The Impact of Immigration on Housing Prices in Ontario

Seminar Policy Paper

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1. Abstract

Canada's growing housing affordability crisis has intensified criticism of immigration policy, with public concern rising over whether increased immigration is contributing to unsustainable home prices. This paper investigates the relationship between international immigration and housing prices across Ontario's urban centers between 2007 and 2023. Ontario, the top destination for new immigrants, has experienced immigration-driven population growth that has exceeded housing construction.

To address the endogeneity of immigrant settlement, we used a shift-share instrumental variable based on historical settlement patterns. We find that a 1 percent increase in the permanent immigration rate raises home prices by about 5.3 percent when we do not account for people moving out. However, this effect is almost entirely offset by native out-migration. We estimate that for every 1,000 new immigrant arrivals, approximately 992 local residents are displaced, on average. As a result, the overall price effect falls to around 1.7 percent and is not statistically significant.

Our findings suggest that immigration has a meaningful short-run impact on housing prices, but this effect is largely offset by the displacement of existing residents. We propose policies to improve housing supply, encourage immigrant settlement in less-constrained regions, and support households vulnerable to rising housing costs. These findings contribute to a clearer understanding of the link between immigration and affordability, helping to inform both housing and immigration policy in the face of growing demographic and political pressures.

2. Introduction

This paper examines the short-run effect of international immigration inflows on home prices in Ontario. The goal is to inform Canadian immigration and housing policy by evaluating whether these inflows have contributed to worsening home affordability and rising wealth inequality, by exploring the economic mechanisms responsible for price changes.

Ontario has experienced sustained population growth over the past two decades, driven primarily by immigration. Over the same period, the region has also recorded a significant increase in home prices. Between 2005 and 2025, home prices in Southern Ontario approximately doubled relative to median family incomes, while immigration inflows consistently exceeded the rate of new housing construction (Initiative, 2025; CMHC, 2024).

According to Piketty and Zucman (2014), home price inflation contributes to wealth inequality. While homeowners benefit from increasing home values, those without property face growing barriers to entry, limiting long-term financial security and upward mobility.

Economic theory suggests that immigration may affect home prices through multiple channels. One channel is a direct increase in demand, as new arrivals require housing. Another potential channel is internal migration; increases in local housing costs, driven by immigration-induced demand, may result in some residents relocating to other regions, exerting downward pressure on prices in the original location. The observed price change reflects the combination of these effects (Sanchis-Guarner, 2023).

In the long run, housing supply tends to adjust to population-driven demand shocks, allowing prices to stabilize at a new equilibrium. However, this paper focuses on the short run; when housing supply is inelastic and prices respond more sharply to shifts in demand (De La Paz, 2014). Ontario, the primary destination for new immigrants, exhibits some of the lowest supply elasticities among Canadian provinces, due in part to geographic limitations and restrictive land-use regulations (Paixao, 2021).

To address potential endogeneity in the immigration variable, the analysis employs a shift-share instrumental variable based on historical immigrant settlement patterns and source-country inflows.

This paper uses home-price data from the Multiple Listing Service (MLS) and immigration data from Statistics Canada and Immigration, Refugees and Citizenship Canada (IRCC) to estimate the relationship between immigration levels and regional housing prices in Ontario. The analysis compares changes in immigration inflows with home-price trends across time and regions to assess the magnitude of this relationship. We aim to estimate how immigration-driven demand shocks affect housing prices in Census Metropolitan Areas[1] (CMAs) across Ontario, with a focus on how these shocks may displace existing residents.

We find that a 1% increase in the permanent immigration rate raises annual home price growth by about 5.3%, when population displacement is not considered. However, we also find evidence of native out-migration: for every 1000 new permanent immigrants, 992 local residents

[1] *Census Metropolitan Area*: Large urban centre of over 100,000 residents (Statistics Canada). See Appendix Table A.1 for the list of CMAs included in our study.

move away due to rising housing costs. After accounting for this out-migration, the net effect on price growth falls to roughly 1.7%, and is not statistically significant.

3. Background

Since the late 1800s, from bringing in railroad workers to attracting highly skilled professionals, immigration has played a fundamental role in shaping the Canadian national identity. Given Canada's large size and low population density, the country has historically relied on immigration to boost economic growth and fill labor shortages. Over time, Canadian immigration policy has continuously shifted to match economic and demographic needs. By 2021, more than 8.3 million people living in Canada (23% of the population) had immigrated there at some point (Statistics Canada, 2022).

Toronto, the capital of Ontario, has become the main destination for immigrants, with 46.6% of its population born outside Canada and 29.5% of all new immigrants settling there in 2021. While Canada has historically been an immigration-friendly country (Murphy, 2024), recent tensions such as housing prices have shifted public opinion. A 2024 poll found that 58% of Canadians now believe the country accepts too many immigrants (Neuman, 2024), and many Canadians are attributing the rising home prices to the higher demand from international immigrants (Mallees, 2024).

In Ontario, between 2015 and 2023, the ratio of annual immigrant arrivals to annual new housing supply increased from roughly 2:1 to nearly 5:1, indicating increased pressure on the housing market (Aristotle Foundation, 2025). The Canada Mortgage and Housing Corporation (CMHC) previously attributed Toronto's 2015 - 2019 house price rise to high international immigration and unresponsive housing supply. This rising unaffordability is evident in the fact that by 2024, the average mortgage payment for a home in Toronto consumed 73% of a median household's pre-tax income, up from 33% in 1999 (Initiative, 2025).

The rising unaffordability has caught the attention of key policymakers, where Conservative Party leader Pierre Poilievre has placed the housing crisis at the center of his political agenda, criticizing immigration policy and zoning regulations for worsening affordability (Kumar, 2023).

While economists generally agree that the political backlash against immigration is not economically rational given its long-term economic benefits such as contributing to GDP

growth, offsetting population aging, and expanding labor supply, it can still create significant short-term challenges in regions with limited housing supply (Aristotle Foundation, 2025). These challenges include rising home prices and rents that outpace wage growth, increased pressure on public infrastructure, and rising political tensions as growing segments of the population begin to associate immigration with housing unaffordability (OECD, 2025). Ontario's rapid demographic expansion has outpaced its housing infrastructure, making it a particularly relevant case for analysis.

4. Literature Review

According to fundamental economic theory, an increase in demand for a good, without a commensurate increase in supply, results in a higher equilibrium price (Giddings, 1890). This principle is particularly acute in housing markets, where supply is notoriously inelastic in the short run, meaning increases in demand predictably lead to higher home prices (DiPasquale & Wheaton, 1994). While factors like investment demand for housing play a role (Favilukis et al., 2017), population growth is the primary driver of housing demand.

For any given city, population growth is a function of natural increase (births minus deaths) and net migration, which is a composite of international immigration, internal migration, and emigration. This paper focuses on the unique role of international immigration, a topic that has presented researchers with a series of analytical challenges.

The first and most persistent challenge was endogeneity. A simple correlation between immigration and housing prices is difficult to interpret because immigrants often choose to settle in destinations with strong economies and appreciating housing markets. This creates a reverse causality problem, making it difficult to distinguish whether immigration causes price growth or is simply attracted by it. The body of research on this topic made a significant leap forward by addressing this issue with the adoption of the shift-share instrumental variable (IV) approach. Pioneered in this context by Card (2001) and Saiz (2007), this method uses historical settlement patterns of immigrants by country of origin to predict current inflows. Because these historical patterns are not tied to immediate local economic conditions, the instrument can isolate the causal effect of immigration on local markets. Saiz (2007), using this IV strategy, estimated that a 1% increase in the immigrant share of the population led to a 1% increase in rents and a 1.6% increase in housing prices in U.S. metropolitan areas.

However, with a tool to establish causality, a new puzzle emerged. Some influential IV studies, such as Sá (2015) in the United Kingdom, found that the net impact of immigration on house prices was surprisingly small or even negative. Sá (2015) estimated that a 1% increase in the immigrant share reduced average house prices by about 1.7%, driven by a displacement of low-income natives in areas with high immigrant inflows. This gave rise to a central theoretical challenge in the literature: an inflow of international immigrants can trigger two opposing effects on house prices. First, there is a direct demand shock, where new arrivals increase the demand for housing, putting direct upward pressure on prices. Second, this initial price shock can increase housing costs for the existing population, inducing some to move away to cheaper cities or regions. This "native flight," a form of internal migration, creates an indirect displacement effect, which puts downward pressure on prices and partially offsets the initial shock.[2]

This creates an analytical puzzle. The total observed effect of immigration on prices is the sum of the direct shock and the indirect displacement. Because this displacement is itself a consequence of the immigration-induced price increase, Saiz (2007) notes that internal migration is endogenous to immigration and cannot be treated as a control variable. The true causal impact of immigration is therefore ambiguous; a small net effect could simply mask two large, opposing forces.

Recent scholarship has focused on resolving this ambiguity by disentangling these effects. The work of Sanchis-Guarner (2023) offered a methodological advance. By analyzing micro-level data from Spain, she formally separated the total effect of immigration into its two components: the direct demand from new arrivals and the indirect effect from the mobility of existing residents. The study found that a 1% increase in the immigration rate increased home prices by 3.3% overall. Importantly, the direct effect accounted for only about 76% of this total, indicating that native inflows, not flight, amplified the price increase. This challenged the conventional assumption that locals move away from immigrant-dense areas.

Similar magnitudes have been found elsewhere. Unal et al. (2024), using administrative panel data from Germany and an IV based on past settlement patterns, estimated that a 1% increase in immigration led to a 2.9% - 3.5% increase in regional home prices, depending on the

[2] While the native flight response is often attributed to rising housing costs in the literature, it may also be influenced by other economic or social factors.

specification. While their study did not decompose the effect into direct and indirect components, the comparable magnitude strengthens the external validity of recent findings.

This study builds on these contributions by applying this identification strategy to Ontario, a province where recent immigration inflows have far exceeded the rate of new housing construction. Although recent studies used microdata to separate these effects, we propose an alternative approach to decompose these channels using aggregate data. Specifically, after estimating the total causal effect of immigration using the shift-share instrumental approach, we deliberately include controls for the main population displacement channels (internal migration and emigration).

Although controlling for post-treatment variables is generally discouraged, Angrist and Pischke (2009) explain that doing so can still be useful if the goal is to understand the partial or direct effect of the treatment, rather than to estimate the total effect. By doing so, our analysis isolates the direct demand shock of immigration, holding subsequent population displacement responses constant.

5. Data

This study constructs a panel dataset of 12 Canadian Census Metropolitan Areas (CMAs) spanning the years 2007 through 2023. The unit of observation is at the CMA-year level. Home price data are sourced from the Canadian Real Estate Association (CREA) using the MLS Home Price Index (HPI), which adjusts for property composition and characteristics, ensuring that observed price changes reflect market dynamics. Since HPI data are available monthly, the model uses HPI values from each June to align with the annual (year-ending June 30) population data.

Population flow data, including permanent immigration and internal migration, come from Statistics Canada's Components of Population Change. Population stock data are from the annual Population Estimates. These sources provide a complete panel from 2002 to 2024, allowing for the construction of lagged variables.

To address the endogeneity of immigration inflows, we construct a shift-share instrument for permanent immigration following the methodology of Saiz (2007) and Card (2001). This instrument uses historical immigrant settlement patterns from the 2001 Canadian Census

combined with national-level inflows by source country from Immigration, Refugees and Citizenship Canada (IRCC). The construction is detailed in the Methodology section.

Data on local economic conditions are sourced from Statistics Canada. Unemployment rates are from the Labour Force Survey, and median family income data are from the Survey of Labour and Income Dynamics and its successor, the Canadian Income Survey.

Table 1: Variable names and descriptions

Variable	Description	Unit	Source
HPI	**Home price index:** Composite home price index measuring home price changes over time, adjusted for property characteristics	Index points	Canadian Real Estate Association
pop	**Population:** The population of CMA *i* in year *t*	Persons	Demographic Estimates Program
imm	**Immigrant inflow:** Annual inflow of people from foreign countries to a given CMA in a given year; refers to a person who has been granted the right to live in Canada permanently by immigration authorities	Persons	Demographic Estimates Program
imm_z	**Predicted immigrant inflow:** Instrument for permanent immigration constructed using historical immigration settlement patterns	Persons	2001 Census, IRCC, Authors' calculation
$intMig$	**Internal migration:** The net movements of persons within Canada's geographical boundaries to or from a given CMA and year; includes within province and between province movements	Persons	Demographic Estimates Program
$emig$	**Emigrant outflow:** Net outflow of Canadian residents from CMA *i* to establish residence in a foreign country; includes Canadian citizens and immigrants	Persons	Demographic Estimates Program
$unem$	**Unemployment rate:** Unemployment rate in a given CMA and year	Percent	Labour Force Survey
$income$	**Household income:** The median household income level in a given CMA and year	Dollars	Canadian Income Survey, Survey of Labour and Income Dynamics
$area$	**Land area:** Total geographic land area of a CMA	Square kilometers	Population and dwelling counts
Λ	Year fixed effects to control for national trends	Dummy	Authors' calculation

Notes: (1) Variables are reported in their original form. All transformations used for estimation (e.g., normalization, differencing, and logging) are described in the methodology section.
(2) "Year" corresponds to the 12-month period ending June 30 of the listed calendar year.

6. Methodology

6.1. Preliminary Econometric Model

To disentangle the direct and indirect effects of immigration on housing prices, we begin with an OLS regression, building upon Saiz (2007). For a given year *t* and CMA *i*, we estimate the following OLS regression:

$$\Delta \ln HPI_{it} = \beta_1 \cdot immRate_{it} + \gamma \cdot unem_{it-1} + \mu \cdot \Delta \ln Income_{it-1} + \alpha \cdot \ln area_i + \Lambda_t + \Delta \epsilon_{it} \quad (\mathbf{1})$$

The dependent variable, $\Delta lnHPI_{it}$, is the annual change in the natural logarithm of the composite Home Price Index for CMA *i* in year *t*. The HPI index controls for the composition and quality of the housing stock, ensuring that observed price changes reflect market dynamics rather than shifts in housing quality or type. This first-difference specification controls for any time-invariant, CMA-specific unobserved heterogeneity (such as land availability or zoning laws). This approach also focuses the model on the short-run responsiveness of housing markets, as it observes year-on-year changes.

The primary independent variable, $immRate_{it}$, is the immigration rate, which is constructed to measure the demand shock from new international immigrant arrivals relative to the destination city's population. All population flow variables are constructed as rates by dividing the flow from the prior year *(t-1)* by the CMA's population from two years prior *(t-2)*. Formally, the immigration rate is defined as:

$$immRate_{it} = \frac{imm_{i,t-1}}{pop_{i,t-2}}$$

The one-year lag on the flow accounts for price stickiness, while the two-year lag on the population denominator mitigates simultaneity bias. This approach yields a standardized rate that allows comparisons across CMAs of different sizes.

The lagged unemployment rate ($unem_{it-1}$) is incorporated to account for the health of the local labor market, and the annual growth rate of nominal median family income ($\Delta lnIncome_{it-1}$) is included to control for changes in household purchasing power. Both of these variables are well-known determinants of housing prices (Jud et al., 1996). The natural log of the CMA land area is included to capture housing supply factors related to land availability.

Finally, Λ_t are year dummies, which capture country-wide economic changes across all CMAs over time, such as inflation and mortgage rates.

6.2. Instrumental Variable

As described by Saiz (2007), a key challenge is that $immRate$ is likely endogenous; immigrants may be attracted to cities with booming economies and rising house prices (reverse causality). To obtain a causal estimate, we instrument for $immRate$ using a shift-share instrument, following the methodology of Card (2001) and Saiz (2007).

The instrument uses the fact that immigrants tend to locate in areas where there are already immigrants from their home country. Our goal is to estimate the inflow of permanent immigrants to CMA *i* in year *t*, based on factors unrelated to the local economic conditions in year *t*. The approach begins by determining the number of immigrants from each source country *j* who resided in CMA *i* during our baseline period, the year 2001. This figure is then divided by the total population of immigrants from that same country *j* living anywhere in Canada during the same baseline period. This calculation yields the historical share of all immigrants from a given country *j* that chose to reside in a particular CMA *i* as of 2001.

This historical share is then multiplied by the total number of new permanent residents arriving in all of Canada from country *j* during a given year *t*. As shown in Equation (2), this operation generates the predicted inflow of immigrants from country *j* to CMA *i* for year *t*. This prediction signifies the number of immigrants who would likely have settled in CMA *i* if the settlement pattern for that nationality group had remained identical to its 2001 distribution. The final step of this methodology involves aggregating these predicted values across all source countries. This summation results in the total predicted number of immigrants moving to a specific CMA within a defined time period.

$$imm\_z_{i,t} = \sum_{j=1}^{M} \left(\frac{immigrants_{j,i,2001}}{immigrants_{j,Canada,2001}} \right) \cdot \Delta immigrants_{j,Canada,t} \quad (\mathbf{2})$$

To construct the final instrument used in our first-stage regression, this predicted number imm_z is then normalized by the CMA's population from two years prior. This creates a predicted immigration rate that serves as the instrument for our endogenous variable $immRate$. Appendix Table A.2 shows the first stage of the 2SLS estimation, where $immRate$ is regressed on this instrument and the other exogenous controls.

6.3. Estimating the Direct Effect vs. the Net Effect

The core of our analysis lies in decomposing the total causal effect of immigration to understand the distinct and opposing economic forces at play. We achieve this through a step-wise regression approach, presented across Table 5.

First, we establish the net effect of immigration. In the model presented in Column (2), we estimate Equation (1) using our shift-share instrumental variable. The resulting coefficient on immigration, β_1, represents the total causal impact on housing prices, capturing the combined result of the initial direct demand shock and any subsequent price-dampening effects from induced population displacement.

Next, we begin to disentangle these channels by controlling for variables that function as causal mediators. We empirically test the strength of these causal links in Appendix Table A.3. The results demonstrate a statistically significant causal effect of immigration on internal migration, validating its role as a key mechanism. Following the framework for mechanism analysis discussed by Angrist and Pischke (2009), controlling for a confirmed mediator is a valid strategy for estimating the partial or direct effect of a treatment. Therefore, in Column (3), we add the internal migration rate to the vector of controls. This specification allows us to estimate the direct price impact of immigration while holding the within-country displacement response constant.

Finally, in Column (4), we extend the analysis by adding the emigration rate. However, as shown in Appendix Table A.3, our analysis does not find a statistically significant link between immigration and emigration. For this reason, we include this final specification primarily as a sensitivity analysis. Its purpose is to test whether our estimate of the direct effect from Column (3) is robust to the inclusion of this additional, albeit non-significant, displacement channel. The stability of the immigration coefficient across both models would provide additional confidence in our core finding.

It is crucial to note that in this framework, the coefficients on the migration variables in Columns (3) and (4) are not interpreted causally; their role is to separate the price changes caused by these migration patterns from the initial impact of immigration. This allows the coefficient on permanent immigration in these final models to be interpreted as the direct price effect. All models are estimated with standard errors clustered at the CMA level using the CR2 adjustment to account for the small number of clusters and provide more conservative inference.

7. Data analysis

This section provides an overview of the data and explores preliminary relationships between the key variables before proceeding to the formal econometric analysis.

Table 2 presents the descriptive statistics for the variables used in our analysis, covering 194 CMA-year observations from 2007 to 2023. The data shows considerable variation across Ontario's metropolitan areas. The average immigration rate is 0.5% of the population, while the average net internal migration rate is similar at 0.4%. However, the wide standard deviation and negative minimum for the internal migration rate (-1.7%) indicate that while some CMAs attract residents from other parts of Canada, others experience significant net outflows. The average emigration rate is approximately 0.1%, five times lower than the average immigration rate. The dataset spans a period of dynamic economic conditions, with the annual unemployment rate ranging from 3.7% to 13.4%.

Table 2: Descriptive statistics

Variable	n	Mean	Std. Dev.	Min	Max
Home price benchmark	194	413,874	205,345	177,400	1,173,700
Population	194	909,984	1,647,000	104,253	6,837,468
Immigration rate	194	0.005	0.004	0.001	0.025
Internal migration rate	194	0.004	0.005	-0.017	0.022
Emigration rate	194	0.001	0.001	0.000	0.003
Unemployment rate	194	0.069	0.017	0.037	0.134
Median family income	194	84,650	12,913	64,300	125,660
Land area (sq. km)	194	2,270	2,118	595	8,047

Table 3 displays the correlation matrix for the main variables. This initial look at the data reveals several patterns that motivate our methodological approach. First, the correlation between the annual change in house prices ($\Delta \ln HPI$) and the immigration rate ($immRate$) is negative (-0.118). This counterintuitive result, which contradicts basic demand theory, suggests the presence of endogeneity, where immigrants may be systematically settling in initially cheaper areas, or other confounding factors are obscuring the true relationship. This reinforces the need for an instrumental variable strategy to uncover the causal effect.

Furthermore, the correlation matrix provides support for the paper's central displacement hypothesis. There is a moderate negative correlation (-0.557) between the international

immigration rate and the internal migration rate. This suggests that, on average, CMAs that receive more international immigrants tend to experience a net outflow of residents to other parts of Canada, providing preliminary evidence of a native flight mechanism.

Table 3: Correlation table

	ΔlnHPI	immRate	intMigRate	emigRate	unem	ΔlnIncome	logArea
ΔlnHPI	1.000						
immRate	-0.118	1.000					
intMigRate	0.169	-0.557	1.000				
emigRate	-0.221	0.298	-0.307	1.000			
unem	0.343	-0.089	-0.228	-0.182	1.000		
ΔlnIncome	0.334	0.057	0.104	-0.067	-0.065	1.000	
logArea	-0.038	0.542	-0.389	0.133	0.047	0.047	1.000

Finally, given the inclusion of several related migration and economic variables, we test for potential multicollinearity. To ensure the robustness of our estimates, we calculated Generalized Variance Inflation Factors (GVIFs) to properly account for the year fixed effects in the model. The results, presented in Table 4, show that the adjusted GVIFs (GVIF^(1/(2*Df))) for all predictors were well below conventional thresholds of concern (all values were below 2.1). This indicates that multicollinearity is not a significant factor driving the results of our analysis.

Table 4: Multicollinearity Diagnostics Using GVIF

	GVIF	Df	GVIF^(1/(2*Df))
imm	3.39	1	1.84
intMig	3.04	1	1.74
emig	1.88	1	1.37
unem	2.43	1	1.56
ΔlnIncome	4.40	1	2.10
logArea	1.54	1	1.24
factor(YEAR)	31.39	16	1.11

8. Results

8.1. Findings

This section presents the main empirical findings of the study. Our central result is that the statistically insignificant net effect of immigration on housing prices masks two opposing

forces: a direct price shock from new demand and a nearly complete offsetting effect from the displacement of existing residents. We first establish the validity of our instrument before presenting the evidence for this decomposition.

Appendix Table A.2 shows the first-stage regression results. The F-statistic for the excluded instrument is 395.8. This value exceeds conventional thresholds for assessing instrument strength, supporting a causal interpretation of the 2SLS estimates.

Table 5: Immigrant inflows and annual log price changes

		Origin Country Instrument		
	Δ Log price	Δ Log price	Δ Log price	Δ Log price
Variable	(1)	(2)	(3)	(4)
Immigration rate	1.346	1.651	5.341	5.944
	(0.497)*	(0.682)	(1.291)*	(1.337)**
Internal migration rate			3.718	3.696
			(0.731)**	(0.743)**
Emigration rate				-10.35
				(6.186)
Unemployment rate at T - 1	0.23	0.228	0.471	0.364
	(0.153)	(0.169)	(0.141)*	(0.17) .
Δ Log income at T - 1	0.633	0.63	0.702	0.708
	(0.522)	(0.543)	(0.525)	(0.53)
Log CMA area	-0.011	-0.012	-0.013	-0.014
	(0.004)*	(0.005)	(0.007)	(0.006)
Year fixed effects	Yes	Yes	Yes	Yes
Observations	194	194	194	194
Adjusted R-squared	0.832	0.832	0.841	0.843

Notes: (1) The dependent variable is the annual change in the log of the composite HPI.
(2) All specifications include year fixed effects. Robust standard errors, clustered by CMA using the CR2 adjustment, are in parentheses.
(3) The F-statistic for the excluded instrument in the first-stage regression is 395.8.

. Significant at 10%
* Significant at 5%
** Significant at 1%
*** Significant at 0.1%

Column (1) of Table 5 presents the OLS estimates for baseline comparison. Column (2) presents our 2SLS estimate of the net effect. The coefficient on the immigration rate is 1.651, which is not statistically significant (p = 0.1002).

While the size of this estimate is consistent with the 1.1% to 1.6% range found by Ottaviano and Peri (2012), our result lacks their statistical significance. This may be due to the statistical power of our analysis, which is limited by having only 12 CMAs for clustering. For comparison, a study like Saiz (2007) utilized a sample of over 300 cities. It is possible that with a larger number of clusters, our estimate would have achieved statistical significance.

Next, we test the central hypothesis of this paper: that the insignificant net effect found in Column (2) masks two larger, offsetting structural forces. We proceed by decomposing this total effect, adding controls for population displacement in subsequent models to separate the direct demand shock from the indirect price effects of native flight.

To investigate this, we first test for the presence of displacement channels. Appendix Table A.3 presents estimates of the causal effect of immigration on both internal migration and emigration. The results show a statistically significant negative effect of immigration on internal migration, with a coefficient of -0.992 ($p < 0.001$). This indicates that an immigrant inflow equal to 1% of a CMA's population leads to a net outflow of internal migrants equal to 0.99% of the local population. In other words, for every 1,000 new permanent immigrants arriving in a CMA, approximately 992 local residents leave, moving to a different city within Canada. Consistent with the literature, we interpret this as a price-induced displacement effect, though we acknowledge our model does not explicitly rule out other contributing factors. The magnitude of this displacement is similar to findings in other studies, such as the coefficient of -0.849 estimated by Sá (2015) for the UK. In contrast, the estimated effect on emigration is not statistically significant. This is evidence that immigration inflows lead to native out-migration, but not to increased emigration.

Returning to Table 5, Column (3) adds the internal migration rate as a control variable. As this is a confirmed causal mediator, its inclusion is justified under the framework of Angrist and Pischke (2009). Its role is to absorb the effects of population displacement, allowing the immigration coefficient to more cleanly reflect its direct impact on housing prices. When this displacement channel is included, the coefficient on the immigration rate increases to 5.341 and becomes statistically significant. This provides evidence that the insignificant net effect in Column (2) is a result of a direct price shock being offset by a large native out-migration response.

The magnitude of this direct effect is larger than that of the net effect. The coefficient implies that a 1% increase in the annual immigration rate (e.g., from 0.5% to 1.5% of the population) would, before accounting for any displacement, directly increase housing price growth by over 5.3%. This highlights the initial pressure that new arrivals place on the housing market.

Column (4) extends the analysis by also controlling for emigration. In this specification, the coefficient on the immigration rate is 5.944 ($p = 0.0099$). However, we have shown that emigration does not lie on immigration's causal path. Therefore, the emigration rate in Column (4) must be treated as a potentially endogenous control variable, which could introduce bias to our estimates. For this reason, the model in Column (3) is our preferred specification. This limitation is discussed further in the limitations section.

The direct effect estimated in our models (5.3%) is larger in magnitude than the direct effect of approximately 2.5% estimated by Sanchis-Guarner (2023) in Spain. The composition of the total effect in our study also differs. In our Ontario sample, the direct effect is substantially offset by internal out-migration, resulting in an insignificant total effect. In contrast, Sanchis-Guarner (2023) found that native in-migration amplified the initial shock, causing the total effect (3.3%) to be larger than the direct effect. This highlights that the nature of the displacement response is a key, context-specific determinant of the total price impact.

8.2. Limitations

The results indicate that the net effect of immigration on housing prices in Ontario is not statistically significant due to a large offsetting effect from internal out-migration. However, the direct demand shock, once isolated, is positive and significant. While the models are robust to multicollinearity and use a strong instrument, these findings are subject to the following caveats.

First, our analysis is, by design, focused on the short run. We do not model the potential for housing supply to adjust over the long term, which could mitigate these price impacts. Second, the generalizability of our findings may be limited to regions with similar housing market characteristics. In markets where construction can respond more readily to demand, the observed price effects would likely differ.

Third, a methodological challenge arises from the inclusion of the emigration rate in our final model (Column 4). Because our data does not show emigration to be on the causal path

from immigration, it cannot be justified as a mediator. Instead, it must be treated as a standard control variable. However, the emigration rate itself is likely endogenous, as it is determined by the same unobserved local economic conditions that simultaneously affect housing prices. Including an endogenous variable as a control in a 2SLS regression can introduce bias to the estimates (Dossani et al., 2025). For this reason, the specification in Column (3) represents our most reliable estimate of the direct effect. We present Column (4) to show that our core finding is not fragile.

A further limitation relates to the scope of population flows analyzed. Our study focuses specifically on the impact of permanent immigration, excluding other components of population change like natural increase (births minus deaths) and temporary immigration (international students, temporary foreign workers, asylum seekers). Natural increase is omitted because it represents a slow-moving demographic trend, whereas our first-difference model is designed to estimate the effect of more volatile, short-run shocks on annual price changes. Consistent with this theoretical reasoning, when the rate of natural increase was included in our preliminary models, its coefficient was statistically insignificant. Using GVIF, we found no evidence of multicollinearity.

The exclusion of temporary residents warrants specific explanation. Like permanent immigration, temporary inflows are likely endogenous. However, the data required to construct a shift-share instrument (similar to what we did for permanent immigration) is not readily available. Without a valid instrument, we cannot causally identify the effect of temporary immigration, and its inclusion would risk introducing endogeneity bias into the model. This constraint is complemented by our empirical testing. In preliminary models where temporary immigration was included, the variable was also not found to be statistically significant. For these reasons, and to maintain a clear and causally identified focus, our analysis is restricted to permanent immigration as the primary variable of interest.

Another limitation is the statistical power of our analysis, which is constrained by the use of only 12 Ontario CMAs. While this was sufficient to decompose the effect into its direct and indirect components, the small number of clusters makes it difficult to obtain a precise estimate of the total net effect. Future research using a national dataset, thereby incorporating a much larger number of metropolitan areas, would be a valuable extension. This would allow for more

precise estimation and provide greater confidence in the magnitude and statistical significance of the overall net impact of immigration.

Finally, a limitation exists regarding the specific mechanism driving the displacement effect. While our analysis in Appendix Table A.3 establishes a causal link between immigration inflows and internal out-migration, our paper proceeds with the interpretation that this displacement is driven primarily by upward pressure on local housing prices. This aligns with Sá (2015) and is a prominent theory in the economic literature. However, our models do not empirically test this theory.

It is possible that other factors, such as increased competition in the local labor market, could also contribute to the out-migration response. Disentangling the relative importance of these different channels was beyond the scope of this study but remains a valuable avenue for future research.

9. Policy Recommendations

The findings of this study have several implications for housing policy in Canada. The analysis indicates that the total price effect of immigration is the net result of a large, direct demand shock and a substantial, offsetting displacement of internal migrants. The statistically insignificant net effect, therefore, should not be misinterpreted as evidence that immigration places little or no pressure on the housing market. On the contrary, it reveals a market that is responding to demand pressures not through an increase in supply, but through the displacement of the existing population.

Displacement is not a sustainable solution to housing shortages. It is a symptom of a market's inability to absorb population growth. This mechanism exacerbates wealth inequality, as those who are priced out are often renters or lower-income residents forced to move away from centers of economic opportunity, while existing homeowners benefit from rising asset values. Furthermore, this dynamic does not solve the affordability crisis but merely relocates it, as displaced residents increase demand in surrounding, often smaller, communities.

One potential policy response to this demand shock could be a reduction in immigration levels. This approach, however, would stand in direct tension with the stated objectives of federal immigration policy, which relies on new arrivals to meet economic and demographic goals such as offsetting population aging and expanding the labor supply (Schinnerl &

Ellermann, 2023). Therefore, policy interventions should address the root cause of this dynamic: the market's inability to accommodate new demand. The following sections outline policy areas and options that are relevant to these findings.

1. Focus on Housing Supply Elasticity

The estimated direct effect of 5.3% points to the role of housing supply in price formation. Policies that increase the responsiveness of housing supply to changes in demand could therefore influence price outcomes.

- **Zoning and Land-Use Regulations:** One area for policy action involves municipal zoning rules. Amending land-use regulations to permit a wider variety of housing types (e.g., duplexes, townhouses, low-rise apartments) in areas previously restricted to single-family homes would increase the potential housing stock.
- **Permitting and Approval Processes:** The timelines for construction approvals can also affect supply responsiveness. Reviewing and modifying these processes to create more certainty and shorten project timelines is another potential policy lever.
- **Alignment of Growth Targets:** Coordinating federal and provincial immigration targets with municipal housing construction targets could facilitate more direct planning for population growth at the local level.

2. Address Regional Distribution of Population Growth

The finding of a near one-for-one displacement of internal migrants suggests that housing price pressures are being spatially relocated. Policies that influence the geographic distribution of population growth could address this dynamic.

- **Immigration Settlement Programs:** Federal programs such as the Provincial Nominee Program (PNP) and the Rural and Northern Immigration Pilot (RNIP) are existing mechanisms that can influence the settlement patterns of new immigrants, directing them to regions with greater housing capacity.
- **Infrastructure Investment in Mid-Sized Cities:** The attractiveness of non-major metropolitan areas as settlement destinations is related to their economic opportunities and public infrastructure. Investment in these areas is a complementary policy consideration.

In conclusion, the findings demonstrate that immigration is not the root cause of housing unaffordability, but rather a catalyst that exposes failures in the housing market. Effective policy must therefore focus on correcting these underlying conditions. By building a more responsive housing supply and guiding population growth more strategically across regions, Canada can ensure that the economic and demographic benefits of immigration are not undermined by a housing crisis that displaces residents and deepens inequality.

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11. Appendix

Table A.1:

Rank	CMA	Population 2005	Immigrants 2005 - 2024	Impact %
1	Toronto	5,248,132	1,933,548	36.84
2	Ottawa - Gatineau	1,222,671	196,078	16.04
3	Hamilton	715,820	86,998	12.15
4	Kitchener - Cambridge - Waterloo	480,635	86,327	17.96
5	London	471,435	64,851	13.76
6	St. Catharines - Niagara	402,375	30,582	7.60
7	Guelph	137,273	18,181	13.24
8	Barrie	179,342	11,805	6.58
9	Kingston	157,681	9,721	6.16
10	Brantford	134,439	6,687	4.97
11	Peterborough	119,842	4,815	4.02
12	Belleville - Quinte West	103,345	3,126	3.02

Notes: (1) Impact = (Immigrants/2005 Population), total immigrants obtained as the sum of permanent immigrant inflows from 2005 to 2024.
(2) Due to data limitations, the following Ontario CMAs were not included in the study: Greater Sudbury, Oshawa, Thunder Bay, and Windsor.

Table A.2: First stage for instrument

	Immigration rate
Predicted immigration rate (shift-share)	0.841
	(0.081)**
Other CMA controls	Yes
Year fixed effects	Yes
Observations	194
Multiple R-squared	0.908
Adjusted R-squared	0.897

Notes: (1) This table presents the first-stage regression for the 2SLS models. The dependent variable is annual immigration rate (immRate).
(2) All specifications include year fixed effects. Robust standard errors, clustered by CMA using the CR2 adjustment, are in parentheses.

. Significant at 10%
* Significant at 5%
** Significant at 1%
*** Significant at 0.1%

Table A.3: Impact of immigration on internal migration and emigration

	Origin Country Instrument	
	Internal migration rate	Emigration rate
	(1)	(2)
Immigration rate	-0.992	0.06
	(0.065)***	(0.041)
Unemployment rate at T - 1	-0.065	-0.01
	(0.022)*	(0.005) .
Δ Log income at T - 1	-0.019	0.001
	(0.022)	(0.005)
Log CMA area	0.000	0.000
	(0.000)	(0.000)
Year fixed effects	Yes	Yes
Observations	194	194
Adjusted R-squared	0.622	0.407

Notes: (1) This table presents the causal effect of permanent immigration on displacement channels, estimated using the 2SLS model. The dependent variable is listed in each column header.

(2) All specifications include year fixed effects. Robust standard errors, clustered by CMA using the CR2 adjustment, are in parentheses.

. Significant at 10%
* Significant at 5%
** Significant at 1%
*** Significant at 0.1%