House Price and Income Inequality in Canada: The Instrumental Variable Approach

A novel approach in using developable land per capita to understand the impact of rising home prices on income inequality in Canada.

BACKGROUND

Decades of rising income inequality and rising home prices across major Canadian cities.

Income inequality has been increasing in Canada, especially among major cities. Between 1982 and 2010, the income of the bottom 90% increased by a meagre two percentage points while the income of the top 10% increased by more than 75% (Green, Riddell, and St-Hilaire, 2017). The increase in income inequality seen in Canada is almost exclusive to major cities; for instance, in 2014, Calgary posted an increase in inequality four times higher than the national average since 1982, and Vancouver and Toronto followed closely behind with increases that are 2.5 and three times higher, respectively (Fong, 2017).

During the same period, average house price in Canada has increased significantly from around $150,000 in the late 1990s to around $500,000 in recent years. A similar trend is also observed in the rental market where the average rental price has almost doubled for a two-bedroom apartment, from $568 in 1992 to $962 in 2016 (CMHC Rental Market Survey).

OBJECTIVE

Could house price escalation be worsening income inequality? This study uses an innovative approach to unearth the truth.

This study examines how residential house prices impact income inequality as measured by the Gini coefficients for selected Canadian census metropolitan areas (CMAs) and census agglomerations (CAs). Since housing costs account for a large proportion of household income and have long been recognized as a factor contributing to poverty and to inequality, similar to Hyun Choi and Green (2017), we consider both total nominal household income and residual income in calculating the Gini coefficients[1].

FINDINGS AND IMPLICATIONS

Rising home prices may point to a possible displacement problem associated with gentrification in major cities.

We find a statistically significant and negative relationship between the house price and the Gini coefficients. Specifically, we find that an increase of 1% in the median sale house price leads to a reduction in the Gini coefficient by about 6% for the nominal income and by about 4.5% for the residual income, implying that the income inequality improves as result of price increase[2].

However, the finding that house price negatively impacts income inequality does not imply that house price escalation is a panacea for income inequality and further study is needed to explain the observed relationship. One hypothesis that can be drawn from the labour and productivity literature is that high-skilled workers are likely to flow into high productivity areas, increasing income level in the region, while the competition for scarce land becomes fierce. This upward pressure on house prices further prevent low-skilled workers from moving into the area, resulting in less income ranges and therefore an improved income inequality measures (lowering Gini coefficients) for the area. The impact of rising house prices on inequality measures for broader areas beyond ones included in this study, however, could be ambiguous. With the Census of Population and the NHS being cross-sectional data, we are unable to test this hypothesis here.

Nevertheless, the finding from this study serves to start a discussion among policy makers on the contradicting objectives of different policies at play. For instance, one objective of tax policies is to reduce income inequality, while housing policies, especially ones that generate demand, could favour escalating house prices, which may in turn exacerbate the overall inequalities.

[1] Residual income is the total household disposable income less total housing expenses. Housing expenses for homeowners include, where applicable, mortgage payments, property taxes and condominium fees, costs associated with electricity, heat, water and other municipal services. For renters, housing expenses include the rent and costs associated with electricity, heat, water and other municipal services.

[2] For complete results, see table 4 and 5 in the full report (link provided at the end).

REFERENCES

Fong, F. (2017). *Income Inequality in Canada: The Urban Gap.* CPA Paper.

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Saiz, A. (2010). *The geographic determinants of housing supply. The Quarterly Journal of Economics*, 123(3), 253-1296.

FURTHER READING

Full report – *House Price and Income Inequality in Canada: The Instrumental Variable Approach* (https://eppdscrmssa01. blob.core.windows.net/cmhcprodcontainer/sf/project/archive/ research_5/69676_rr.pdf)

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