

Factors That Explain Property Price Changes in Québec

Property prices are influenced by several factors. Among these factors, three are considered fundamental: income, demographics and interest rates. We measured the effect of these three variables on the evolution of property prices and we are now presenting our main findings.

There has been a solid increase in property prices in Québec in the last thirty years, and the period between 2000 and 2010 was exceptionally prosperous¹. Between the fourth quarter of 1980 and the fourth quarter of 2011, the average price of properties in Québec, all property categories combined, increased by 422 per cent, while inflation² only rose by 163 per cent. As a result, the average property price in Québec almost doubled in real terms³ during this period.

However, price changes were far from uniform throughout this period. In chart 1, we can identify periods of moderate price growth, price decreases, stability and strong growth. What underlying factors explain these changes in price trends?

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Chart 1: Average property price in Québec (quarterly data)



Sources: CREA from 1980 to 2002, QFREB by Centris® from 2002 and Statistics Canada.

The evolution of property prices, in real terms, is primarily determined by the evolution of the three fundamental factors mentioned earlier: income growth, population growth, and changes in interest rates⁴. To quantify the impact that each factor had on the evolution of prices over the last thirty years, we developed a model that uses quarterly data from the first quarter of 1980 to the fourth quarter of 2011. This model allowed us to isolate the individual impact of each of these three factors on average property prices in Québec⁵. Here are our results.

¹ See: [Residential Real Estate Prices More Than Doubled in Québec Between 2000 and 2010](#) for more information.

² Measured by the [Consumer Price Index](#) published by Statistics Canada.

³ To obtain the increase in real terms, meaning adjusted for the effect of inflation, we convert all prices into 2002 constant dollars. We therefore calculated that the average price in the fourth quarter of 1980, in 2002 dollars, was \$111,174 and the average price in the fourth quarter of 2011, in 2002 dollars, was \$220,592. Price growth in real terms during this period was therefore $98\% = ((220,592/111,174) - 1) * 100$.

⁴ [« Déterminants du prix réel des logements au Canada »](#), M. Fortin and A. Leclerc, *l'Actualité économique*, vol. 78, n° 3, 2002, p. 293-320.

⁵ This means we are quantifying the impact of one factor on prices, while leaving the other factors unchanged.

Demographics Have a Significant Impact on Prices

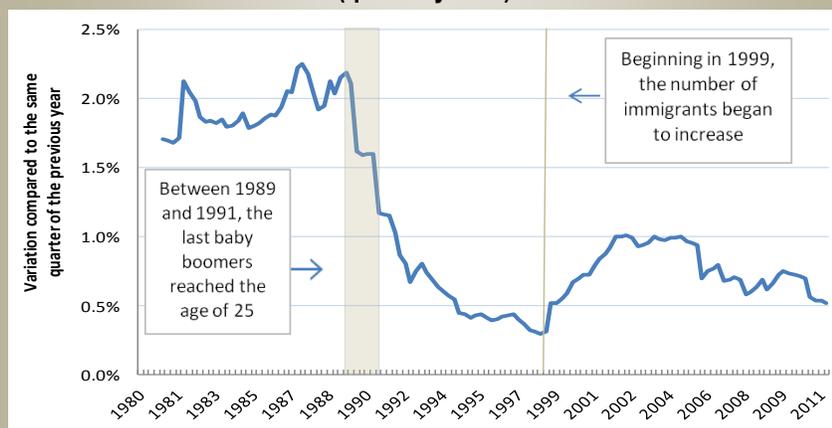
We noticed, firstly, that an increase in population among people between 25 and 64 years of age largely explained the price changes observed between the fourth quarter of 1980 and the fourth quarter of 2011. We believe that most buyers fall into this age bracket and, as a result, population changes in this age group – more than population changes in Québec's total population – best explain changes in property prices⁶.

During this period, the number of people belonging to this age group increased by approximately 40 per cent. According to the model we developed, a 1 per cent increase in this segment of the population would lead to a 3.5 per cent increase in average property price approximately two years later, all other things being equal.

Once the last of the baby boomers reached the age of 25 in the early 1990s, the increase in number of persons aged between 25 and 64 years began to slow, as shown in chart 2. This slowdown, which was observed throughout the decade, exerted downward pressure on property prices. Then, the rebound in the number of people in this age bracket in the late 1990s, due mainly to the rapid increase in the number of immigrants, stimulated the real estate market and fuelled the increase in property prices that was observed in the early 2000s.

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Chart 2: Increase in population between 25 and 64 years of age in Québec (quarterly data)



Sources: Statistics Canada, the ISQ and QFREB estimates.

Income Growth Affects Price Growth With a Delay of Approximately Three Quarters

Personal disposable income in Québec, in real terms, increased by approximately 56 per cent between the first quarter of 1981 and the fourth quarter of 2011⁷, which allowed buyers to allocate a higher amount of money to the purchase of their property. Based on the results of our model, we estimate that a 1 per cent increase in income would lead to a 0.4 per cent increase in property prices. For example, an increase in disposable income from \$100,000 to \$101,000 (equivalent to a 1 per cent increase), would cause property prices to increase from \$100,000 to \$100,400 (an increase equal to 0.4 per cent), all other things being equal.

Interest Rates Also Play a Role in Property Prices

Mortgage rates play an important role in buyers' borrowing power. When mortgage rates are low, potential buyers are able to pay a higher price for a property because they can borrow a higher amount from their financial institution for the same monthly payment. According to the results of our model, a 1 percentage point decrease in

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⁶ The population between 25 and 64 years of age was estimated using data from Statistics Canada and the Institut de la statistique du Québec (ISQ).

⁷ Seasonally adjusted and annualized data. Source: ISQ.

mortgage rates would lead to a quarterly increase of approximately 1 per cent in property prices, with a lag of approximately two quarters. For example, a decrease in mortgage rates from 6 per cent to 5 per cent for a five-year term (the equivalent of a 1 percentage point decrease) would lead, on average, to a 1 per cent increase in property prices, all other things being equal.

Other Factors That Have a Significant Impact on Prices

The vacancy rate for rental properties⁸ as well as conditions for accessing credit also had an impact on property prices in the period we examined. When the vacancy rate moves away from equilibrium (estimated at 3 per cent) and decreases, this has an upward impact on property prices, all other things being equal. When households are faced with a smaller choice of available rental properties they are more inclined to buy a home, which increases demand and exerts upward pressure on prices.

In the early 1990s, conditions for accessing mortgage credit eased. The Home Buyers' Plan (HBP) came into existence in 1992. The minimum down payment required to obtain an insured mortgage decreased from 10 per cent to 5 per cent for first-time buyers in 1992 and for all buyers in 1998. These measures allowed a greater number of potential buyers to meet the conditions for obtaining a mortgage. To measure accessibility to credit, our model used the ratio between the volume of residential mortgage loans granted by chartered banks⁹ and the available personal disposable income in Québec. When conditions for accessing a mortgage become more relaxed, this ratio increases. According to our results, an increase in this ratio has an upward impact on property prices, all other things being equal.

The changes in property prices observed between the fourth quarter of 1980 and the fourth quarter of 2011 also reflected changes in the size and quality of houses in Québec. However, we have not found data that allows us to satisfactorily measure the evolution of these features in the period examined. As a result, these factors were omitted from our model and could not be quantified.

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This empirical study was conducted using quarterly data on average property prices in Québec published by The Canadian Real Estate Association (CREA) and the QFREC. Price changes were calculated from the first quarter of 1981 to the fourth quarter of 2011, and were compared to the same quarter in the previous year. These results are not intended to predict future changes to property prices in Québec, but rather to measure the impact that certain factors, such as demographics, income and interest rates, had on the average price of properties over the past thirty years.

⁸ Source: Canada Mortgage and Housing Corporation.

⁹ Source: Statistics Canada.

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