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The Impact of Mortgage Interest Costs on Rental Inflation Amid Population Growth

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Introduction

Canada's housing market has recently been shaped by two powerful, interrelated trends. First, rapid population growth has intensified demand for housing, with newcomers typically putting upward pressure on rental prices.[1] Second, rising mortgage interest costs (MIC) have increased the financial burden on landlords—who may pass these costs on to tenants through higher rents (Albuquerque and Lenney, 2023)[2]—and on prospective homeowners, who may delay their purchase and instead continue to rent (Dias and Duarte, 2019; Abramson et al., 2025).

These forces may interact through a state-dependent cost-pass-through mechanism. In particular, the extent to which these costs translate into higher rents is likely to depend on demand conditions in the rental market. When population growth is strong, tighter rental markets may strengthen landlords' pricing power, potentially amplifying the passthrough of higher financing costs to rents. By contrast, when population growth is closer to historical norms, this passthrough may be more limited.

In this note, we examine this hypothesis empirically by assessing whether the impact of mortgage interest costs on rental inflation is indeed amplified during periods of rapid population growth, and we discuss the implications for monetary policy.

Key takeaways:

- We find evidence of **a positive and nonlinear relationship between MIC and rental inflation:** the impact of MIC on rents is small when population growth is near its historical norm, but significantly stronger during periods of rapid population growth.
- This pattern is consistent with a **nonlinear Phillips curve**, where cost pressures are more likely to feed into higher prices when demand is elevated.
- It highlights a **short-term trade-off for monetary policy in the rental market, particularly during episodes of strong population growth**: while tighter policy reduces overall inflation, it simultaneously increases rental inflation through higher landlords' financing costs and housing demand, rotating away from owning towards renting.

[1] On average, it takes 10 years for immigrants in Canada to transition from renting to owning (MPR July, 2024).

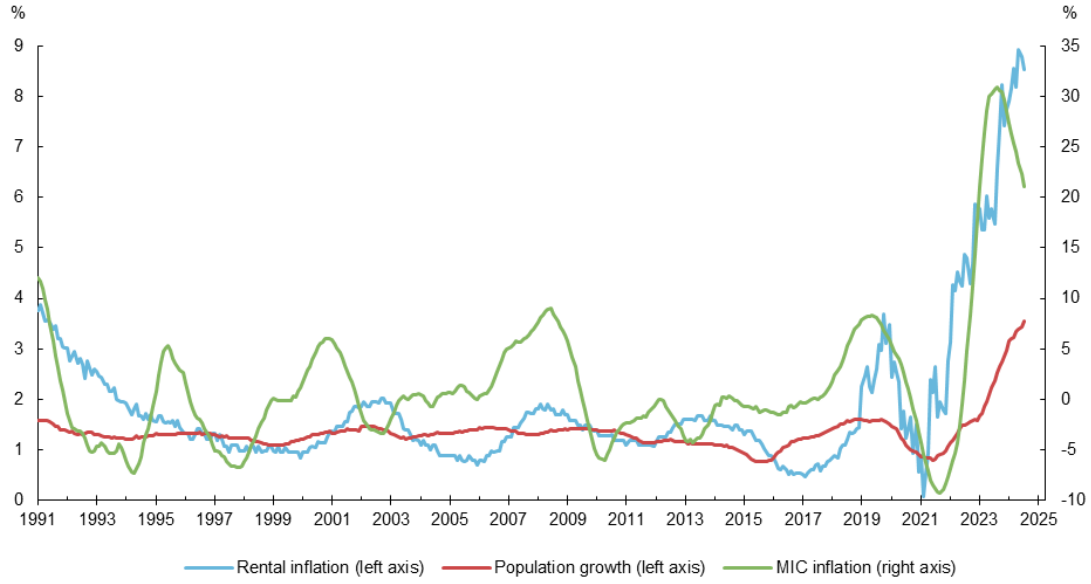
[2] From an asset pricing perspective, it is not surprising to expect rental yields to increase following an interest rate hike, much like returns on other assets. However, the actual pass-through to rents is likely to be gradual due to significant adjustment costs, stemming from rigidities in rental contracts, institutional frictions in the rental market and house price responses.

Mortgage interest costs, population growth, and rental inflation: stylized facts and empirical approach

Figure 1 shows rental inflation (blue line), population growth (red line), and MIC inflation (green line). Over the full sample, MIC inflation and rental inflation are moderately correlated, with a correlation coefficient of **0.58**. This correlation **increases to 0.67** during periods when population growth exceeds its historical average of 1.3%. Notably, the relationship remains positive when focusing only on the pre- COVID period, with a peak correlation of 0.31, rising to 0.41 with above average population growth.[3, 4]

Figure 1: Mortgage interest costs, population growth and rental inflation

Canadian series, year-over-year, monthly data, 1991M1 - 2024M7



Sources: Statistics Canada and Bank of Canada calculations

Does the strong relationship between MIC inflation and rental inflation during periods of high population growth persist when we control for other potential drivers of rental inflation? To answer this question, we estimate the following equation:

[3] The peak correlation is contemporaneous in the full sample but occurs at a 12-month lag in the pre-COVID period—i.e., the highest correlation is between MIC_{t-12} and current rental inflation.

[4] There has been a methodological change in rental inflation just before Covid. Previously, the Canadian rent index was based on a matched model approach that followed households from one month to the next and tracked the cost associated with housing services that remained constant over time. Since 2019, rent data have been quality adjusted using a hedonic model leveraging a supplemental questionnaire in the Labor Force Survey (LFS). After this adjustment, rent inflation has been stronger and more volatile.

$$rentinf_t = \alpha + \beta_1 MIC_t + \beta_2 Pop_t + \beta_3 MIC_t * \left(\frac{Pop_t - \overline{Pop}}{\sigma_{pop}}\right) + \Omega_{k=1}^{4} \Sigma_k rentinf_{t-k} + \Gamma controls_t + \alpha * \mathbf{1}_{t \geq 2019} + \varepsilon_t$$

where $rentinf_t$ stands for rental inflation, MIC_t stands for the growth of the mortgage interest cost index in the CPI, and Pop_t stands for population growth. We include a dummy variable for the post 2019 period to control for changes in the definition of rental inflation. We include five months of lag of rental inflation based on the Akaike information criterion.

As control variables, we include:

- house replacement cost from the CPI as a proxy for house prices,
- house starts as a proxy for housing supply,
- inflation excluding shelter as a proxy for potential additional costs landlords may face, such as maintenance expenses and various fees
- GDP per capita as a proxy for the impact of business cycles on the rental market.

The data spans from 1991 January to 2024 July at a monthly frequency. All variables are expressed in year-over-year growth rates.[5] In the appendix, we employ other proxies for housing supply and business cycles, we replace MIC with monetary policy shocks from Champagne and Sekkel (2018), and we do a robustness using provincial level data.

The effect of MIC on rents at average population growth is captured directly by β_1. While the coefficient of interest β_3 captures the possible additional nonlinear effect between MIC and population growth that deviates from its historical mean expressed in the number of standard deviations. Thus, the total effect of MIC on rents is a combination of both coefficients β_1 and β_3.

Results

To ensure that the analysis is not skewed by the unusual economic behavior during the pandemic and unusual population growth just after the pandemic, we first focus on a

[5] We use year-over-year (YoY) growth rates rather than month-over-month (MoM) changes for three main reasons. First, several variables in our analysis are not seasonally adjusted by statistical authorities, and YoY transformations help eliminate recurring seasonal patterns in the data. Second, our focus is on medium-term relationships that align with how policymakers and institutions typically monitor and communicate inflation developments—using YoY measures that smooth out short-term volatility. Finally, since the objective is to explain broader trends in rental inflation rather than short-run dynamics, the YoY specification provides a more stable and policy-relevant framework for interpretation. Nevertheless, the results remain broadly robust with MoM changes, suggesting that they are not driven by spurious correlations that could arise from using overlapping YoY observations.

data sample from June 1991 to February 2020 (pre-Covid sample, **Table 1**, column 1). The estimated coefficients on MIC and population growth are positive, as predicted by theory. In addition, the interaction term is positive and significant. In particular, under average population growth, a 1 percentage point increase in MIC inflation is associated with a modest increase in rental inflation on impact (around 0.006 percentage points). However, during periods of above-average population growth—for example, when growth is about four-and-a-half standard deviations above the mean, reaching 3%—the impact rises to roughly 0.09 percentage points.

Importantly, these results suggest that the observed nonlinearity is not an artifact of unusual correlations in the post-Covid period, but was already present in the pre-Covid data. In the full sample (**Table 1**, column 2), the coefficient for the interaction term remains statistically significant, indicating the nonlinearity persists. However, the estimated impact is somewhat smaller. This attenuation could reflect unusual movements in the variables, introducing noise into the data and weakening the underlying relationships. It may also be explained by upward rigidities in the rental market due to regulatory constraints. Even during periods of rapid population growth, rent increases are often capped or delayed, which may limit the extent of pass-through and result in smaller coefficients.

Table 1: Baseline regression

	(1) Pre-COVID	(2) Full Sample
MIC	0.00571**	0.000393
	(0.00226)	(0.00272)
Pop. growth	0.172**	0.172**
	(0.05443)	(0.08702)
MIC x Standardized pop. growth	0.0179*	0.00298**
	(0.01021)	(0.00147)
R^2	0.967	0.979
F	1437.52	2329.43
N	345	397

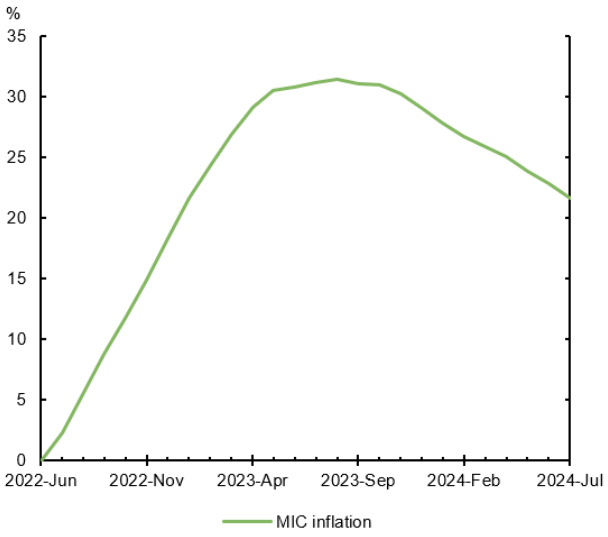
Notes: All regressions are estimated using Newey–West heteroskedasticity and autocorrelation consistent (HAC) standard errors to account for potential serial correlation in data. The sample spans January 1991 to July 2024. Asterisks denote statistical significance at the 10% (*), 5% (**), and 1% (***) levels.

In the appendix, we show that our results are robust to using other proxies for housing supply and business cycle. In addition, our main message remains the same when we replace MIC with monetary policy shocks.

We next examine the role of elevated MIC inflation since 2022 in driving rental inflation. Using our regression estimates from the full sample specification, we simulate the path of rental inflation by imposing the observed trajectory of MIC inflation (**Figure 2a**) under two scenarios (**Figure 2b**): average population growth (1.3%, blue line) and high population growth (3%, red line). Under average conditions, a 30 ppt increase in MIC inflation (as observed since the second half of 2022) raises rental inflation by only **0.1 ppt**. However, during the high population growth observed in this period, the same increase in MIC inflation leads to a **3.1 ppt** rise in rental inflation—explaining roughly 60% of the actual increase in rental inflation over the period.

Figure 2a: Increase in MIC inflation relative to June 2022

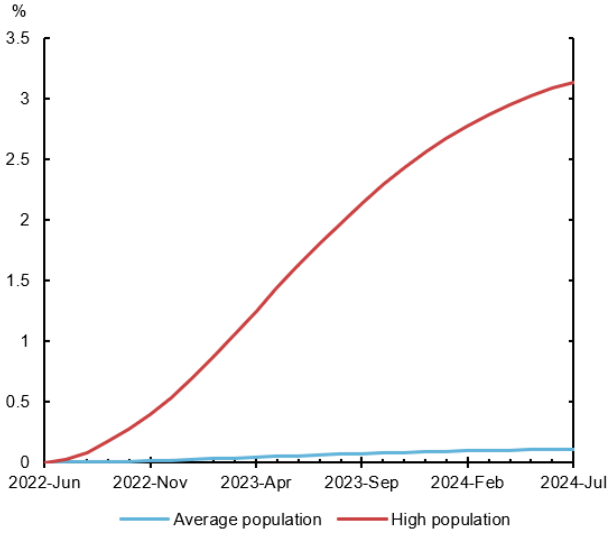
Year-over-year, monthly data, 2022M6 - 2024M7



Sources: Statistics Canada and Bank of Canada calculations

Figure 2b: Simulated rental inflation path

Year-over-year, monthly simulated data series



Sources: Statistics Canada and Bank of Canada calculations

Conclusion

Shelter inflation has become one of the largest expenses for many households and plays a significant role in overall inflation. We explore the "cost channel" of monetary policy on rental inflation, where interest rate hikes can passthrough to rents via (i) increased costs landlords face and (ii) increased demand for rentals vis-à-vis houses as a result of higher mortgage costs.

We show that this channel is mild under normal population growth but especially pronounced when population growth is above average, akin to nonlinear Phillips curves

studied in the literature. Our results imply that, under high population growth, there might be benefits to look through rental inflation in order to gauge underlying inflation pressures. Indeed, higher rental inflation driven by tighter monetary policy via MIC cannot be easily offset by further monetary policy tightening.

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Appendix

We conduct several robustness checks. First, we redefine the interaction term by using a dummy variable for high population growth, specified as MIC × (Population growth > 1.3). This specification is designed to test for a potential nonlinearity — specifically, whether there is a kink in the relationship when population growth exceeds 1.3%. Our main message remains unchanged (**Table 2**, column 3).

Table 2: Results with an alternative interaction variable

	(1) Pre-COVID	(2) Full Sample	(3) Full Sample
MIC	0.00571** (0.00212)	0.000393 (0.00272)	-0.0112 (0.0073)
Pop. growth	0.172** (0.05443)	0.172** (0.08702)	0.269** (0.09009)
MIC x Standardized pop. growth	0.0179* (0.01021)	0.00298** (0.00147)	
MIC x Pop. > 1.3%			0.0155* (0.00811)
R^2	0.967	0.979	0.979
F	1437.52	2329.43	2692.79
N	345	397	397

Second, we replaced our interest cost variable with the 5-year government bond and mortgage rate in place of MIC. The results are similar to what we presented with MIC, although less significant for the 5-year bond rate (**Table 3**, column 1). However, for the mortgage interest rate costs, the 5-year mortgage rate might be a better indicator, and significant results remain in that regression (**Table 3**, column 2). In particular, 1 ppt increase in the 5-year mortgage rate is associated with a 0.38 ppt increase in rental inflation under 3% population growth. A 3 ppt increase in mortgage rates then will be associated with a 1.2 ppt increase in rental inflation. When using monetary policy shocks from Champagne and Sekkel (2018), similar but less significant results are obtained (**Table 3**, column 3).

Table 3: Results with alternative interest cost variables in place of MIC

	(1) 5-Year Govt. Bond	(2) 5-Year Mortgage Rate	(3) MP shocks
Interest Rate	0.0104 (0.0093)	0.00103 (0.01176)	0.0582* (0.03485)
Pop. growth	0.265*** (0.08047)	0.251*** (0.07596)	0.193*** (0.0686)
Interest rate x Standardized pop. growth	0.0115 (0.03435)	0.0714* (0.04034)	0.235* (0.13613)
R^2	0.979	0.979	0.967
F	2744.04	2675.92	1172.57
N	397	397	344

Third, we substituted housing completions for housing starts. The completions data come from the Canada Mortgage and Housing Corporation (CMHC). We use "total dwelling completions" (**Table 4**, column 3) and “apartment completions” (**Table 4**, column 2) under dwelling type given that rentals might be more skewed to multi-units. Replacing house starts with completions hardly changes our estimates. We also use the unemployment rate instead of GDP per capita as a proxy of business cycle, and the results stay the same (**Table 4**, column 4).

Table 4: Results with alternative controls

	(1) Baseline	(2) Apartment completions	(3) Dwelling completions	(4) Unemployment
MIC	0.000393 (0.00272)	0.00169 (0.00254)	0.00169 (0.00254)	0.000519 (0.003)
Pop. growth	0.172** (0.08702)	0.164** (0.08212)	0.164** (0.08215)	0.168** (0.07439)
MIC x Standardized pop. growth	0.00298** (0.00147)	0.00264* (0.0014)	0.00265* (0.0014)	0.00245 (0.00167)
R^2	0.979	0.979	0.979	0.981
F	2329.42	2496.85	2495.8	1582.77
N	397	402	402	398