their ‘housing supply elasticities’. ‘Housing supply elasticity’ basically measures how costly it is to develop new housing, or, put more accurately, the price increase that will be needed to induce developers to generate a new unit of housing. The higher that price, the lower is elasticity (confusing, but bear with me; Appendix B spells this out if you’re unclear). The index Saiz uses is called the Wharton Regulation Index (WRI), and was developed by researchers at the Wharton School of Business at the University of Pennsylvania. (We don’t have a Canadian equivalent, to my knowledge.) The index is essentially a standardized measure of zoning- and building-type restrictions. If these types of zoning restrictions had a major impact on house prices, then this ‘distraction’ might not be such a distraction after all.

So, what does the analysis find? Without getting too technical, three things: (a) regulations matter in terms of prices; (b) high levels of regulations are found much more in large, land-constrained cities; (c) the impact of regulations is considerably smaller when we control for land constraints.

Let me explain. In large, land-constrained cities it’s difficult for citizens to escape the effects of rapid development (e.g., think traffic, sight-lines, pollution, etc.), so they press for regulations to protect themselves and their home values, and politicians deliver. What that means is that in big cities the amount of undevelopable land in a region is highly correlated with the level of regulation (b). So when we find (a), what we might actually be seeing is the impact of ‘undevelopable land’, not

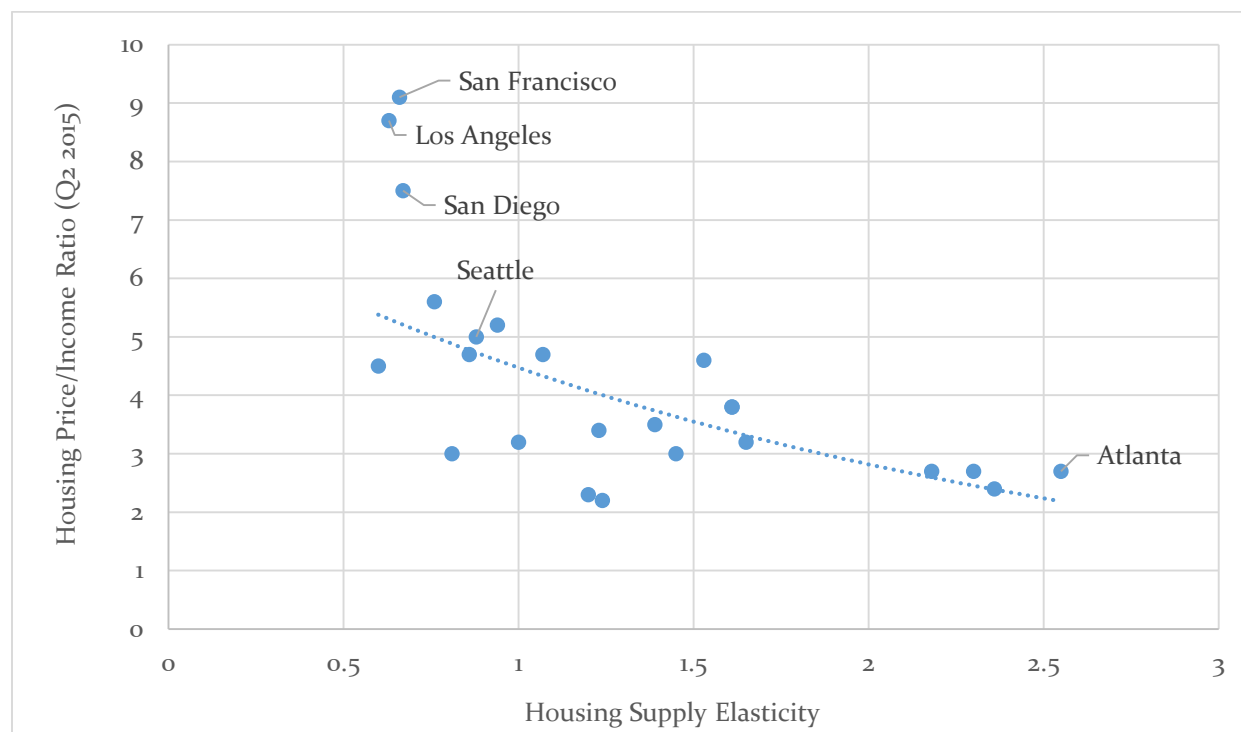
¹² See <http://former.vancouver.ca/commsvcs/planning/rezoning/applications/>.

regulations. If you include both the WRI and the measure of undevelopable land used in Figure 8 in regressions, then, the impact of the WRI will decrease significantly, relative to its predicted impact when the other measure is not included (point (c)). Saiz does this, and that's what he finds.

By putting the WRI and the measure of undevelopable land *together*, Saiz estimates the 'housing supply elasticities' of different cities. The prediction, which I explain in the technical Appendix, is that a lower supply elasticity will lead to higher housing prices. Figure 9 shows the relationship between Saiz's estimate of housing supply elasticity and house price to income ratios. As you can see, the basic conclusion remains the same as in Figures 8: there is a significant relationship, in the predicted direction, but *even putting Vancouver at the lowest supply elasticity of all the cities could still only explain a fraction of the extreme prices we see today* (the dotted trendline). And the same caveats that I made in relation to 'geographic constraints' apply here, especially with the outlier nature of San Francisco and L.A. (San Diego's property market will be closely connected to L.A.'s, in a similar way that Victoria's is to Vancouver's.) So adding zoning and building regulations to the picture does not substantially change our conclusions: it adds a little bit to the argument about geographic constraints, but not much. Supply constraints like these simply can't get us to where Vancouver sits.

In short, re-zoning is a discussion that needs to happen, but it need not happen under the 'shadow' of the affordability crisis, as an alleged major culprit.

Figure 9: Housing Supply Elasticity versus Price/Income Ratios, 2015



Sources: Saiz, 2010; Economist Magazine (Online). The line is curved because with 'elasticities' economists generally estimate 'logarithmic' relationships.

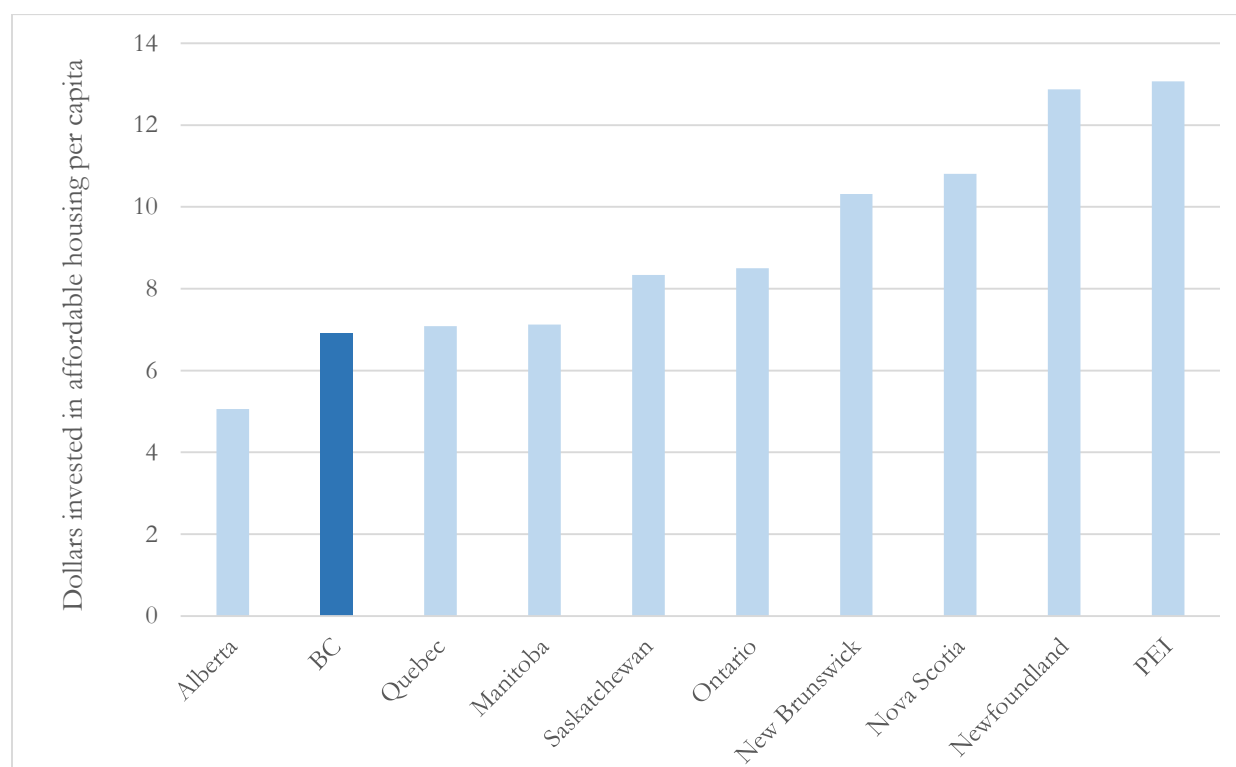
2.6 Distraction #6: “We haven’t built enough social housing”

This argument is popular on the political Left. Similar to the developers, they prefer this as a central explanation of the crisis because it supports a policy they have always favored: social housing. Curiously, some writers on the Left have sought to deflect attention from foreign buyers so they can advance this and other aspects of their policy agendas.¹³

If weakening or insufficient investment in social housing were a big driver of the problem then we would see the rates of such investment in different cities/provinces correlate with housing prices: the more investment, the lower prices. Moreover, we would see trends in national social housing spending matching up to broad shifts in affordability. Do we see this? Well, in part it’s hard to tell, because the data are spotty. But what evidence we do have suggests that *there are no sharp differences in social housing investment from province to province*, and thus it is highly unlikely that the major cities have sharply different amounts of social housing spending/investment (since presumably provinces distribute such spending relatively equitably, in terms of regional populations within their borders).

The evidence I’ve collected suggests that the amount of social housing spending, units developed, and so on, correlate extremely highly with provincial population: none of the correlations I found falls below 0.98 (see Table 1). (1 being a perfect correlation and 0 being none.) This is for a very straightforward reason: most of the spending on social housing comes through the federal government and they distribute the money on a roughly per capita basis to the various provinces. So it’s hard to see how that could account for much if any of the widely diverging affordability ratios in Figure 1, since the provinces seem to be taking it up at relatively even rates. And we also don’t see sharp price effects from dramatic changes in national social housing spending rates: Ottawa cut funding in a major way in the mid-1990s and we didn’t see a spike in unaffordability, at least measured in terms of house price/income ratios. Figure 10 and Table 1 provide some data in regards to these issues.

¹³ See for example, Matt Hern, 2015, “Vancouver’s core real-estate problem is profiteering and not whether buyers are of Chinese ancestry”, *The Tyee*, November 9th. Hern blames “profiteering” and the ownership of land as culprits in the housing crisis, which is a strange stance to take given that “profiteering” and land ownership are allowed throughout Canada and there are no major affordability crises outside of a few cities (at least not in the standard sense of “affordability” used above).

Figure 10: Investment in Affordable Housing per Capita, by Province, 2012-13

Source: CMHC.

Table 1: Size of Social Housing Programs in Canadian Provinces, 2012-13

Province	Estimated Households Assisted by Social Housing Programs	CMHC Funding Claimed (in millions)	Units Committed or Announced	Provincial Population
Newfoundland	10,950	25.87	1,492	528,271
PEI	2,900	5.16	1,534	145,340
Nova Scotia	19,000	34.74	1,627	943,524
New Brunswick	14,250	27.89	1,271	755,810
Quebec	126,350	294.22	10,188	8,143,836
Ontario	235,600	452.83	21,941	13,533,970
Manitoba	38,100	45.99	2,701	1,263,560
Saskatchewan	28,000	41.2	1,577	1,103,406
Alberta	36,300	122.58	4,308	3,989,191
BC	67,350	162.04	4,802	4,579,968

Source: CMHC.

While BC does seem to be a laggard in social housing, based on Figure 10, this is variation around a very low level of spending across the provinces (\$5-\$12 per capita!). Given the number of ‘households’ assisted by social housing in each province, as in Table 1, likely only about 2-7 percent of the population receives such assistance.

The weak relationship between social housing investment and housing prices might also be because there are decent grounds to question the very premise of the social housing claim: if social or public housing is built, this will reduce the demand for private development (as people move into the former kind of housing), lowering developer profits, and thus inducing weaker future supply from private builders. In short, there should be strong *crowd-out effects from social/public housing investment*.¹⁴

What is true is that social housing can provide shelter for the neediest citizens, and that it can help build the kinds of housing that may be undersupplied in a private market setting, such as family-friendly rental units. So there is *a good case for increased social housing investment, if it's done right*. However, given the relative weakness in social housing across Canada, and not just Vancouver, and evidence from the literature on substantial crowd-out effects, it seems highly doubtful that we can explain the city’s affordability crisis with reference to this factor. It may well be part of the solution, but only at the margins. Again, housing supply is not the major issue in Vancouver, at least not the apartment supply that social housing would create, (foreign) demand pressures are.

2.7 Evidence for Foreign Investment as the Main Culprit

Taken together, the evidence from Sections 2.1-2.6 suggests that there is a lot of ‘explaining’ that remains to be done if we are to account for Vancouver’s very high housing prices. The remaining culprit, foreign capital, is investigated on that basis in what follows. As it turns out, there are strong grounds for indicting it as the major cause of the crisis. I look primarily at three related pieces of evidence: the history of the Business/Investor Immigrant Program, the studies of high-end home buying, and recent patterns of capital movement and prices.

In what follows I emphasize foreign investment from China. I do so not because I want to ‘single it out’ or because there is something particularly bad about it. I do so because in order to build a convincing case for the role of foreign money we simply must recognize the specific source. Because our governments have not carefully tracked foreign investment, we simply must piece together the case in a manner similar to what I do, with reference to the specific origins of much of the money.

¹⁴ For a discussion and evidence of this, see Stephen Malpezzi and Kerry Vandell, 2002, “Does the low-income housing credit increase the supply of housing”, *Journal of Housing Economics* (11): 360-380; and Michael Eriksen and Stuart Rosenthal, 2010, “Crowd out effects of place-based subsidized rental housing: New evidence from the LIHTC program”, *Journal of Public Economics* (94): 953-966. They find crowd-out effects of almost 100 percent in some cases.

2.7.1. Exhibit A: The Business Immigrant Program

What follows is largely drawn from the path-breaking work of UBC Professor of Geography David Ley. The interested reader is especially encouraged to read Ley's recent article in the *International Journal of Housing Policy* titled "Global China and the making of Vancouver's residential property market". I am mostly just summarizing the main relevant points.

The business immigration program began in 1978 with an 'entrepreneurial stream' that encouraged high net worth individuals to migrate to Canada and set up businesses.¹⁵ It did so by requiring them to have a minimum net worth (which has changed over time with inflation) and to establish a business in Canada that employed at least one Canadian. In 1986, though, another stream was added to the program, the 'investor stream'. After a few tweaks, the investor stream basically required applicants to front the Canadian government a 5 year, interest-free loan of \$400,000 and have a net worth of at least \$800,000. The proceeds were then distributed to the participating provinces on the basis of their admission rates. In 2010, these sums were doubled to \$800,000 and \$1.6 million, respectively. In return, these migrants would receive permanent residency. In essence, 'cash for citizenship'.

The investor stream was initiated in 1986 partly in reaction to the deal between London and Beijing which had set up the handover of Hong Kong in 1997. Wealthy individuals in Hong Kong were understandably concerned about the safety of their assets in light of the deal, and the Mulroney government aimed to capitalize on this worry. Not coincidentally, this followed other attempts by Canadian governments at all levels, federal, provincial and municipal, to encourage investment from East Asia into BC's moribund economy. The early 1980s had not been kind to the province, as Vancouver's housing market had seen a 40 percent price correction and the provincial economy shrank 8 percent in 1982. In an effort to resuscitate economic growth, the hope was that foreign capital and entrepreneurship would spur business creation and real estate development.

The investor stream was gradually expanded over the years and by 2011 it constituted 89 percent of all BIP entrants. There is no need to carefully recount the details and reforms to the system over these many years. David Ley's work and the 2014 Citizenship and Immigration Canada (CIC) report linked in a footnote above provide that for the interested reader. What needs to be said is two things: (a) the program was an unmitigated failure in terms of its stated ambitions, and (b) the scale of the migration (wealth and human) that happened to Vancouver is substantial, and consisted almost entirely of investors from Greater China.

To the first point, (a), the hope was that investor stream applicants would engage in business activities once they arrived in Canada.¹⁶ To the extent they did, however, that 'business' was not really the intended one: 48.8 percent of investor stream migrants reported that "real estate and rental" was the nature of their business operations. Even more tellingly, only about 10 percent of the

¹⁵ The Citizenship and Immigration Canada 2014 report on the program is also very useful, if a bit long for any busy citizen. The report is available at: <http://www.cic.gc.ca/english/resources/evaluation/bip/index.asp>. Another stream, the "self-employed stream" required demonstrated performance at a "world-class level" in either cultural or athletic fields, or an experience with farm management. From what I can tell it was never a major component of the BIP program, and only constituted about 5 percent of the program from 2007-2011.

¹⁶ A recent article by Ian Young on the program is excellent: "Study reveals awfulness of Canadian investor immigration; income tax averages C\$1,400 per millionaire", *South China Morning Post*, 23 March, 2016.

migrants in this stream reported *any* self-employment income. And then the kicker: the average income tax paid annually after 10 years of admission was only \$1,400. That compares to the \$10,900 paid on average by skilled immigrants in other programs, and \$7,500 for Canadians in general. In short, the investor stream migrants have engaged in virtually no economic activity in Canada.

This is striking. These are individuals who we would expect to be able to prosper in Canadian society should they wish. Anyone who has a net worth of \$1.6 million and can front a government an interest-free five year \$800,000 loan is presumably well placed to do well in business or the labor market if they so choose. That they haven't reveals the underlying logic of the program, confirmed through interviews by CIC officials: the program is being used as 'hedge' in case political instability in their home country threatens their assets and freedom. In return for their initial individual investment, family members could eventually be brought over, and these people could use government services such as health care and education. Granted, the foregone interest might be substantial for those 5 years, but once this period was over and the money was returned, then the effective contribution to government coffers would rapidly diminish. The obvious tax unfairness in this situation is not hard to see.

If this were happening on a small scale, this might not be much cause for concern. However, the program has brought in a large number of people in this way, and they have been concentrated in Toronto and Vancouver. Relative to its population, especially, Vancouver has been by far the greatest recipient of investor stream migrants. Around 65 percent of all investor stream migrants come to B.C. (read: Vancouver), while around 28 percent go to Ontario (read: Toronto). That leaves about 7 percent for the rest of the country. (And Vancouver is less than half the size of Toronto, so in relative terms the same number of people matters more here.) Entrepreneur stream migration is somewhat different but still concentrated in Toronto and Vancouver: 49 percent and 39 percent of all such migrants file taxes in Ontario and B.C., respectively.

Over the course of the program, to cite a stat mentioned earlier, David Ley estimates that roughly 200,000 migrants arrived in Vancouver through these different streams of the BIP between 1980 and 2012: 8-9 percent of the regional population (and 17 percent of all population growth). And the vast majority of these migrants have come from China: in Ley's calculations, around 80-85 percent of the investor stream migrants have come from there.

So this is a substantial amount of wealth that could be brought to Vancouver. 8-9 percent of a market is not an inconsequential figure, and there is evidence that the prominence of this money in real estate purchases has increased sharply in recent years (discussed below). For an earlier period, from 1988 to 1997, Ley estimates that around \$35-40 billion was brought over in liquid form, which could be used to buy property. The numbers are undoubtedly much higher since, and I will discuss more recent estimates shortly, but we don't have good data on this because Canadian governments have been largely asleep at the wheel.

Two final notes should be made: this program was extremely popular in its last few years before being cancelled, and Quebec continues to run a program where they get the interest-free loans and Vancouver and Toronto get the migrants.¹⁷ When the program was cancelled in 2014, there was a backlog of 80,000 applicants, 50,000 of them aiming for B.C. Furthermore, 80 percent of the

¹⁷ Iain Marlow, "Chinese investors' immigration cases fail", *The Globe and Mail*, June 27, 2014.

applications originated from Hong Kong. Meanwhile, Quebec has maintained a program that admits 2,000 investor migrants a year, yet somewhere near 90 percent of them end up in Vancouver, by one estimate. That this ‘loophole’ has been allowed to continue is strange, to say the least.

2.7.2 Studies of High-End Buying and Related Research

If the history of the BIP was all we had to go on, then readers might still remain understandably skeptical. This sub-section puts a bit more weight behind the prosecution: it looks at studies of high-end buying and research on ‘de-coupled’ housing markets.

The most important study of the former sort is the one done by Andy Yan, an urban planner with Bing Thom Architects and also affiliated with SFU and UBC.¹⁸ Yan looked at 172 homes sold in three Westside neighborhoods between August 2014 and February 2015. (Specifically, West Point Grey, Dunbar and University Endowment Lands neighborhoods.) The median sale price was \$2.64 million and the average price was \$3.1 million, totaling \$525 million in sales.

What Yan found was that 66 percent of the buyers had non-anglicized Chinese names, which suggests recent arrival. In the market for homes above \$5 million they constituted 88 percent of buyers. These are stunning figures.

Some analysts might be tempted to argue that ethnic Chinese-Canadians have simply done very well in Vancouver labor markets. Considering that they make up only about 18 percent of the region’s population, and 28 percent of the City of Vancouver, though, this seems to be a hugely disproportionate share of high-end purchases.

In any case, other stories corroborate Yan’s study. Macdonald Realty, for instance, revealed that buyers from Mainland China constituted 70 percent of their sales over \$3 million in 2014.¹⁹ They were less present in 2014, though, in ‘lower end’ real estate, making up ‘just’ 21 percent of purchases of homes from \$1 million to \$3 million. (Recent anecdotal evidence suggests that has changed in 2015 and 2016, as discussed below.)

This historical concentration in the high-end doesn’t mean they don’t have an effect on prices everywhere. Such strong demand pressures at the top-end create cascading price pressures elsewhere, as noted earlier. Buyers who previously would have bought in the highest end markets must now take their high incomes and wealth to slightly less upscale neighborhoods, and so on outwards to the less ‘prized’ markets.

Perhaps more to the point, we already have some good research on the ‘de-coupling’ of the Vancouver real estate market from local incomes. This happens when wealthy migrants bring extra purchasing power to a given area and inflate real estate prices across the board, while not working in the local labor market. Even by 2001 the effects of this de-coupling were being felt. In another important paper, Markus Moos and Andrejs Skaburskis used Census data to document how recent immigrants to Vancouver in the 1981-2001 period earned much less than their qualifications would

¹⁸ You can access the studies main findings at <http://www.slideshare.net/ayan604/ownership-patterns-of-single-family-homes-sales-on-the-west-side-neighborhoods-of-the-city-of-vancouver-a-case-study>.

¹⁹ See “Mainland Chinese ‘dominating’ high-end Vancouver real estate market”, *Vancouver Sun*, August 10, 2015.

suggest they could, and yet that their home values and housing spending were above the levels of the rest of the population.²⁰ Their first pass at the data revealed that this held for all recent immigrants. What they found was that actual income levels did not predict the amount spent on housing for this group in a statistically significant way, whereas it did strongly for the rest of the population. More tellingly, when they decomposed the “recent immigrant” category into those from Asia, Europe and “Other”, then income became a strong predictor of housing spending for the other groups but did not for the recent immigrants from Asia. In fact, the greater was actual (or “temporary”) income the *lower* was housing spending: the least integrated into the labor market spent the most on housing...

More recent research by Dan Hiebert comes to similar conclusions.²¹ He found that between 2006 and 2011, about 53 percent of all new immigrants became homeowners. However the rate among new immigrants from China was 73 percent, well above average (and significantly raising the average on its own; for some important groups the rate was around 44 percent). This suggests that these recent immigrants have brought considerable wealth with them, since the overall rate of homeownership in Vancouver is 70 percent and it generally takes more than 5 years in a new society to build up enough wealth to buy a house. Moreover, Hiebert found that roughly 100,000 houses had been purchased by recent immigrants from 2006-2011, compared to the roughly 220,000 sold overall in that period. So about 45 percent of all homes were bought by new immigrants in that period, and of course this is saying nothing about the more recent period when this has likely increased significantly (we’ll have to wait on the 2016 census). In such a context, it’s not hard to see how extra purchasing power brought in from outside of the country has affected the housing market in a significant way.

2.7.3 Recent Capital Flows and Housing Prices

Arguably, the clincher to the case happens here. What has occurred in the past year is unprecedented and is a large part of why I am even writing this document. The numbers boggle the mind: in the past calendar year, the price of a detached home in Metro Vancouver surged 27 percent. Even prices for attached units and apartments/condos rose roughly 20 percent.²²

Dan Morrison, vice-president of the Real Estate Board of Greater Vancouver (REBGV), attributes the increase to “strong job growth, population growth and low interest rates”. It’s easy to see that this is wrong, with reference to the discussion above. The notion that an uptick in interprovincial migration due to Alberta’s collapse, of perhaps 20,000 people for the province as whole and 10,000-15,000 for Vancouver, could drive a 20-25 percent price increase in a region of 2.3 *million*, is ridiculous.²³ These kinds of flows have happened in the past and haven’t led to such price surges,

²⁰ See Markus Moos and Andrejs Skaburskis, “The Globalization of Urban Housing Markets: Immigration and Changing Housing Demand in Vancouver”, *Urban Geography* 31 (6): 724-749. Aside from their own work, they cite a number of relevant pieces of research on the topic.

²¹ “Immigrants help drive the Vancouver housing market: study”, *Vancouver Sun*, March 12th, 2016.

²² “Even luxury listings don’t last in Vancouver’s hot housing market”, *The Globe and Mail*, April 4, 2016; “March sets an all-time record”, REBGV, April 4, 2016.

²³ I have ball-parked these figures from http://www.finance.alberta.ca/aboutalberta/population_reports/2014-2015/2015-4thQuarter.pdf and <http://www.bcbc.com/bcbc-blog/2016/net-in-migration-to-bc-picks-up-in-q3while-alberta-goes-the-other-way>.

there is no reason to expect any difference now. B.C.'s economic growth, meanwhile, at 2.7 percent, is not exactly the stuff booms are made of. Lastly, the interest rates have been low for almost 8 years (and of course are low everywhere).

So, suffice it to say, local 'fundamentals' can't explain the price surge. What can? Foreign money.

Two things point to this. First, in 2015 \$1 trillion USD left China seeking safety.²⁴ That's right, \$1 trillion USD. (For fans of Austin Powers, you might pause to put a pinky finger to the side of your mouth.) Second, in that same period, the Canadian dollar lost about 10-15 percent against the major currencies, in this case the Chinese renminbi and the US dollar. In short, Canadian real estate became more attractive to foreign investors.

Putting these things together leads to one simple conclusion: a massive amount of money from China entered the Vancouver real estate market in the past year or so. Anecdotally we know this. But we also know this through more reliable means. One such source is the Hurun Report, which details the lifestyle and investment patterns of wealthy Chinese citizens. In their 2014 Report, they surveyed these wealthy people to get a sense of where they most wanted to emigrate to, and where they most wanted to buy real estate.²⁵ Table 2 reports these figures.

Table 2: Emigration and Real Estate Investment Preferences of Chinese Elite, 2014

City	Preferred destination for real estate purchases	Preferred emigration destination
Los Angeles	18%	14%
San Francisco	17%	14%
Vancouver	14%	13%
New York	10%	9%
Seattle	9%	8%
Toronto	8%	8%
Boston	6%	5%
Sydney	2%	4%
Melbourne	2%	4%
Singapore	2%	3%
New Zealand	2%	4%
UK	2%	3%

Source: Hurun Report, 2014.

Vancouver is clearly a top destination. So there are strong reasons to suspect that a decent chunk of that \$1 trillion has landed here. In fact, using these kinds of surveys with better data on the share of

²⁴ "Chinese start to lose confidence in their economy", *New York Times*, February 13, 2016.

²⁵ Available at <http://up.hurun.net/Hufiles/201504/20150427162743845.pdf>. I thank Anjum Mutakabbir for drawing my attention to this document.

money invested in real estate (gathered from the US, which keeps track of this stuff), three economists at National Bank of Canada estimated that around \$12.7 billion dollars was spent by Chinese investors in Vancouver in 2015 *alone*.²⁶ *This represents roughly one-third of all sales volume in that year.* Whether the buyers are foreign or not, it is the source of the money that matters here (which is why CMHC data on the number of “foreign buyers” are largely meaningless). This kind of influx of money *would* cause a price surge, and indeed that is what we have seen.

Just as revealing is to look at the cities in Table 2 and to compare them with the least affordable major markets in (much of) the developed world looked at by the Demographia Housing Affordability Survey.²⁷ Table 3 does this. Some have quibbled with Demographia’s methods and specific numbers, but the broad picture will be accurate. The overlap is stark and sobering.

Table 3: Least Affordable Major Housing Markets in Select Countries, Demographia Survey, 2015

City	Least Affordable Major Housing Markets (Price/Income Ratio)
Hong Kong	19
Sydney	12.2
Vancouver	10.8
Melbourne	9.7
Auckland	9.7
San Jose	9.7
San Francisco	9.4
London	8.5
Los Angeles	8.1
San Diego	8.1

Source: Demographia 2015.

A few points can be made. First, the San Jose and San Francisco figures are obviously closely related due to close proximity, as are the L.A. and San Diego figures. Second, seeing the overlap between Tables 2 and 3 is precisely why the ‘geographic constraints’ predictions are likely biased upwards: Appendix B shows that when we remove L.A. and San Francisco, the predicted slope or relationship weakens considerably. Table 2 shows us why we should do this. Third, the order of the cities don’t match up neatly, though it is close, but this is partly because we need to take into account the size of the market: the same amount of foreign investment will mean a lot more in terms of prices in Vancouver (or Melbourne or Auckland) than L.A. Fourth, this money didn’t just start flowing in 2015. This is a report from 2014 but the preferences have likely been similar for at least several years prior. What this means is that Vancouver’s historically fairly high price/income ratio can be

²⁶ “Study likely to fuel debate on foreign home buyers”, *The Globe and Mail*, March 23, 2016.

²⁷ *Demographia International Housing Affordability Survey*, Performance Urban Planning, 2015. The countries surveyed are: Australia, Canada, China (Hong Kong), Ireland, Japan, New Zealand, Singapore, UK and US.

understood in terms of a continuous wave of money, but that this wave has turned into a deluge in the past year or two, further spiking prices.

Lastly, this is not likely to be a case of ‘reverse causation’, where money from China is invested in places that have already high prices. This is because the preferred areas of “emigration” also match up with the investment desires, suggesting that these individuals want to buy ‘pied-a-terres’ in these cities, or places where their families can reside while they do business (e.g., the so-called ‘astronaut family’ scenario). Moreover, the cities near the top of the list have a number of similarities which suggest a longer-term ambition than merely speculation: they are English-speaking and/or have sizable Chinese diaspora communities and/or are easy plane rides away.

2.8 Tying the Evidence Together

Taken together, we have the following case. Beginning in the 1980s, Canadian governments effectively began to encourage large transfers of wealth from abroad into the Vancouver real estate market. These flows of wealth increased the demand for housing in Vancouver, especially single-detached housing which was popular among wealthy migrants. This allowed prices to rise above what local incomes could justify, even in these early days. Gradually this program expanded, bringing in roughly 8-9 percent of the region’s population by 2012 and somewhat more until it was canceled in 2014. Locals, who were forced to compete with this outside wealth for prime housing, were thus forced to pay above what they would have had to had this not been the case. As a result, housing prices and incomes became “un-coupled”, generating relatively high price to income ratios well before the 2010s. This dynamic intensified greatly in the last few years for three reasons. First, China has become much wealthier as its economy has grown dramatically in recent decades, and a long build-up in the property market in Hong Kong (see Table 3) allowed residents there to ‘cash out’ and buy housing here. Second, people with this increased purchasing power in China have had stronger incentives to move abroad since the start of Xi Jinping’s tenure in 2012, since he has vowed to crack down on corruption (which can sometimes be aimed capriciously).²⁸ Third, many elite citizens in China fear that the economic foundations of the country are unstable, and this has produced a massive rush of wealth out of the country in the past year or so. It is this surge in foreign demand that has led Vancouver housing prices to become so detached from, and unaffordable to, local incomes. In addition, this continuous flow of money from abroad, combined with inaction and disinterest on the part of Canadian governments, has created expectations of continuously rising prices, which has only served to intensify the demand pressures, in this case from locals who seek to ‘jump in’ to the housing market even on very disadvantageous terms.

²⁸ See for example Orville Schell, “Crackdown in China: Worse and Worse”, *The New York Review of Books*, April 21, 2016.

3. Consequences

This section puts forward the case for action. It does so by presenting some of the major harms of the status quo and debunking one of the commonly held notions about the ‘benefits’. This section is not nearly as long as the previous section, the reader may be glad to hear. That is not because there isn’t as much to say about the topic, it is simply because I assume that many people will be aware of these types of issues and will already be motivated by the situation.

3.1 Harm #1: Intergenerational Inequity

There is little doubt that the people who are bearing the biggest brunt of the crisis are millennials, who are now reaching the age when they would normally look into buying a house. Not surprisingly, when Angus Reid conducted its poll in June of 2015, a disproportionate share of those who considered themselves either “uncomfortable” or “miserable” in the current situation were between 18 and 34. They are on the outside looking in.

The benchmark price for a detached home in Greater Vancouver in March 2016 was roughly \$1.34 million CAD.²⁹ Benchmark prices strip out outliers at the top and low ends, which in practice will tend to lower the average, but we will use that anyway. Apartments were substantially cheaper, but still pricey: \$463k CAD. Let’s think about those figures for a second. An average detached house would require a \$268k down payment at a 20 percent rate, which is basically required on mortgages over \$1 million. Alright, so you need to save up \$268k, and the median family income (before taxes) is around \$80k. This might take a while...

Buying an apartment is certainly easier to do, but even there a decent down payment might be ~\$45k. And that apartment is unlikely to be hospitable for a family larger than three. Two bedroom apartments will often sell for considerably more than the figure cited above. If you want to really ‘live large’ and aim for near the heart of the city (Vancouver proper), be prepared to fork over an average of \$578k, or a decent down payment of \$58k. It’s true that many first time buyers now opt for only a 5 percent down payment, but that’s risky, and we’ll get to that in a moment.

What about those poor sods who don’t get hitched, married or otherwise, and thus lack dual income power? Tough luck! With a median individual income near \$40k, a large majority of these people can forget about ever owning anything.

So just rent, says the curmudgeon. Well that isn’t cheap either. The average rent price in Vancouver proper in late 2015 was \$1,079 for a one bedroom and \$1,368 for a two bedroom.³⁰ The latter is the highest in the country, while the former is not far behind top spot. And there is anecdotal evidence that rental rates on new units have surged.

Suck it up, says the curmudgeon.

²⁹ The following figures are drawn from REBGV reports. Available at <http://www.rebgv.org/monthly-reports>.

³⁰ These figures are drawn from RentSeeker.ca, at <http://www.rentseeker.ca/blog/index.php/new-rental-data-shows-the-average-cost-of-rents-across-canada/2561>.

And here we get to the crux of the matter: whether you should feel bad for millennials is kind of irrelevant. The point is that they are facing challenges getting into the housing market far beyond what recent generations have faced (and ditto for rent). If this was simply a product of 'limited land', then we might not think this was a big issue: times have changed, there are a lot more people in Vancouver, so not everyone can get a detached house anymore. To an extent this is true; however as I've shown, limited land can account for only a fraction of the price increase we've seen. Given that it's largely a decision to allow massive inflows of money from abroad into real estate that has driven prices up, what we have then is *a policy decision at multiple levels of government to ignore the interests of this group and saddle them with an out-of-reach real estate market, which was not faced by those who are often making the policies*. This is basically the definition of generational inequity, again whether you feel bad for millennials or not.

While some millennials will be compensated down the road through a bigger inheritance, this is often a long ways off, and many will not have this waiting for them because their parents don't own (sometimes creating familial tensions...). Thus *intra-generational inequity* is added to *inter-generational inequity*.

3.2 Harm #2: Dangerous Leveraging (or Debt Levels)

Millennials are like other human beings, they want things they can't have. When Vancouver millennials see their friends in other cities buying houses or nice apartments, they want to take part in it too. After all, ownership comes with a range of obvious benefits: you are accumulating wealth when you pay off a mortgage; you don't get taxed on any capital gains on your primary residence; you have control over a tiny parcel of this big earth, which a landlord can't (reno)evict you from. All of these things are nice, and part of the lure of homeownership. But these things are extremely expensive for Vancouverites, especially relative to their income levels.

So, what to do? Take on a bunch of debt!

Again, whether you feel bad for people who perhaps naively take on too much debt is irrelevant. The fact is that they're doing it, and that this is very dangerous in the medium term. Runaway housing prices draw people into unsustainable debt, from Miami to Dublin to Mallorca. When that happens the whole financial system is put at risk, and eventually the real economy pays a heavy price.

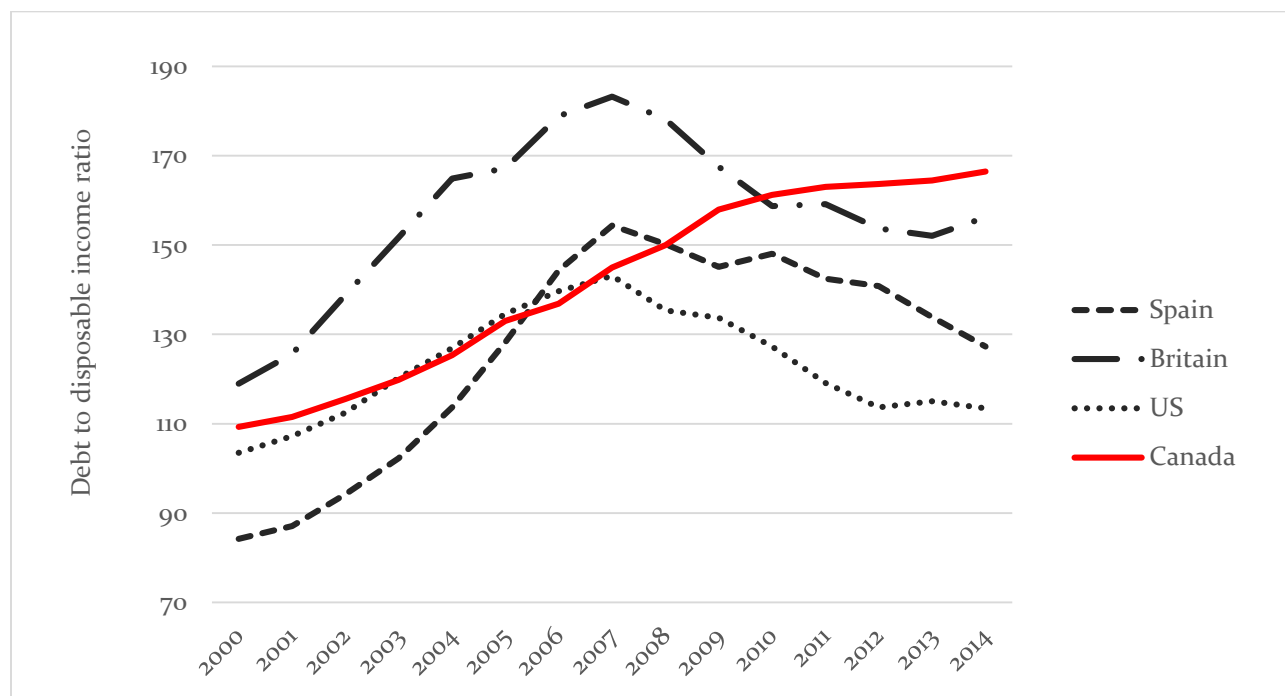
In the near term this is not evident. As long as prices are rising you can usually sell if you run into financial difficulties. When prices start to go down, however, things get interesting. Then you might find yourself owing more than what your house is worth (an 'underwater mortgage'). When that happens, you either renegotiate your loan, you default and walk away from the house, or you lose possession of the house and have to declare bankruptcy. In Canada, only this last option is possible, except for in a couple of provinces. In the US during its boom, for example, the second option was possible, and this made foreclosures much more common. The mantra has been that in Canada we're secure because this option isn't available, so we don't see many foreclosures. But in the most bubbled housing markets in the country, Toronto and Vancouver, that hasn't really been put to the test: apart from a brief blip in 2008-09 when prices fell about 10 percent and the federal government

stepped in with massive de-facto bailouts of the major banks, prices have continuously risen over the past 10-15 years.³¹

Meanwhile, personal private debt has reached record levels. Figure 11 shows this. Mortgage debt is by far the largest driver of these trends, though other kinds of debt can sometimes expand in parallel, partly because high mortgage payments put the squeeze on other aspects of financial health. Thus, from 2000 to 2014, Canadians' personal debt-to-income ratio grew 56 percent, compared to an average growth of 13 percent in the G7.³² This expansion of private debt is called 'leveraging'. Usually it brings short-term economic benefits: people spend more money, which creates more jobs, which creates more income, which creates more spending, and so on. This is why housing bubbles are usually 'fun', and tricky to stop politically. (It's a testament to the provincial and federal governments that they've created a housing bubble that isn't 'fun')

But eventually this process runs its course, as the leverage in the system begins to undermine the economy, as highly-indebted households are forced to slash spending or declare bankruptcy when interest rates or unemployment rise. This slashing of spending, as these households try to pay down debt or are forced to through credit constraints, reverses the 'virtuous cycle' of leveraging: i.e., 'de-leveraging'. When this happens, especially if it happens suddenly across a country, economies go into free-fall and governments have to step in with massive stimulus to prevent calamity. And so it went in the US following 2007-08, as Figure 11 suggests. (And in Spain, the UK, etc.)

Figure 11: Private debt to disposable income ratio, 2000-2014, Select Countries



Source: OECD.

³¹ Alan Walks, 2014, "Canada's Housing Bubble Story: Mortgage Securitization, the State, and the Global Financial Crisis", *International Journal of Urban and Regional Research* 38(1): 256-284.

³² "Rising household debt leaves Canadians 'increasingly vulnerable'", *The Globe and Mail*, January 19, 2016.

In short, our governments are setting us up for major pain down the road, either in terms of a crash or a slow deleveraging process that keeps growth sluggish for several years. Given that interest rates are already rock bottom, and this is a major instrument used to stimulate economies when ‘deleveraging’ occurs, this is a scary prospect.

Has Vancouver witnessed a particular spike in private debt? Yes. The data I could find was not as precise or as recent as I would have liked, but we do have a decent sense of the problem. Data from 2009, for example, showed that Vancouver led the country in terms of private household debt as a percent of disposable income: the city had a stunning level of 266 percent, considerably above Calgary (234), Toronto (209), Ottawa (191), and Montreal (184).³³ And we know housing prices have risen substantially since then, between 20-75 percent depending on the type of property, so this has likely worsened considerably. When we put this in the context of Figure 11, this becomes scary stuff. More recent data from 2012 also show that Ontario (Toronto) and BC (Vancouver) were far ahead of other areas in terms of private debt accumulation.³⁴ One way of seeing this is to look at the share of households with a mortgage debt to disposable income rate of over 500 percent. In BC in 2012, nearly 21 percent of households were in that situation, compared to about 13 percent in Ontario, and 4-7 percent in the other major regions in the country. These highly leveraged or indebted households are in serious danger if the economy goes sideways. Once more, these were mortgage debt rates in the ‘calm days’ of 2012. It has got so bad that when the Bank of Canada lectures Canadians on reining in spending/debt, they make little attempt to conceal the fact that they are basically talking to people in these two markets (and Alberta to a lesser extent).³⁵ Also important to note is who holds almost all of this dangerous debt: households under 45, and not just because this is when people are usually most indebted (which is true). The rate of indebtedness in this younger group is unprecedented and growing, getting back to the issue of generational inequity.

Given that the leveraging is highly concentrated in Toronto and Vancouver, it’s possible that Canadian governments will be able to gradually de-leverage without a major crisis. The provincial economies of Ontario and BC will be buffeted strongly regardless, considering the importance of those two cities in the economies of both provinces. It is this somewhat localized nature of Canadian leveraging that may allow us to escape the wholesale crashes of other places such as the US and Ireland. But it’s tough to tell. Conversations with mortgage industry insiders paint a picture of lending standards being subverted, for example.³⁶ It’s not quite “The Big Short” territory, but it’s

³³ Alan Walks, 2013, “Mapping the Urban Debtscape: The Geography of Household Debt in Canadian Cities”, *Urban Geography* 34(2): 153-187.

³⁴ Craig Alexander and Paul Jacobsen, 2015, “Mortgaged to the hilt: Risks from the distribution of household debt”, *C.D. Howe Institute*, Commentary No. 441.

³⁵ See “Big mortgages, static incomes fuel BoC’s housing crash fears”, *The Globe and Mail*, December 15, 2015; and “Connecting the Dots: Elevated Household Debt and the Risk to Financial Stability”, Remarks by Lawrence Schembri, Deputy Governor, Bank of Canada, February 24, 2016. Available at <http://www.bankofcanada.ca/2016/02/connecting-dots-elevated-household-debt-risk/>. The contrast in figures between the BoC figures and the Alexander and Jacobsen is due to different debt-to-income measures: debt-to-gross income in the former case and debt-to-disposable income in the latter.

³⁶ This happens partly as young desperate borrowers “institution shop”, seeking out the lenders that will allow them to extend themselves the furthest. There is also “creative financing”, where people simultaneously open up multiple lines of credit to put together down payments to avoid detection by banks, and “occupancy misrepresentation”, where people claim that they’re moving in to a place they are bidding on, in order to get lower mortgage rates, even though they have no intention of doing so. (Lenders are more inclined to give lower mortgage rates on primary residences.) Both moves allow people to get in over their heads. Lastly, the enforcement regime is weak, both because of weak training of on-the-

unnervingly close. So I wouldn't put money on it. One thing is for sure, however, the longer we let these bubbles inflate, the more painful and long-lasting will be the after-effects.

3.3 Harm #3: Weakened Communities

There are two significant components to this problem. The first is that the surging housing prices are pushing many first-time buyers out further and further into the suburbs in search of homeownership, be it apartments or houses. This means that they will often be farther away from their families/parents, friends, and workplaces. In turn, that distance will reduce the frequency of visits and lengthen commute times, cutting into time potentially spent being social.

To some extent this is inevitable in a big city: in 2011 three of the top five CMAs in terms of commute times were Montreal, Toronto, and Vancouver, not by coincidence.³⁷ But in Vancouver it has had a bit of a perverse dynamic: many of the most prized neighborhoods, the areas targeted by foreign buyers with limited commitments to the city, are closest to the major amenities and workplaces. So in many instances, the people with the most limited connection to the world of work and to the city around them have taken residence in the most ideal locations to do just that.

The second component follows on from the first: many of the homes purchased with foreign money sit largely unused, or at least under-used. Prior to the City of Vancouver's publication of the Ecotagious report, speculation was rampant about the extent of empty condos and houses.³⁸ It must be said that the report dampened a lot of those concerns, since it showed a relatively stable level of "unoccupied" units from 2002-2014. However, the report, while well-intentioned and meticulously done, had some unique methodological features that served to underplay the issue.

The report deemed a unit "non-occupied" if there were 25+ days of 'low variation' energy usage in a given month, *for each of the four months in the reference year*: in this case, August/September and the following June/July. (Summer months were picked because otherwise energy usage might fluctuate purely on the basis of different heating needs in the winter, and thus indicate occupancy where it was not present.) What that meant in practice, then, was that if a unit was occupied for even 6 days in a given one of those months, then it would be deemed "occupied". Obviously this is a very low bar. On this basis, the report found that about 4.8 percent of all units were unoccupied in the City of Vancouver; just above 1 percent for single detached and between 7 and 8 percent for apartments/condos. "Non-occupancy" dipped somewhat from 2002 until about 2008 and then started to climb back to its 2002 levels between then and 2014.

Judged with a slightly higher bar, the level of "non-occupancy" doubled. In one alternate calculation, if 15+ days in a month went without varied electricity use, and this happened in all four months, then the non-occupancy rate jumped to around 10 percent. Similarly, if two of the four months fell short of the 25+ days of 'low variation' electricity use, but met that mark in the other two, then

ground brokers and faulty incentive structures: since many organizations have very little "skin in the game", due to the nature of the CMHC mortgage insuring, they are not as concerned with due diligence as they should be. This last problem in particular echoes a problem from the US subprime boom.

³⁷ See <https://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-012-x/2011003/tbl/tbl02-eng.cfm>.

³⁸ Report available at <http://council.vancouver.ca/20160308/documents/rr1EcotagiousReport.pdf>.

again the non-occupancy rate for the city doubled to just above 10 percent. Unfortunately, the report didn't put those two figures together: 2 months of under 15 days of varied energy use constituting "non-occupied" or "under-occupied". That would have given an even clearer picture of "under-occupancy". More to the point, it has long been known that the kinds of foreign buyers with limited attachments to the city come here in the summer (understandably!). So again, there are good grounds to think that this was a significant under-estimate of the number of un-occupied or under-occupied units.

Representatives of the real estate industry immediately jumped on the report to suggest that critics of foreign ownership were wrong. They claimed that Vancouver fell in the same range of non-occupancy as other major CMAs. However the report had a different methodology than the other studies, and a stringent one, as noted. Moreover, the fact that Vancouver, the hottest housing market in the country, had a non-occupancy rate similar to the average of other Canadian cities was in itself revealing: the (opportunity) cost of not occupying a Vancouver home was a lot higher than other cities, and it was not as if there were abandoned units due to economic decline, as there have been in other cities. Lastly, and most importantly, it is the use of foreign money to purchase housing that is at issue here, not whether those with foreign sources of funding ever use it.

In any case, having so many unused or under-used homes weakens communities in obvious ways. People see fewer neighbors in the street around them, local businesses suffer, and temporary attachments diminish the incentives to integrate culturally and economically.³⁹ While some people have arguably over-blown this issue, it is not an unimportant one either.

3.4 Harm #4: Stunted Future Economic Viability

When housing prices rise to the extent they have in Vancouver it becomes very difficult to attract or retain top, mobile talent. These are the kinds of people who expect to have a nice house and many other such perks. Whatever your view of them, these people are important to a region's economic prospects in the long run, as they are crucial sources of innovation and entrepreneurship.

So what happens when even well-paid professionals and innovators have a hard time affording the nice house they believe is their due? Long-term trouble!

In two deservedly well-known pleas from people in the tech sector in Vancouver, this was pointed out bluntly.⁴⁰ Their own experience has taught them that high housing prices have made it difficult to retain talent at their firms. Nor is their experience in the tech sector unique. A report for the Vancouver Board of Trade reported that 49 percent of employers felt that high housing prices impacted their ability to attract and retain top talent, while 71 percent felt that rising real estate

³⁹ See for example, Kathy Tomlinson, "Vancouver's house-buying frenzy leaves half-empty neighborhoods", *The Globe and Mail*, October 30th, 2015; or Kerry Gold, "At Vancouver's 'Cold Harbour', a neighborhood hollows out", *The Globe and Mail*, May 3, 2013.

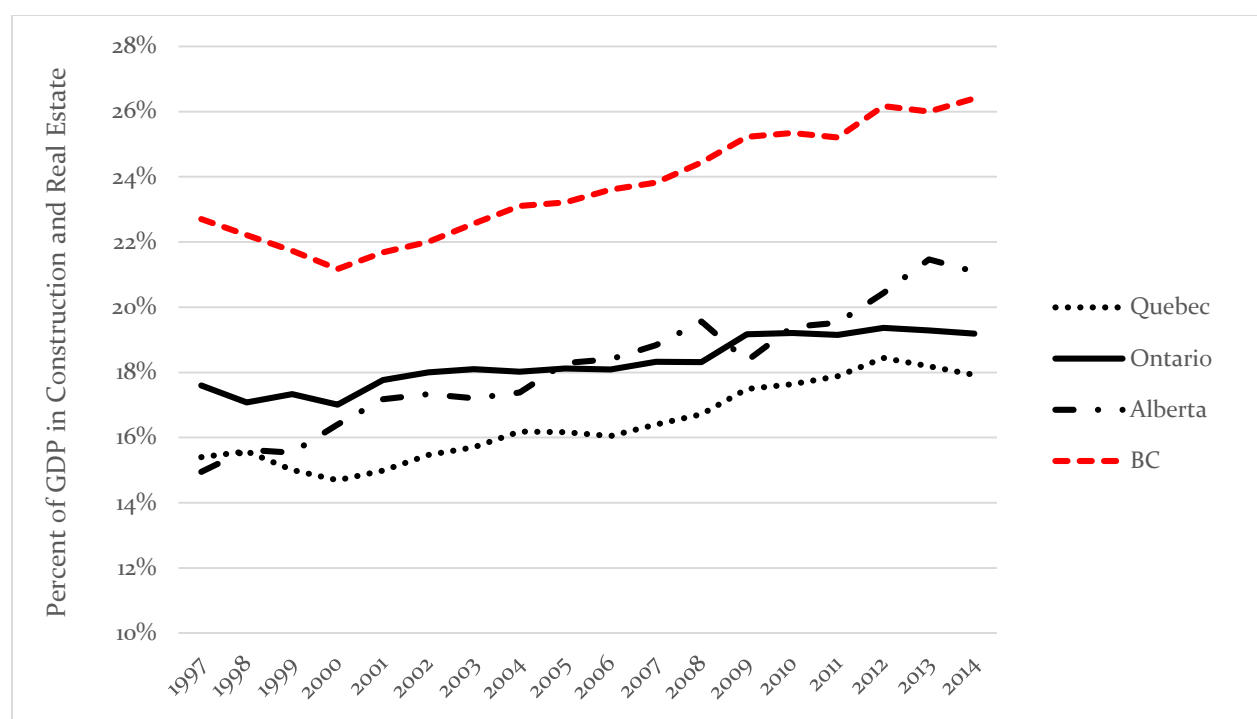
⁴⁰ Ryan Holmes, "Without affordable housing, Vancouver risks becoming an economic ghost town", National Post, February 3, 2016; Saeid Fard, "The Decline of Vancouver", available at: <http://saeidfard.com/post/113616107456/the-decline-of-vancouver>.

prices had harmed the ability of businesses to expand or even start.⁴¹ Only 7 percent thought that high real estate prices were beneficial to their ability to expand.

What of the economic expansion that the city/province has seen in recent years? BC did post the strongest growth in the country last year, the provincial government will be sure to remind you.

Yet this is due to extremely high rates of construction and real estate activity, and this is tied to steadily worsening leveraging, which will eventually run itself out with devastating consequences, as I've noted. BC's share of GDP made up by construction and real estate activity has far surpassed the other provinces for several years. Figure 12 tells the story.

Figure 12: Construction and Real Estate Services as a Share of GDP, 1997-2014, Four Provinces



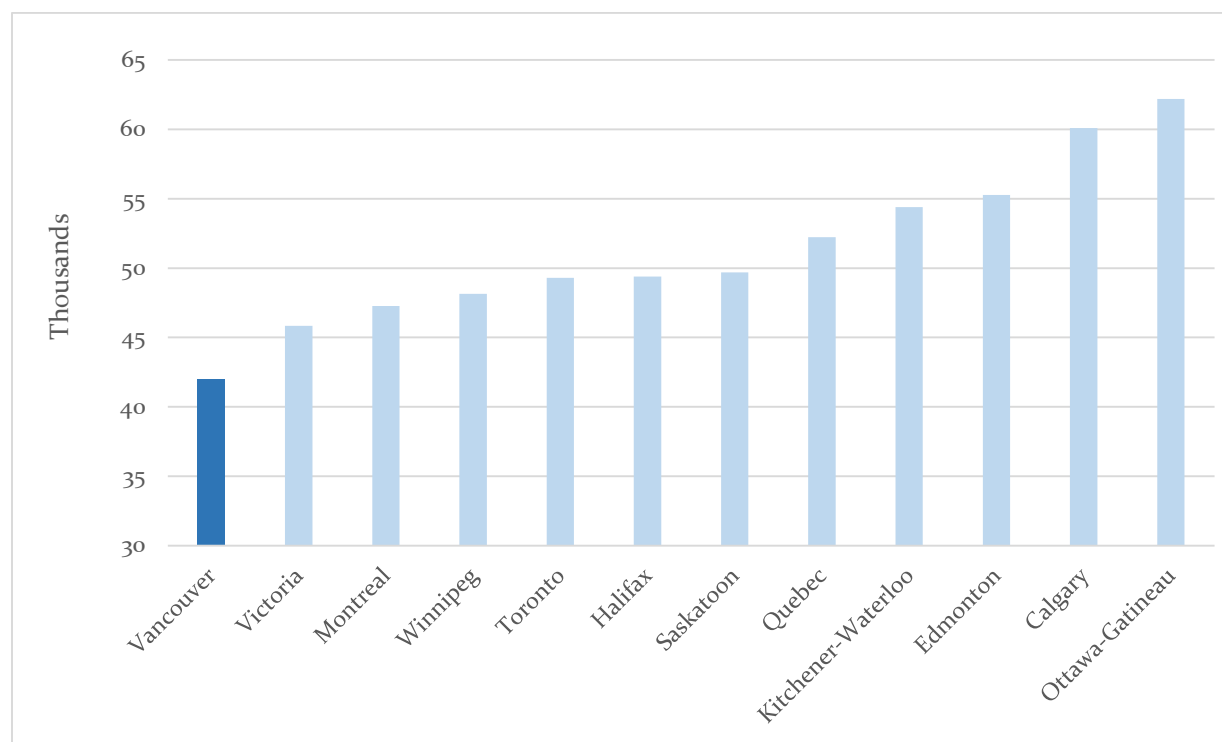
Source: CANSIM.

Besides this, luxury sectors have flourished, and many service or hospitality industries too. But again this is largely dependent on an unsustainable debt foundation. And perhaps more to the point, these kinds of industries in many cases don't provide the jobs that support a broad and flourishing middle class. Figure 13 illustrates this by comparing the median income for individuals with bachelor degrees across major Canadian cities.⁴² In short, Vancouver is well on its way to becoming simply a pretty resort town.

⁴¹ "Housing Affordability's Effect on Businesses in Vancouver", *Vancouver Board of Trade*, August 24, 2015.

⁴² Other measures of median income and education reveal the same basic pattern, with Vancouver at or very near the bottom. This figure is inspired by a similar figure in Andy Yan's (2015) presentation cited above.

Figure 13: Median income for individuals with a Bachelor’s degree as the highest level of education, 2011, Major CMAs



Source: Statistics Canada.

3.5 Other Harms

In the interests of space I will simply note important but arguably smaller-scale problems caused by the housing crisis. Each of these could be treated and fleshed out at length, to stoke the ire of the reader. They deserve separate reports each, frankly. I simply reference a relevant story or two for each.

Unscrupulous real estate activity: From “shadow flipping” to outright fraud, the past few years have not been inspiring years for the real estate industry.⁴³ A major shake-up is likely as a result, but not before hundreds if not thousands of people have been scammed out of major sums. Many real estate agents are appalled at what has happened in their industry, yet industry leaders have dragged their feet when it comes to enforcement and reform.

Money laundering: Vancouver has attracted a number of unsavory characters, given our lax enforcement of disclosure and money laundering laws.⁴⁴ This is a shameful side to the story, which I touch on below.

⁴³ Kathy Tomlinson at The Globe and Mail has done some terrific reporting on these issues. See for example, “The real estate technique fueling Vancouver’s housing market”, *The Globe and Mail*, February 6, 2016; and “Tricks of the trade: Inside a BC real estate firm that has home sellers crying foul”, *The Globe and Mail*, April 8, 2016.

⁴⁴ For example, Kathy Tomlinson, “Vancouver housing market ‘vulnerable’ to money laundering”, *The Globe and Mail*, March 17, 2016.

Tax inequity: Many of those who have arrived through the BIP have paid very little in taxes in their years in Canada, yet their families have often come in with them and these people will have used Canadian government services and infrastructure to a much greater extent than what the ‘foregone interest’ will have contributed.⁴⁵ That this is still expanding, thanks to Quebec’s immigrant investor program, without BC even getting the ‘foregone interest’, is also regrettable.

3.6 False Benefits: The Illusion of Home Equity Gains

In return for all of those harms it’s usually noted that we get a major benefit: property owners’ houses and apartments are worth much more. There is no denying that, and certainly many homeowners must feel nice when they see their latest assessed value. However, it doesn’t take much to see that this alleged benefit is not quite what it seems. This is because housing is not like other types of wealth.

To see why, consider that your (perhaps imaginary) stock portfolio goes up 50 percent. Fantastic. You can cash out your stocks and buy all the amenities and baubles you desire, not to mention some nice meals and a vacation or two. And here’s the beauty: you can do so and wake up in the same house, have breakfast on the same patio, go for coffee at the same local joint, socialize with the same friends on the weekend, and see your parents on Tuesdays.

If your house price goes up, though, you could ‘cash out’, but you’d have to sacrifice some if not all of the latter things. That’s because if your house value goes up, chances are very good that the values of the properties all around you will have gone up a similar amount. So, if you want to ‘cash out’ you either have to move a long way away, perhaps even a different city, or you will have to substantially downsize (and even there the condos are still pricey, just better in terms of price inflation). Most Vancouverites don’t want to do that. They live in Vancouver for very simple reasons: it’s where their friends and family are, it’s where their job is, and/or it’s where they grew up. So what have they really gained through price appreciation?

Sure, a long way down the road you might be able to ‘cash out’ through downsizing or by passing on a substantial inheritance to your children. But that’s usually a long way away, and in the meantime you have all the harms noted above. And given the situation’s unstable debt foundations, there’s a strong chance that it won’t ever amount to what you’ve come to expect.

As I said near the start, most Vancouverites understand this, and that’s why they’re not all over-the-moon with their rising property values. Even most homeowners aren’t happy with the situation, though they’re a lot happier than those on the outside looking in. A big part of this is likely that parents see their children struggling to get into the market, and must either put up with them living far away or leaving the city altogether. Parents see the world partly through the eyes of their kids, after all, not merely in terms of their home equity windfalls. And so they see that the situation stinks.

⁴⁵ “Foreign investors avoid taxes through Canadian real estate”, *The Globe and Mail*, October 7, 2015. See also, Ian Young, “Study reveals awfulness of Canadian investor immigration; income tax averages C\$1,400 per millionaire”, *South China Morning Post*, 23 March, 2016.

4. Solutions

Having a good sense of the causes of the crisis is important for designing appropriate policy solutions. I use the material from the section on ‘Causes’ to justify a few major steps to tackle the crisis. These policy steps can be taken at the same time, if desired, there is no need to pick and choose. In my view, though, the first policy option is by far the most likely to tackle the problem swiftly and effectively.

4.1 Progressive Property Surtax Targeted at Foreign Owners

This clever policy proposal was initially developed by Rhys Kesselman, my colleague at the School of Public Policy at SFU. Another similar proposal by some UBC and SFU professors appeared very shortly after Kesselman first proposed his (about 3 days), and was developed independently. Its lead proponent is Tom Davidoff, of the Sauder Business School. For reasons that I leave mostly implicit, I prefer a variant of Kesselman’s proposal. For reasons of space, I only outline his here.

The Targeted Property Surtax (TPS) has a fairly straightforward set-up. First, it has a threshold of \$1 million for residential properties. The surtax only applies to the value of a property *above* that level. It starts at a 1 percent rate between \$1 million and \$2 million, rising to 2 percent on the value above \$2 million, and 3 percent on the value above \$3 million. So that means that a property of \$1.4 million would be subject to an *annual* surtax of \$4,000 ($\$400,000 \times 0.01$). Table 4 shows a few different calculations of the rate for different property values.

Second, and crucially, the surtax is deductible against any income tax paid in the previous year (or two).⁴⁶ That means that if you have recently paid income tax, the tax will almost certainly be offset completely, and the surtax will not impact your tax bill. Moreover, the surtax amount can be deferred until the time that the property is sold, with a low rate of interest charged on the balance owing. As I will explain shortly, this is unlikely to be necessary in the vast majority of cases.

What this second feature of the tax does is to target the surtax on foreign buyers or non-resident owners, and to a lesser extent on those who evade income taxes somehow.

What about retired people, with limited income but high house values? This is third component of the TPS. People with a substantial or consistent contribution record to CPP (e.g., 10 years of maxed out CPP contributions), are fully exempt from the tax on their primary residence. Exemptions might also be provided to the few owners who have rented out expensive homes for a decent period of time prior to the tax’s introduction, and for veterans.

⁴⁶ Variations on this rule are possible, to exempt people who might get sudden bursts of income followed by little income in between, such as athletes and actors.

Table 4: Sample Calculations of the Targeted Property Surtax

Property Value	Surtax Calculation	Surtax Amount Annually
\$800,000	0	0
\$1,000,000	0	0
\$1,500,000	$\$500,000 \times 0.01$	\$5,000
\$2,500,000	$(\$1,000,000 \times 0.01) + (\$500,000 \times 0.02)$	\$20,000
\$4,000,000	$(\$1,000,000 \times 0.01) + (\$1,000,000 \times 0.02) + (\$1,000,000 \times 0.03)$	\$60,000
\$8,000,000	$(\$1,000,000 \times 0.01) + (\$1,000,000 \times 0.02) + (\$5,000,000 \times 0.03)$	\$180,000

Why is the TPS a good option? Here are a few reasons.

-It would act as a significant deterrent to new inflows of foreign capital: these owners would know that they would have to pay an *annual* tax that would gradually eat away a substantial amount of their equity, assuming prices don't continuously rise at the rates we've seen in the past few years. Even if they do, and foreign owners aren't thereby deterred, then at least Vancouverites will get handsome compensation for the price effects of foreign money in the form of major tax revenues. Those tax revenues could be put toward housing affordability projects, transit and infrastructure development, or simply tax cuts if you're not a fan of government spending. That would be decided democratically and in an ongoing way.

-It catches foreign and laundered money, past and present. To the extent that the crisis is the culmination of a few decade old process of outside wealth transfer, people will be living in homes far above what their incomes in Canada can justify. This would mean, in effect, that we might well be retroactively taxing some portion of the money brought over while our governments were asleep at the wheel. As I'll show, other measures that only tax new purchases would effectively leave in place the impact of foreign money up to this point, and thus be unlikely to make a significant dent in affordability.

-It would be very difficult to really evade this surtax. There would be no need to target the surtax in a crude way at certain groups, which might among other things foster actions to evade the taxes. Even if owners of homes bought with foreign money set up front businesses to generate 'deductible income tax', they would still be ultimately paying taxes!

-Given the exemption structure, there would be very few Canadians affected who we might feel bad for. These people would be mainly individuals who had worked hard to evade taxes, and we would likely feel little sympathy for them. What about those very rare retired people who had bought a (now) \$3 million home on a modest income and who hadn't earned enough to achieve the CPP exemption? They've

absolutely hit the jackpot already. To own a home over \$2 million, say, and be retired and not have maxed out CPP contributions for 10 years would be some feat. (Maxing out CPP contributions happens at about \$55k today, slightly above an *individual* median income, and this structure has been consistent over time.) Worst case scenario for these people, they defer the tax and take a bit of a hit to the massive equity gains they've already accrued, or they sell at the high prices we see today and downsize to a house value that is less onerous to them. Nobody wants to harm these people, of course, but if we cannot adopt a policy that addresses the plight of most of a generation (and city) on account of a very small number of older lottery winners, then you're setting too high a bar for policy action. Why don't we just exempt all CPP (or OAS) recipients to avoid this? Because that would open up the surtax to massive evasion, as properties would get registered/transferred to elderly people who had paid a convenient couple of years to CPP or who had simply lived in the country for 10 years (the minimum for receiving OAS). Allowing a major loophole like this to exist would undo a lot of the benefits of the TPS and would simultaneously weaken political support for it, as people would rightly complain about fraud/evasion.

-As noted, *in the short run at least, this would likely bring in major revenues*. For a right wing government this could be put toward tax cuts; for a left wing government it could be put towards social spending and housing initiatives. Either way, Vancouverites are getting a sudden fiscal boost.

-*It is administratively simple*. The surtax would be collected along with regular property tax and the deduction from income taxes paid would occur merely as a result of the CRA communicating with the BC government. There would be no need for any significant new administration.

-*It will have an effect by altering expectations*: In a bubble situation, prices tend to climb very steeply near the end as the perception that "prices will always go up" comes to predominate. This encourages people to jump in even on very risky terms, for fear of being 'left out'. By providing a clear signal that non-resident or non-tax-paying individuals are no longer going to covet Vancouver nearly as much, the TPS will weaken the view that we will have an 'endless bubble' driven by largely foreign money. This will convince first-time buyers to hold off and seriously weaken price pressures, eventually leading to falling prices.

Some people are instinctively anti-tax. There's not much to be said to such people, except that we levy extra taxes on all kinds of activities that we deem problematic, from smoking to alcohol to pollution. The intuition is simple: to the extent that the behavior doesn't change, then society gets tax revenues as compensation, and if it does, then great, less 'bad activity'. In addition, lacking this policy tool, the other options are likely limited in what they can achieve.

4.2 Better Tracking of Foreign Investment and Laundering

This was a no-brainer even before the Panama Papers. We need better monitoring of foreign investment and the enforcement of money laundering rules. Very few people disagree with these things in principle, but governments at the provincial and federal levels have been surprisingly slow to act. (Or not so surprisingly, if we're being cynical.)

Not only do we need to introduce these kinds of policy moves, they also have to be given resources and teeth. For example, the CMHC has consistently published its 'estimates' of the number of

foreign buyers, and the real estate industry has been quick to tout those ‘estimates’. Yet as the president of the CMHC, Evan Siddell, admitted in late 2015, they are dependent on anecdotal evidence and self-reporting, since there is no legal requirement to disclose the owner’s status. This leads to massive under-estimates. For example, the CMHC estimated in 2015 that in central Toronto, around 5.4 percent of condos were foreign owned.⁴⁷ Industry insiders, such as leading condo developer Brad Lamb, who in this case has no interest in fudging the numbers, estimated that around 50 percent were foreign owned.

When the CMHC *does* go out to collect better data, they have been stymied by the real estate agents and developers. Some real estate agents and developers in Vancouver have simply refused to take part in a pilot data gathering effort by the CMHC this year, which follows on from the modest \$500,000 that was devoted to studying the issue by the federal government.⁴⁸ Similar issues may bedevil the provincial government’s commitment in February 2016 to bring back a rule that was discontinued in 1998: that owners of property declare whether they are a permanent resident (or citizen) or not, and if not, where they are from. While it’s a good start, it must be given resources and it must be enforced strictly. The details are so far lacking on the proposal, so residents will have to keep the heat on a government that to this point has been resistant to collect good data.

In terms of money laundering, the same kinds of issues have arisen.⁴⁹ The Canada Revenue Agency, which is tasked with investigating tax-evasion and questionable financial transactions, had its international division “gutted” by a cut of 262 auditors. Said one former employee, “Most of the auditors are gone. The whole CRA is a joke.” While that may be too strong, undoubtedly it reflects an insufficient commitment to enforcement on the part of at least the previous federal government. As Kathy Tomlinson put it, “All the legal experts and CRA insiders consulted by the Globe [and Mail] felt Canada needs to change its tax laws and the CRA needs more resources to enforce them, so that wealthy foreign investors pay their fair share.”

It goes without saying, though, that these policy options need to be combined with other policy measures to have much effect.

4.3 Restrictions on Foreign Ownership

A set of fairly crude policy measures might also be adopted in the short-run to deal with the crisis before the other solutions start to really take effect. These policies aim to limit new foreign investment in quite direct and sometimes stringent ways. Here is a sample of policy options that exist in other countries:⁵⁰

⁴⁷ “CMHC finds foreign ownership of condos low but growing”, *CBC News*, December 3, 2015. And “Toronto’s ‘condo king’ says 50% of condos foreign-owned”, *CBC News*, August 12, 2014.

⁴⁸ “CMHC hits roadblocks in review of foreign owners”, *The Globe and Mail*, March 13, 2016.

⁴⁹ See for example, “B.C. pledges to close loophole that allows some real estate investors to dodge taxes”, *The Globe and Mail*, October 7, 2015.

⁵⁰ Much of this is drawn from Daniel Valentine, 2015, “Solving the UK Housing Crisis”, *The Bow Group*. Available at: <http://www.bowgroup.org/policy/restore-sanity-residential-housing-market-argues-bow-group-discussion-paper>. The countries where restrictions on foreign ownership exist include (but may not be limited to): Australia, China, Denmark, France, Hungary, New Zealand, Singapore, Switzerland, Thailand, Turkey, and the UK. p. 52.

-An extra property transfer tax on foreign purchasers: Much like the Property Transfer Tax that already exists in BC, which is due when a property is sold, an extra amount could be added to any purchaser from abroad. Singapore, for example, imposes a 15 percent tax on all foreign purchases, and Australia has a 3 percent tax (since 2015). Hong Kong and Italy have variations on this kind of regulation. This would both collect revenue and discourage future purchases by foreign buyers. Unfortunately, on its own, it would be unlikely to make much of a dent in the problem: a great deal of money has already entered the region and none of this would be subject to the tax; foreign buyers might coordinate to buy properties through existing permanent residents to avoid the tax; for many of the extremely wealthy foreign buyers that are currently investing in Vancouver real estate, a one-time hit of even 15 percent might be seen as a small cost in the long run, at least relative to recent trends in home prices (even if those expectations prove mistaken). As an additional measure, though, added to the TPS, it would help a lot in the short run.

-Restrict foreign purchasers to 'new builds': Variants of this rule exist in Australia, Denmark, Switzerland, Singapore and Thailand. In this set-up, only vacant properties and buildings that have been recently built (e.g., not previously owned) would be eligible for foreign investors to buy. This sounds like a plausible path forward, but it has limitations. Australia's experience is instructive here. Australia has a Foreign Investment Review Board, which is supposed to oversee and regulate foreign purchases of Australian property along the lines noted above, among other things. Sounds pretty tough. Unfortunately, this board has allowed money to come into the country with very few restrictions and buyers have repeatedly flouted the rules. Only in 2015 did the country start to get serious and crack down on those who had gamed the system. Whether this will have a major effect will only become clear in the next year or two. But what this experience makes clear is that systems such as this are liable to evasion, often with the help of local realtors/lawyers/etc., and that it takes a fair bit of administration and continuous political will to properly police such restrictions. Given the sorry history of our enforcement of money laundering rules and so on, I don't have a great deal of confidence in this.

-Limiting the number of properties a non-resident/foreign buyer can purchase to one: Switzerland has this rule in place, and ironically China too. This is a sensible option in a range of ways, but it's also liable to be evaded, as different family members might buy a property each using the real owner's money. Moreover, this does nothing to all of the property already snapped up, and might just encourage a 'rush' into real estate before the imposition of the rule. Perhaps applying this retroactively, and forcing non-residents to sell their extra residential holdings might help, but again we would be back to the issue of creative accounting/evasion. If only by introducing administrative and legal hurdles, though, this kind of a policy might discourage large-scale foreign investment.

-Reciprocity principle: We might only allow foreigners to buy property in Canada if their home country allows Canadians to purchase property freely. Simple enough, and this might have some effect, because China has regulations on foreigners owning property. However this approach might be seen to be a bit too ad hoc and might create administrative headaches as we tried to sort out exactly what kinds of 'restrictions' disqualified certain nationalities of foreign buyers.

In sum, these types of policy actions should be seen as short-term supplements to a deeper fix to the situation, as embodied in something like the TPS. Along with better monitoring of foreign investment, they could help raise some revenue as well as 'throw sand in the wheels' of the current

massive movement of funds. Perhaps even more importantly, they would represent ‘shots across the bow’, which might have expectation-type effects for both foreign and domestic buyers.

4.4 Affordable Housing

While I have argued that this is not primarily a supply problem, there is no doubt that in the short term a lot of people with lesser means are being marginalized in the housing market, sometimes to devastating effect. For these people, the government needs to step in quickly and provide affordable rental units that meet a diverse array of needs, including for young families. This can happen both through the provision of improved rent subsidies for families below a certain income level and the initiation of purpose-built rental units. This type of action is already underway, but it needs to be expanded and sped up.

5. Conclusion: The Politics of Housing Bubbles

We learned a number of things about the politics of housing markets following the crash of 2008. One of the clearest lessons was that being in charge during a housing slump was extremely risky for any government, Right or Left. When the bubbles burst in Ireland, Spain, the UK, the US and elsewhere, the national governments of the day lost power, whatever their partisan stripe. Unemployment rose, deficits expanded, austerity was often imposed, and citizens didn't like it. They quickly turfed the incumbents.

Tellingly, Canada's government didn't lose power after 2008, though that was at least partly because of a little trick called 'prorogation'. More importantly, the Harper government did not lose power because the bubble did not burst. In fact, as Figure 11 showed, it kept on expanding. The Harper government bet on oil extraction and a housing bubble, and for a time that was a politically successful strategy, helping to generate their majority in 2011 as Canada became relatively well-off relative to the rest of the G7. We now know how the oil play has worked out, and that was largely sufficient to knock them from power, but the housing bubble strategy never caught up with them. Instead, repeated government moves to tighten lending conditions dampened the bubble in most parts of the country. Yet two glaring exceptions have kept household debt rising dangerously higher, and have put the country in a precarious economic situation: Toronto and Vancouver. These are major exceptions, make no mistake.

The usual way to deflate a housing bubble is to raise interest rates. For a range of complicated reasons, that is not a viable strategy for the Bank of Canada today. So the Bank of Canada is left to basically 'lecture' Canadians on personal debt, and at this point the warnings are mainly aimed at Toronto and Vancouver. But the new federal government also recognizes how dependent it is on not deflating the hot housing markets in these two cities, and so it has become complicit in soothing talk of 'protecting home equity'. Oil is in the doldrums, and a housing deflation could mean serious trouble for a government already running big deficits.

If this is bad news for Prime Minister Trudeau, the dilemma is even more acute for the BC government. The BC economy is tied to the housing boom even more intimately. Construction and real estate services represent over a quarter of provincial GDP! And so the bubble defenders are out in full force, both in industry and in government.

If you're starting to feel sorry for the 'rock and a hard place' situation of the provincial government, don't. They have put themselves there. They have been in power for 15 years and this crisis has been a long time in the making. At a number of crucial points they have in fact tried to silence criticism and deflect attention from the issue. Perhaps more unsettling, they've recently doubled down.

Most of what you need to know about the upcoming politics of the housing situation is contained in the following fact: condo king Bob Rennie is the BC Liberal's chief political fundraiser. As has been revealed in a series of newspaper articles, the provincial Liberals have been carefully amassing a large election war chest by selling personal access to the premier.⁵¹ \$20,000-a-plate private fundraising

⁵¹ See for example, Gary Mason's two recent articles: "Donor lists reveal B.C. Liberals greed for power", *The Globe and Mail*, April 5, 2016; and "Christy Clark offers red herrings to defend fishy fundraising rules", *The Globe and Mail*, April 19, 2016.

dinners, among other things, have been used to accumulate a financial arsenal double that of the provincial NDP.

The fundraising is being dominated by prosperous developers and others closely tied to the housing boom. This is the second lesson about housing market politics from the past decade: inside players, with large vested interests, are willing to shovel over massive amounts of money to political parties to keep the boom booming. Then, when the bubble bursts, the rest of us are forced to pick up the tab, and indirectly bail these people out.

The fact that the boom is so clearly being driven by foreign money, a single, resolvable issue, is what is perhaps most upsetting. Other factors have played partial roles in the drama, but as I have argued they have been largely distractions. This is not complicated stuff, ultimately.

Which brings us to why this issue is not going to go away and why it generates such intense passions. For the younger generation in particular, their ability to comfortably and sustainably live in Vancouver is in many cases threatened. Many people who grew up in the City of Vancouver, West Vancouver, North Vancouver, and to a lesser extent Burnaby and Richmond do not have a realistic chance of owning a house in these places, and even a family-friendly condo is a stretch for many. If they hope to one day own a home, they are essentially being kicked out of their childhood cities. And this issue is gradually spreading outwards.⁵²

Whether you feel any sympathy for these people is up to you. Whether resentment at what is going on is an ‘entitled mentality’ is also up to you. For me, though, any such discussion of ‘entitlement’ and so on needs to happen after young Vancouverites are no longer forced to compete with vast amounts of money from abroad, sometimes of dubious origin.⁵³

The Panama Papers have begun to reveal some of the dynamics at play here. With any luck, more revelations will be forthcoming. But most Vancouverites have never been confused on the issue. And thus, in part, their overwhelming support for measures to restrict demand from abroad: 79 percent of Vancouverites support an extra property transfer tax on foreign buyers and gathering more data on such purchasers, while 82 percent would like to impose some form of “vacancy tax”.

I have focused in this report on money coming from China. To repeat, that is not because of any intention to gratuitously single that source out, nor any hostility towards Chinese-Canadians. It is simply where most of the money is coming from, and where we have the clearest evidence of it, as I have shown in various ways. The vast majority of Vancouverites embrace Chinese-Canadians who have long been here and have integrated in Canadian society. Nor do they have an issue with those who want to take an honest shot at the ‘Canadian dream’. These people are our friends, colleagues, boyfriends, girlfriends, husbands and wives. More to the point, *they are us and we are them*.

What bothers many Vancouverites is when funds from abroad, from whatever country, of questionable and often unknowable origins, dramatically distort the housing market where they live,

⁵² Brent Jang, “Hot housing in Vancouver rippling across B.C.”, *The Globe and Mail*, April 24, 2016.

⁵³ For some context, see for example, Diane Francis, “All Canadians are paying the price for ‘conceal’ estate in Toronto and Vancouver”, *National Post*, February 26, 2016.

shutting them or their friends out and weakening their communities. Ultimately, curtailing the flow of this money from abroad will help, not hinder, efforts to bring Vancouverites together.⁵⁴

This report potentially steps on some big toes. If it gets widely read, it will undoubtedly invite criticism. There will be an effort to discredit it in a range of ways. That's fine, that's democracy. But, if I may, two quick warnings to readers.

First, do not put much weight on 'arguments from authority'. As I have documented, common refrains of those with long experience in real estate and development do not hold up to scrutiny. To the extent that they should be listened to, they need to provide strong evidence and reputable economic models that can generate Vancouver's extreme housing prices alongside our modest or weak average incomes. To my knowledge, this has never been done. Second, beware so-called 'poke and run' critiques. This is a common failing when we criticize something we don't like: we point to a few minor places where we don't like the analysis, or where a figure/statistic is subtly wrong, and then go on to justify our dismissal of the whole argument. That's not to say that those minor criticisms don't matter; they do (and you probably have a few yourself). But they shouldn't distract from the broader accuracy of the argument, unless they in fact effectively undermine that broad argument. Don't allow quibbles to add up to refutation.

This issue will not go away. The provincial government has put itself in a tight spot: ride the bubble or tackle it and basically admit that they screwed up. I highly doubt the latter. And so this problem will worsen, at least so long as China's own worrisome housing and credit bubble continues.⁵⁵ This is fundamentally a struggle about what kind of a city we want to be and whether we will allow all of the injustices and imbalances of the current situation to stand. Challenge defenders of the status quo. Challenge politicians to act now. If they don't, hold them accountable.

⁵⁴ For an excellent discussion of this issue, see Ian Young's interviews with *Vancouver Magazine* in January 2016.

⁵⁵ See for starters, "Chinese housing market shakes off a slump", *New York Times*, April 18, 2016; "Toxic loans around the world weigh on global growth", *New York Times*, February 3, 2016; "As China's growth slows, banks feel the strain of bad debt", *New York Times*, April 15, 2016; and Paul Krugman, "China's Naked Emperors", *New York Times*, July 31, 2015.

Appendix A: Rebutting Common Counter-Arguments

A. “There isn’t an affordability crisis!”

At a recent City of Vancouver meeting on the issue of ‘vacant properties’, a real estate representative claimed that there wasn’t an affordability problem. It was a bit of a surprise, but apparently in some circles there’s still confusion on the question. So let’s set things straight.

Why is the house price to income ratio used as an indicator of affordability? And why is the ratio of 3 deemed ‘affordable’? Because the amount of mortgage/housing payments you have to make should not greatly exceed about a third of your gross income, otherwise you will have very little to spend on pleasant things after taxes and transportation and saving for retirement and various other basics are taken care of. A mortgage that exceeds that ratio will start to seriously crimp other aspects of your life and likely leave you with little saved for retirement and/or debt.

Why do we use a house price to income ratio that is based on ‘averages’? Because there are people who make above the average and people who make below the average. This simple point is apparently lost on some writers at the Real Estate Board of Greater Vancouver. In a recent document, they claimed that “The average home price in the region is an inadequate yardstick for housing affordability. Nearly 70 percent of all MLS residential transactions in Metro Vancouver during 2014 were below the average price of \$738,000, with 32 percent of homes sold below \$400,000 and 82 percent below \$1 million.” Well, yes, but likely a similar percent (approaching 60-70 percent) of buyers earned under the average household income (because average incomes are skewed upwards by the highest incomes), and *by definition* half of households earned less than the median household income (~\$80-90k), which is used to calculate the ratio I have used in this report. So those people with lower than average incomes are going to struggle to purchase a home even in those lower price brackets. It’s as if households earning below the median didn’t exist for the REBGV. Even for the median household, that \$400,000 housing unit is out of reach, absent a big down payment or ‘creative financing’. And there are 68 percent of properties above it!

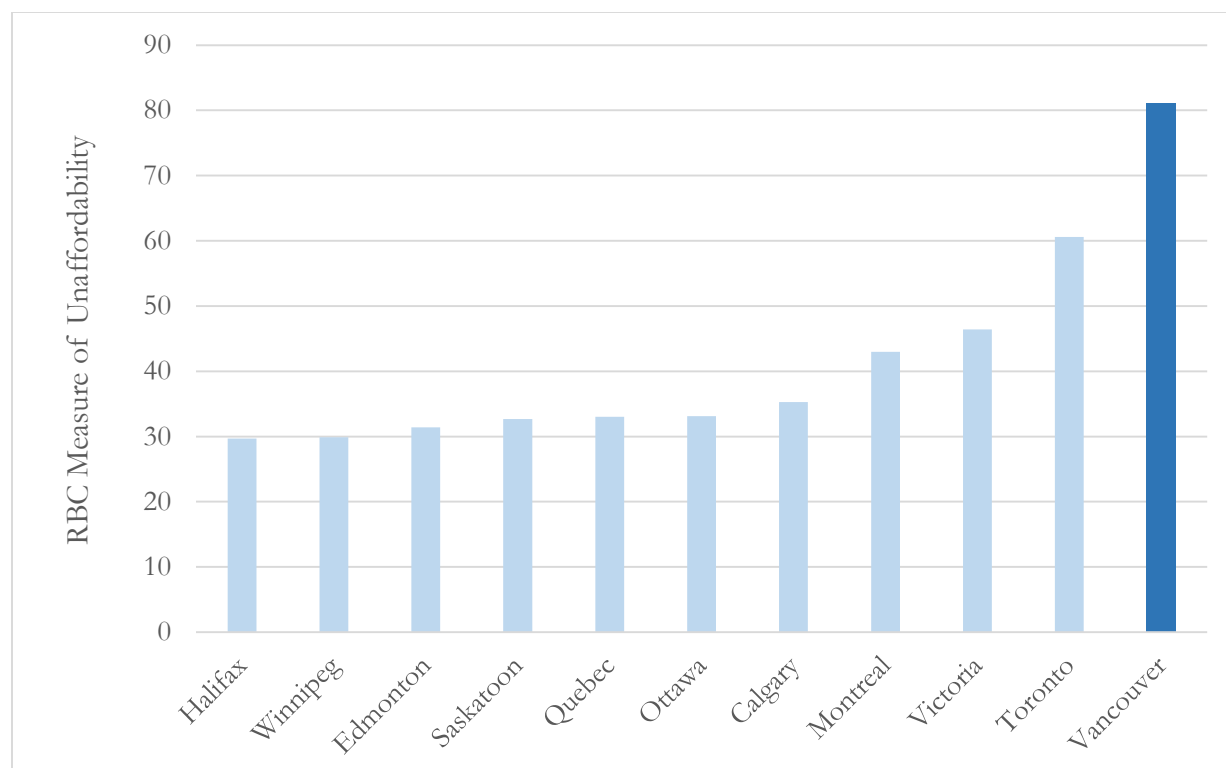
Taking a different approach, let me quote the radicals at the Royal Bank of Canada, from their February 2016 report on housing affordability in Canada: “There was a marked erosion in the Vancouver-area and, to a lesser extent, the Toronto-area markets, where rapid price increases further exacerbated already poor affordability conditions, especially in the single-detached segments. In fact, it has never been so unaffordable to own a single-detached home in the Vancouver area... Owning a single-detached home at market prices in the Vancouver area is clearly out of reach for the average household or for the vast majority of households for that matter. Fortunately, owning a condo apartment is still within reach for many in the area –and the only realistic option for first-time buyers –although, it too has become slightly less affordable in the last two quarters.”

But beware, most of these condos will not be family-friendly, so they only offer a short term option for many. And, as I show shortly, they aren’t all that affordable.

To see the reasoning behind these claims, examine Figure 14, which presents RBC’s indicator of housing affordability for the fourth quarter of 2015. This measure tracks the proportion of a pre-tax

median household income that would be required to service the costs of “mortgage payments (principal and interest), property taxes, and utilities based on the median market price” of different kinds of housing (detached, condo or a composite). This assumes a 25 year mortgage period, at a five-year fixed rate (currently very low), with a *25 percent down payment* (ha!). The historical Canadian average for this figure is around 40 percent, based on the RBC report data.

Figure 14: RBC’s Measure of (Un)affordability, Q4 2015, Major CMAs

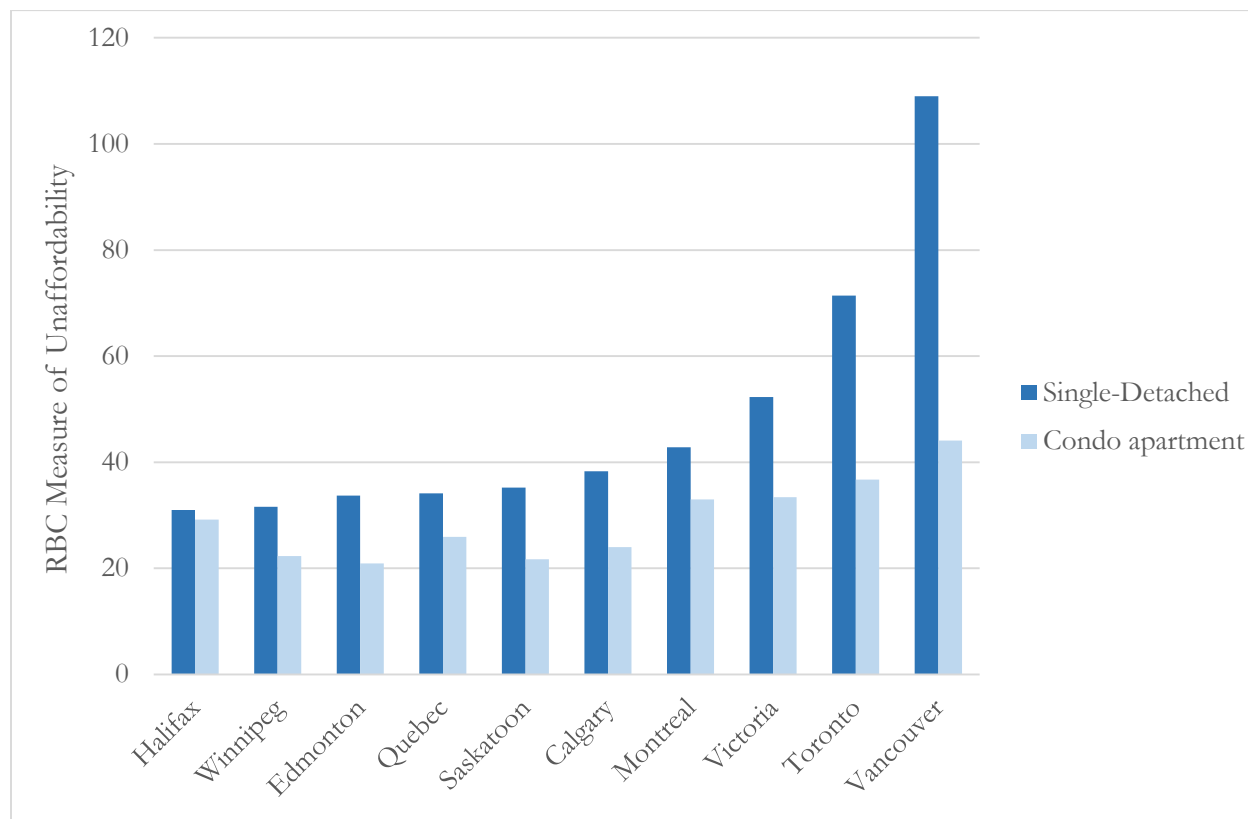


Source: RBC, “Housing Trends and Affordability”, February 2016.

As you can see from Figure 14, Vancouver’s ‘affordability’ just jumps off the page... But, the REBGV will protest, what about condos? Figure 15 breaks down the RBC measure of affordability into single detached and condos to address this. Clearly condos are more affordable than detached houses, but what we see is that Vancouver’s affordability index score for *condos* is worse than *single detached houses* for all other markets except Victoria and Toronto! That’s quite a feat.

The REBGV’s stance is tone-deafness at its worst. Essentially, because an upper middle class family income can afford a detached house somewhere in the suburbs (although only Surrey and Langley remain within reach at this point), or a condo closer to the center, there is no affordability crisis. Hooray! Silly us!

Figure 15: RBC’s Measure of (Un)affordability, Q4 2015, Major CMAs



Source: RBC, “Housing Trends and Affordability”, February 2016.

B. “If you don’t like it, leave!”

Well, no. At least not without a fight. Many of us grew up here, most of us have careers here, and all of us have social networks here. The idea that we should have to move because our governments can’t get their acts together is ridiculous. At a minimum, this is a democracy, we get the chance to change things through elections.

C. “Some other cities are expensive too!”

This is a common line among those trying to play down the extreme prices and the view that this is a crisis. “Look at New York or London, look how expensive property is there, especially by square foot!” Except Vancouver is not New York or London. These are massive metropolises; Metro Vancouver is the 23rd biggest urban area in Canada and the US. These other places are global cities, massive hubs of tourism and finance and culture. Unless you’ve been spending a lot of time in the new dispensaries, you’ll recognize that Vancouver is not like the others. Perhaps more pointedly, “So what?” If Vancouver had the 4th highest rate of gun crime in North America, the fact that three other cities had higher gun crime would not convince us that we simply needed to ‘get some perspective’. We would tackle the problem, as we should on this issue. To the extent that other cities

on the Pacific coast are experiencing similar price pressures, they should deal with their problems too. Whether they do or not has no relevance to us.

D. “Adjust your expectations, you entitled millennial!”

I’ve already covered this one to some extent. Yes, to a greater degree than before, the new generation of Vancouverites is not going to be able to own single detached houses. But the extreme prices we see are not primarily because of population pressures mixed with constrained geography, as I’ve argued. So let’s deal with the influence of foreign money, at a minimum, and then we can have a discussion about ‘expectations’.

E. “This is the free market, hands off!”

Discussions of a ‘free market’ make little sense when you have waves of money arriving from societies that are assuredly not free market. In addition, housing is one of the most tightly regulated sectors in our economies, precisely because it usually represents the biggest purchase people will make in their lives. (Whether those regulations are well enforced is another matter...) So we regulate construction, zoning, mortgage finance, renovations, and so on down the line. In short, we already regulate housing a great deal; I am simply proposing some further regulations. Lastly, we routinely regulate or tax activities that we think are doing harm to our societies. Unless you think democracies can never do such things, there’s no reason to see why this, of all markets, is so sacrosanct.

F. “There will be people with underwater mortgages if we address affordability!”

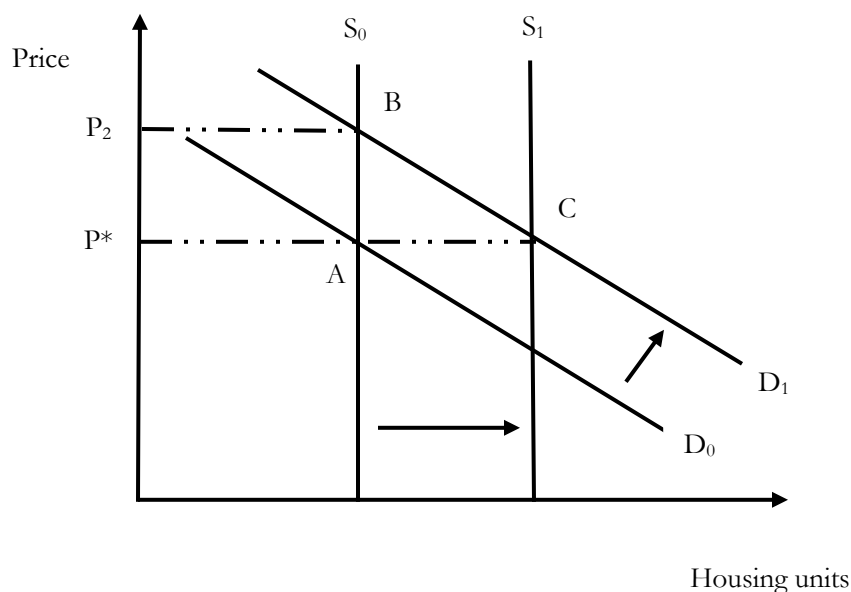
This is the trickiest rebuttal to deal with. Because it’s correct, and there aren’t many ways around it. I have sympathy for this issue, not least because some of my best friends might well be in this situation if there is a large price correction. So, what to do? There are two broad answers here, and you can pick which you like. First, we can acknowledge that there will be these underwater mortgages, but that if these people plan on staying in their homes a long time then they can ‘ride it out’ to an extent. The people most affected will likely be those who bought in the past couple of years. The trouble is, absent a price correction, it’s basically impossible to get back to affordability: unless incomes jump substantially, which is always easier said than done, the prices that exist in Vancouver will always be beyond the reach of, or dangerously debt-inducing for, most of the new generation. Call this the “sorry but we need to act” view. A second response is to acknowledge the dilemma above, but to make efforts to compensate buyers from the past few years, or at least help them renegotiate their mortgages. Renegotiating mortgages is tough to do well, but it may be possible. One option is to allow recent homeowners the choice to essentially give the government a portion of their home equity in return for a renegotiated mortgage, with longer time horizons or a lower interest rate to compensate their loss somewhat. This will be one for the mortgage experts to weigh in on. But let’s be clear, on our current trajectory, this is going to happen anyway. Price to income ratios similar to what Vancouver has now don’t last. Under this more realistic view, *deflating the bubble now would spare a lot more people from getting in over their heads and eventually defaulting*. Don’t you think the Americans and Irish regret not having tackled their housing bubbles sooner? When prices come down, and some people are stuck with underwater mortgages, they should blame previous and current Canadian governments for making it difficult to resist leveraging up to the extent they have (i.e., “we have to jump in now!”), not the policies that restored some sanity to the broader market (that is, if some of these policies are ultimately adopted).

Appendix B: Technical Section on ‘Natural Boundaries’ and Zoning/Regulations

The aim in this appendix is to think through how much ‘limited land’ and other supply constraints could raise housing prices, and to explain the logic of the claims explored in Section 2.4 and 2.5. To do this, I draw some diagrams that will be familiar to people with some background in economics; to those unfamiliar with economics it will be a slog, but hopefully it will make sense.

Figure A depicts some possible short-run supply and demand curves in a housing market. Recall that those who emphasize ‘natural boundaries’ and zoning or regulations claim that the main issue is sluggish or constrained supply in the context of growing demand. Figure A shows how this might occur: an increase in demand (D_0 to D_1) will cause an increase in price if the supply curve does not shift outwards (i.e., a move from point A to B; P^* to P_2). The short-run housing supply curve is vertical because at any given point in time it is highly ‘inelastic’: new housing can’t simply be conjured at the snap of fingers, it takes a year or two to develop. (More on ‘elasticity’ in a moment.)

Figure A: (Short-run) Supply and Demand in a Hypothetical Housing Market



In practice, though, developers are able to see the major sources of increased demand coming and are able to adjust supply to keep up with them. Things like income and population move slowly and in fairly predictable ways, so developers can base their projects to suit upcoming demand. As a result, *in the longer-run the supply curve is more elastic, or flatter* (which I diagram shortly). Another way of showing this is that the steep short-run supply curve steadily moves rightward, largely neutralizing the outward shift in the demand curve; e.g., the shift from S_0 to S_1 and point A to C.

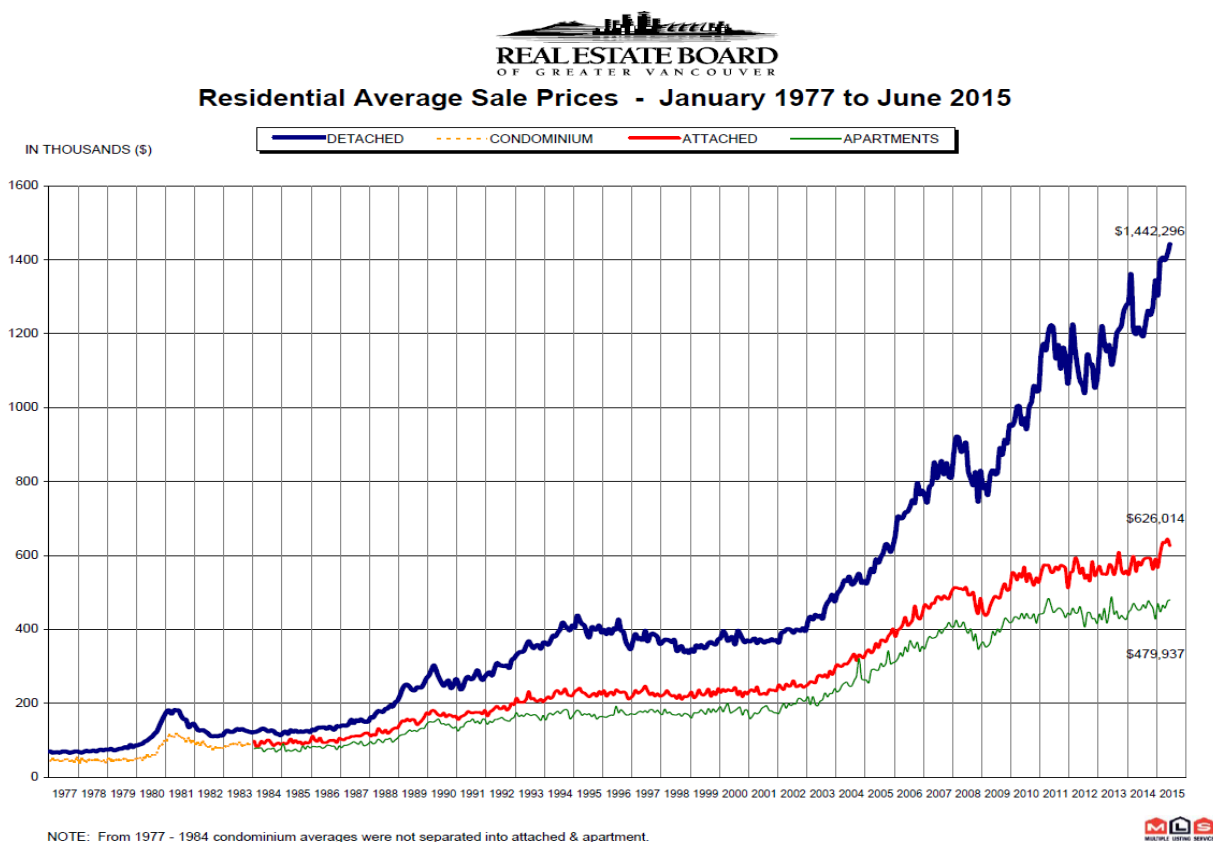
Sometimes this goes wrong and developers create too much or too little supply (e.g., because of unexpected interest rate shocks), and then prices will fluctuate. However, as I showed in Section 2.4,

this has not really occurred in Vancouver: *supply of new housing steadily kept up with demand, at least terms of population*, the main driver of new demand in normal circumstances. So, in a normal housing market, what we should see is that as the demand curve shifts out, with modestly growing population, the short run supply curve will shift out by a sufficient amount to keep prices at a steady rate (at least in terms of a ‘multiple’ of income): S_0 to S_1 . Or, put another way, the long term supply curve will be very subtly sloped upwards and its slope will reflect income gains.

Indeed, this is what we see in most housing markets, and it’s one of the reasons ‘investing’ in your house is not usually a good long-term bet. (Vancouver has been an exception to this, of course, but we’ll return to that soon.) In normal housing markets, then, the historical standard of a 3:1 ratio in average house price to income holds, except for modest, temporary fluctuations due to slumps or bubbles. As we have seen, Vancouver has blown this ratio out of the water, sitting at roughly 13 at the time of writing.

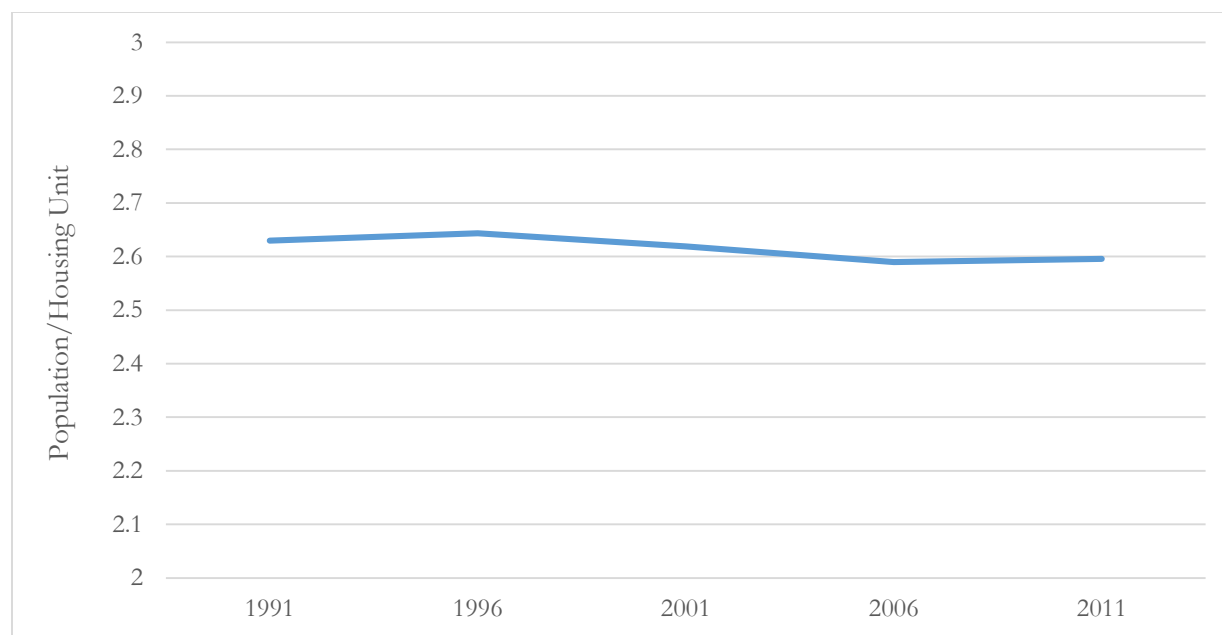
So what’s going on? Perhaps, some suggest, supply has not kept up with demand. And in one important respect they are right: *single-detached housing has not really grown in the Metro Vancouver region for about 20-odd years*. This means that the price of this kind of housing should have increased in the same period, and in fact it has. I reproduce Figure 5 here to show this.

Figure 5: Residential Average Sale Prices, 1977-2015



However, that does not mean that *total* housing supply has not increased sharply in that time, as Figure 6 showed in Section 2.4. In fact, when we look at the number of housing units *per population*, the rate has actually declined: *there was more new housing created than population growth in terms of standard ratios of population to housing* (since more than one person lives in each unit of housing, on average). Figure 7 showed that ratio from 1991-2011, and again I reproduce it here.⁵⁶

Figure 7: Ratio of population to housing units



Source: Statistics Canada.

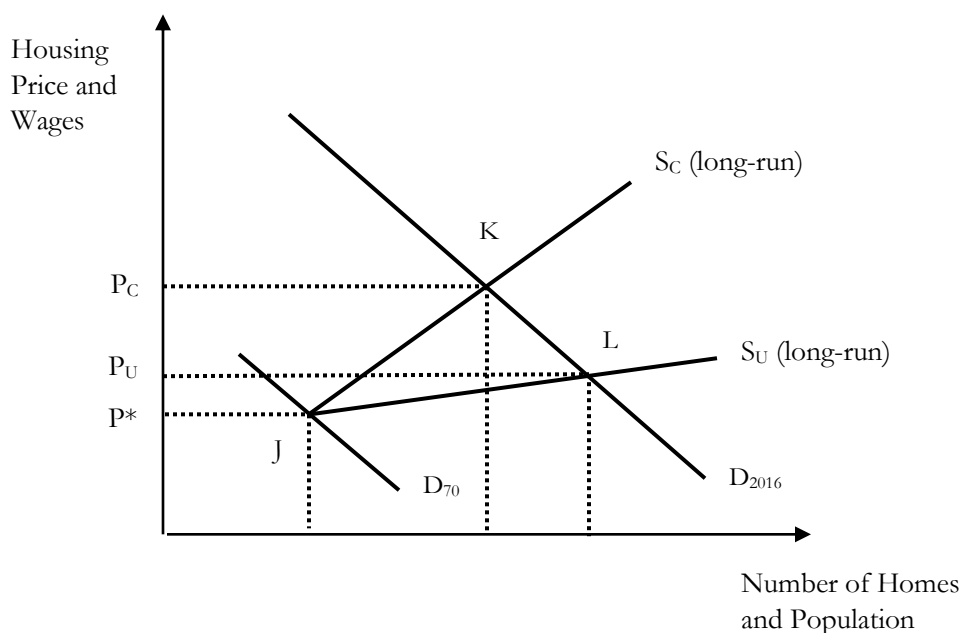
What does this mean, ultimately? It means that the increased supply of (apartment/condo) housing should take a lot of the upward pressure on prices away from the detached housing segment, as people choose to live in multi-unit buildings and so on. This is what happens in any major city, as the feasibility of travelling to and from work to a detached home diminishes. There are certain limits to how long people are willing to commute, and at that point densification really takes off. And so it is in most major cities: people choose ‘location over yards’ and the prices rebalance somewhat, as demand weakens for single detached housing.

⁵⁶ The figures since then (2011), as in “State of the Market” reports from the Urban Development Institute, show the same pattern. They are available at <http://www.udl.bc.ca/policy/publications>. In fact, the UDI, which is a think tank funded by the development industry, says in their 2015 Q4 report that new housing construction has been in the “healthy range” in recent years (p. 5). Defenders of the status quo often claim otherwise. Dan Scarrow, for example, vice-president of Macdonald Realty, argued in mid-2015 that high prices are “a function of (having) not enough houses... There is population growth. We are not building enough.” See “Mainland Chinese ‘dominating’ high-end Vancouver real estate market”, *Vancouver Sun*, August 10, 2015. I thank Anjum Mutakabbir for alerting me to the data from Statistics Canada on housing growth.

The upshot is that while Vancouver does indeed have a limited supply of single-detached housing, and this is pushing up their prices relative to other types of housing, expanded supply of apartments or condos should have prevented a major price increase from occurring.

But... this doesn't mean that constrained geography won't have an impact on prices. *Prices will indeed be higher overall in cities with constrained geographies.* Why is that? In essence, it's because the constrained land available for development will *raise the price of land* as the population expands: more people bidding for the same fixed quantity. This will increase the costs of developing new housing, even high-rises, relative to other cities where such constraints don't exist, and will lead to higher housing prices.⁵⁷ In the jargon of economics, this dynamic will reduce the "elasticity of new housing supply": it will take a larger price increase to induce developers to generate an equivalent increase in housing supply. For instance, they now have to buy up certain plots and then apply to convert them into high-rise multi-unit buildings. In less land-constrained cities, including smaller cities, all it takes to add more houses is for a developer to buy outlying land and build (perhaps after lobbying local politicians!). In this latter situation, there will be a high elasticity of housing supply: it will be cheaper to create new housing (so, a flatter long-run supply curve). Figure B presents this more nuanced, and realistic, description of housing demand and (long-run) supply in graphical form.

Figure B: Long-run Housing Supply and Demand in Constrained and Unconstrained Markets



⁵⁷ Land prices are considered the main factor in this difference. Construction costs in most economic models are assumed to be roughly equal: building materials like wood and concrete and labor will cost similar amounts in different cities in a country. Yes, some labor cost differences will exist, but in the medium-term they will tend to equalize as high wages draw construction workers to the high wage area.

In Figure 9, suppose that the initial price and quantity of housing (point J) was where Vancouver stood in 1970.⁵⁸ S_C represents the long-run supply curve of a ‘constrained’ housing market; S_U represents an ‘unconstrained’ supply curve. Clearly, as demand increases (D_{70} to D_{2016}) the price will rise to a greater extent in the ‘constrained’ market (P_C) relative to the ‘unconstrained’ one (P_U). Theoretically, this all makes sense. In practical terms, we want to know how much of a difference this creates in housing prices, or what the difference is between P_U and P_C .

The experience of other cities is instructive here. And given that there are very few large Canadian cities where these kinds of ‘constraints’ might be felt, we need to look to the American experience for guidance. Thankfully, there is some excellent research on this topic already in the US. I touch on two studies.

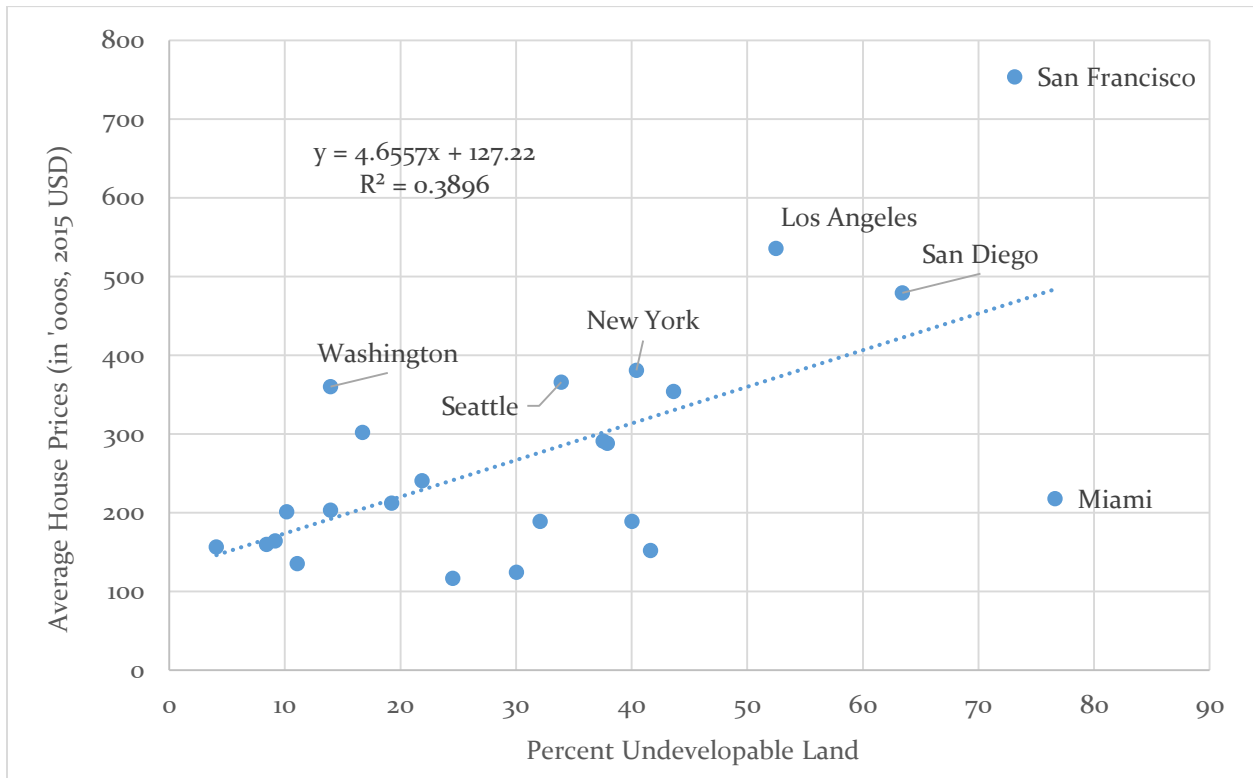
First, Albert Saiz examined the relationship between geographic constraints and housing supply/prices in a 2010 article.⁵⁹ Using satellite-based geographic data of 95 major American cities, Saiz estimated the amount of “developable land” within a 50 km radius of the city center. He used the satellite data to exclude any water constraints (rivers, wetlands, oceans, lakes, etc.) and mountainous constraints (any land with steep enough slopes to be prohibitive for development). Then, in a variety of ways, he looked at the impact of different levels of ‘geographic constraint’ and the impact it had on housing supply and prices.

Sure enough, those constraints did have a significant impact on prices, even when controlling for a host of other factors. Since this isn’t an academic paper, there isn’t much point in going into the specific numbers that Saiz estimated. The interested reader can go check out the paper if they wish. What I can do here, though, is try to give some rough sense of how much this might affect housing prices. First, we can plot average housing prices in 2015 against the amount of *undevelopable* land in that 50 km radius, which is unchanging over time, as in Figure C. The cities selected were the largest cities for which I could readily access data; they have not been cherry-picked. Figure 8 in the text looks at the same relationship, this time using the average price to income ratio, and I reproduce it here. (Using a non-linear estimation technique doesn’t change the results substantially in each of the following figures.)

⁵⁸ This diagram is developed from Edward Glaeser, Joseph Gyourko and Raven Saks, 2006, “Urban Growth and Housing Supply”, *Journal of Economic Geography* (6): 71-89.

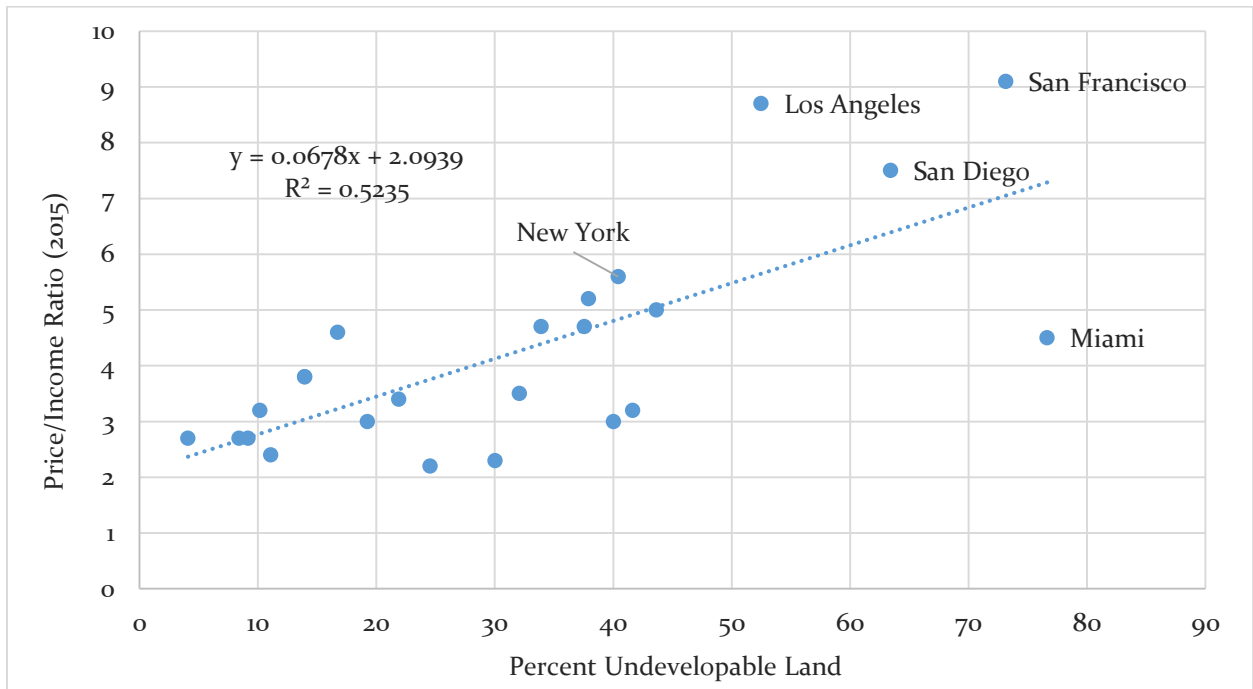
⁵⁹ Albert Saiz, 2010, “The Geographic Determinants of Housing Supply”, *Quarterly Journal of Economics* (August): 1253-1296.

Figure C: Housing Prices vs Share of Undevelopable Land, Major US Cities, 2015



Sources: Saiz, 2010; Economist Magazine (Online).

Figure 8: Price/Income Ratio vs Share of Undevelopable Land, Major US Cities, 2015



Sources: Saiz, 2010; Economist Magazine (Online).

Clearly there is a relationship. And the relationship is reasonably strong. But two points need to be made. First, taking the relationship at face value, it could still only explain a fraction of Vancouver's anomalous prices. As we have seen, Metro Vancouver sits at a price/income ratio of 13 and average housing price of ~\$1,044,000 (or ~\$800,000 USD at exchange rates at time of writing).⁶⁰ Supposing that Vancouver has as much undevelopable land as San Francisco, which seems a generous assumption (in favor of the opposing view), then the predicted ratio for Vancouver would be roughly 7 and the predicted house price would be ~\$606,000 CAD (or ~\$467,000 USD). Since exchange rates fluctuate a fair bit, and it's more helpful to control for income, the ratio figure is arguably more pertinent. (Note that interest rates are also low in the U.S. currently.) In this view, then, the predicted ratio would still be much less than where Vancouver sits. If we were to take the difference between the ratio of other major Canadian cities and Vancouver's ratio as what we're trying to explain (i.e., $13.2 - 4.3 = 8.9$), then this factor would explain about 30 percent of Vancouver's affordability crisis ($7 - 4.3 = 2.7$). And this is putting Vancouver's geographic constraints at the highest rate among existing American cities, for argument's sake.

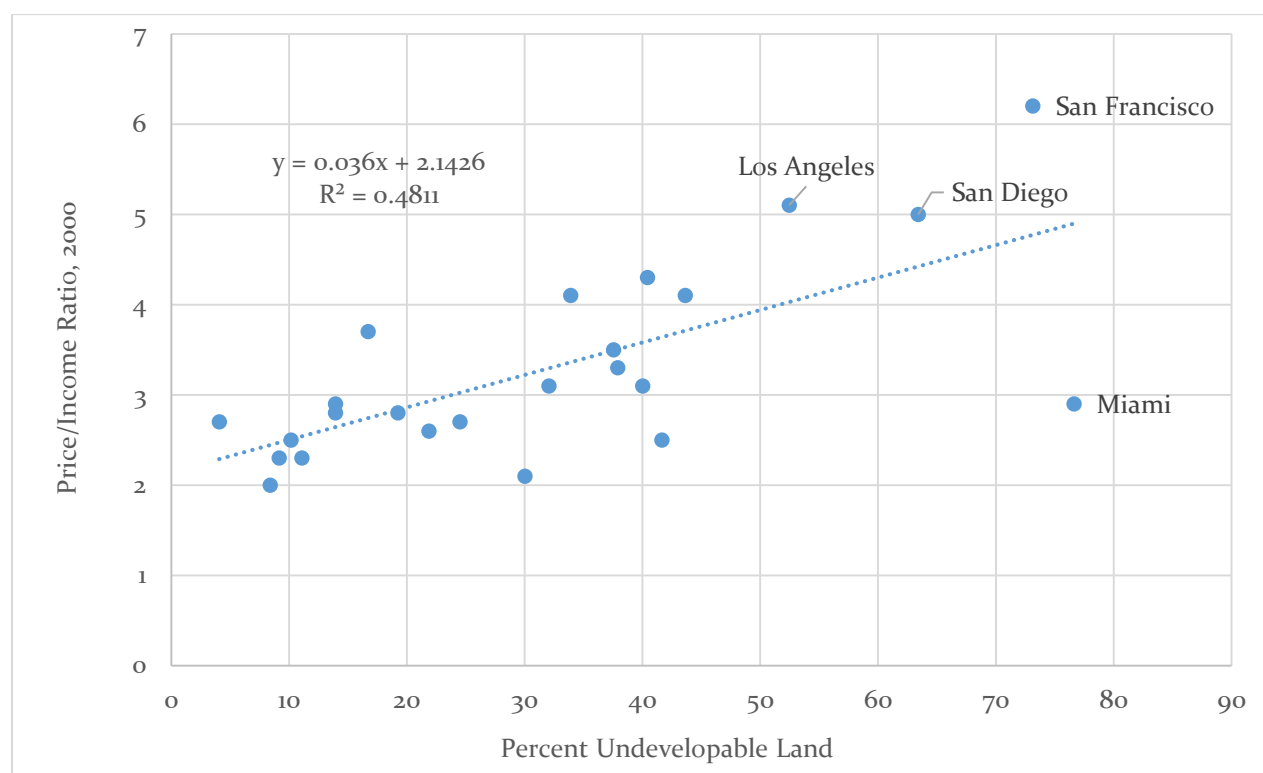
Second, this relationship and its strength is heavily driven by Los Angeles, San Diego and San Francisco. As I showed in 2.7.3, L.A. and San Francisco have large inflows of foreign capital too, and the San Diego real estate market is likely closely tied to the L.A. market in the same way that Victoria is tied to the Vancouver market. Even discounting this latter point, if we just remove San Francisco and Los Angeles from the regression, then the 'predicted' price/income ratio for Vancouver in 2015 becomes 5.6, not 7, and San Francisco and LA become even greater outliers.

Another way of showing this is to look at the relationship in 2000, before major flows of foreign capital became an issue and before the US experienced its housing bubble and correction. Figure D does this. (Even in 2000, the majority of these cities had a larger population than Vancouver does today, which is relevant because our measure of 'undevelopable land' is unchanging, regardless of population.) When we do this, the predicted price/income ratio for a city like Vancouver, with San Francisco-like constraints, is around 4.8.

Let me clear about this exercise: none of these numbers are set in stone, or some kind of gospel truth. The exact numbers will change depending on how many cities we include, what/how many years we pick, what variables we include in the regressions, etc. If anything, though, adding other variables would likely diminish the explanatory 'predictions' of the bivariate relationships outlined in Figures C-D and 8. Nevertheless, it is useful to get a rough sense of how much 'work' the geographic constraints argument might be able to make towards explaining Vancouver's real estate prices. And the answer is, not a negligible amount, but not nearly enough to account for Vancouver's house price insanity, and certainly not a majority of the region's unique prices.

⁶⁰ "Metro housing prices surge", *Vancouver Sun*, April 7, 2016.

Figure D: Price/Income Ratio vs Share of Undevelopable Land, 2000, Major US Cities



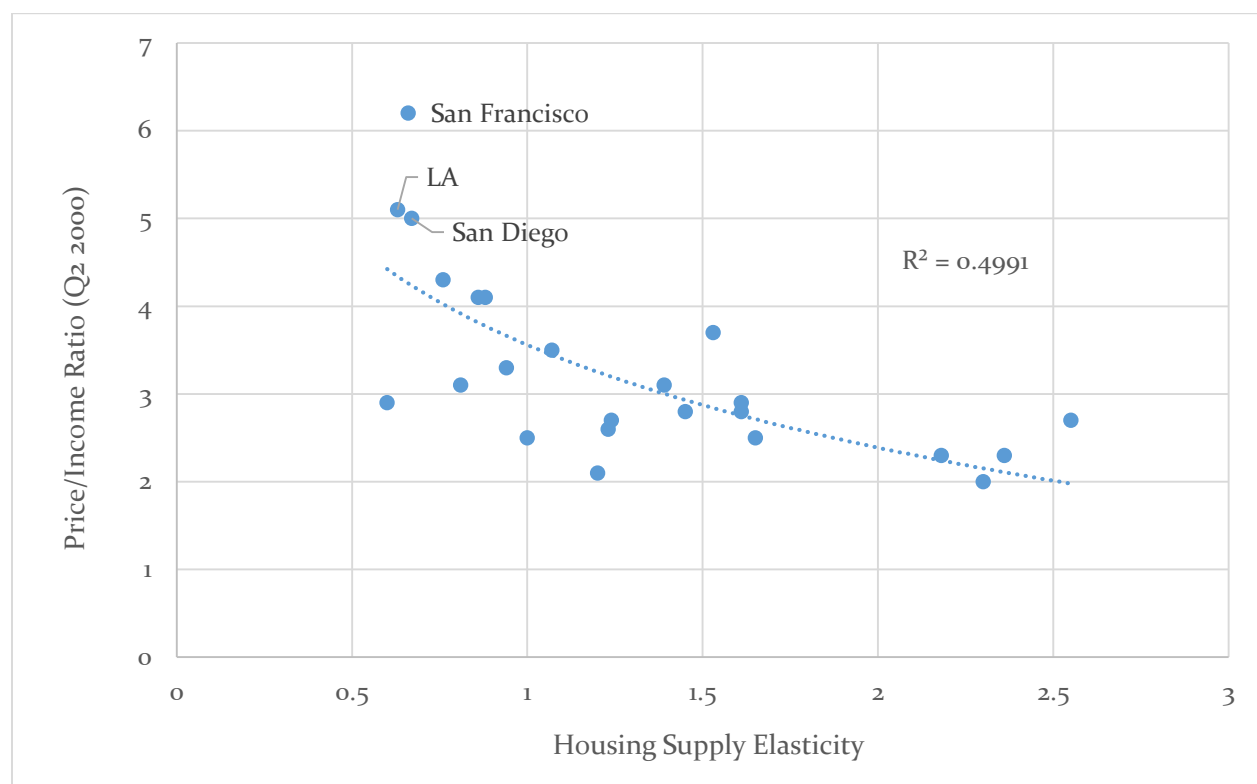
Sources: Saiz, 2010; Economist Magazine (Online).

Another important point to keep in mind is that all of the theoretical economic models that are used to generate these price expectations predict that *areas with relatively inelastic housing supply will have either higher incomes than average and/or higher ‘amenities’*. (See Figure B.) This is because workers will need to be compensated for higher housing prices. In terms of income, if workers demand higher pay, this will push up productivity and wages in a city as businesses have to innovate to stay alive. But as we’ve seen, Vancouver doesn’t fit this pattern; it has relatively low incomes. San Francisco, for example, in certain ways the obvious comparator case, has much higher incomes than most other American cities (and Vancouver, to be sure). That this isn’t the case in Vancouver, and that relatively high prices have been around for a while, suggests that there is a ‘de-coupling’ of the housing market from local incomes. So even to the extent that we accept the geographic constraints argument, it is likely that Vancouver has in large part experienced high and rising prices because foreign demand has ‘filled-in’ for non-existent local purchasing power.

It is also true that ‘amenities’ can compensate workers for their higher housing prices. This refers to things like a pleasant natural environment, cultural hubs, and so on. (Saiz proxies it by tourist visits.) Certainly Vancouver has a nice natural environment, at least if we ignore the rain. So perhaps by this logic some of Vancouver’s weak income performance, relative to what we might expect, can be explained. But the regressions Saiz runs suggest that both incomes *and* “amenities” are higher in land constrained cities, and it’s hard to explain sharply rising prices (or price/income ratios) with something like ‘natural beauty’, which is essentially constant over time.

Another approach to this issue is to look at the estimates of ‘housing supply elasticity’ generated by Saiz. This allows us to combine measures of ‘natural constraints’ and ‘zoning-regulations’ (e.g., the WRI). As Figure 9 in Section 2.5 showed, this more precise estimate of the ‘supply constraints’ argument in fact suggested that even less of Vancouver’s high prices could be explained by these factors.⁶¹ Rather than re-posting that figure, or posting a similar relationship between housing prices and supply elasticity for 2015, I present the relationship in 2000. Arguably this gives us a better sense of the impact of these kinds of forces when housing bubble conditions are not present (but not a slump either; the US was right around its historical price/income ratio in that year). What we see is that even the tightest ‘supply constraints’ simply cannot generate the extreme prices we see in Vancouver, not even close.

Figure E: Price/Income Ratio vs Housing Supply Elasticity, Major US Cities, 2000



Source: Saiz, 2010; Economist Magazine (Online).

⁶¹ Recall that ‘regulations/zoning’ and ‘undevelopable land’ will be correlated for the reasons noted in Section 2.5. In calculating the ‘housing supply elasticities’, though, Saiz finds figures which suggest that ‘undevelopable land’ does most of the ‘work’ in generating the elasticity estimates: they are correlated at around -0.86.

A final way of looking at this issue is to examine a recent paper by Matthew Palm and his colleagues at Oregon State University.⁶² In a careful study of the issue of population density and housing prices in the US, they sought to examine whether urban density might drive higher housing prices. The theoretical expectation was that housing costs would increase with rising density, through the channels noted above (raising the price of land), but that this might be somewhat offset by lower transportation costs.

What did they find? They found that these expectations were met. However, while they found that housing prices (either in terms of home values or rents or mortgage payments) went up with density, and consistently so, *they didn't go up very much*. In fact, the effect of such things as average income in an area swamped the effects of density. One way to understand this point is that precisely because location matters, *single-detached housing and apartments are substitutes*. They are hardly perfect substitutes, which generates the divergence in Figure 5, but they are substitutes. This should mean that rising apartment/condo supply can significantly dampen the effect of density on prices.

While these studies are American, the onus is on the other side to explain why those findings would not apply in the Canadian context. Given the limited possibilities for Canadian comparisons on this particular angle of the debate, it seems like the best we can do.

In sum, geographic constraints could at most only explain a fraction of the price increases that Vancouver has witnessed, and such price increases are usually predicated on rising wages, which has not occurred as predicted. We also have not seen any serious supply shocks that might explain major price increases among all segments of the market. We do see more sharply rising prices in detached housing, as we would expect, but the dampening effect on prices that densification produces in other cities has not occurred here. Together, this suggests that we face particularly potent (and unique) demand pressures.

⁶² Matthew Palm et al., 2014, "The trade-offs between population density and households' transportation-housing costs", *Transport Policy* (36): 160-172.