



The price ripple effect in the Vancouver housing market

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ABSTRACT

Attempts to model the dynamic characteristics of a housing market include examining the spatial diffusion of price changes from an epicenter through a regional or national network of geographic units. Less common has been the study of a ripple effect of price changes within a single metropolitan area, with implications for the erosion of residential affordability. Such trends have particular salience within the Vancouver metropolitan area, the least affordable housing market in North America. Using quarterly price data from local real estate boards, we examine price changes through municipal regions from 2005–2017, a period including several externally-induced price shocks. Several techniques test for a ripple effect in price movements. A time lag of three months consistently exists in the communication of price shocks from an originating epicenter to other parts of the metropolitan region, with longer lags with several more distant municipalities, confirming the presence of an intra-metropolitan ripple effect.

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Ripple effect; price diffusion; Vancouver housing market; affordability; price volatility

Introduction

Vancouver's rapidly inflating housing market has become a celebrated case in North American residential real estate (Ley & Tutchener, 2001; Moos & Skaburskis, 2010). Following the Global Financial Crisis (2008–09) it achieved the unwelcome status of having the least affordable housing among North American cities relative to household income (Demography, various years). Impaired access to the rental and ownership markets is associated with serious household debt loads (Walks, 2013), crowding, homelessness, long commutes, out-migration, and actual and potential labor shortages (Vancity, 2015). Within a broader financial context of unusual credit and mortgage availability, various explanations have been posited for Vancouver's price inflation and subsequent lack of affordability. While urban economists and the real estate industry have mooted deficient supply (CMHC 2018; UDI, 2017), an alternate perspective has emphasised a surfeit of investor-driven demand, including trans-Pacific capital flows (Gordon, 2016; Ley, 2017). By 2016, Vancouver's market was regarded as unstable, with a UBS report on housing bubbles casting it as the most likely among a set of global cities to develop volatile bubble characteristics (UBS, 2016). Its pronounced residential price inflation makes

region. The panel analysis also revealed the significant association between price change in a municipality and the changes in neighboring municipalities. The highest coefficients were observed for simultaneous change among neighboring municipalities, but there is also a significant relationship against a one-quarter lag. Intercorrelations between the two epicenters and other municipalities (Table 2) also showed stronger associations with the proximate municipalities of North Vancouver and Burnaby for simultaneous price changes. Of course, with a contagious process like the ripple effect, we would expect such a “chain reaction” between spatial units and their neighbors, while at the same time remembering the continuing role of the epicenter, “because the Westside is where the ‘chain reaction’ starts” (Lee-Young, 2018). This observation by a local realtor is upheld by the continuing significance of the Vancouver Westside epicenter in the panel regression when such neighboring effects are included.

Driving the ripple effect are the behavioral processes of household replacement and displacement and (sometimes irrational) rising aspirations by sellers especially those close to inflating submarkets. In policy-relevant terms, our results show that escalating prices in central districts are not confined to their own high-priced submarkets, but become a source of price inflation and declining affordability in a much larger metropolitan region. The existence of the ripple effect means that price shocks will diffuse outwards, usually with declining strength with distance from epicenters, reducing housing affordability according to the strength of the effect. Future research of a more behavioral nature could usefully examine the roles of displaced and replaced demand, as well as raised expectations, in shaping the ripple patterns we have observed.

Note

1. As there were no changes in the final fitted models for the majority of municipalities, we do not report the regression results for this second specification separately.

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