THE IMPACT OF SPECULATION AND VACANCY TAX ON THE HOUSING PRICES IN VANCOUVER

by

Qihang Yang
BSc, Beijing Jiaotong University (2018)

and

Yue Yang
BSc, Shandong University of Business and Technology (2018)

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Name: **Qihang Yang and Yue Yang**

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Committee:

_____

Dr. **Andrey Pavlov**
Senior Supervisor
Professor

_____

Carlos Lopes da Costa
Second Reader
Lecturer

Date Approved: _____

Abstract

This paper studies the effect of British Columbia's Speculation and Vacancy Tax (SVT) on Vancouver housing prices. We also reexamine other economic factors referring to the existing literature, such as the GDP of the real estate sector growth, the 10-year government of bond yield, the local unemployment rate and the local population growth.

We use difference-in-differences (DID) model to measure the effect of SVT policy. In the overall market of Vancouver, we cannot detect significant effect of the tax on housing prices. However, we detect an impact for the market segment we expect to be most affected by the tax— condos in Vancouver West. We find that British Columbia's Speculation and Vacancy Tax has significantly negative influence on the prices of condos in Vancouver West in comparison with Toronto Central, where no similar tax is implemented.

Keywords: Speculation and Vacancy Tax; housing prices; DID model;

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1 Introduction

Based on the data obtained from Statistics Canada, between 2006 and 2016, Vancouver's housing affordability is severe in that the number of households spending ranges from 30% to 100% of people's total income on shelter costs. A number referred to as the shelter-cost-to-income-ratio grows by 9% between 2006 and 2016 to 80,050 households, which is about 28% of all households in Vancouver. Besides, the local residents put forward the issue that housing remains vacant especially those bought by foreigners. Nowadays, there is an act of Speculation and Vacancy tax to deal with housing affordability further.

In February 2018, an adjusted Speculation and Vacancy tax (SVT) rate structure was announced by the Government of British Columbia. This new rate structure is dependent on the value of residential property. The general rule is that British Columbians owning vacant homes in specified urban areas will be subject to a tax rate of 0.5% on the property value; for Canadian citizens and permanent residents who do not reside in BC, they will be charged by 0.5%. However, for foreign investors and satellite families, 2% will be applied. And the specified areas mentioned in SVT is composed of municipalities with Metro Vancouver, Abbotsford, Mission, Chilliwack, Kelowna, West Kelowna, Nanaimo, Lantzville, and Greater Victoria. The aim of SVT is to mitigate the housing affordability issue in BC by apply tax on speculators especially foreign ownership and

vacant homes. On the other hand, the tax revenue will be used to assist with affordable housing initiatives in communities subject to the tax.

We carry out a difference-in-differences (DID) model using panel dataset. The original source data are from Statistics Canada, Real Estate Board of Greater Vancouver and Toronto Real Estate Board. At the beginning, required variables are extracted from kinds of tables or data sources and then are gathered into one master panel dataset based on cities on a monthly basis. The final version of dataset contains residential housing market information from November 2009 and October 2019 for both Vancouver and Toronto. We use Toronto as the control group of Vancouver due to the similar economic and population situation.

In our empirical analysis, DID model is utilized in this paper, which focuses on the effect of British Columbia's SVT residential housing prices in Vancouver, with the control variables of demographic elements and macroeconomic situations, including the up-to-date housing benchmark price, the GDP of the real estate rental and leasing sector, the 10-year government bond yield, the provincial unemployment rate and the provincial population statistic data.

The regression results of DID model indicate that controlling other elements unchanged, British Columbia's Speculation and Vacancy tax rate shows significant positive effect on decreasing housing price in Vancouver, which means we can attribute the declined Vancouver housing prices to the SVT.

In our study, we explore the impact of Speculation and Vacancy Tax on overall housing real estate but we cannot detect an effect for the overall market in Vancouver. This could be either because there was no effect or because the data available does not allow for sufficient identification. Our study further extends to the impact of Speculation and Vacancy Tax on specific types of real estate property in specific region of Vancouver. In detail, the specific region is referred to Vancouver West and Toronto Central where housing prices are highest among the city because it is reasonable that regions with higher housing prices will fluctuate more from the new act of Speculation and Vacancy Tax. And the specific types of real estate property in Vancouver are detached (single-family), attached and condos in specific region of the city. Eventually, we detect an impact for the market segment— condos in Vancouver West where the effect is significant.

2 Literature Review

Housing vacancy has significant influence on housing price by lowering housing supply in owner-occupied housing market. More elastic housing supply results in slighter housing prices fluctuation. Glaeser et al. (2008) states that housing prices are similar to many other assets in that housing prices are subject to the observable fluctuations in fundamentals. In this paper, in order to understand boom-bust housing cycles, Glaeser takes housing supply into a simple model of housing bubbles. The model indicates that more

elastic housing supply can lead to fewer and shorter bubbles as well as smaller price increases. However, in fact the welfare consequences of bubbles may be higher in more elastic places, the reason is that more elastic places will overbuild more in response to a bubble. And the data show that the upward prices in 1980s were mainly from cities where housing supply is more inelastic. More elastic places had slightly larger increases in building during the same period. In this study, it shows that over the past five years, a modest number of more elastic places also experienced large price booms, but as the model suggests, these booms seem to have been quite short. Prices are already moving back towards construction costs in those areas.

Hwang, M., & Quigley, J. M. (2006) points the relationship between national and regional economic conditions and the single-family housing market in the respect of housing prices, vacancies and residential construction activity. They also suggest that the regional economic conditions, income and employment play significant roles on local housing market. Their study reveals the significant role of vacancies in owner-occupied housing market on housing price and supplier activities for the first time. Besides the above, they record that new supply of household can be affected significantly by the changes in materials, labor and capital costs and regulation. The results of the study indicate that the way of market responses to regional income shocks can be affected hugely by the local regulation. Also, in general Single and cross-country researches find that housing markets

and the macroeconomy are strongly interrelated at the country-level and internationally correlated.

The planning policy can serve as an impact factor of housing prices. Barker (2008) introduces the impacts of history of planning policy in England on housing. Barker focuses on the topic of plan-led system and the uncertainties of housing projections. In this study, it is found that the planning policy plays an important role on the relationship between housing prices and housing supply in the context of upward housing prices. In planning policy, planning practice, and housing supply, it also suggests that the impact of environment constrains on additional housing supply may be overstated.

We review the effect of interest rate on housing prices as well. Cho, D., & Ma, S. (2006) reveal the long-run relationship between housing prices and interest rates in the context of Korean housing market. By the cointegration test and spectral analysis, it is shown that there exists a long-run negative equilibrium relationship between housing prices and interest rates. After carrying out the Granger causality test, one-way causality exists between the short-run dynamic relationship between growth rate of housing values and interest rates, at the same time, the transfer function model presents concretely the causal structure of this relationship. In this journal, the effectiveness of interest rate policy in Korean housing market is verified, which contribute to the predicted growth rate of future housing prices. Hu (2018) demonstrates that the alternative of interest rate is the ten-year

government bond yield which has the significant effect on the value of residential housing building.

Apart from the above factors, housing prices can be affected significantly by population and employment.

Mulder, C. H. (2006) in his study puts forward a two-sided opinion. From one perspective, the demand for housing is dependent of the number of households; from the other perspective, more population can be derived from migrants with the affordability of housing prices. Also, the housing prices can have an impact on young people of leaving the parental household, marry or cohabit and have children. Mulder, C. H. (2006) indicates that the ownership of household can slow down the mobility and migration of resident in the way of binding people to a place.

Agnello, L., & Schuknecht, L. (2011) and Jud & Winkler (2002) also suggest that the growth of population plays a significant role on the real housing price appreciation. The study of Jud and Winkler (2002) examines the dynamics of real housing price appreciation in 130 metropolitan areas across the United States and finds that real housing price appreciation is significantly affected by the population growth and real changes in income, construction costs and interest rates. It also suggests that stock market appreciation plays an important current and lagged wealth impact on housing prices. And due to location-specific fixed-effects, housing appreciation rates change across areas; Jud and Winkler

(2002) also suggest that the extent of the fixed-effects specific cities has a positive correlation with restrictive growth management policies and limitations on land availability.

Gyourko, J. (2009) in the housing supply demonstrates that the essential role of heterogeneity in supply conditions across markets for a better understanding of the increasing price dispersion across metropolitan areas as well as the understanding of whether positive growth shocks to a metropolitan area manifest themselves more in respects of expanding population and homebuilding or higher wages and house prices. In this journal, Gyourko, J. (2009) also indicates that the nature of supply has an important impact on the local housing-market dynamics.

The reviewed literatures above reveal the relationship between the financial market condition and the macroeconomy and the housing prices. For this study, in order to explore the impact of Birth Columbia's Speculation and Vacancy Tax, our model takes into consideration of the interest rate or government bond yield, overall economic condition, unemployment rate and population growth (changes).

3 Methodology

Based the reviewed literature above of Mulder, C. H. (2006) and Barker, K. (2008) indicates that the planning policy such as vacancy tax plays an important role on the housing prices in the context of upward housing prices. Additionally, we can observe the decrease of benchmark price in Vancouver after February, 2018 from Appendix figure 1. Therefore, we assume that the British Columbia's Speculation and Vacancy tax has positive impact on the decrease of housing price in Vancouver as our initial hypothesis.

During this research, we employ the difference-in-differences (DID) model to explore the potential influence of Speculation and Vacancy tax on the housing benchmark prices in Vancouver. And the benefit of using DID model is to make a direct estimation of the effect of the Speculation and Vacancy tax. With the DID model, we should firstly choose the treatment group and control group and the time period of the new policy to measure the difference-in-differences between the control group and treatment group. And in this way the effect of the policy across time after the intervention can be measured. In the DID model, the first difference is pre-differences and post-differences in the form of housing prices ranging from November 2009 to October 2019. And then the second difference in DID model is the difference between property price respectively in Vancouver (treatment group) and Toronto (control group).

In this study, we use regression method to measure both the first differences and the second differences. When it concerns the benefits of using regression method, first of all it is more efficient than manual calculation and we can then carry out the statistical test on the regression model. Also, there are lots of types of regression method available for us to use the most proper one.

The DID model equation that we choose is as followed:

$$\Delta \text{Log}(Y_i) = \beta_i + \beta_1 * Time + \beta_2 * City + \beta_3 * City * Time + \gamma + \varepsilon$$

Referring to Jeffrey Wooldridge (2002), the Ordinary Least Squares (OLS) regression result of β_3 measures the difference in percentage of Yi between treatment and control group after the settled date of policy reflected by the variable of Time. Here we define Yi as Input housing benchmark price in different specifications and use housing benchmark prices in the form of log value changes as the dependent variable.

"City" is a binary variable equal to 1 if the data is from Vancouver and 0 otherwise. 0 represents the control group where the data are derived from Toronto where similar tax does not exist. In this way, "City" can measure the average differences between Vancouver (treatment group) and Toronto (control group) on the benchmark prices of the residential housing market.

"Time" is a binary variable equal to 1 if the date is February 2018 onward and 0 otherwise. Similarly, "Time" can measure the differences of pre-differences and post-

differences related to the housing benchmark prices between February 2018 and October 2019.

In DID model, "City*Time" is the interaction term of the binary variables, when both City and Time are equal to 1. This interaction term represents the effect of tax policy announced. "City*Time" can measure the difference-in-differences on the housing benchmark prices of housing market between Vancouver (treatment group) and Toronto (control group) with and without the effect of tax act.

γ is the vector of variables including the GDP of the Canadian real estate and rental and leasing sector, the 10-year government of Canada bond yield, the local unemployment rate and the size of local population.

4 Data Description

In our study, the original source of economic data is the Statistics Canada and the data of housing prices is from Real Estate Board of Greater Vancouver and Toronto Real Estate Board. We combine different types of necessary variables and then generate a panel dataset based on cities on monthly basis. For each of the regressions, 240 observations are gathered from November 2009 to October 2019. And we use two panels to identify the treatment group and control group in time series among the dataset. The treatment group

is Vancouver at the same time Toronto is chosen as the control group due to the similar size of city, economic condition and population.

The price data we choose is the benchmark price which is based on the average of firm transaction data entered into both the REBGV and TREB MLS® system between the first and last day of the month being reported. The MLS® is operated by six founding institutions: the Canadian Real Estate Association (CREA), the real estate boards of Greater Vancouver, the Greater Toronto, Calgary, Fraser Valley, and Greater Montreal.

According to the CREA, MLS® benchmark price, modelled with the Consumer Price Index, measures housing prices by providing a clearer picture of market trends. Instead of measuring goods and services, the MLS® benchmark price measures the rate at which housing prices change over time taking into account the type of homes sold.

The analysis dataset includes measurements of housing benchmark prices and the GDP of real estate rental and leasing, the 10-year government bond yield, the unemployment rate and the population size between November 2009 to October 2019 for the treatment group (Vancouver) and the control group (Toronto) respectively. The variables include the city, time and the interaction term of city*time. The variables of prices, unemployment rate and population are dependent on the monthly date and the geographic location.

As panel/time-series data, $\Delta\text{Log}(Y_i)$ need to be tested for the unit root, which is used to determine whether the panels are stationary on the dimension of time. By the result

of Levin-Lin-Chu unit-root test (Appendix, Tables 1, 2 and 3), we can reject the null hypothesis that the panels contain unit roots. Meanwhile, the Fisher-type unit-root test (Appendix, Figure 1, 2 and 3) indicates that at least one panel is stationary. Hence, we can run regression for overall market price, price of detached, price of attached, price of condos and specific region's price as Y_i.

5 Empirical Results

5.1 Impact of Speculation and Vacancy Tax on Overall Housing Market in Vancouver

Table 1 contains the estimated treatment effect of British Columbia's Speculation and Vacancy Tax (SVT) on Vancouver's housing price using the DID model regression (eq.1.1). As for the overall market, the coefficient of City*Time (treatment effects of the tax on Vancouver's housing price) has negative sign, which is same as the initial hypothesis. However, the coefficient of City*Time is not statistically significant, indicating that for the Greater Vancouver regional district, even with the implementation of British Columbia's Speculation and Vacancy Tax Act, the price of housing property is not significantly decreased compared with Toronto, where no similar tax act is implemented.

Additionally, the coefficient of real estate GDP growth is positive and statistically significant at a 10% level. The coefficient of unemployment rate is positive and statistically significant at 1% level.

Table 1: *Overall Housing Market*

This table shows the result of the regression for price of overall housing market in Vancouver as Y_i. The treatment group is Vancouver while the control group is Toronto. *significant at 10%; ** significant at 5%; *** significant at 1%.

Variable	Coefficient
City	0.007628 (1.48)
Time	-0.000632 (-0.14)
City*Time	-0. 004465 (-0.93)
GDP of real estate growth	0.000000 (1.79)*
10-year government bond yield	0.016120 (0.07)
Unemployment rate	0.640303 (2.24)***
Population growth	0.0000001 (0.56)
Constant	0.128213 (2.00)**
R^2	0.0337
	Prob > F = 0.3344

5.2 Impact of Speculation and Vacancy Tax on Specific Region in Vancouver

Table 2: *Result of the regression for Housing Prices of Specific Region*

This table shows the result of the regression for price of housing market in Vancouver West as Y_i. The treatment group is Vancouver West while the control group is Toronto Central. *significant at 10% level; ** significant at 5% level; *** significant at 1% level.

Variable	Coefficient
City	0.833333(1.26)
Time	0.004097(0.69)
City*Time	-0.006806(-1.10)
GDP of real estate growth	0.000000(1.08)
10-year government bond yield	-0.145897(-0.48)
Unemployment rate	0.599238(1.64)
Population growth	0.000001(0.47)
Constant	-0.104574(-1.28)
R^2	0.0182
	Prob > F = 0.4531

Since we could not find significant changes in housing price of the overall market in Vancouver due to Speculation and Vacancy Tax (SVT) in B.C., we try to make specific

analysis for specific region's housing property—Vancouver West versus Toronto Central, where the housing prices are more expensive and fluctuant.

Table 2 contains the estimated treatment effect of British Columbia's Speculation and Vacancy Tax (SVT) on the housing prices of Vancouver West using the DID model equation. As for housing prices of Vancouver West, the coefficient of City*Time (treatment effects of the tax on housing prices) not statistically significant. Additionally, all other coefficients are not statistically significant.

5.3 Impact of Speculation and Vacancy Tax on Specific Types of Housing Property

Since we could not find significant changes in housing price of the overall market in Vancouver or Vancouver West due to Speculation and Vacancy Tax (SVT) in B.C., we try to make specific analysis for specific type of housing property—detached (single-family), attached, and condos.

Table 3: *Result of the regression for Detached Property Prices*

This table shows the result of the regression for prices of detached housing property as Y_i. *significant at 10% level; ** significant at 5% level; *** significant at 1% level.

Variable	Overall Market	Vancouver West
City	0.004021	0.000518
	(0.57)	(0.17)
Time	-0.003172	-0.004144
	(-0.53)	(-1.48)
City*Time	-0.001017	-0.004369
	(-0.15)	(-1.5)
GDP of real estate growth	0.000000	0.000000
	(0.07)	(2.51)**
10-year government bond yield	-0.017987	0.165685
	(-0.07)	(1.16)
Unemployment rate	0.078456	0.387327
	(0.35)	(2.24)**
Population growth	-0.000000	-0.000001
	(-0.60)	(-1.71)*
Constant	0.005131	-0.089955
	(0.27)	(-2.33)**
R^2	0.0163	0.0918
Prob > F	0.8014	0.0022

Table 4: *Result of the regression for Condos Prices*

This table shows the result of the regression for prices of condos as Y_i. *significant at 10% level; ** significant at 5% level; *** significant at 1% level.

Variable	Overall Market	Vancouver West
City	0.001524	0.011860
	(0.37)	(2.7)***
Time	-0.000842	0.006149
	(-0.24)	(1.84)**
City*Time	**-0.004750**	**-0.006367**
	(-1.22)	**(-2.07)****
GDP of real estate growth	0.000000	0.000000
	(1.03)	(1.66)**
10-year government bond yield	0.028137	-0.171093
	(0.18)	(-1.06)
Unemployment rate	-0.127055	0.608584
	(-0.97)	(2.67)**
Population growth	0.000000	0.000001
	(1.00)	(1.50)
Constant	0.030486	-0.112281
	(0.39)	(-2.07)**
R^2	0.0387	0.0765
Prob > F	0.4542	0.0099

Table 3 and table 4 contains the estimated treatment effect of British Columbia's Speculation and Vacancy Tax (SVT) on the detached and condos prices of Vancouver West using the DID model equation. We also repeat the test for attached housing property (Appendix table 4). For different types housing property in overall market, all the coefficients of City*Time are not statistically significant, indicating that the prices of different types of housing property in Vancouver are not significantly influenced by British Columbia's Speculation and Vacancy Tax because the prices of different housing properties

are not significantly decreased compared with Toronto's housing property respectively, where no similar tax act is implemented. Additionally, all the other reexamined coefficients are not statistically significant.

When we focus on Vancouver West's single-family (detached) and condos, the coefficient of condos' City*Time indicates that the condos' prices in Vancouver West is 0.6367% lower than in Toronto Central due to the introduction of the SVT act. Unlike the regression of overall market or different types of housing property, the coefficients of City*Time is statistically significant at 5% level, demonstrating that in Vancouver West there is negative influence on condos' prices because of British Columbia's Speculation and Vacancy Tax compared to Toronto Central, where no similar tax act is implemented and housing price of housing are close to Vancouver West before the Speculation and Vacancy Tax act. In F-test, Prob > F = 0.0099 so all the coefficients are jointly significant in this specification.

Additionally, the coefficient of real estate GDP is positive and statistically significant at 5% level, demonstrating that the growth rate of housing price in Vancouver West would increase with the increase of GDP of real estate growth in Vancouver. The coefficient of 10-year Canadian government bond yield is positive and statistically significant at 5% level, indicating that the growth rate of housing price in Vancouver West would be higher when 10-year Canadian government bond yield is increasing.

6 Conclusion

Our paper investigates the effect of British Columbia's Speculation and Vacancy Tax (SVT) on the housing price in Vancouver. With panel dataset constructed from customized time and city variables and various data sources in Vancouver and Toronto between November 2009 and October 2019, this paper estimates a DID model using differences before and after the implementation of British Columbia's Speculation and Vacancy Tax between Vancouver and Toronto on housing price, including the two cities' overall market, specific region and specific types of housing property. We also reexamine other economic factors referring to the existing literature, such as the GDP of the real estate and rental and leasing sector, the 10-year government of bond yield, the local unemployment rate and local population growth.

From the empirical analysis of overall market, we cannot detect the significant effect of Speculation and Vacancy Tax on the price of housing property in Vancouver after the implementation. Only the parameters of GDP of real estate growth and unemployment rate are reexamined to be statistically significant. We could observe the decrease of housing price in Vancouver from the price chart after the tax policy entered into force. The decrease is also reflected by the negative coefficient of City*Time although it is not significant. The insignificant results may indicate the obstacle of our study. The benchmark prices we choose are the prices of typical homes with the various qualitative housing features (near

shopping center, schools, transportation, etc.) and defined by different Real Estate Board in Vancouver and Toronto. As a result, even though the prices of "benchmark" housing properties are transaction data from real estate firm, they cannot represent the real transactional level of the housing price in Vancouver. Perhaps this is the reason why we cannot detect the certain effect of the Speculation and Vacancy Tax.

Focusing on a specific region's housing price, we still cannot detect that British Columbia's Speculation and Vacancy Tax has significantly impact on the housing price of Vancouver West compared to Toronto Central. All the other factors mentioned by other researches are not statistically significant neither.

When we combine specific region and certain type of housing property together, we detect an impact for the market segment we expect to be most affected by the implementation of SVT— condos in Vancouver West. The empirical result from this study indicates that British Columbia's Speculation and Vacancy Tax has a significantly negative impact on the condos' prices of Vancouver West compared to Toronto Central. We find the particular type of housing property is valuable for further Canadian housing prices study. In the reexamination, the GDP of real estate growth in Canada and 10-year Canadian government bond yield have significant effect on the housing price, which is consistent with the conclusion of the existing researches.

The difference between overall market and Vancouver West may reflect the phenomenon that foreign buyers or investors from other parts of Canada tend to buy condos

in the expensive neighborhoods in Vancouver. Also, investing in condos is a more common opportunity for speculation among the most of buyers because condos are much cheaper than detached and attached housing property. Therefore, we can expect the effect of the certain tax policy to be stronger on the condos.

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Appendix

Table 1: Unit Root Test: ΔLog(*Yi*) of Overall market prices

Levin-Lin-Chu unit-root test Ho: Panels contain unit roots Ha: Panels are stationary		Statistic	p-value
Unadjusted t		-9.8502	N/A
Adjusted t		-8.3176	0.0000
Fisher-type unit-root test **Ho: All panels contain unit roots** **Ha: At least one panel is stationary**		**Statistic**	**p-value**
Inverse chi-squared	P	91.0394	0.0000
Inverse normal	Z	-8.4227	0.0000
Inverse logit t	L	-18.4704	0.0000
Modified inv. chi-squared		30.7731	0.0000

Table 2: Unit Root Test: ΔLog(*Y*i) of detached, attached & condos prices

Levin-Lin-Chu unit-root test						
Ho: Panels contain unit roots		Detached		Attached		Condos	
Ha: Panels are stationary		Statistic	p-value	Statistic	p-value	Statistic	p-value
Unadjusted t		-9.1891	N/A	-10.3199	N/A	-8.3211	N/A
Adjusted t		-7.1331	0.0000	-8.9657	0.0000	-6.2171	0.0000
Fisher-type unit-root test							
Ho: All panels contain unit roots							
Ha: At least one panel is stationary		Statistic	p-value	Statistic	p-value	Statistic	p-value
Inverse chi-squared	P	116.3227	0.0000	144.1746	0.0000	124.3972	0.0000
Inverse normal	Z	-10.2303	0.0000	-11.4917	0.0000	-10.6109	0.0000
Inverse logit t	L	-23.6000	0.0000	-29.2507	0.0000	-25.2381	0.0000
Modified inv. chi-squared		39.7121	0.0000	49.5592	0.0000	42.5668	0.0000

Table 3: Unit Root Test: ΔLog(*Y*i) of Vancouver East and Toronto Central housing prices

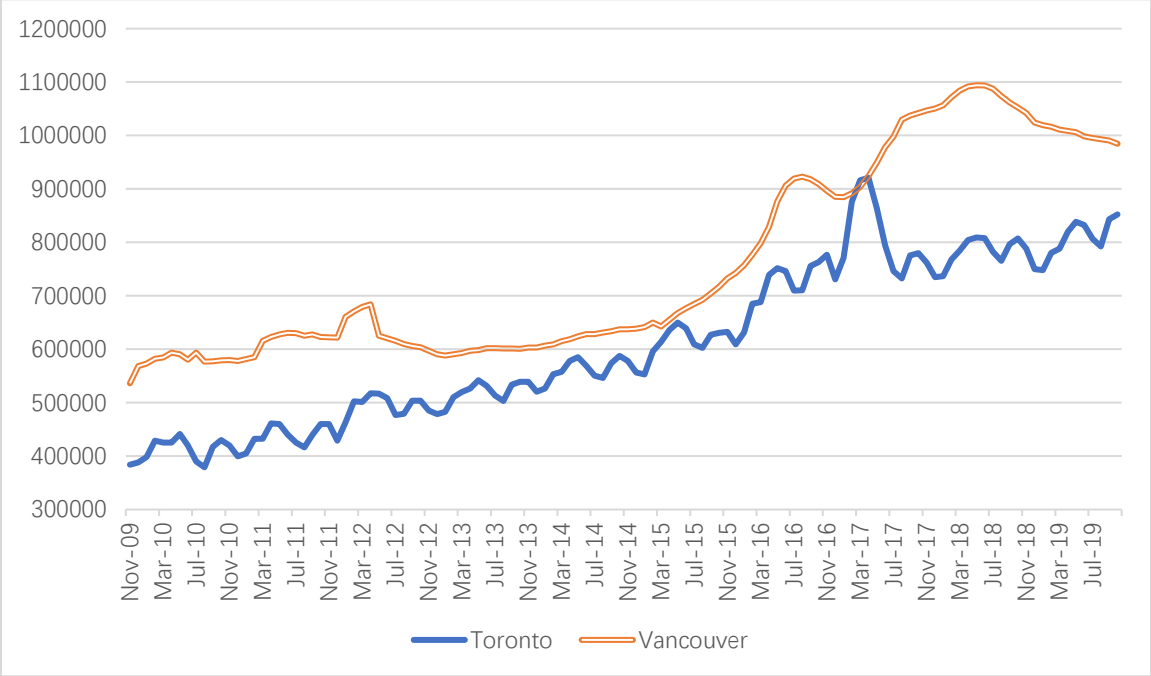
Levin-Lin-Chu unit-root test			
Ho: Panels contain unit roots			
Ha: Panels are stationary		Statistic	p-value
Unadjusted t		-8.5468	N/A
Adjusted t		-7.6141	0.0000
Fisher-type unit-root test			
Ho: All panels contain unit roots			
Ha: At least one panel is stationary		Statistic	p-value
Inverse chi-squared	P	38.8687	0.0000
Inverse normal	Z	-5.4379	0.0000
Inverse logit t	L	-7.8858	0.0000
Modified inv. chi-squared		12.3279	0.0000

Table 4: Result of the regression for Attached Property Prices

This table shows the result of the regression for price of detached housing property in Vancouver as Y_i. *significant at 10% level; ** significant at 5% level; *** significant at 1%.

Variable	Coefficient
City	0.000407
	(0.06)
Time	-0.003761
	(-0.62)
City*Time	-0.001940
	(-0.31)
GDP of real estate growth	0.000000
	(0.78)
10-year government bond yield	0.106200
	(0.34)
Unemployment rate	0.175668
	(0.47)
Population growth	-0.000000
	(-0.01)
Constant	-0.057164
	(-0.68)
R^2	0.015
	Prob > F = 0.8331

Figure 1: Benchmark Price of Overall Housing Market



Source: Real Estate Board of Greater Vancouver and Toronto Real Estate Board