The Impact of Immigration on Local Public Finances: Evidence from Canadian Municipalities*

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May 10, 2026

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Abstract

As immigration becomes the primary driver of population growth in many countries, concerns persist regarding its implications for public finances. This paper examines the fiscal impact of immigration at the municipal level in Canada between 2004 and 2022, leveraging high-quality, annual immigration data and a shift-share instrumental variables (IV) approach. We find that immigration increases municipal revenues and expenditures per capita, with positive net fiscal effects for *low*-skilled immigrants and negative effects for high-skilled immigrants. These findings stand in contrast to recent evidence from the United States and to the common skill-based narrative that low-skilled immigrants impose disproportionate fiscal pressures on public finances. Overall, the results suggest that the fiscal impacts of immigration at the municipal-level can differ both from those at higher levels of government and across institutional settings, reflecting differences in local institutions and immigration patterns.

*We would like to thank the Bridging Divides research program, funded by the Canada First Research Excellence Fund (CFREF), for their support in this project. We are also grateful for helpful comments at the 2025 Canadian Economics Association meetings (CEAs) in Montreal and the Bridging Divides Research Retreat. This research was conducted at the University of Alberta Research Data Centre, a part of the Canadian Research Data Centre Network (CRDCN). This service is provided through the support of the Canada Foundation for Innovation, the Canadian Institutes of Health Research, the Social Sciences and Humanities Research Council, and Statistics Canada, and through the support of the University of Alberta. All views expressed in this work are our own.

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1 Introduction

As birth rates decline and populations age, immigration has become an increasingly important source of economic and demographic growth. However, a common concern is that immigrants may place a burden on public finances by consuming more public services than they contribute in revenues. While a large literature examines this question at the federal government level, with mixed evidence on immigrants' net fiscal contributions, far less is known about the fiscal impacts of immigration at the municipal level. This is despite the fact that municipalities are responsible for providing much of the local infrastructure and services required to accommodate this population growth.

The fiscal impacts of immigration at the municipal level are not immediately obvious, in part because the channels through which immigration affects municipal budgets differ from those at other levels of government. A common assumption is that immigrant skill levels drive overall fiscal impacts, with high-skilled immigrants improving public finances while low-skilled immigrants impose fiscal burdens. Although this logic applies almost mechanically at the federal level, where revenues and expenditures scale closely with income, it need not hold at the municipal level. Municipal revenues are generally tied to property taxes, user fees, and government transfers, while expenditures largely reflect investments in local public goods and services rather than means-tested programs.

The existing empirical literature on immigration and municipal finances is limited. In the United States, Mayda et al. (2023) show that high-skilled immigrants increase municipal revenues and public expenditures, while low-skilled immigrants are associated with lower revenues and spending. In contrast, Mariani et al. (2024) find that public expenditures do not decline with the arrival of predominantly low-skilled immigrants in Italian municipalities. These findings highlight that the relationship between immigration and municipal finances is not uniform across settings and motivate further evidence from other institutional contexts.

This paper studies the impact of immigration on municipal finances in the Canadian context using high-quality administrative data and a reduced-form empirical framework. The Canadian setting is particularly informative for two reasons. First, the scale of recent immigration is unusually large: Canada experienced population growth of approximately 3% in 2023, more than triple the rate observed in the United States, driven almost entirely by immigration. Second, the availability of detailed administrative data allows us to track immigrant inflows by skill level and municipality on an annual basis. The Statistics Canada Immigration Database (IMDB) captures the universe of immigrants[1] to Canada - includ-

[1]Throughout the rest of the paper the term *immigrant* will refer to all newcomers to the country, whether permanent or non-permanent. This terminology differs from Statistics Canada, who typically only refer to permanent residents as immigrants.

ing permanent and non-permanent residents - and provides rich information on individual characteristics and location over time.[2]

In the Canadian context, we find that low-skilled immigrants are *not* a drag on public finances. We show that a 1 percentage point (p.p.) increase in immigrant share in Canadian municipalities leads to a 1.5 p.p. increase in the growth rate of revenues and a 0.9 p.p. increase in the growth rate of public expenditures. When breaking this down by skill, we find that low-skill immigrants have slightly positive impacts on revenue growth and null effects on expenditures, while high-skill immigrants have large effects on expenditure that outweigh the increases to revenues in the average municipality. As a result, low-skilled immigrants have a positive net effect on municipal budgets in the average municipality while high-skill immigrants do not. These results hold across a number of alternative definitions of skill, including the intended occupation, economic class and immigration stream and suggest that the impact of immigration on municipal finances does not necessarily operate according to the prevailing skill-based narratives found in other contexts and at higher levels of government.

To estimate the impact of immigration on municipal finances, we employ the "enclave" instrumental variables (IV) approach as in Card (2001) and Mayda et al. (2023). This shift-share style instrument exploits the fact that immigrants tend to locate in regions where others of the same ethnic origin are already located and leverages shocks to immigration patterns across origin countries and skill levels. The impact on municipal finances is captured using separate regressions for the change in the log of per capita revenues and expenditures in municipalities across Canada.

We find that institutional context and cultural attitudes play a major role in driving the results as seen by the diverging trends in different Canadian provinces. For example, Alberta does follow the conventional skill-based narrative and sees negative impacts from immigration, while Ontario sees positive impacts from immigration that are entirely driven by the low-skilled immigrant population. The role of immigrant selection seems to play important roles in the other Canadian provinces. In British Columbia, a larger influx of high-skill immigrants drives more negative net fiscal effects despite similar regression coefficients to Ontario. While in Québec, which has its own, unique immigration system, the impact of immigration is a net fiscal positive only due to large reductions in per capita expenditure in response to low-skilled immigrants.

We also examine mechanisms by decomposing municipal budgets into detailed revenue and expenditure categories. On the revenue side, increases are driven primarily by user fees

[2] Mayda et al. (2023) rely on decennial data from 1990 to 2010, whereas our annual data allow us to exploit substantially richer within-municipality variation over time.

and permits rather than property tax revenues, consistent with immigration raising municipal revenues through direct use of local services. On the expenditure side, we find little evidence of increased spending in categories typically associated with low-income immigrants, such as public housing and social services. Instead, expenditure increases are concentrated in broader public goods and service categories. Together, these findings are difficult to reconcile with the view that low-skilled immigrants impose disproportionate fiscal burdens on municipalities through elevated demand for redistributive local services.

This paper contributes to the literature on immigration and public finances. The question of how immigration affects public finances, especially at the national and state levels, has been studied extensively.[3] Most previous research has used an *accounting* approach to this question, where one calculates the average taxes paid by immigrants and the amount of expenditures dedicated to immigrants. These analyses, particularly those that focus on a single year, tend to find negative impacts of immigrants on public finances in the United States (Huddle, 1994; Smith & Edmonston, 1997; Garvey et al., 2002). While Javdani & Pendakur (2014) find a similar result for Canada using the 2006 Census, Ruist (2014) do find a positive effect of immigration in Sweden. Additional work has shown how higher skilled immigrants have more positive impacts (Dustmann & Frattini, 2014; Storesletten, 2000; Smith & Edmonston, 1997) and how looking at longer time horizons improves the outlook (Auerbach & Oreopoulos, 1999; Storesletten, 2000; Lee & Miller, 2000).

These traditional approaches have some notable limitations that recent research has attempted to address. First, the accounting approach does not take into account the price or general equilibrium effects of immigrants. Some papers attempt to address this using model-based approaches (Busch et al., 2020; Chassamboulli & Liu, 2024; Colas & Sachs, 2024), but still may not capture the complete effect as there are many possible channels through which immigrants can affect public finances. Second, the accounting exercises do not have a causal interpretation as they just capture a snapshot in time. Finally, most of the analysis does not specifically focus on the municipal level or does so in only limited detail. These latter two points are addressed in recent work by Mayda et al. (2023) and Mariani et al. (2024), who study the impact of immigration on municipal finances in the United States and Italy, which inspires the empirical approach used in this paper.

Our paper contributes to this recent literature by studying a new country with extremely high levels of immigration, Canada, and by employing rich administrative data on immigrant characteristics and location. The annual structure of the IMDB allows us to exploit within-municipality variation over time, yielding more precise estimates of immigration's municipal fiscal impacts. The paper's findings, that low-skilled immigrants do not impose

[3]See literature reviews by Vargas-Silva (2015), Preston (2014) and Dustmann & Görlach (2016).

disproportionate fiscal pressures on municipal finances, challenge the prevailing narratives and reinforce the idea that institutional context matters for understanding the local fiscal impacts of immigration.

The paper is laid out as follows: Section 2 covers the immigration context in Canada and how it affects municipal finances as well as the data for this paper, Section 3 explains the empirical method, Section 4 presents the main results, Section 5 discusses the various possible mechanisms driving the results and Section 6 concludes.

2 Context & Data

2.1 Context

2.1.1 Immigration in Canada

Like many Western countries, Canada relies on immigration as a primary source of population growth. According to the *2025 Annual Report to Parliament on Immigration* (IRCC, 2025), 23% of the population in 2021 was comprised of first-generation immigrants. In 2024, Canada's population grew by 744,324 people to reach a population of 41,528,680, a 1.8% growth rate, which was actually lower than 2022 and 2023. International migration accounted for 97.3% of this growth, with a natural population growth, births minus deaths, of only 19,738 people. As a result, population growth and immigration are synonymous with one another in Canada.

The Canadian immigration system can be classified under two broad categories: permanent and non-permanent residents. Permanent residents - what Statistics Canada considers as immigrants - are immigrants who are offered a direct pathway to citizenship. This is typically done through a few streams: economic immigration, family reunification and refugee or humanitarian admissions. Admissions are governed by annual targets and, for economic immigrants, a points-based selection system, which was introduced in 1967. Economic immigrants are selected based on a set of criteria related to education, age, work experience and language skills. Prior to 2015, this system had maintained an inflow of around 170,000 to 260,000 new permanent residents per year. Traditionally, immigration policy has largely been related to the permanent residency category and the targeted number of admissions.

Non-permanent residents are newcomers to Canada on time-limited permits. One large program for non-permanent residents is the Temporary Foreign Workers Program (TFWP), which allows Canadian firms to hire workers from other countries in order to fill supposed labour shortages in particular industries, such as agriculture. Another type of non-permanent resident permit that has gained prominence in recent years is the international student visa.

International students attending Canadian universities and colleges could translate their status into permanent residency after graduation, should they attain Canadian employment. Non-permanent residents were historically a small share of overall immigration to Canada and received little policy attention, but this has changed in recent years as non-permanent resident numbers have expanded rapidly.

Beginning in the mid-2010s, immigration policy and realized inflows expanded substantially. Permanent resident targets increased, refugee admissions rose during major humanitarian crises, and net inflows of non-permanent residents grew sharply. By 2023, net additions of non-permanent residents exceeded 800,000, which led to a population growth rate of 3.1% in a single year, making Canada one of the fastest growing countries in the world. These developments intensified pressure on housing markets and local public services, highlighting the importance of understanding the impact of immigration on municipalities, who are responsible for providing a range of infrastructure and public services but have limited influence over immigration policy.

2.1.2 Municipal Finances in Canada

Canada's system of government assigns major service responsibilities across federal, provincial, and municipal levels. Provinces hold primary responsibility for education, healthcare, and municipal governance, and municipalities operate under provincial legislation. Within this framework, municipalities are responsible for a wide range of local public services and infrastructure, including roads and transportation infrastructure, water and wastewater services, waste management, local planning and development, and protective services such as police and fire. In some provinces, municipalities also play a role in the administration of local school boards.

Canadian municipalities rely primarily on property taxes for revenue. As shown in Appendix Figure 1, in the average Canadian municipality, property tax revenues account for almost half ($\sim 45\%$) of all revenues with user fees, permits and fines accounting for about 25%. Transfers from other levels of government make up around 15% of revenue and capital income and other sources of revenue make up the remaining 15%. Unlike in American municipalities, revenue tools such as municipal income or sales taxes are not found in Canada. In Canadian municipalities, the annual property tax rate is set to raise the revenue required to fund the municipal budget after accounting for other revenues and transfers. Practically, the municipality determines the total levy needed and applies a tax rate to the assessed property tax base, so that the rate adjusts to ensure the desired total revenue given the aggregate assessed value of properties. Notably, this means that property tax revenue does not scale with changes to overall housing values, but rather with changes to the budget itself.

On the expenditure side, spending is more varied and municipality specific. Generally speaking, transportation is one of the largest spending categories, around 20-30% of total budgets, encompassing both roads and highways as well as public transit. Protective services, such as police and fire, are another major category that takes up around 20% of budgets. Public health and welfare makes up about 30% of the budget in Toronto, but is a much lower share in most other municipalities. Municipal expenditures can sometimes experience large spikes in the event of sudden changes to policy or large infrastructure investments.

Canadian municipalities operate under strict fiscal rules set by provincial legislation and are generally required to adopt balanced annual budgets. In practice, this constraint applies primarily to the operating budget, which must be financed using current-year revenues such as property taxation, user fees, and intergovernmental transfers, as well as transfers to and from reserve funds. The operating budget therefore functions as a cash-based spending plan in which municipalities set tax rates and fees to raise the funds required to cover planned operating expenditures. Capital budgets are treated differently: long-lived infrastructure is typically financed through a combination of reserve contributions, project-specific transfers from other levels of government, and borrowing subject to provincial rules and debt limits. As a result, municipalities have limited ability to smooth operating imbalances over time, but have more flexibility in how they fund capital investment.

Despite these constraints, municipal budgets do not always mechanically imply net-zero fiscal effects in annual data. First, municipalities may choose to run operating surpluses and transfer funds into reserves, contributing to an accumulated surplus that can be used to finance future capital projects or to buffer negative shocks. Second, the concept of a "balanced budget" in municipal budgeting is typically defined on a cash (modified accrual) basis, whereas year-end financial statement reporting follows full accrual accounting. Under full accrual reporting, large capital outlays are not expensed in the year of purchase but are amortized over the life of the asset. Consequently, municipalities can satisfy balanced-budget requirements in their annual plans while still reporting accrual-based surpluses or deficits in financial statements.

2.1.3 Immigration and Public Finances

The recent increase in immigration has intensified population growth pressures in many Canadian municipalities. Because municipalities are responsible for providing a wide range of local services and infrastructure but operate under comparatively constrained fiscal institutions, immigration-driven growth raises natural questions about local fiscal capacity and service provision. In particular, municipalities are interested in whether immigrants are net-contributors, where the revenues generated from immigrants outweighs the additional costs

they impose, or net-beneficiaries of public services. If immigrants are net-contributors, then their arrival represents a fiscal boon, but if they are net-beneficiaries, then this may force municipalities to raise taxes on existing residents, reduce services or require larger transfers from other levels of government.

One key feature of municipal finances that is highly relevant for questions raised by immigration is that they need not scale mechanically with either population growth or residents' incomes in the same way as federal or provincial finances. At higher levels of government, household taxes are closely linked to income and consumption through personal income and sales taxes. As a result, immigration-driven population growth tends to expand the tax base in a relatively predictable manner as immigrants earn income and consume goods. By contrast, municipal revenues rely heavily on property taxation and user fees, which are tied primarily to housing and service usage rather than to individuals' earnings, and therefore may respond less consistently to population growth and immigrant skill composition.

One reason is that the municipal property tax base expands primarily through changes in housing development rather than through population growth. Where housing supply is inelastic, population growth may be absorbed through higher occupancy, crowding, or displacement rather than new construction, raising service demand without proportionately expanding the property tax base. Even when new housing is built, the implied tax capacity per additional resident can vary substantially depending on the type and assessed value of new units (e.g., high-density condominiums versus single-family homes) independent of immigrants' income or skill composition.

A second reason municipal revenues may not scale mechanically with immigration is that municipal councils actively set both property tax rates and service provision through the annual budget process, creating multiple margins of fiscal adjustment. One margin is through the *nominal* property tax rate. Municipalities choose expenditures net of other revenues and transfers and then set the nominal property tax rate so that, given the aggregate assessed value of properties, the tax rate generates the required revenue. One implication of this system is that nominal property tax rates are generally adjusted to smooth out changes in aggregate, city-wide housing prices and assessed values. This means that increases in average housing prices over time do not automatically translate into increased revenue for municipalities in the same way that rising incomes raise revenues for higher levels of government.

A second margin concerns how municipalities allocate immigration-driven changes in fiscal capacity across taxes and public services. Using the terminology from Mayda et al. (2023), municipalities may respond to an influx of immigrants by either changing *effective* property tax rates (the tax-adjustment scenario) or service levels (the benefit-adjustment

scenario). If immigration expands fiscal capacity and municipalities want to maintain a balanced budget, they may lower effective tax rates in the tax-adjustment scenario or increase service levels in the benefit-adjustment scenario.[4] Under the tax-adjustment scenario, total revenues will appear to be uncorrelated with immigration despite increasing fiscal capacity, which is another reason why municipal finances may not scale cleanly with immigration.

These features complicate the conventional skill-based narrative around immigration and public finances. In many settings, high-skill immigrants are expected to contribute more fiscally because their earnings generate higher income tax payments, while low-skill immigrants are expected to be net beneficiaries. At the municipal level, however, the link between immigrant skill and local revenue capacity is weaker, since key revenue instruments are tied to housing and service usage rather than earnings, and since municipal councils adjust taxes and services endogenously through the annual budget process.

Skill composition may nonetheless matter for municipal fiscal outcomes through both revenue and expenditure channels. On the revenue side, if different immigrant groups differentially affect housing development, assessed values, or fee-based service usage, then municipal revenues may respond heterogeneously by skill. On the expenditure side, immigrant groups may differ in the extent to which they increase demand for local public services and infrastructure. These considerations imply that the net municipal fiscal impacts of immigration and how they vary by skill are theoretically ambiguous.

2.2 Data

2.2.1 Longitudinal Immigration Database (IMDB)

The key dataset in this paper comes from Statistics Canada's Longitudinal Immigration Database (IMDB). The IMDB contains information on the universe of immigrants to Canada dating back to 1952, including both permanent resident and non-permanent resident arrivals. Since most of the key variables go back to 1980, we will define immigrants in this sample as those who arrived in 1980 and later. Because of issues with the variable capturing the destination of non-permanent residents prior to 2004 and the fact that municipal finance data is not available for most provinces prior to the early 2000s, the main sample will span from 2004-2022.

Using the IMDB, we create tabulations of the number of immigrants by skill level and country of origin for every municipality in Canada. To determine the location of an immigrant, we use the municipality or Census Subdivision (CSD) that they filed their taxes in. In

[4]Federal levels of government are less likely to respond to an increase in fiscal capacity with contemporaneous reductions in tax rates.

cases where an immigrant did not file taxes as is common for children, non-working spouses or students, we use the location of their spouse who did file taxes or the declared location of their first non-permanent resident permit to the country. If there are small gaps in tax filing behaviour, we impute their location using the location from the year prior. This generates a panel of immigrant locations over time.[5]

We determine the skill of an immigrant using variables from the IMDB. The main specification in this paper uses a definition based on the intended occupation of an immigrant. The intended occupation, which requires educational and professional supporting documentation, is then classified into broad categories such as "Managerial", "Professionals", "Skilled and Technical", "Intermediate and Clerical", "Elemental and Labourers" and other. Those at intermediate and above are classified as high-skill for the main results. The level of skill is defined at the time of landing and does not change, which means that students who arrive and later become permanent residents, and even citizens, will still be considered as low-skill in future years. Alternative skill breakdowns, such as through the immigration category (eg. economic or non-economic) and duration (eg. permanent vs. non-permanent) are explored in the robustness section.

The key variable of interest is the annual change in the immigrant share of a municipality. I compute the immigrant share as the number of immigrants residing in a municipality in a given year divided by the total population using Statistics Canada population estimates; this measure is also constructed separately by skill group. Because this variable is defined as a stock (a population share) rather than a flow, the main coefficients capture the effects of changes in the immigrant composition of a municipality's population rather than the direct impact of international immigrant inflows in a given year. Changes in the immigrant share reflect the combined influence of international immigration, domestic migration of immigrants across municipalities, and outflows, as well as changes in the total population. As a result, the estimates should be interpreted as the effect of a growing immigrant presence in the local population regardless of when they arrived, rather than the effect of contemporaneous inflows of immigrants.[6]

[5]There can be some measurement error in determining the location as immigrants may move frequently as temporary residents without paying taxes or if they go many years between filing.

[6]To illustrate, a municipality that receives a similar number of temporary foreign workers each year who subsequently leave may exhibit little change in its immigrant share, making it observationally similar to a municipality with low inflows but a stable population composition. Municipalities with no immigrants are included in the sample and assigned a share of zero.

2.2.2 Municipal Finance Data

Data on municipal finances comes from financial information returns (FIRs) and related provincial municipal financial reporting systems. The analysis of this paper will focus on the four biggest provinces in Canada - Ontario, Québec, British Columbia and Alberta - which account for the majority of Canada's population. The years of data available vary across provinces with Alberta and Ontario having the most data and Quebec having the least. As we start our data sample in 2004 due to limitations with locations in the immigration data, we have data for Alberta and Ontario from 2004-2022, British Columbia data is available one year later in 2005 and Quebec data is available starting in 2014. As a result, the main dataset will be an unbalanced panel.

The main variables of interest are total revenues and expenditures per capita in each municipality every year. The data includes revenues from a number of sources including own revenues (property taxes, user fees etc.) as well as capital income, transfers from other levels of government and any other sources of income (such as land transfer tax revenues). The data on expenditures encompasses both operational and capital expenditures across a number of categories based on full accrual accounting. This means that capital costs are recorded through amortization rather than being fully expensed in the year incurred. All of these values are inflated to 2022 Canadian dollars using the Consumer Price Index (CPI) and calculated on a per capita basis in each municipality according to Statistics Canada's population estimates.

To narrow the sample of over 5,000 CSDs in Canada, we introduce the following restrictions. First, we focus only on municipalities in the four biggest provinces, which reduces the sample to around 3,000 municipalities. Second, the municipality must have valid data for at least 80% of the period of available data for the province. Third, it must have a consistent CSD geographic code going back to 2001 in order to merge with the 2001 Canadian Census of Population, which contains the key control variables in the empirical analysis.[7] Finally, we limit the sample to municipalities with at least 1,000 people in 2022 to exclude very small communities with volatile per-capita finances. The resulting sample leaves us with 972 municipalities across 8-19 years of data.

[7] One exception is for Québec, which dramatically restructured municipal boundaries in the early-2000s, including for the City of Montréal. For these municipalities, census data from 2006 is used for the control variables. Because the sample for Québec only begins in 2014, the use of 2006 as pre-period controls remains justifiable.

2.2.3 Summary Statistics

In Table 1, we present key summary statistics for the combined dataset on municipal finances and immigrant shares broken down by province. Starting with the municipal finance statistics, the average total revenue per capita across the entire sample is $2,450 CAD, with higher levels of revenue in Alberta and lower average revenues in Ontario and Québec. If looking only at own revenue,[8] the gap between provinces narrows somewhat as a larger share of Alberta's revenue comes from indirect sources. There is also greater variation across municipalities in Alberta compared to the other provinces. Total expenditures are higher than own revenues, but lower than total revenues, suggesting that on average Canadian municipalities run small surpluses, but only when accounting for extra sources of income, such as capital income or government transfers.

The immigrant share in the average municipality in Canada is in fact quite low.[9] Across the four biggest Canadian provinces, the average immigrant share of the population at the municipal level is 6%.[10] This number is higher in British Columbia (11.6%) than in Québec (3.3%). The standard deviation of the total immigrant share is relatively large at 7%, which suggests substantial variation in the immigrant share across Canadian municipalities. The high-skill immigrant share is around 1-2% in most provinces, which is between a quarter to a third of all immigrants according to this definition of skill. This average masks an important trend seen in Appendix Figure 2, which shows that the share of immigrants defined as high skill has been declining sharply since 2015 in most provinces and has led to greater convergence across the four provinces.

The distribution of municipal population in Canada is highly skewed. The average population across municipalities is about 30,000, but the median is only 6,000. Municipalities are twice as large on average in Ontario compared to Québec and even Alberta. Overall, there are 972 unique municipalities in the sample, with more in Ontario and Quebec than Alberta and British Columbia.[11] Combining these municipalities with the number of years each province is available in the sample yields the total observations broken down by province.

In Figure 1, we plot the net change in the number of immigrants by skill classification

[8] This comprises of property taxes and user fees, permits and fines, but ignores capital income, government transfers and other revenue.

[9] This average is unweighted, meaning municipalities with large immigrant populations are treated equivalently to the many small municipalities with few immigrants.

[10] It bears repeating that this defines immigrants as those who have arrived since 1980. This means that this measure is a lower-bound on the actual number of immigrants, assuming that those who arrived pre-1980 continue to consider themselves immigrants.

[11] Note here that municipalities under 1,000 people in 2022 are dropped from the sample, so places like Alberta that have many small municipalities will have fewer municipalities than in the raw data.

Table 1: Summary Statistics

	Total	BC	AB	ON	QC
Mean Total Revenue ($ per capita)	2,450	2,447	3,588	2,013	2,175
Own Revenue ($ per capita)					
Mean	1,722	1,729	2,451	1,383	1,664
Median	1,488	1,575	1,864	1,212	1,543
Standard Deviation	1,282	836	2,130	860	626
Total Expenditure ($ per capita)					
Mean	2,099	1,977	2,887	1,836	1,910
Median	1,786	1,748	2,382	1,516	1,772
Standard Deviation	1,416	1,001	2,152	1,175	671
Mean Total Immigrants (%)	6.01	11.58	6.22	5.27	3.33
High-Skill (%)	1.88	3.27	1.82	1.73	1.23
Low-Skill (%)	4.13	8.30	4.40	3.54	2.10
Mean Population	30,729	32,999	22,202	39,736	19,198
Median Population	6,115	7,528	4,987	8,190	2,903
Number of Years	.	18	19	19	9
Unique Municipalities	972	123	169	338	342
Total Observations	14,925	2,214	3,211	6,422	3,078

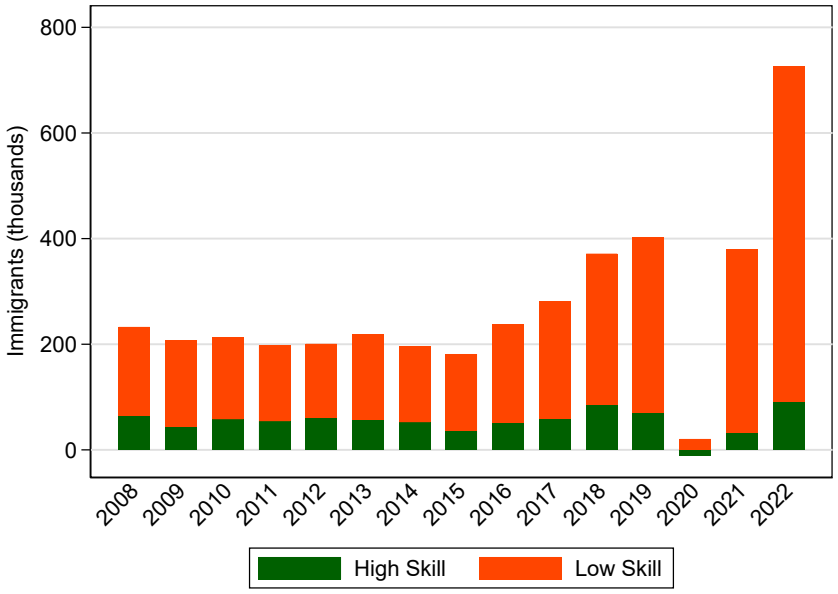
Note: This table presents the summary statistics for key variables in the main dataset. The main dataset captures municipal finance and immigration data for the four biggest provinces in Canada in an unbalanced panel from 2004 to 2022. Municipal finance variables are expressed in per capita terms using population data from Statistics Canada. The total column captures the totals from the four biggest provinces and do not reflect true national averages.

each year from 2008 to 2022.[12] This captures the number of immigrants that were in the country each year minus the previous year's total. This figure captures the large increase in immigrants after 2015 that followed a decade of relative stability. This increase was largely driven by low-skill immigrants. In Appendix Figure 3, we show that this increase in low-skill immigrants holds across different definitions of skill, such as the entry pathway (economic vs. non-economic class) and permanency of arrival (permanent resident vs. non-permanent).

There is significant variation in both the municipal finance and immigration variables

[12]Some issues with the data for Québec prior to 2007 led to those years being omitted, meaning for consistency, only the subsequent years are plotted here.

Figure 1: Change in Number of Immigrants by Year and Skill Level



Note: This figure shows the evolution of the number of immigrants over time by skill level. Skill here is defined according to the stated occupation upon landing in Canada. The change in immigrants is capturing the net change in the number of immigrants in the four largest provinces from year to year, which captures inflows and outflows as well.

over time at the municipal level. In Appendix Figure 4, we show how municipal finances have evolved in the cities of Toronto and Edmonton over the years. In Toronto, tax revenue remained fairly flat on a per capita basis adjusted for inflation, while transfers and other income rose. In terms of expenditures, transportation expenses rose, while many other categories remained flat. Compared to Edmonton, the public health and welfare category makes up a much higher share of expenditures in Toronto. In Edmonton, tax revenue did rise during this period with other revenues streams staying flat. In terms of expenditures, there was not much movement over this time period.

In Appendix Figures 5 and 6, we plot the change in the immigrant share over time. App. Figure 5 shows the total share and the high skill share and the evolution over time. Toronto has a higher total share than the other cities, but this is mainly driven by differences in low skill immigrants with most cities seeing a high skill share of about 10%. All cities exhibit a similar pattern of steady growth in the low skill share, with limited growth in the high skill share. App. Figure 6 shows the first-difference version, which exhibits far greater variation over time than the absolute levels. This variation will be important when discussing the identification strategy.

3 Method

3.1 Empirical Specification

In this paper, the goal is to recover the relationship between municipal finance variables and immigration. This is done using the following first-differenced regression equation:

$$\Delta \ln y_{it} = \sum_k \beta_k \Delta \frac{M_{it}^k}{\mathrm{P}_{it}} + \Delta\delta_i + \Delta\delta_t^p + \beta_x X_{i,2001} * t + \varepsilon_{it} \tag{1}$$

where y_{it} represents per capita revenues or expenditures for a municipal government, i, in year t adjusted for inflation. $\frac{M_{it}^k}{\mathrm{P}_{it}}$ is the share of immigrants, M, of type k in the municipal population, P_{it}. $X_{i,2001} * t$ is a set of control variables from the pre-period (2001) interacted with a linear time trend, t.[13] The regression includes municipality and year-by-province (p) fixed-effects δ_i and δ_t^p.[14]

The parameter of interest, β_k, captures the impact of a change in the immigrant share in a municipality on municipal revenues or expenditures. This can be interpreted both across municipalities, where those with higher immigrant shares impact per capita revenues or expenditures, and within municipalities, where changes in the share of immigrants over time in a municipality affects per capita revenues or expenditures. Using the share of immigrants rather than total immigrants helps reduce the role of total population in driving the results since large municipalities will also see larger immigrant inflows. As mentioned previously, this parameter will capture the combined impact of all changes to the immigrant share, including international inflows, domestic migration, outflows and changes in native population.

The first-differences specification is preferred to the levels specification, which is the main specification in Mayda et al. (2023), in this context for a few reasons. First, unlike in Mayda et al. (2023), where there is only a short panel of data every ten years for a couple decades, we have annual data in Canada and therefore a much longer panel that is suitable to taking first-differences. Second, the key variables, both immigrant shares and municipal finances per capita, are generally rising during this period and are not stationary. Taking first-differences helps separate the main effects from these broader trends. Finally, we are more interested in the interpretation of immigrant *shocks* within municipalities than the immigrant share

[13] The control variables in this case come from the 2001 Census (2006 Census for some Quebec municipalities) and are: the share of adult women, the visible minority share, the share of youth, the share of married individuals, the unemployment rate, median income, the share employed in agriculture and the share employed in manufacturing.

[14] While the time invariant components of the municipality fixed effects are differenced out in the first-difference specification, there may be fixed differences in the growth rate of key variables across municipalities that will be captured by the δ_i term.

itself, which can reflect immigration patterns that are not contemporaneous.

3.2 Identification

A regression of municipal revenues or expenditures on immigrant share is potentially endogenous. Immigrants may be attracted to municipalities with promising economic trends that are unobserved to the econometrician, but may drive stronger municipal revenues, which would bias OLS results upwards. Another possible reason for upwards bias is if immigrants believe certain municipalities are more likely to provide more services, which would increase expenditures. The bias could also go in the opposite direction if higher productivity municipalities attract immigrants, but are also less likely to want to redistribute through higher expenditures. As a result, an instrumental variables (IV) approach is required to capture an unbiased estimate of β_k.

In this paper, we follow the immigration literature in using the "enclave", shift-share IV as found in Card (2001). The IV is a simulated share of immigrants in the population, $\frac{\overline{M}^k_{it}}{\overline{\mathrm{P}}_{it}}$, based on the product of national-level shifts in immigration by country of origin with municipal-level immigrant shares from an initial pre-period, t_0. The simulated number of immigrants, $\overline{M}^k_{it}$, is captured as:

$$\bar{M}^k_{it} = \sum_g \frac{M^k_{igt_0}}{M^k_{gt_0}} M^k_{gt} \tag{2}$$

where $\frac{M^k_{igt_0}}{M^k_{gt_0}}$ is the initial share of immigrants of skill-level k from country of origin g located in municipality i out of all immigrants of that skill-level and country of origin. M^k_{gt} is the aggregate number of immigrants of skill-level k from country of origin g in time t. To convert this into a simulated share, we also simulate the population in municipality i using the simulated value of immigrants in place of the actual number of immigrants: $\overline{\mathrm{P}_{it}} = \overline{M}_{it} + N_{it}$, where N_{it} is the number of non-immigrants in municipality i.

The enclave IV is a useful instrument in the immigration context because it makes a compelling case for satisfying the two main criteria of any instrument: relevance and the exclusion restriction. This instrument is relevant because immigrants tend to co-locate with other immigrants from the same country of origin (Bartel, 1989). As a result, immigrant shares from the pre-period, which in this case is 2001, will still hold predictive power for immigrant shares in later years. In Appendix Table 1, we show that the IV is positively correlated with actual changes in immigrant shares and the results are statistically significant across different skill levels. Additionally, the instruments are not correlated across skill levels. The instrumented low-skill share is uncorrelated with the high-skill share and vice versa. We

also find that the F-stat is fairly strong across empirical specifications when estimating the main results.

The argument for why the exclusion restriction holds is based on isolating the changes in immigration to supply-push factors rather than demand-pull factors. Since changes in the simulated immigrant share is based purely on aggregate shifts in the number of immigrants from country of origin g, there is less reason to believe these changes are correlated with municipality specific demand-pull factors, such as local productivity shifts. In addition, using the initial share of immigrants from the pre-period reduces the risk that the shares are correlated with contemporaneous demand-pull shocks.

Using this instrument, we estimate Equation 1 using a weighted two-stage least squares (2SLS) approach with two-way fixed effects for municipalities and year-by-province. The weights for the regression are the 2022 population values for each municipality. This means that the results should be interpreted as capturing the effect of the average immigrant rather than the effect on the average municipality. This is done in part to ensure that the decisions made in a large city, such as Toronto, get weighted more strongly than decisions made in tiny towns. As seen in the summary statistics, the distribution of municipal population is quite skewed, with the median municipality being quite small (around 6,000 residents), while the average is around 30,000.[15]

4 Results

4.1 Main Results

This section presents the main results on the impact of the change in the total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level adjusted for inflation. These results cover the years 2004-2022 and 972 municipalities across the four biggest Canadian provinces - Ontario, Alberta, Quebec and British Columbia - that have the relevant data for the given years. After removing outliers and taking first-differences, the final sample size is 14,269 municipality-year observations.[16]

In Table 2, we present the main results of the weighted 2SLS regression described in Section 3 using the total immigrant share by municipality for both own revenues and expenditures. Starting with the change in log revenue per capita table, we find statistically significant and positive results across a number of empirical specifications. In Column (1),

[15]We show in Section 4.3 that using weights does not drive the overall conclusions of the paper because the direction of the net effects hold even in the unweighted case.

[16]Outliers are defined for the change in log revenues and expenditures as being 5 times larger than the interquartile range. This removes roughly 1% of the sample.

with no controls or fixed effects, we find that a 1 percentage point (p.p.) increase in the total immigrant share is associated with a 1.03 p.p. increase in the growth rate of revenue per capita in a municipality. Controlling for unobserved municipality effects is important as the results increase when including controls and municipality fixed-effects. In our preferred specification - Column (6) - a 1 p.p. increase in the total immigrant share is associated with a 1.47 p.p. increase in the growth rate of per capita revenue. We also find statistically significant positive results for per capita expenditure. In our preferred Column (6), a 1 p.p. increase in total immigrant share is associated with a 0.9 p.p. increase in the growth rate of expenditure per capita.

The results from the weighted 2SLS regression are larger than the non-instrumented weighted least squares (WLS) version reported in Appendix Table 2. In Column (6), the effect sizes using the IV are more than double those of the WLS regression. This suggests that the bias in the WLS regression is a downward bias, which is consistent with immigrants being attracted to places that are less likely to increase municipal expenditures per capita. One possible explanation for this could be that municipalities with strong economies attract immigrants, but have a lower desire to support higher expenditures for new residents. The Kleibergen-Paap F-Stat is well above the standard threshold of 10 in all specifications, which suggests that the IV is not weak for the total immigrant share.

To provide context on the magnitude of these effects, we can compare them to sample moments. The average annual growth rate in the sample is 2 p.p. for revenue per capita and 1.7 p.p. for expenditure per capita, with corresponding standard deviations of 6.2 and 10.1 percentage points. A one-percentage-point increase in the immigrant share is therefore associated with an increase in revenue growth of roughly one-quarter of a standard deviation and an increase in expenditure growth of about one-tenth of a standard deviation. The size of these effects is therefore non-negligible.

In terms of the immigration share, a one-percentage point increase represents around one full standard deviation change in the independent variable, which is significant, but not unreasonable. Several municipalities experience a 1 p.p. change in the immigration share in the sample, which can represent anywhere from a 2% increase in cities like Toronto to a 17% increase in the immigrant share in the average municipality. Another way to interpret this magnitude is over a longer time horizon, where several municipalities will experience a 1 p.p. increase over several years combined.

While the revenue and expenditure coefficients capture the effects separately, the main effect of interest - the net effect - requires some additional computations. Because baseline own-revenues and total expenditures are not necessarily equal, differences in these coefficients may not correspond to gaps in dollar-terms. To help with this, we convert the estimated

Table 2: Impact of Total Immigrant % on Municipal Finances - 2SLS

(a) Change in Log Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	1.030***	0.501*	1.633***	1.594***	1.303***	1.470***
	(0.156)	(0.209)	(0.217)	(0.162)	(0.227)	(0.185)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	284.89	93.85	41.65	154.35	73.79	111.12

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	0.951***	0.510*	0.939***	1.377***	0.629**	0.905***
	(0.192)	(0.256)	(0.280)	(0.265)	(0.242)	(0.253)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	284.89	93.85	41.65	154.35	73.79	111.12

Note: These tables capture the impact of the change in total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level using a variety of empirical specifications for the years 2004-2022 in 972 municipalities across Ontario, Alberta, Quebec and British Columbia. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

results into dollar-terms for selected municipalities using observed levels of revenues and expenditures per capita and changes in immigrant shares. Using the fact that each coefficient captures the impact of a 1 p.p. change in the immigrant share in a municipality on the growth rate of revenues or expenditures per capita in percentage point terms, we can compute the additional growth in revenues and expenditures per capita in a particular municipality given that shock. The net effect is then the difference in the growth of expenditures and revenues.

Making this conversion shows that the average municipality in Canada does experience

a net positive, year-over-year fiscal impact from immigration under this specification. The average Canadian municipality in 2021 had own-revenues per capita of $2,042 CAD and expenditures of $2,402 CAD. Using the estimated coefficients, this translates to an annual increase of $21 CAD in own revenues and $15 CAD in total expenditures per capita relative to a baseline with no change in the immigrant share. The net impact in the average municipality is then around $6 CAD per capita or $184,000 CAD based on an average population of about 30,000 residents. This represents around 0.2% of the average municipality's expenditure budget for the year.

While this effect may appear small in percentage terms, this ignores the cumulative effect of a higher growth rate due to immigration. Using the actual change in immigrant share in the average Canadian municipality between 2014 and 2022 (the earliest year we have all provinces in the dataset), which was an increase of around 2.6 p.p., we can compute the cumulative effect of these changes relative to a baseline with no change in the immigrant share during this period. Repeating the exercise from above shows that the net impact on the average municipality was $18 per capita or $590,000 in total, which is about 0.7% of total municipal expenditures. These results show that the increasing share of immigrants in municipalities is corresponding to an increase in municipal revenues that are outpacing the increase in expenditures.

Due to differences in baseline revenues and expenditures per capita across municipalities, these net fiscal effects in dollar terms will also vary across municipalities. Looking at the single-year change from 2021 to 2022, cities such as Calgary ($37.6 million or 0.9% of expenditures) experienced substantial increases in net revenues associated with rising immigrant shares, while cities such as Toronto (-$437,000) saw small negative effects. However, when considering cumulative impacts over multiple years, all major Canadian cities exhibit positive net effects with this specification, ranging from approximately 0.2% of expenditures in Toronto to 5% in Calgary. Further heterogeneity in the results will be studied in the following section.

These findings suggest that increases in the immigrant share in Canadian municipalities are associated with revenue growth that outpaces expenditure growth, leading to a positive net fiscal effect on municipalities on average. This stands in contrast to some results found elsewhere in the world, such as the United States, where Mayda et al. (2023) do not find statistically significant impacts for the total immigration share for either revenue or expenditure. On the other hand, Mariani et al. (2024) do find positive fiscal impacts from immigrants in Italy, which suggests the results in this paper are not without precedent.

4.2 Heterogeneity Analysis

4.2.1 By Skill Level

Much of the discussion around immigration centres around the narrative that high-skill immigrants contribute positively to the economy, while low-skill immigrants are a burden to social services. In this section, we test whether immigrant skill generates heterogeneous impacts on municipal finances by splitting immigrants into high and low-skill categories, where high-skill immigrants are classified based off their intended occupation as discussed in Section 2.

In Table 3, we present the results of the regression of the change in log own revenue and expenditure per capita on the share of immigrants of both high and low-skill from 2004-2022. Including both high and low-skilled immigrants in the same regression, we can interpret each coefficient as the effect of an increase in high (low) skilled immigrants as a share of the total population holding the share of low (high) skilled immigrants constant. Because these shares are computed with respect to the total population, this interpretation implies that the share of native residents is falling. We instrument for each variable separately using the simulated share of high or low skilled immigrants in each year.

While we find expected results for revenues, the expenditure results across skill level are surprising. In Column (6) - our preferred specification - of the revenue table, high-skill immigrants generate a larger increase in the growth rate of per capita revenue compared to low-skill immigrants although the high-skill coefficient is not statistically significant.[17] In the expenditure table, there is a strongly positive estimate for high-skilled immigrants, where a 1 p.p. increase in the high-skilled immigrant share is associated with a 4.8% increase in the growth rate of municipal expenditures per capita. For low-skilled immigrants the effect is practically zero, which runs counter to the prevailing narratives around immigration and the results for the United States.

As with the total immigrant case, it is necessary to convert these coefficients into dollar-terms in order to compute the net effects both for different skill levels and for the municipality overall. When doing this by skill, it is apparent that high-skilled immigrants have negative fiscal impacts across municipalities, which is in line with the coefficients. In the major Canadian cities selected for this analysis, the observed increases in high-skill immigrants from 2014 to 2022 lead to a decrease in net revenues that is between 3-6% of municipal expenditures depending on the city. Montréal is the one exception, where net revenues increased because the share of high-skill immigrants actually fell during this period. In the

[17] One reason the high skilled number may be noisier is that there are fewer high-skilled immigrants than low-skill - there are about three or four times the number of low-skilled than high-skilled immigrants.

Table 3: Impact of Immigrant % by Skill-Level on Municipal Finances - 2SLS

(a) Change in Log Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	5.215**	0.459	1.600	6.264**	0.912	2.467
	(1.704)	(0.687)	(1.208)	(2.343)	(1.074)	(1.811)
Δ Immigrant % (Low)	0.376	0.509*	1.640***	0.815**	1.393***	1.262***
	(0.268)	(0.209)	(0.266)	(0.292)	(0.219)	(0.371)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	25.26	25.42	40.00	51.83	35.02	28.59

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	3.694*	3.231***	3.673***	4.244*	3.092***	4.790**
	(1.631)	(0.955)	(0.794)	(1.917)	(0.936)	(1.483)
Δ Immigrant % (Low)	0.522**	0.010	0.360	0.899***	0.064	0.094
	(0.169)	(0.206)	(0.287)	(0.210)	(0.253)	(0.317)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	25.26	25.42	40.00	51.83	35.02	28.59

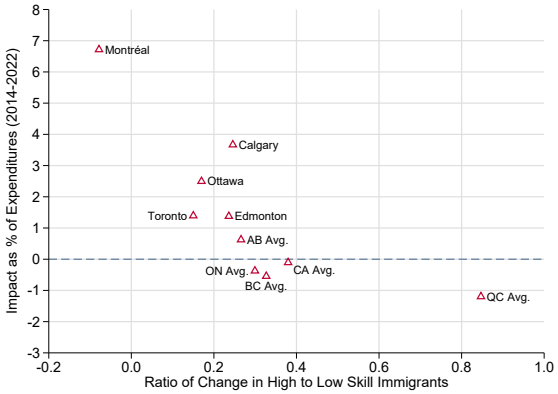
Note: These tables capture the impact of the change in immigrant share by skill level in a municipality on the change in log per capita own revenues and expenditures at the municipal level using a variety of empirical specifications. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

average Canadian municipality, where high-skilled immigrant growth was slower, high-skilled immigration was associated with only a 1.5% decline in cumulative net revenues.

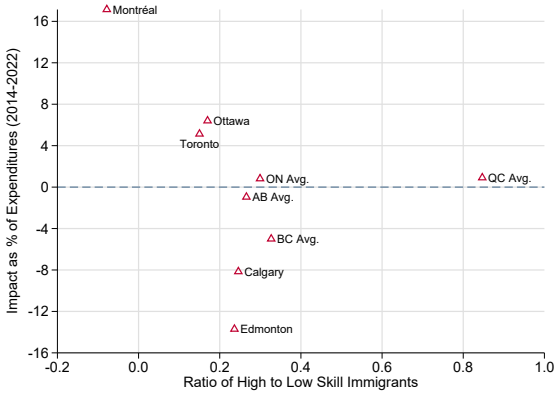
Conversely, low-skilled immigrants have a positive fiscal impact on municipalities. When

Figure 2: Impact of Immigration on Municipal Budgets - Selected Cities & Provinces

(a) Aggregate Coefficients



(b) Coefficients by Province



Note: This figure depicts the predicted change in net municipal revenues in selected cities according to the ratio of high-to-low skilled immigrants in each location. The predicted change in net revenues is expressed as a share of annual expenditures and is computed using the coefficients from Column 6 of Table 3 (left-panel) and Appendix Table 6 (right-panel) and the observed changes in immigration shares from 2014-2022 in each municipality. Points labelled Avg. can be interpreted as the impact on the average municipality in each province and overall (CA), with the average change in revenues, expenditures and immigration shares.

converting to dollar-terms, the increase in low-skilled immigration is associated with increases in net revenues in major cities, making up between 4.7% to 8.6% of expenditures. In the average Canadian municipality, the net revenue effect is smaller, sitting at about 1.4% of the average municipality's expenditures. These results suggest that the positive impact of immigration on municipal finances found in the previous section is likely driven by low-skill rather than high-skill immigrants.

These counteracting impacts by skill introduce a source of heterogeneity in the overall impact of immigration. According to these results, municipalities with larger increase in the share of high-skill immigration may experience a negative net effect from immigration. As seen in the left-panel of Figure 2, larger cities, such as Montréal or Toronto, that saw bigger increases in the share of low-skill immigrants (and, therefore, a lower ratio of high to low-skilled immigrant growth), saw positive impacts of immigration on municipal budgets. However, the representative, average municipalities saw slight declines in the net impact of immigration due to receiving a relatively higher ratio of high-skill immigrants, who are paradoxically worse for budgets according to these results.

These results are surprising, in part because one might expect high-skilled immigrants to have a more positive impact and low-skilled immigrants to have a negative impact. This is what Mayda et al. (2023) find in the United States example, where high-skilled immigrants

Table 4: Impact of Total Immigrant % on Municipal Finances by Province

(a) Change in Log Own Revenue per capita

	AB	BC	ON	QC
Δ Immigrant % (Total)	1.564***	1.083**	1.847***	0.583
	(0.370)	(0.343)	(0.208)	(0.350)
Observations	3,125	2,060	6,373	2,711
Kleibergen-Paap F-Stat	185.13	34.85	83.59	561.83

(b) Change in Log Expenditure per capita

	AB	BC	ON	QC
Δ Immigrant % (Total)	2.247	1.390***	0.706*	-1.348***
	(1.432)	(0.276)	(0.359)	(0.406)
Observations	3,125	2,060	6,373	2,711
Kleibergen-Paap F-Stat	185.13	34.85	83.59	561.83

Note: This table shows the impact of the change in immigrant share in a municipality by skill on the change in log per capita own revenues and expenditures at the municipal level across provinces. Results for each period are estimated using separate regressions for each province and include controls, year-by-province FEs and municipality FEs. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

increase revenues, expenditures and net revenues, while low-skilled immigrants reduce all three. In the Canadian case, both kinds of immigrants increased revenues *and* expenditures in such a way that the net effects by skill go in the opposite direction. These results suggest that the net fiscal impact of immigration on local municipalities can vary substantially across countries and institutional contexts, which is explored further in the next section.

4.2.2 By Province

While the main results capture the average effects of immigration on municipal finances, both overall and by skill level, there is reason to believe there is considerable variation across provinces. Every Canadian province governs their municipalities differently, leading to different institutional contexts that could influence how each city responds to immigration. To assess possible variation across provinces, we estimate separate regressions for each one and present the results in Table 4.

These findings suggest significant heterogeneity across provinces. We find statistically significant results for revenues that are largely in line with the overall results with the exception of Québec, where the coefficient is positive, but smaller and statistically insignificant. There is greater variation in expenditures, where Alberta has a higher, but noisy, expenditure response than the overall effects, while Québec's expenditure response is statistically significantly negative, which stands in stark contrast to the other provinces. Notably, the coefficients on expenditure in Alberta and British Columbia are larger than the revenue coefficients, which differs from the unified regression case. When converting to dollar-terms, we find that the net impacts in Alberta and British Columbia become negative, suggesting that the net impact of immigration in those provinces is negative, while the net impact in Ontario and Québec is positive.

In Appendix Table 6, we break out these results by skill level to explore further. We again see evidence that high-skill immigrants lead to positive, although noisy, revenue impacts, with Alberta having a very large positive coefficient. We also see some evidence of low-skill immigrants having a negative impact on revenues in Alberta and Québec, although this is statistically insignificant and close to zero. In terms of expenditures, the high-skilled results from the unified regression holds across British Columbia, Ontario and Québec, but not in Alberta, where the coefficient is negative (although very noisy and not statistically significant). The low-skilled results vary quite substantially, with a larger positive coefficient in Alberta and a significant, negative coefficient in Québec.

These results by skill level and province force us to reassess the net fiscal impacts on certain municipalities from what was found with the unified regression. After converting these coefficients to dollar-terms once again, the right-panel of Figure 2 plots the net fiscal effects of immigration as a share of expenditure across different municipalities by the ratio of immigrant skill level. In this panel, Edmonton and Calgary, which are cities in Alberta, now see negative net effects of immigration, while the other major cities in Ontario and Québec still see positive effects. The Ontario and Québec average cities are also positive, while the representative Alberta and British Columbia municipalities have a negative effect.

These findings suggest that local institutions, cultural attitudes and immigration patterns play an important role in shaping the response to immigration at the municipal level. This can be seen by the fact that the net fiscal impact is reached in different ways across provinces. For instance, the two provinces that see negative net fiscal impacts - Alberta and British Columbia - differ significantly in the regression coefficients by skill. Alberta is unique in the Canadian context in following the more conventional wisdom around immigration, where high-skill immigrants improve public finances and low-skill immigrants worsen them. Conversely, in British Columbia, the regression coefficients largely follow the main

unified regression, but with a higher ratio of high-skilled immigrants and a more muted impact from low-skilled immigrants, the overall effect becomes negative on net. Therefore, the negative net fiscal effects in Alberta seem to reflect the municipal response to immigration, whereas the impacts in British Columbia appear to reflect the composition of immigrants.

The two largest provinces in Canada - Ontario and Québec - drive the more positive headline results, but for completely different reasons. Ontario has coefficients and trends that mirror the main results, where low-skilled immigrants have a strong positive financial impact and high-skilled immigrants have larger, statistically significant expenditure effects. On the other hand, Québec sees positive effects largely due to a large negative coefficient on low-skilled immigrant expenditures, that is lower than the small negative coefficient on revenues. Québec has much greater control over its immigration system than other Canadian provinces due to unique historical factors, which could explain some of the difference, but cultural attitudes and institutional differences could also account for the observed decrease in expenditures per capita in places that see more low-skilled immigration.

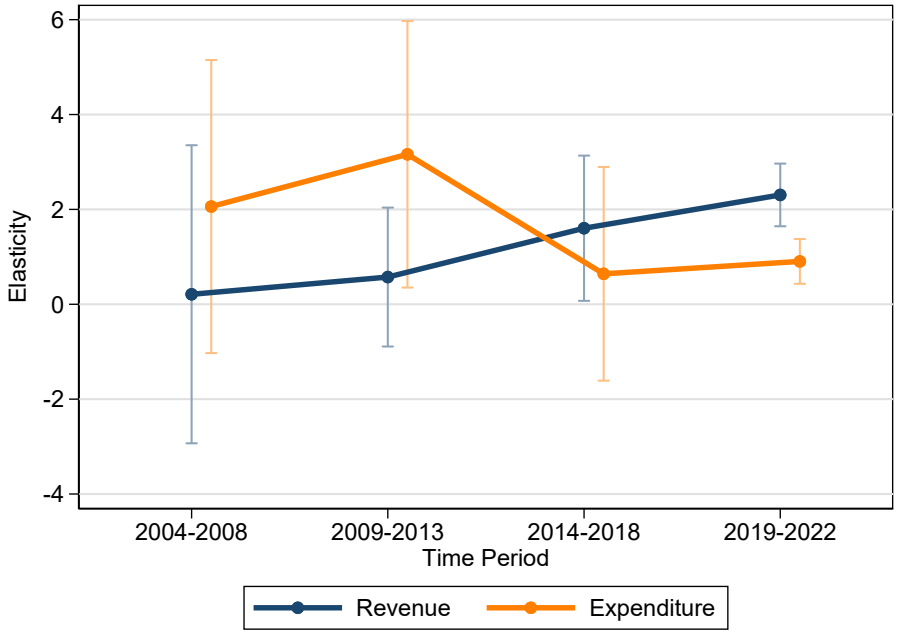
4.2.3 By Time Period and City Size

Given recent changes to immigration policy, we also explore how the effects change over time. In Figure 3, we present the results for log revenue and expenditure per capita estimated separately by time period. We find that the positive impacts of immigration on municipal finances emerge predominantly in more recent years. These years also coincide with an increase in the relative share of low-skilled immigrants to Canada, who tend to have more positive effects on municipal net revenues than high-skilled immigrants. One reason the observed net effects appear smaller than in the main analysis is because Québec, which has a positive net fiscal impact, is omitted due to their data starting only in 2014.

In Appendix Table 7, we show how the results change over different time periods by skill. Although the results are noisier than for the total immigration share, we find that, at least when looking at the first and second half, there is an improvement in the net revenue impact of both high and low-skilled immigrants. This finding suggests that the improvement in fiscal impact is not entirely compositional, but also due to the changing behaviour or composition of immigrants within a skill group.

Another dimension to explore is that of city size. Municipal governments in large cities would be expected to operate differently than in small towns and this could be reflected in how they respond to immigration. In Appendix Table 8, we present regression results for both revenue and expenditure where we interact the municipal population from 2022 (expressed in 100,000s) with the total immigrant share both linearly and as a quadratic. We find statistically significant results for revenue that suggest an inverse-U relationship

Figure 3: Impact of Change in Immigrant % on Municipal Finances by Time Period



Note: This figure captures the impact of the change in total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level across different periods of time in the sample. Results for each period are estimated using separate regressions for each period of time and include controls, year-by-province FEs and municipality FEs. These results do not include Québec, which is only added to the sample in 2014.

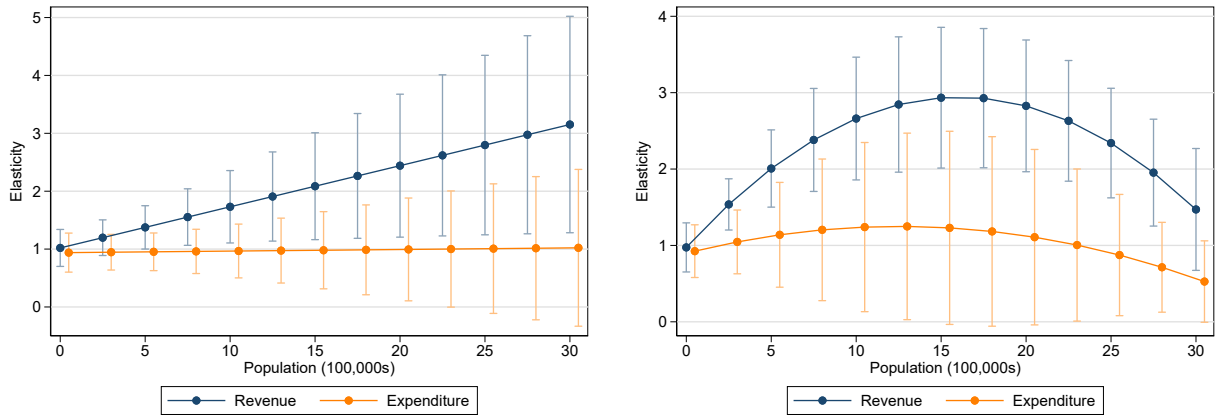
between city size and the impact on municipal per capita revenues. We also find an inverse-U relationship for expenditure, but it is not statistically significant.

In Figure 4, we plot the marginal effects of the city size regression for population intervals of 250,000. We show that for small cities the net impact of immigrants on municipal finances is small and close to zero, but for larger cities this impact grows. One explanation for this is that low-skill immigration tend to choose larger cities and because their impact is more positive, this will lead to more positive impacts in these places. In the quadratic specification, the positive effects are maximized in municipalities with populations between one and two million. This suggests that while there are positive effects of immigration on municipal finances, there could perhaps be diminishing returns as a city grows in size.

4.3 Robustness

In this section, we show how the results presented above are robust to alternative empirical specifications. A first question is the skill classification of immigrants. In Figure 5 and Appendix Tables 4 and 5, we show how the results vary by skill definition. First, using the

Figure 4: Impact of Change in Immigrant % on Municipal Finances by City Size



(a) Linear (b) Quadratic

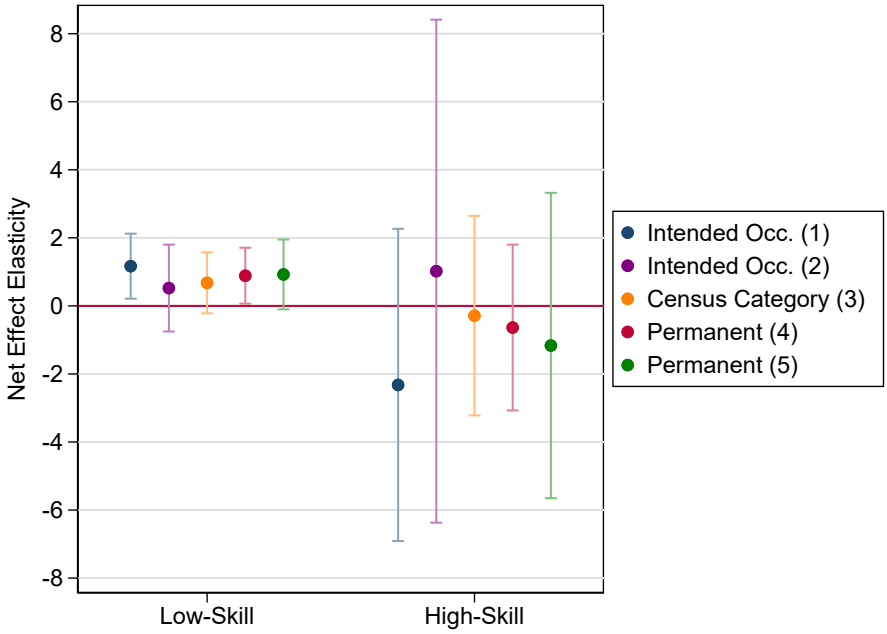
Note: This figure captures the marginal effects of the impact of the change in total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level across different city sizes (expressed in 100,000s). Results for each period are estimated by interacting the municipal immigration share variable with the 2022 municipal population and include controls, year-by-province FEs and municipality FEs.

intended occupation measure of skill from our main results, we show how shifting "Intermediate and Clerical" immigrants from high to low skill changes the estimates. This change makes the high-skill estimates much noisier and more difficult to interpret, in part because it reduces the number of immigrants classified as high-skill in the sample substantially. That said, the rough pattern of low-skilled immigrants having a non-negative effect still holds despite removing some of the highest-skilled of the low-skilled group.

A second alternative definition of skill uses the immigration categories from the Canadian Census of Population. Every permanent resident arriving in Canada does so through a particular immigration stream that is broadly classified into: Economic, Family Reunification, Refugees and Other. We classify the Economic stream immigrants as high-skill as they arrive with the presumption of adding economic value to Canada. Non-permanent residents are all classified as low-skill using this definition, which will also include students. We find that the overall trends are again robust to this alternative definition of high and low-skill.

We also classify immigrants broadly as high and low-skill based on whether they arrived as permanent residents (high) or non-permanent residents (low). For those who started as non-permanent residents and transitioned to permanent residents, we classify them as permanent in version (4) and non-permanent in version (5). Again we find that the results are robust across these different definitions. The fact the results are robust to using different definitions of skill, suggests that there is substantial overlap across these different definitions.

Figure 5: Impact of Change in Immigrant % on Net Revenues by Skill Definition



Note: This figure capture the impact of the change in immigrant share by skill level in a municipality on the change in log per capita net revenues at the municipal level using a variety of definitions of immigrant skill-level. For definitions (1) and (2) skill level is defined by the intended occupation of the immigrant, where definition (2) classifies "Intermediate and Clerical" as low-skill rather than high. Definition (3) uses the Census categories of immigrants, where we define "Economic" immigrants as high-skill and family, refugee and other immigrants as low-skill. Definitions (4) and (5) attribute permanent residents as high-skill and non-permanent residents as low-skill with those who were both being classified as permanent in (4) and non-permanent in (5). The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Standard errors are clustered at the municipality (CSD) level.

Next, we examine how robust the results are to different specifications of the main regression. In Appendix Table 9, the results using simple year fixed-effects (FEs) are presented in the second column. The log revenue per capita results remain unchanged, but there is a slight decrease in the coefficient for expenditures. When looking by skill in Appendix Tables 10 and 11, we find that this change is modest overall. We use the province-by-year fixed effects because the panel is unbalanced and there could be issues with using a national-level year fixed effect when the composition of provinces changes throughout the sample.

The third and fourth columns have very little impact on the results with *total* immigration. In the third column, we present the unweighted version of results, which lead to very similar estimates. This suggests that the effects we observe are not entirely driven by large cities. This is what we find when looking by city size, where even though the effect does grow somewhat with city size, both revenue and expenditure coefficients are positive

and the net effect is positive even for smaller cities. In the fourth column, where towns under 1,000 people are included in the sample the results are similarly unaffected. There is some evidence however, that weighting has an effect when looking by skill. In Appendix Tables 10 and 11, we show how the results vary by skill and there is a difference in the high skill revenue coefficient when removing the weights, but this simply makes the impact of high-skilled immigrants even more negative compared to the main results, which is shown in Appendix Figure 7.

We also present the results using a log-log formulation. We do find barely statistically significant results for revenue and positive, but not significant results for expenditure that are slightly smaller than the revenue coefficients. When breaking them down by skill, we also find that the direction of the net effects is the same as in the log-level version, but not significant. The magnitude of these results is far smaller than those of the log-level version because of the economic interpretation of a 1% change. Since we are taking logs of small shares - the average municipality-year observation has a 6% share - a 1% increase in the immigrant share corresponds to only a 0.06 p.p. increase in immigrant share, which would have a correspondingly small effect on municipal budgets. These results show that the overall direction of the effects is robust to specifying this regression in logs, but that the interpretation of the magnitude is important to consider.

Finally, we look at the impact of a one-year lag in the change in immigrant share because some have argued that it takes time to implement changes to municipal finances in response to a shock. We find that for total immigrants, there is no impact on revenues and a negative impact on expenditures that is statistically significant. When broken down by skill, neither coefficient is significant for revenues, although high-skilled immigrants a year prior are associated with a slight increase in revenues. For expenditures, the negative coefficient for the total is driven by low-skill immigrants rather than high-skill ones.

One explanation here is that revenue shifts occur contemporaneously, especially for sources of revenue such as user fees, where an influx of immigrants will directly translate to a change in that year, but not necessarily in future years. On the other hand, there may be a kind of backlash effect with expenditures, where in the contemporaneous period, expenditures rise with low-skilled immigrants because they increase their use of services, but decrease in the following year if municipalities reduce spending in response to this inflow. What is reassuring is that the relationships for most of these variables are weaker than in the main results, and null in some cases, which suggests that persistence is not necessarily driving these results.

5 Mechanisms

5.1 Revenue and Expenditure Categories

To better understand what is happening at the municipal level, it is worth examining individual revenue streams and expenditure categories. In Appendix Table 12, we present the results for different revenue streams in municipal budgets. While these results are largely noisy and not statistically significant, the general direction and magnitude of the coefficients proves useful. We find that the tax revenue category is practically unaffected by changes in total immigrant share, which suggests that increased revenues are not coming through the property tax channel. One statistically significant finding is that user fees and permits does increase with a change in the immigrant share. This suggests that it is this channel which is driving the increase in own revenue, with both high and low-skilled immigrants having a positive relationship. Another finding from this table is that government transfers are largely correlated with high-skilled immigrants rather than low-skilled. This could suggest that government funding to municipalities is unlikely to be driven by a desire to redistribute along a skill basis.

Overall, this pattern suggests that the increase in own-source revenues is not being driven by higher property tax contributions from existing residents, but by immigrants themselves generating new revenue. In particular, the growth in user fees and permits is consistent with the idea that immigrants are directly contributing to municipal finances through their own consumption of services. For example, prior research shows that immigrants in Canada are significantly more likely to use public transit than the Canadian-born population (Heisz & Schellenberg, 2004) which then helps explain the increase in per capita user fee revenue. This finding supports the notion of immigrants, and especially low-skilled immigrants, as net contributors to the municipal budget.[18]

In terms of expenditures, there is also little evidence that spending is increasing in categories that would be associated with immigration. In Appendix Table 13, we do not find any statistically significant results, but the sign on categories such as transportation and health and welfare is negative rather than positive. This suggests that spending on items such as shelters, bus routes and social services is not increasing in response to immigration shocks. This finding runs counter to some of the popular narratives regarding immigration and public spending and again suggests that immigrants are not net beneficiaries of municipal spending.

[18]This is largely suggestive evidence because we do not observe the spending behaviour of immigrants and native residents on public services, which means that this uptick could be driven by native residents, but this would be a deviation from historical trends.

5.2 Discussion

The main findings in this paper stand in contrast to much of the conventional wisdom around immigration and public finances. In particular, the finding that the positive net fiscal impacts of immigration are driven by *low*-skilled immigrants goes against much of the standard theory of local public finance and the results of Mayda et al. (2023) for the United States. This section will discuss a few explanations that can rationalize this result.

One potential explanation lies in differences in immigration selection and composition across countries. Canada's immigration system relies heavily on points-based selection for permanent residents, with criteria related to education, language proficiency, and work experience. In the United States, high-skilled immigration is tightly capped and highly selective, while a substantial share of lower-skilled immigration occurs through family-based channels or unauthorized entry. These institutional differences may generate different average fiscal impacts at the municipal level, even before considering local adjustment mechanisms. The results across provinces in this paper provide evidence that there can be substantial differences in municipal adjustment across institutional settings even within a single country.

Explaining the reversal in the relative municipal fiscal impacts of high- and low-skilled immigrants is more challenging and necessarily speculative given the reduced-form nature of the analysis. One interpretation draws on a Tiebout-style perspective in which immigration affects municipal finances not only through revenue channels, but also through changes in local demand for public goods and infrastructure. High-skilled immigrants in Canada are more likely to enter as permanent residents, settle long-term, and participate in local political processes, potentially increasing demand for capital-intensive public services.

This explanation can also potentially explain some differences between Canada and the United States. Statistics Canada reports that immigrants own housing at a higher rate than Canadian-born residents - 310 units per 1,000 people compared to 271 units respectively (Zhang & Hou, 2025). This trend is not replicated in the United States, where two-thirds of native-born households owned their house in 2011 compared to only 52.5% of foreign-born households (Trevelyan et al., 2013). If Canadian immigrants, especially high-skill ones, own their houses at a higher rate, they may also be able to command more public resources than their American counterparts, which could explain some of the divergence in trends.

The high rate of homeownership among immigrants in Canada also points to another possible mechanism explaining the results. Since immigrants are generally new to the country, many of them settle in newer suburbs of major Canadian cities. In Brampton, a suburb of Toronto, 52% of the population is South Asian, while in Richmond, a suburb of Vancouver, 57% of the population is East Asian in the 2021 Census. Suburbs also tend to be more costly from a municipal finance perspective because the cost of maintaining additional

infrastructure is higher in less dense areas. If these immigrant communities are generally higher skill, as one might expect of people who can afford to buy large suburban homes, then this could also explain higher levels of per capita expenditure in these municipalities.

6 Conclusion

This paper addresses an important question facing municipalities about the impact of immigration on their budgets. Following the approach of Mayda et al. (2023) in the Canadian context, we find results that contrast with the experience of American municipalities. In Canada, an increase in the immigrant share increases revenues and expenditures per capita and has a positive impact on net revenues in the unified specification. Surprisingly, these effects are driven by low-skill immigrants rather than high-skilled ones through the expenditure side - low-skill immigrants do not increase per capita expenditures at all, while high-skilled immigrants do so significantly.

These results raise a number of questions for local public finance and immigration policy. The findings here assume that the quality of services provided to immigrants is not changing during this period. However, if the lack of an increase in expenditure per capita is simply due to the neglect of immigrant needs, then there is a related, but separate policy issue to resolve. Better understanding how public services are being provided in response to immigration not simply through a monetary measure will be an important avenue for future work. Another question is regarding the role of the immigration selection process. While lower-skill immigrants may be better for municipal finances, it is unclear if this is optimal from other policy perspectives. There has already been some public backlash against the dramatic recent increase in immigration levels in Canada, which suggests that immigration has several other impacts that should be considered when determining the optimal level of population inflows.

Finally, the interpretation of the results depends on how immigrants are defined and measured. Immigrants in this paper are defined as individuals who arrived in Canada in 1980 or later, and skill classification is based on characteristics observed at entry and held fixed over time. As a result, the analysis captures changes in the composition of the resident immigrant stock rather than short-run inflows or within-individual skill upgrading. While the use of first differences mitigates some concerns that shifts in immigrant share may not be well captured using this metric, the estimates should be thought of as changes in the composition of the local population rather than as new arrivals each year. More work can be done to better understand the role played by newly arrived immigrants compared to those that arrived years earlier.

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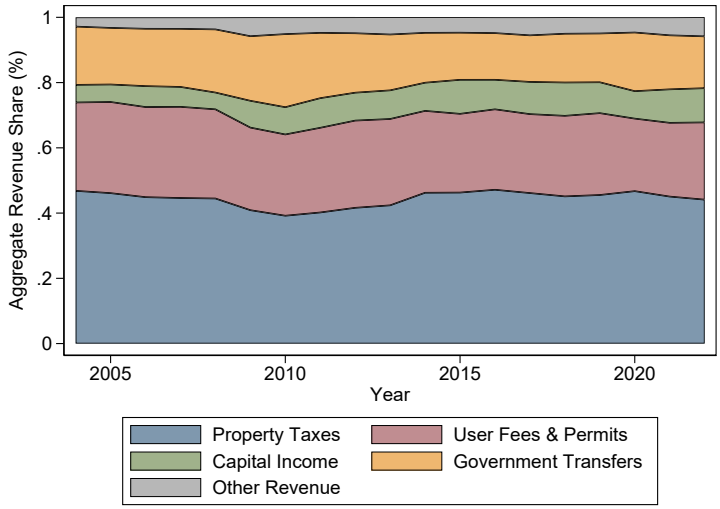
A Appendix

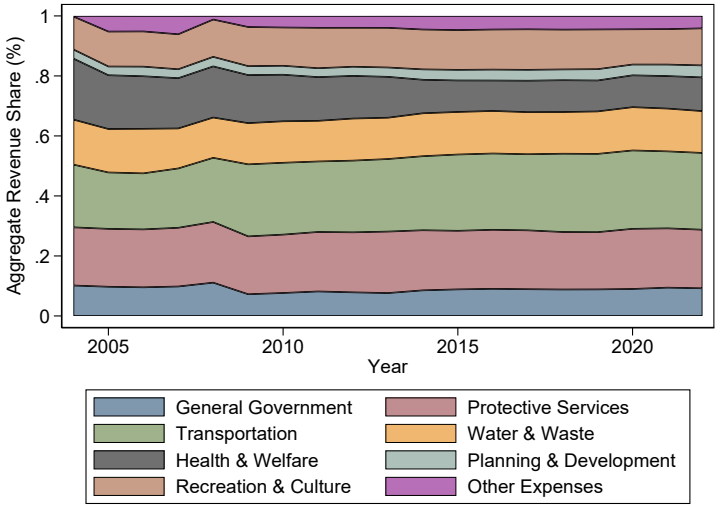
A.1 Figures

Figure 1: Aggregate Municipal Revenues & Expenditure Shares By Type and Year

(a) Revenues

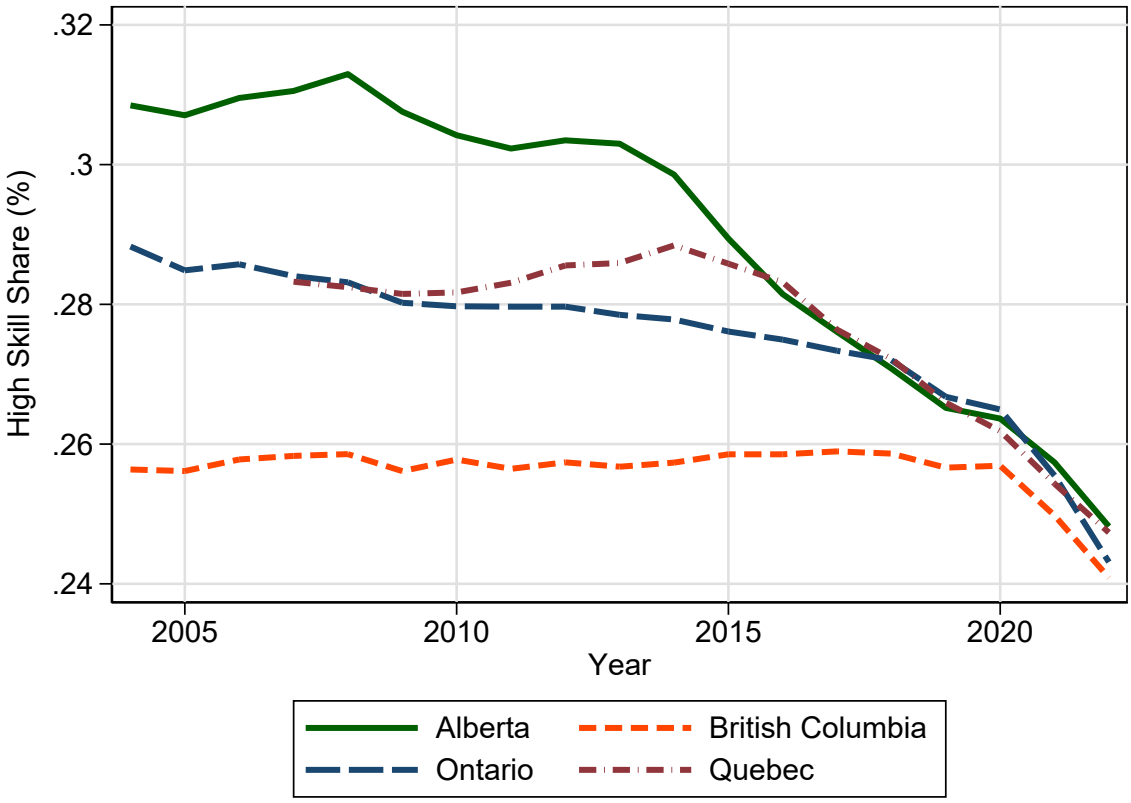


(b) Expenditures



Note: This figure shows the share of aggregate municipal revenues and expenditures that are dedicated to different categories in the four biggest Canadian provinces from 2004 to 2022. Information on municipal revenues comes from provincial datasets on municipal financial returns.

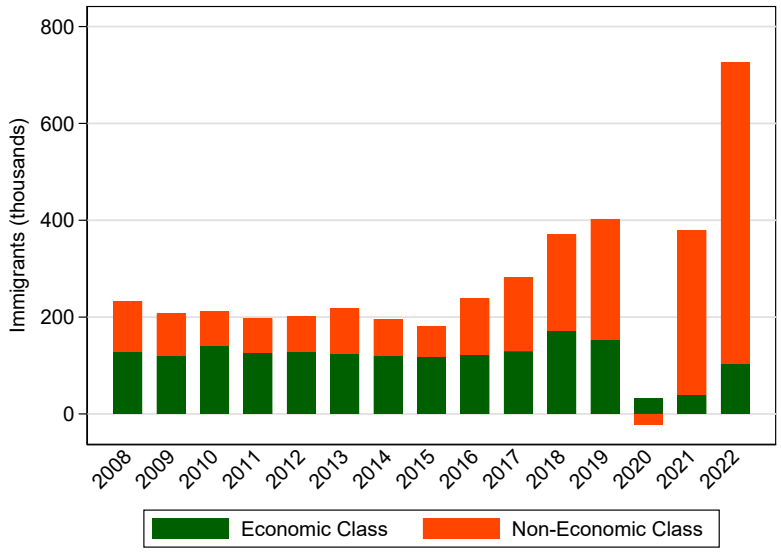
Figure 2: Share of High Skill Immigrants By Province



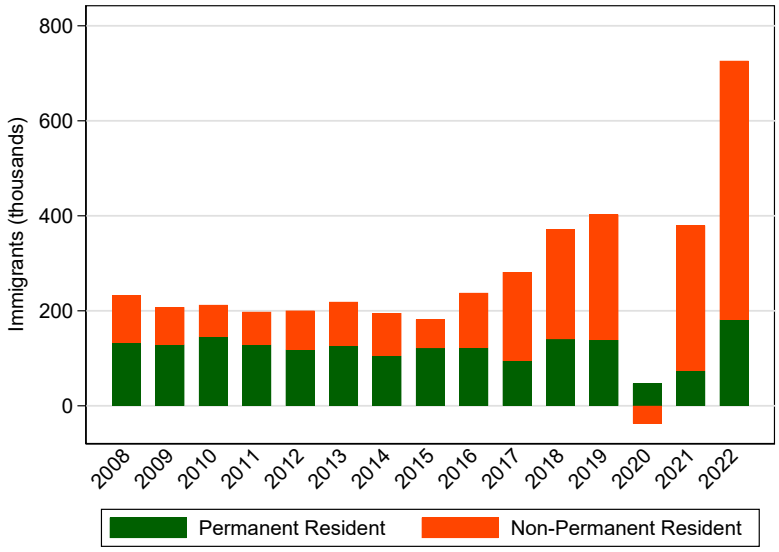
Note: This figure presents the aggregate share of high skill immigrants in each province over time from 2004 to 2022. Shares are calculated by dividing the number of high skill immigrants located in each province in each year by the total number of immigrants. Values for Québec are available starting in 2007.

Figure 3: Change in Number of Immigrants by Year and Skill Level, Alternative Definitions

(a) Economic vs. Non-Economic Class



(b) Permanent vs. Non-Permanent

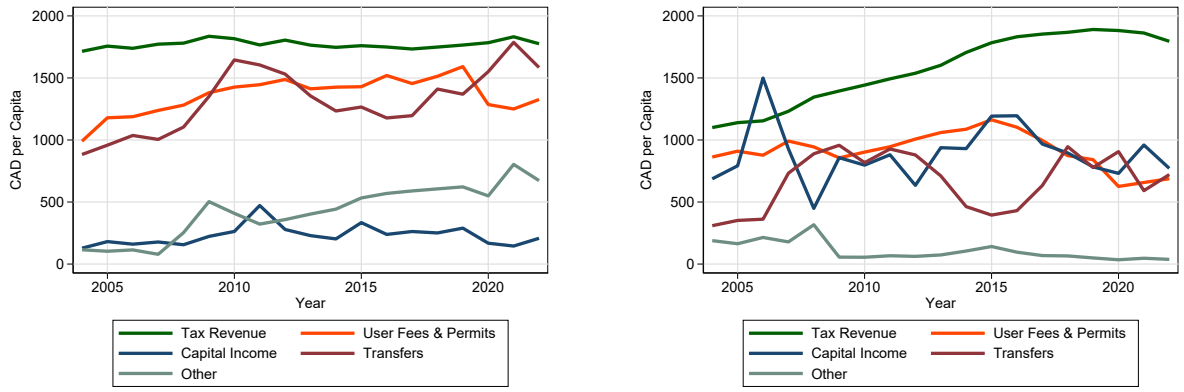


Note: This figure presents the evolution of the net change in immigrants according to alternative definitions of skill. Skill level is defined in the original figure according to the intended occupation of the immigrant. In this figure, the first panel defines skill according to whether the immigrant was classified as an economic migrant or a non-economic migrant. In the second panel, skill is defined according to whether the immigrant is a permanent or non-permanent resident.

Figure 4: Municipal Finances in Toronto and Edmonton

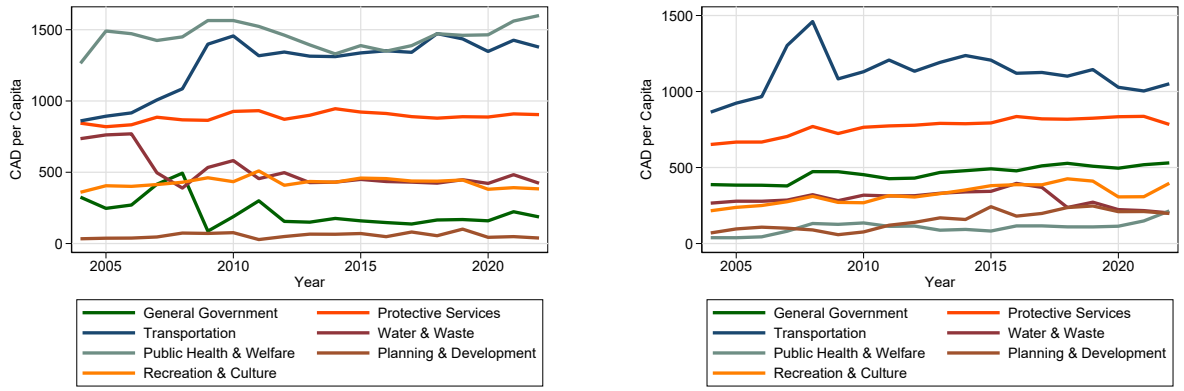
(a) City of Toronto - Rev

(b) City of Edmonton - Rev



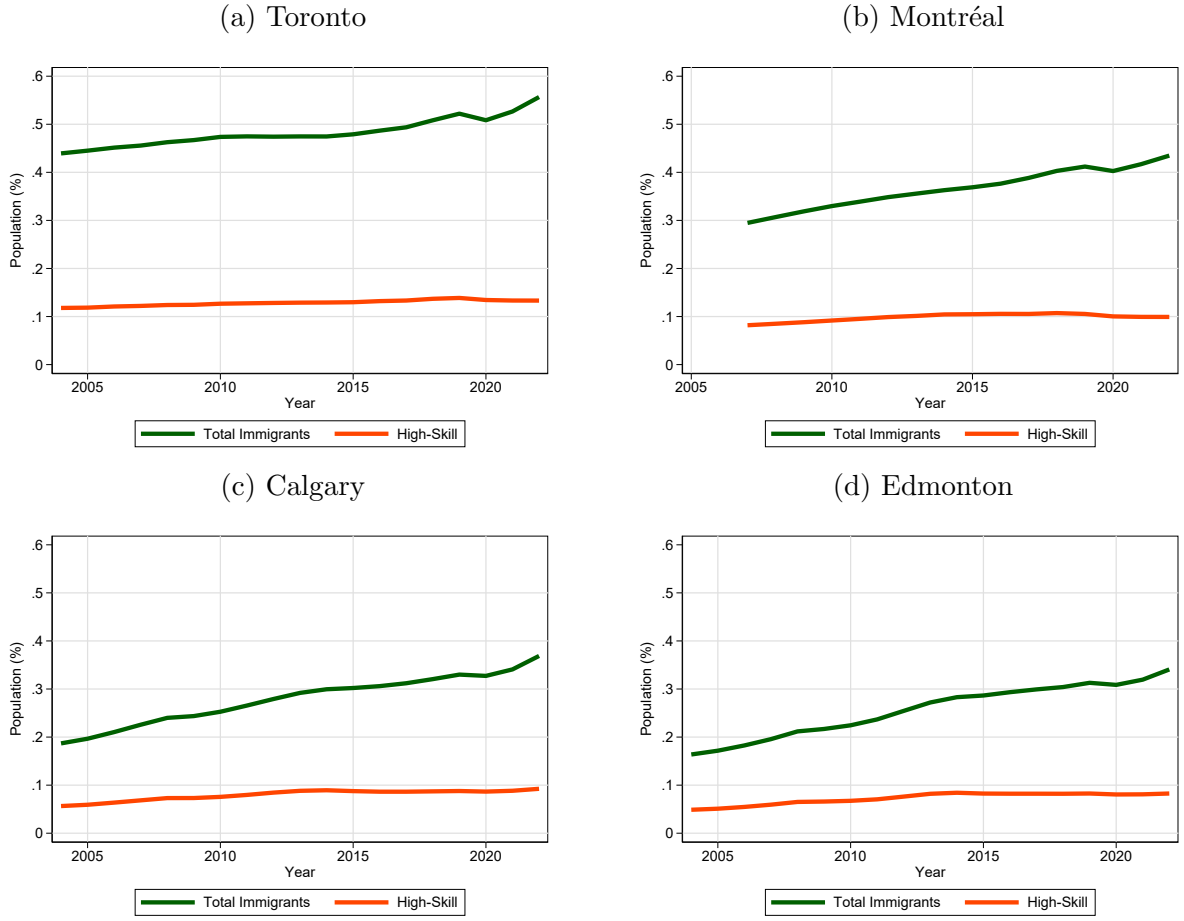
(c) City of Toronto - Exp

(d) City of Edmonton - Exp



Note: This figure presents the evolution in municipal finance variables in select Canadian cities - Toronto and Edmonton - from 2004 to 2022. The panels represent revenues (top panels) and expenditures (bottom panels) per capita, broken into several categories. Expenditures per capita are measured on a full accrual basis, which includes both operational and capital expenses amortized over time. All values are expressed in 2002 CAD.

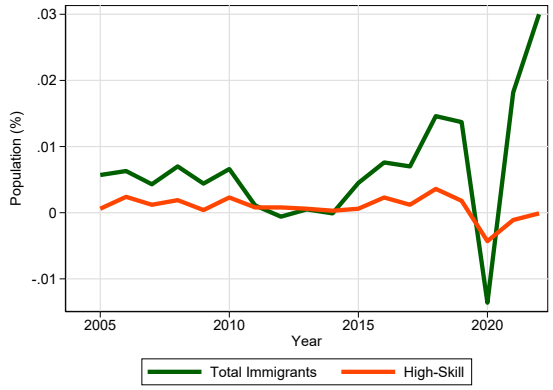
Figure 5: Immigrant Shares in Select Canadian Cities



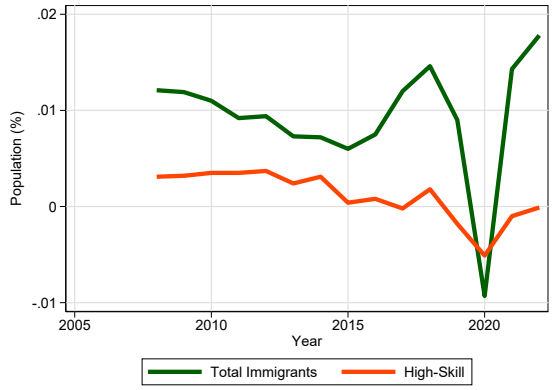
Note: This figure represents the immigrant shares in selected Canadian cities - Toronto, Montréal, Calgary and Edmonton - over time from 2004 to 2022. The two lines reflect the total immigrant share and the high-skill immigrant share as a fraction of the total population in each municipality.

Figure 6: Change in Immigrant Shares in Select Canadian Cities

(a) Toronto

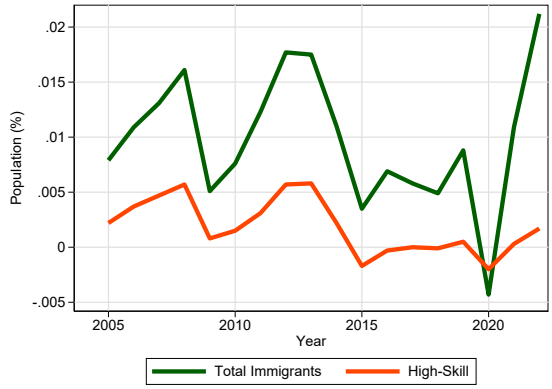


(b) Montréal



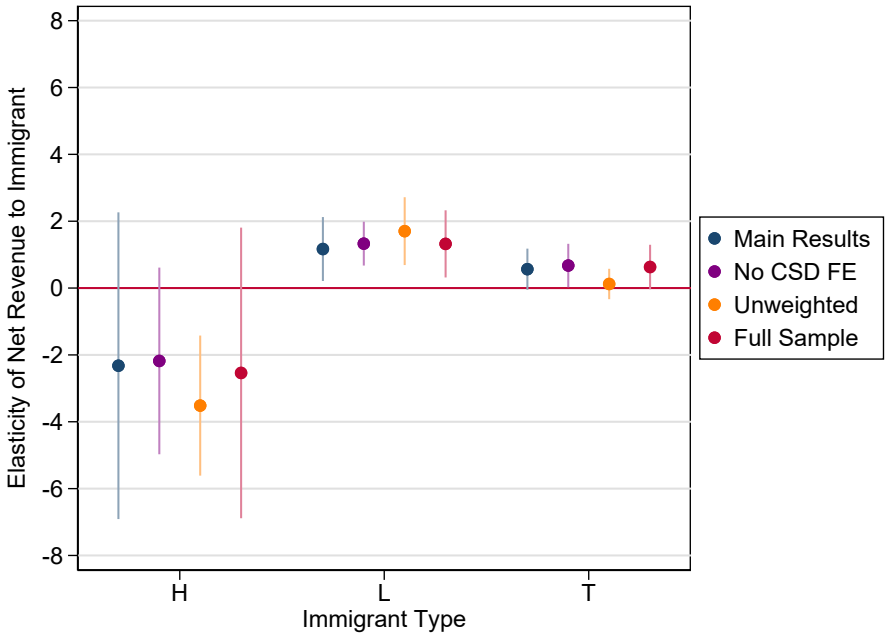
(c) Calgary

(d) Edmonton



Note: This figure represents the change in immigrant shares in selected Canadian cities - Toronto, Montréal, Calgary and Edmonton - over time from 2004 to 2022. The two lines reflect the change in total immigrant share and the high-skill immigrant share as a fraction of the total population in each municipality.

Figure 7: Impact of Change in Immigrant % on Municipal Finances by Skill & Specification



Note: This figure captures the impact of the change in total immigrant share in a municipality on the change in log per capita revenues minus expenditures at the municipal level using different robustness checks. The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Only municipalities with over 1,000 residents in 2022 are included in the main sample. "No CSD FE" drops the CSD FEs, "Unweighted" does not weight results by population, "Full Sample" includes municipalities with fewer than 1,000 residents. Standard errors are clustered at the municipality (CSD) level and assumed to be independent between revenue and expenditures.

A.2 Tables

Table 1: First Stage Regression - Change in Immigrant %

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Sim. Imm. % (Total)	0.769***	0.922***				
	(0.046)	(0.087)				
Δ Sim. Imm. % (High)			0.787***	1.073***	-0.165	0.378
			(0.119)	(0.109)	(0.312)	(0.291)
Δ Sim. Imm. % (Low)			-0.015	0.010	0.810***	0.826***
			(0.018)	(0.025)	(0.053)	(0.072)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	✓	×	✓	×	✓
Municipality FE	×	✓	×	✓	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269
R-Squared	0.450	0.715	0.252	0.501	0.519	0.762
Within R-Squared		0.382		0.259		0.428

Note: This table presents the first stage estimation results regressing the immigrant share on the shift-share ("enclave") IV. Columns (1) and (2) present the results for the total immigration share, Columns (3) and (4) present the results for the high-skill share and Columns (5) and (6) present the results for the low-skill share. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

Table 2: Impact of Total Immigrant % on Municipal Finances - WLS

(a) Change in Log Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	0.854***	0.328**	0.680***	1.029***	0.525***	0.718***
	(0.176)	(0.118)	(0.131)	(0.168)	(0.123)	(0.121)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	0.817***	0.249	0.395*	0.910***	0.244	0.425**
	(0.197)	(0.145)	(0.158)	(0.201)	(0.151)	(0.161)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269

Note: These tables capture the impact of the change in total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level using WLS and a variety of empirical specifications. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

Table 3: Impact of Immigrant % by Skill-Level on Municipal Finances - WLS

(a) Change in Log Own Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	2.364**	0.240	0.093	2.144**	-0.004	0.037
	(0.755)	(0.361)	(0.487)	(0.762)	(0.396)	(0.468)
Δ Immigrant % (Low)	0.478*	0.356	0.880***	0.744***	0.700***	0.951***
	(0.225)	(0.195)	(0.216)	(0.220)	(0.193)	(0.218)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	1.804*	0.820*	0.698	1.471	0.670	0.667
	(0.902)	(0.387)	(0.455)	(0.883)	(0.415)	(0.459)
Δ Immigrant % (Low)	0.571***	0.071	0.292	0.766***	0.104	0.342
	(0.171)	(0.180)	(0.195)	(0.180)	(0.195)	(0.210)
Controls x Year FE	×	×	×	✓	✓	✓
Year x Province FE	×	✓	✓	×	✓	✓
Municipality FE	×	×	✓	×	×	✓
Observations	14,269	14,269	14,269	14,269	14,269	14,269

Note: These tables capture the impact of the change in immigrant share by skill level in a municipality on the change in log per capita own revenues and expenditures at the municipal level using OLS and a variety of empirical specifications. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

Table 4: Impact of Immigrant % on Log Revenue By Skill - Alternative Skill Definition

	Intended Occ.		**Imm. Cat.**	**Perm. Resid.**	
	(1)	(2)	(3)	(4)	(5)
Δ Immigrant % (High-Skill)	2.467				
	(1.811)				
Δ Immigrant % (Low-Skill)	1.262***				
	(0.371)				
Δ Immigrant % (High-Skill)		8.116**			
		(3.015)			
Δ Immigrant % (Low-Skill)		0.591			
		(0.561)			
Δ Immigrant % (Economic)			4.367***		
			(0.692)		
Δ Immigrant % (Non-Economic)			0.920**		
			(0.348)		
Δ Immigrant % (Permanent)				3.066***	
				(0.610)	
Δ Immigrant % (Non-Permanent)				1.014***	
				(0.232)	
Δ Immigrant % (Permanent)					3.604***
					(0.700)
Δ Immigrant % (Non-Permanent)					1.123***
					(0.297)
Observations	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	28.589	15.878	41.500	21.355	62.719

Note: This table captures the impact of the change in immigrant share by skill level in a municipality on the change in log per capita own revenues at the municipal level using a variety of definitions of immigrant skill-level. In Columns (1) and (2) skill level is defined by the intended occupation of the immigrant, where column (2) classifies "Intermediate and Clerical" as low-skill rather than high. Column (3) uses the Census categories of immigrant, where we define "Economic" immigrants as high-skill and family, refugee and other immigrants as low-skill. Columns (4) and (5) attribute permanent residents as high-skill and non-permanent residents as low-skill with those who were both being classified as permanent in (4) and non-permanent in (5). The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Standard errors are clustered at the municipality (CSD) level.

Table 5: Impact of Immigrant % on Log Expenditure By Skill - Alternative Skill Definition

	Intended Occ.		**Imm. Cat.**	**Perm. Resid.**	
	(1)	(2)	(3)	(4)	(5)
Δ Immigrant % (High-Skill)	4.790**				
	(1.483)				
Δ Immigrant % (Low-Skill)	0.094				
	(0.317)				
Δ Immigrant % (High-Skill)		7.095**			
		(2.266)			
Δ Immigrant % (Low-Skill)		0.067			
		(0.331)			
Δ Immigrant % (Economic)			4.654***		
			(1.326)		
Δ Immigrant % (Non-Economic)			0.242		
			(0.296)		
Δ Immigrant % (Permanent)				3.702***	
				(1.083)	
Δ Immigrant % (Non-Permanent)				0.127	
				(0.349)	
Δ Immigrant % (Permanent)					4.768*
					(2.180)
Δ Immigrant % (Non-Permanent)					0.198
					(0.431)
Observations	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	28.589	15.878	41.500	21.355	62.719

Note: This table captures the impact of the change in immigrant share by skill level in a municipality on the change in log per capita expenditures at the municipal level using a variety of definitions of immigrant skill-level. In Columns (1) and (2) skill level is defined by the intended occupation of the immigrant, where column (2) classifies "Intermediate and Clerical" as low-skill rather than high. Column (3) uses the Census categories of immigrant, where we define "Economic" immigrants as high-skill and family, refugee and other immigrants as low-skill. Columns (4) and (5) attribute permanent residents as high-skill and non-permanent residents as low-skill with those who were both being classified as permanent in (4) and non-permanent in (5). The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Standard errors are clustered at the municipality (CSD) level.

Table 6: Impact of Immigrant % by Skill-Level on Municipal Finances by Province

(a) Change in Log Own Revenue per capita

	AB	BC	ON	QC
Δ Immigrant % (High)	10.620***	2.242	2.259	4.414
	(3.093)	(4.474)	(2.043)	(5.035)
Δ Immigrant % (Low)	-0.503	0.869	1.760***	-0.550
	(0.928)	(1.150)	(0.295)	(1.228)
Observations	3,125	2,060	6,373	2,711
Kleibergen-Paap F-Stat	13.16	35.45	42.49	4.82

(b) Change in Log Expenditure per capita

	AB	BC	ON	QC
Δ Immigrant % (High)	-2.248	5.494	4.472**	6.078
	(8.819)	(3.038)	(1.603)	(3.104)
Δ Immigrant % (Low)	3.273	0.630	-0.093	-3.545**
	(3.106)	(0.449)	(0.358)	(1.077)
Observations	3,125	2,060	6,373	2,711
Kleibergen-Paap F-Stat	13.16	35.45	42.49	4.82

Note: This table shows the impact of the change in immigrant share in a municipality by skill on the change in log per capita own revenues and expenditures at the municipal level across provinces. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. Results for each period are estimated using separate regressions for each province and include controls, year-by-province FEs and municipality FEs. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

Table 7: Impact of Immigrant % by Skill-Level on Municipal Finances by Time Period

(a) Change in Log Own Revenue per capita

	2004-2013	2014-2022	2004-2008	2009-2013	2014-2018	2019-2022
Δ Immigrant % (High)	-1.286	1.638	-2.901	2.574	2.765	-2.338
	(2.449)	(1.207)	(3.287)	(4.870)	(4.026)	(2.408)
Δ Immigrant % (Low)	2.402**	2.254***	1.774	-0.230	1.050	3.384***
	(0.812)	(0.444)	(1.415)	(1.639)	(1.797)	(0.847)
Observations	5,934	5,624	2,829	3,105	3,133	2,491
Kleibergen-Paap F-Stat	39.79	44.44	45.92	54.90	3.89	10.38

(b) Change in Log Expenditure per capita

	2004-2013	2014-2022	2004-2008	2009-2013	2014-2018	2019-2022
Δ Immigrant % (High)	4.534	3.200	5.486*	4.934	12.585	1.097
	(3.539)	(2.962)	(2.447)	(4.755)	(11.058)	(3.994)
Δ Immigrant % (Low)	1.766	0.326	0.340	2.447	-5.041	0.859
	(1.603)	(0.598)	(2.981)	(2.563)	(5.024)	(0.979)
Observations	5,934	5,624	2,829	3,105	3,133	2,491
Kleibergen-Paap F-Stat	39.79	44.44	45.92	54.90	3.89	10.38

Note: This table shows the impact of the change in immigrant share in a municipality by skill on the change in log per capita own revenues and expenditures at the municipal level across different periods of time in the sample. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. Results for each period are estimated using separate regressions for each period of time and include controls, year-by-province FEs and municipality FEs. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population. These results do not include Québec, which is only added to the sample in 2014.

Table 8: Impact of Total Immigrant % on Municipal Finances with City Size Interactions

	Revenue		**Expenditure**	
	(1)	(2)	(3)	(4)
Δ Immigrant % (Total)	1.0196***	0.9718***	0.9388***	0.9248***
	(0.1635)	(0.1641)	(0.1719)	(0.1761)
Δ Immigrant % (Total) × Pop.	0.0711*	0.2450***	0.003	0.054
	(0.0332)	(0.0677)	(0.0248)	(0.0910)
Δ Immigrant % (Total) × Pop. Sq.		-0.0076***		-0.002
		(0.0023)		(0.0030)
Observations	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	60.69	36.13	60.69	36.13

Note: This figure captures the impact of the change in total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level when interacted with city size (expressed in 100,000s) both linearly and as a quadratic. Results include controls, year-by-province FEs and municipality FEs, but are not weighted by 2022 municipal population as in the other regressions.

Table 9: Impact of Total Immigrant % on Municipal Finances - Robustness Table

(a) Change in Log Revenue per capita

	Main	Yr FE	No Wgt	All CSD	Log %	Lag 1-Yr
Δ Immigrant % (Total)	1.470***	1.554***	1.063***	1.430***		
	(0.185)	(0.171)	(0.162)	(0.181)		
Δ Log Immigrant % (Total)					0.014**	
					(0.005)	
Lag Δ Immigrant % (Total)						-0.001
						(0.589)
Controls x Year FE	✓	✓	✓	✓	✓	✓
Year x Province FE	✓	×	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Observations	14,269	14,269	14,269	19,823	14,269	13,650
Kleibergen-Paap F-Stat	111.12	115.54	136.05	115.79	426.14	99.89

(b) Change in Log Expenditure per capita

	Main	Yr FE	No Wgt	All CSD	Log %	Lag 1-Yr
Δ Immigrant % (Total)	0.905***	0.430	0.941***	0.800**		
	(0.253)	(0.247)	(0.166)	(0.287)		
Δ Log Immigrant % (Total)					0.010	
					(0.006)	
Lag Δ Immigrant % (Total)						-0.882**
						(0.320)
Controls x Year FE	✓	✓	✓	✓	✓	✓
Year x Province FE	✓	×	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Observations	14,269	14,269	14,269	19,823	14,269	13,650
Kleibergen-Paap F-Stat	111.12	115.54	136.05	115.79	426.14	99.89

Note: These tables capture the impact of the change in total immigrant share in a municipality on the change in log per capita own revenues and expenditures at the municipal level using different robustness checks. The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Only municipalities with over 1,000 residents in 2022 are included in the main sample. "Yr FE" uses just year FEs rather than year-by-province, "No Wgt" does not weight results by population, "All CSD" includes municipalities with fewer than 1,000 residents and "Log %" takes the difference in the log of the immigrant share. Standard errors are clustered at the municipality (CSD) level.

Table 10: Impact of Newc. % on Log Revenue per capita By Skill - Robustness Table

	Main	Yr FE	No Wgt	All CSD	Log %	Lag 1-Yr
Δ Immigrant % (High)	2.467	2.582	-1.212	2.305		
	(1.811)	(1.775)	(0.686)	(1.668)		
Δ Immigrant % (Low)	1.262***	1.349***	2.051***	1.239***		
	(0.371)	(0.315)	(0.375)	(0.345)		
Δ Log Immigrant % (High)					0.090	
					(0.173)	
Δ Log Immigrant % (Low)					-0.066	
					(0.159)	
Lag Δ Immigrant % (High)						1.178
						(1.169)
Lag Δ Immigrant % (Low)						-0.339
						(0.749)
Controls x Year FE	✓	✓	✓	✓	✓	✓
Year x Province FE	✓	×	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Observations	14,269	14,269	14,269	19,823	14,269	13,650
Kleibergen-Paap F-Stat	28.59	37.34	35.36	18.35	1.51	19.93

Note: This table captures the impact of the change in immigrant share by skill level in a municipality on the change in log per capita own revenues at the municipal level using a variety of empirical specifications. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Only municipalities with over 1,000 residents in 2022 are included in the main sample. "Yr FE" uses just year FEs rather than year-by-province, "No Wgt" does not weight results by population, "All CSD" includes municipalities with fewer than 1,000 residents and "Log %" takes the difference in the log of the immigrant share. Standard errors are clustered at the municipality (CSD) level.

Table 11: Impact of Newc. % on Log Expenditure per capita By Skill - Robustness Table

	Main	Yr FE	No Wgt	All CSD	Log %	Lag 1-Yr
Δ Immigrant % (High)	4.790**	3.570*	2.304**	4.844***		
	(1.483)	(1.469)	(0.820)	(1.462)		
Δ Immigrant % (Low)	0.094	-0.195	0.348	-0.083		
	(0.317)	(0.256)	(0.357)	(0.379)		
Δ Log Immigrant % (High)					0.746	
					(0.465)	
Δ Log Immigrant % (Low)					-0.672	
					(0.429)	
Lag Δ Immigrant % (High)						1.759
						(1.121)
Lag Δ Immigrant % (Low)						-1.637***
						(0.458)
Controls x Year FE	✓	✓	✓	✓	✓	✓
Year x Province FE	✓	×	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Observations	14,269	14,269	14,269	19,823	14,269	13,650
Kleibergen-Paap F-Stat	28.59	37.34	35.36	18.35	1.51	19.93

Note: This table captures the impact of the change in immigrant share by skill level in a municipality on the change in log per capita own expenditures at the municipal level using a variety of empirical specifications. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. The main specification includes controls interacted with a linear time trend, year-by-province FEs and municipality FEs, with results weighted by 2022 municipal population. Only municipalities with over 1,000 residents in 2022 are included in the main sample. "Yr FE" uses just year FEs rather than year-by-province, "No Wgt" does not weight results by population, "All CSD" includes municipalities with fewer than 1,000 residents and "Log %" takes the difference in the log of the immigrant share. Standard errors are clustered at the municipality (CSD) level.

Table 12: Impact of Immigrant % on Change in Log Revenue per capita - By Stream

(a) Total Immigrant %

	Tax Revenue	User Fees & Permits	Capital Income	Govern. Transfers	Other Income	Total Revenue	Own Revenue
Δ Immigrant % (Total)	0.083	3.097*	13.678	2.219	10.785	1.302**	1.470***
	(0.232)	(1.409)	(7.727)	(2.499)	(5.930)	(0.421)	(0.185)
Observations	14,269	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	111.1	111.1	111.1	111.1	111.1	111.1	111.1

(b) Immigrant % by Skill Level

	Tax Revenue	User Fees & Permits	Capital Income	Govern. Transfers	Other Income	Total Revenue	Own Revenue
Δ Immigrant % (High)	2.333	2.411	28.111	25.757	15.410	2.077	2.467
	(1.210)	(3.069)	(52.594)	(13.873)	(49.255)	(2.827)	(1.811)
Δ Immigrant % (Low)	-0.386	3.240	10.666	-2.693	9.820	1.141	1.262***
	(0.356)	(1.714)	(8.897)	(3.614)	(8.742)	(0.680)	(0.371)
Observations	14,269	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	28.6	28.6	28.6	28.6	28.6	28.6	28.6

Note: These tables capture the impact of the change in immigrant share by skill level in a municipality on the change in log per capita revenues at the municipal level across a variety of different revenue streams. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.

Table 13: Impact of Immigrant % on Change in Log Expenditure per capita - By Category

(a) Total Immigrant %

	General Governm.	Protect. Services	Trans-portation	Water & Waste	Health & Welfare	Plan. & Develop.	Recrea. & Cultu.	Total
Δ Immigrant % (Total)	0.724	0.403	-0.285	1.323	-4.052	4.989	0.870	0.905***
	(1.652)	(0.272)	(1.419)	(1.267)	(5.664)	(3.103)	(0.687)	(0.253)
Observations	14,269	14,269	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	111.1	111.1	111.1	111.1	111.1	111.1	111.1	111.1

(b) Immigrant % by Skill Level

	General Governm.	Protect. Services	Trans-portation	Water & Waste	Health & Welfare	Plan. & Develop.	Recrea. & Cultu.	Total
Δ Immigrant % (High)	20.895	1.585	-28.477	3.842	-18.511	7.512	3.056	4.790**
	(15.284)	(1.318)	(23.144)	(4.540)	(25.639)	(9.745)	(2.254)	(1.483)
Δ Immigrant % (Low)	-3.485	0.157	5.598	0.798	-1.035	4.463	0.414	0.094
	(2.191)	(0.438)	(4.762)	(1.199)	(6.837)	(2.440)	(0.856)	(0.317)
Observations	14,269	14,269	14,269	14,269	14,269	14,269	14,269	14,269
Kleibergen-Paap F-Stat	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6

Note: These tables capture the impact of the change in immigrant share by skill level in a municipality on the change in log per capita revenues at the municipal level across a variety of different expenditure categories. Skill level is defined according to the industry of occupation upon landing as discussed in Section 2. Controls are a set of municipality characteristics from the 2001 Census interacted with a linear time-trend. All standard errors are clustered at the municipality (CSD) level and results are weighted by 2022 municipal population.