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

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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 leads to improved municipal budget balances, which holds even for *low*-skilled immigrants. These results contrast with recent evidence from the United States, which highlights substantial heterogeneity across immigrant skill groups. We argue that low-skill immigrants to Canada are in fact net fiscal *contributors* in the municipal context, due to the more complex interactions between municipal budgets and the skill distribution.

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1 Introduction

As birth rates decline and populations age, immigration has become an increasingly critical source of economic and demographic growth. Yet, while immigration is generally a national responsibility, many of the impacts of immigration are felt at the local level by municipal governments which are typically responsible for the infrastructure and service needs of a growing population. The recent increases in immigration in several countries have raised concerns about the ability of municipalities to meet these financial obligations and pay for this growth.

The question of whether immigrants burden municipal finances is important for several reasons. First, it has relevant policy implications for several levels of government including issues such as the design of immigration policy, municipal planning and intergovernmental transfers. Second, municipal finances respond to growth far differently than regional or federal finances. Much of the revenue for municipal governments comes from property taxes rather than income taxes, municipalities have tighter fiscal constraints and cannot run deficits and their expenditures are generally more investment focused and less redistributive. As a result, the relationship between immigration and the municipal tax base may be more complex than simply being about the income generating potential of the immigrant population. Finally, despite the policy relevance, there is little empirical evidence on the total impact of immigration on municipal budgets.[1]

This paper studies the impact of immigration on municipal finances in the Canadian context using high-quality immigration data and a reduced-form empirical framework. The Canadian context is particularly relevant to study because the sheer scale of immigration far exceeds that of most other countries in recent years. Canada saw a population growth rate of around 3% in 2023, which is more than triple the rate seen in the United States and is driven almost entirely by immigration. The Canadian context is also useful due to the quality of

[1]The notable exceptions being the work by Mayda et al. (2023), who study this in the United States, and Mariani et al. (2024) in Italy.

immigration data available. The Statistics Canada Immigration Database (IMDB) captures the universe of immigrants to Canada - both permanent and non-permanent residents - and includes detailed individual characteristics and information on their destination and subsequent location over time.

To estimate the impact of immigration on municipal finances, we employ the "enclave" instrumental variables (IV) approach as in Card (2001). 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.

Using this approach, we find that immigrants to Canada generally have a positive impact on municipal budget balances. A one percentage point (p.p.) increase in the share of immigrants in a municipality is associated with a 1.5% increase in per capita revenues and a 0.9% increase in per capita expenditures. As a result, this implies a 0.6% increase in *net* revenues for the municipality and an increase in the overall budget surplus. These results contrast with those from Mayda et al. (2023) for the United States who find no statistically significant impact of the total immigration share on revenues or expenditures.

To better understand these results, we explore heterogeneity across a number of dimensions. We look at how the results vary by immigrant skill level and find that, again contrary to the United States, *low*-skilled immigrants have a positive impact on municipal finances in Canada. In fact, low-skilled immigrants appear to have more of a positive impact on net revenues than high-skilled immigrants do. This appears to stem from differences in expenditures. High-skilled immigrants lead to large increases in per capita expenditures, while low-skilled immigrants lead to no change. We find that the impact of immigration on municipal finances is getting more positive over time, which corresponds to an increase in lower skill immigration to Canada. We also find that the results double in size when moving from

small municipalities to large cities, suggesting that the effects differ by city size.

These results can be better understood by considering how immigrants interact with specific municipal budget items. We find that the increases in per capita revenues are driven by increases in user fees and permits (e.g., transit fares) rather than property tax revenues. This suggests that the revenues may be coming directly from new residents and not from tax increases on existing residents. In terms of expenditure, there is little evidence of increased spending on categories typically associated with low-income immigrants and refugees such as public housing and social services. There is evidence of higher spending on categories associated with more educated immigrants, such as general government expenditures, protective services and culture and recreation.

We propose a couple explanations for these observed patterns. A first explanation is political - low-skilled immigrants are not as involved in the municipal political process since they cannot vote and therefore do not receive the same level of investment as local residents or higher-skilled immigrants. This could explain why low-skill immigrants do not affect per capita expenditures, which drives their positive impact on municipal finances. A second explanation is spatial - low-skilled immigrants are more likely to be found within urban areas, while higher-skilled immigrants are more likely to be found in the suburbs, which typically entail higher infrastructure and service delivery costs.[2] This could explain why high-skilled immigrants see a large positive increase in per capita expenditures overall and in categories associated with infrastructure investment such as water and waste management.

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 municipal finances in the United

[2]Need to provide evidence of this claim...

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

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 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 and 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 employing superior data that is both annual in nature and offers a detailed outlook on immigrant skill. The annual nature of the data is particularly useful as we can see how effects vary within municipalities over a long periods, which allows for the more direct study of how immigrants reshape municipal budgets and decision-making.

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 nations, Canada relies on immigration for population growth and until recently, the flow of immigrants into Canada was fairly predictable and controlled. Canada introduced the world's first "points-system" for evaluating potential immigrants and granting them entry into the country in 1967. This ensured that immigration followed a fairly steady trend - from 1990 to 2014 the number of immigrants landing in Canada was between 170,000 and 260,000. These were permanent residents - those who had a direct pathway to citizenship if they remained in the country and satisfied some basic conditions. Permanent residents can be classified into three categories: economics, family reunification and refugees.

There was also a group of non-permanent residents who made up a small share of new arrivals to the country during this period. This group mainly comprised of students and workers who came under the Temporary Foreign Workers Program (TFWP). Student visas were designed with the goal of translating into future high-skilled permanent residents, while temporary foreign workers were meant to fill skill gaps in the labour force, mainly in agriculture. In 2014, there was a net increase of only 17,000 non-permanent residents in Canada.

In 2015, the election of a new Prime Minister of Canada, Justin Trudeau, led to a fundamental shift in immigration policy. Between 2015 and 2023 the target for permanent residents increased from 300,000 to 500,000, he committed to welcoming 25,000 Syrian refugees during the Syrian refugee crisis and the number of net new non-permanent residents exploded to over 800,000 by 2023. The growth of non-permanent residents arose following COVID as employers used loopholes in the TWFP program for lower-cost labour and post-secondary institutions exploited the fact that student visas offered a clearer pathway to citizenship for those coming from poorer countries than the traditional permanent resident pathway. In 2023, Canada's population grew by 3.1% in a single year - a growth rate that would put

Canada as one of the fastest growing countries in the world. This policy has since come under scrutiny as housing prices soar and public services struggle to keep up with exploding population growth. Efforts are now being made to scale back the dramatic rise in population in recent years.

2.1.2 Municipal Finances in Canada

Canada is fairly decentralized when it comes to dividing responsibilities between different levels of government. The federal government gives provinces substantial power in terms of education, healthcare, natural resources and municipal governance. Municipalities are in turn in charge of protective services, roads and infrastructure, water and waste management, parks and recreation and planning and development. Municipalities also play a role in terms of running their local public school boards.

Municipalities in Canada are quite limited from a financial perspective. They are often said to "exist at the pleasure of the provinces" because a Canadian province controls their very existence. The public finance tools at their disposal are also correspondingly limited. Canadian municipalities cannot run deficits and raise revenue primarily through property taxes, which are set based on the projected level of expenditures in a given year. They cannot raise additional income through income or sales taxes.

As a result, municipalities are often struggling to balance their budgets as they try to provide public services to their residents. Should they face a budget deficit, they have few options other than to raise taxes on residents. Occasionally, they can request provincial and federal support for needed projects, but this support is not guaranteed. If subject to shocks outside of their control that affect their budgets, potentially including changes to immigration policy, they have few avenues to address the budget deficit outside of higher taxes on their own residents, which is politically costly and welfare decreasing.

2.1.3 Immigration and Public Finances

The recent upsurge in immigration has raised important questions for municipalities regarding the impact on municipal finances. If immigrants are a significant drain on municipal budgets, then municipalities may be forced to raise taxes on their existing residents or request funding from the federal government to ensure the same level of public service provision. Conversely, if immigrants are a net benefit to municipalities, then this could lead to larger capital investment or budget surpluses that can be saved for a negative shock in the future.

Immigrants, and population growth more broadly, can affect municipal finances in a variety of ways. When immigrants arrive, they can buy or rent housing, which contributes to growing the property tax revenue base as new properties are built, they can contribute more to transit and energy company revenues through greater usage and they can lead other levels of government to transfer funds to the municipal level. However, immigrants may also place greater demands on municipal expenditures. This could arise if they require increased spending on public shelters, social services, police services and any other municipal expenditure category.

Understanding the impact of immigration on municipal finances is important for several reasons. First, municipalities have to plan for growth and ensure they can fund it appropriately. If immigration has a negative impact, they should have a sense of how many immigrants they expect and what they can do to mitigate the impact. Second, federal governments may want to know whether immigration policies are imposing externalities on other levels of government. If their policies are benefiting the federal budget through higher income tax revenues, but hurting municipalities, this may be something to consider when designing better policy. It could also inform whether municipalities should receive greater support in helping accommodate immigrants.

Crucial to this issue is the question of whether immigrants are *net contributors*. If immigrants are net contributors, that means that they contribute more to municipal revenues than they consume in expenditures or public services. This can be thought of both directly -

through the taxes and fees they pay - and indirectly - through increases in economic growth and activity that helps the municipal economy. Because municipal budgets must balance, this can be hard to evaluate when looking at how budgets respond to immigration. An increase in municipal revenues and expenditures could be consistent with either immigrants being net contributors and increased public services for the municipal population overall or immigrants being net beneficiaries and taxes rising on the population overall to pay for services for immigrants. One objective of this paper is to provide greater clarity on this question.

2.2 Data

2.2.1 Longitudinal Immigration Database (IMDB)

The key dataset in this paper comes from Statistics Canada's Longitudinal Administrative Database (IMDB). The IMDB contains information on every Canadian immigrant - both permanent and non-permanent - dating back to 1952. 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 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.[4]

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 experiential 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. Alternative definitions of skill, such as the immigration category (eg. economic or non-economic) and duration (eg. permanent vs. non-permanent) are explored in the robustness section.

2.2.2 Municipal Finance Data

Data on municipal finances is acquired separately for each province. We focus on data from the four biggest provinces of Canada - Ontario, Quebec, British Columbia and Alberta - which make up the majority of the total 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 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.

We harmonize this data across provinces to ensure comparability and group the data into some general categories. For revenues, these are tax revenue, user fees and permits, capital income, government transfers and other income. For expenditures, this is general government, protective services, transportation, water and waste management, health and welfare, planning and development and recreation and culture. All of these values are then adjusted for inflation 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 restric-

[4]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.

tions. 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 holds the key control variables in the empirical analysis. This does cut out some major cities, such as Montreal, which has a different code now compared to 2001. Finally, I limit the sample to municipalities with at least 1,000 people in 2022.[5] The resulting sample leaves us with 920 municipalities across 8-18 years of data.

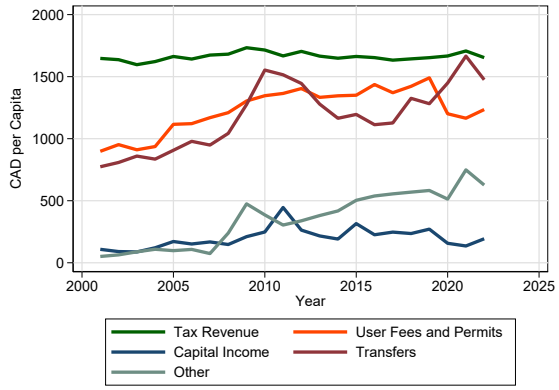
2.2.3 Summary Statistics

In Figure 1, 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.

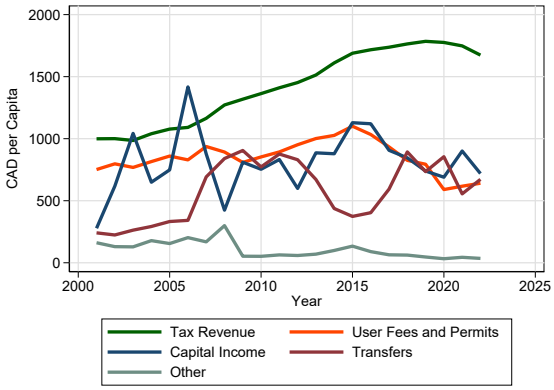
[5] I do relax this in a robustness check and show that the results are not affected by this restriction.

Figure 1: Municipal Finances in Toronto and Edmonton

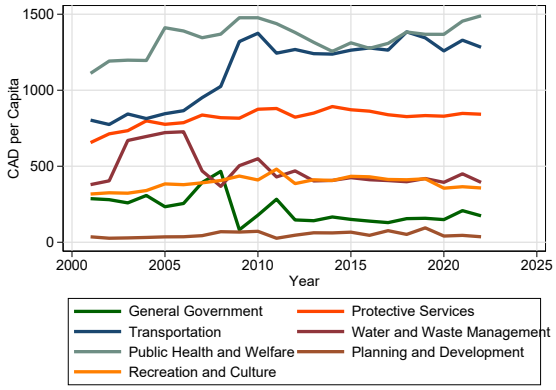
(a) City of Toronto - Rev



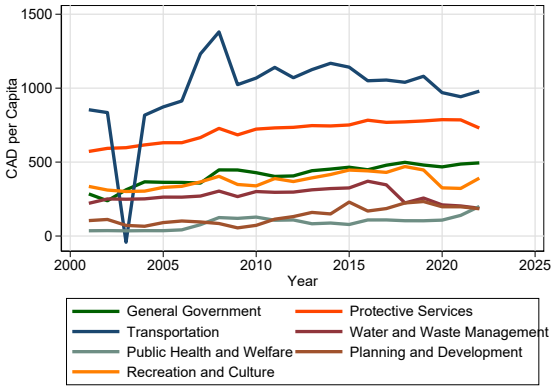
(b) City of Edmonton - Rev



(c) City of Toronto - Exp



(d) City of Edmonton - Exp



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:

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

where y_{it} represents per capita revenues or expenditures for a municipal government, i, in year t adjusted for inflation. $\frac{M_{it}^k}{\text{Pop}_{it}}$ is the share of immigrants, M, of type k in the municipal population, Pop. $X_{i,2001} * t$ is a set of control variables from the pre-period (2001) interacted

with a linear time trend, t.[6] The regression includes municipality and year-by-province (p) fixed-effects δ_i and δ_t^p.

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.

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 immigration 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 immigration *shocks* within municipalities than the immigrant share 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

[6]The control variables in this case come from the 2001 Census 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.

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). This IV represents a simulated share of immigrants, $\widetilde{M}^k_{it}$, 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 is captured as:

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

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: $\widetilde{\text{Pop}_{it}} = \widetilde{M}_{it} + N_{it}$, 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 immigration shares and the results are statistically significant across different skill levels. We also find that the F-stat is fairly strong across most empirical specifications when estimating the main results.

The argument for why the exclusion restriction holds is based on isolating the changes

in immigration to more supply-push factors 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.[7]

Even upon accounting for endogeneity, it is important to note that this regression equation cannot separately identify the different mechanisms through which immigration affects municipal finances directly. As discussed in Section 2, one example is that this regression equation does not directly identify whether immigrants are *net contributors* or not because it only captures the *total* effect of immigrant share on municipal revenues or expenditures. That is, β_k for the revenue equation may be positive due to either the positive impact of new immigrants or because the municipality raises taxes on existing residents to pay for expenditures that new immigrants may require. We explore these two mechanisms in greater detail in Section 5.

Another example is that the definition of immigrant share includes anyone who immigrated to Canada since 1980 and tracks their locations over time using tax records, which means that changes to the immigrant share can also arise due to the internal migration decisions of immigrants already in Canada. Any observed effects will then capture the impact of

[7]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.

both new arrivals from abroad and changes in immigration location domestically. This alters the policy implications somewhat as we are estimating the impact of having a larger immigrant share in a municipality for any reason rather than simply as recent arrivals. Despite this limitation, using immigrants dating back in time does have some advantages compared to only using new arrivals particularly when it comes to the IV. It removes the sensitivity of the choice of the initial base year and ensures a stronger first stage for the 2SLS.

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 the log per capita own revenues and expenditures at the municipal level adjusted for inflation. These results cover the years 2004-2022 and 920 municipalities across the four biggest Canadian provinces - Ontario, Alberta, Quebec and British Columbia - that have the relevant data for the given years.

In Table 1, 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), with no controls or fixed effects, we find that a 1 percentage point (p.p.) increase in the total immigration share is associated with a 0.97% increase in revenue per capita in a municipality. Controlling for unobserved municipality effects seems important as the results increase significantly 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 1.5% increase in 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% increase in expenditure per capita. These results are also slightly less sensitive to the specification compared to the revenue case as the coefficients across all columns are fairly similar.

In nearly all the specifications, including our primary one, the increase in per capita revenue is larger than the increase in per capita expenditure. Using Column (6) for both the revenue and expenditure tables, a 1 p.p. increase in total immigrant share is associated with a 0.6% increase in net revenue per capita for a municipality on average. This finding suggests that the arrival of immigrants in Canadian municipalities is in fact positive for

Table 1: Impact of Total Immigrant % on Municipal Finances - 2SLS

(a) Change in Log Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	0.966***	1.629***	0.378	1.332***	1.721***	1.535***
	(0.165)	(0.169)	(0.255)	(0.255)	(0.249)	(0.189)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Kleibergen-Paap F-Stat	255.360	140.301	79.500	64.974	36.871	96.190
Observations	14,018	14,018	14,018	14,018	14,018	14,018

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	0.940***	1.364***	0.582*	0.697*	0.962**	0.916**
	(0.200)	(0.282)	(0.296)	(0.280)	(0.333)	(0.303)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Kleibergen-Paap F-Stat	255.360	140.301	79.500	64.974	36.871	96.190
Observations	14,018	14,018	14,018	14,018	14,018	14,018

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 920 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.

the municipal budget outlook. It also suggests that immigrants lead to larger municipal budgets on average with both revenues and expenditures per capita rising. These results contrast with those found in the United States by Mayda et al. (2023), where they did not find statistically significant impacts for the total immigration share for either revenue or expenditure. However, they are not without precedent as Mariani et al. (2024) find that

immigrants have a positive fiscal impact in Italy.

The magnitude of the results should also be put in context. A 1 p.p. increase in the total immigration share is fairly large for a year-over-year change in a generic Canadian municipality.[8] As a result, the magnitude of the results should be viewed as smaller than the coefficients from the table or they should be viewed as longer-run impacts over several years. Using this log-share interpretation is still preferable to the log-log interpretation, which is tested in Section 4.3. This is because the average total immigrant shares are fairly small and a one per cent change in the share is conversely far too small to be economically meaningful.

The results from the weighted 2SLS regression are also larger than the simpler weighted least squares (WLS) version reported in Appendix Table 2. In Column (6) of the revenue tables, the effect sizes using the IV are more than double those of the WLS regression and in Column (6) of the expenditure tables, the effect sizes are more than quadruple the size using the IV. 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 less community connection that would prompt residents to support higher expenditures for new residents. It should also be noted that 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 immigration share.

4.2 Heterogeneity

While the main results capture the average effects of immigration on municipal finances, there is reason to believe there is considerable variation in the impacts across different immigrant types and municipality size. In this section, we explore the role of immigrant type using a measure of immigrant skill level, the role of city size and how results vary over time and across provinces. This analysis will help in understanding what is driving the average results

[8] WILL BE REPLACED BY ACTUAL SUMMARY STATISTICS IN A FUTURE DRAFT

found above.

In Table 2, 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. High skill immigrants are classified based off their intended occupation as discussed in Section 2. Including both high and low-skilled immigrants in the same regression, we can interpret each coefficient as holding the share of the other skill level constant. We instrument for each variable separately using just the simulated share of high or low skilled immigrants in each year.

We find surprising results across skill level. In Column (6) - our preferred specification - of the revenue table, high-skill immigrants generate a larger increase in per capita revenue compared to low-skill immigrants although the high-skill coefficient is not statistically significant. The estimate is noisier in part due to the fact that there are fewer high-skilled immigrants according to this definition. In the expenditure table, there is a strongly positive estimate for high-skilled immigrants, where a 1 p.p. increase in high-skilled immigration share is associated with a 5.4% increase in municipal expenditures per capita. For low-skilled immigrants the effect is practically zero. In both cases, revenue and expenditure rises more for high-skilled than low-skilled immigrants, but high-skilled immigrants reduce net municipal revenue by 2.7%, while low-skilled immigrants increase net revenue by 1.3%.

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 increase revenues, expenditures and net revenues, while low-skilled immigrants reduce all three. In the Canadian case, both high and low-skilled immigrants lead to higher per capita revenues, which differs from the United States case, where low-skilled immigrants have a negative impact. More importantly, the differences in net revenue are driven almost entirely by the expenditure side, where high-skilled immigrants lead to large increases in per capita expenditure, while low-skilled immigrants have no impact. We investigate why this is the

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

(a) Change in Log Own Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	5.367**	6.731**	0.290	0.805	1.395	2.626
	(1.800)	(2.529)	(0.740)	(1.145)	(1.225)	(1.910)
Δ Immigrant % (Low)	0.226	0.729*	0.398	1.467***	1.791***	1.306***
	(0.303)	(0.337)	(0.250)	(0.250)	(0.277)	(0.360)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Kleibergen-Paap F-Stat	25.179	48.978	20.149	24.942	38.160	29.078
Observations	14,018	14,018	14,018	14,018	14,018	14,018

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	3.753*	4.461*	3.612**	3.481**	4.252***	5.358**
	(1.680)	(1.999)	(1.161)	(1.143)	(1.036)	(1.661)
Δ Immigrant % (Low)	0.467*	0.818***	-0.085	-0.016	0.253	-0.017
	(0.189)	(0.233)	(0.293)	(0.355)	(0.366)	(0.394)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Kleibergen-Paap F-Stat	25.179	48.978	20.149	24.942	38.160	29.078
Observations	14,018	14,018	14,018	14,018	14,018	14,018

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.

case in Section 5.

Another dimension to explore is that of city size. Municipal government in a large city

would be expected to operate differently than a small city and this could be reflected in how they respond to immigration. In Appendix Table 4, 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 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.

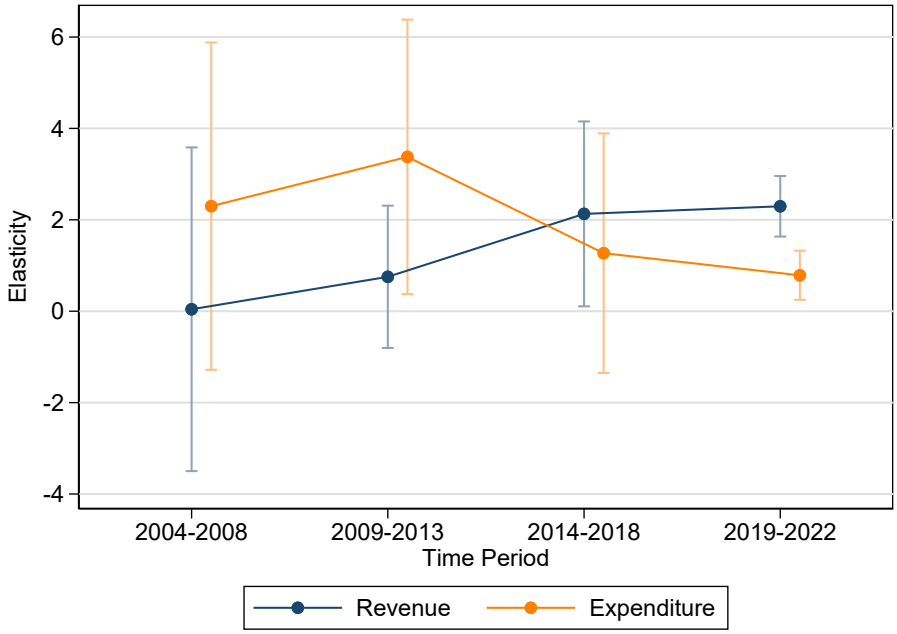
In Appendix Figure 1, we plot the marginal effects of the city size regression for population intervals of 250,000. We show that for small cities the net impact of immigrants on municipal finances is small and close to zero, but for larger cities this impact grows. In the quadratic specification, the 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.

Given recent changes to immigration policy, we also explore how the effects change over time. In Figure 2, we present the results for log revenue and expenditure per capita estimated separately by time period. Quebec is omitted from this analysis as they only have data starting in 2014. 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.

In Appendix Table 5, 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.

Finally, we also examine the results by province with separate regressions for each one.

Figure 2: Impact of Change in Immigration % 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.

We find that outside of Quebec, the impacts on revenue and expenditure are all positive, while they are both negative within Quebec.[9] The net revenue impacts are positive in Alberta and Ontario, but slightly negative in British Columbia. This could perhaps be related to the types of immigrants moving to each province as those moving to British Columbia could be higher skill, which would have more negative impacts.

4.3 Robustness

In this section, we show how the results presented above are robust to alternative empirical specifications. In Table 3, we present the results using a number of alternative choices in how the weighted 2SLS regression is estimated and in Appendix Figure 2, we show how the

[9]The results for Quebec should be interpreted with a bit of caution as a few major cities - including Montreal - were dropped from the sample due to the fact that the 2001 Census CSD geographic codes did not merge with the contemporary geographic codes used in the municipal finance and population data.

net effects change across different empirical specifications and skill-levels.

In Table 3, 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 Table 8, we find that this change is fairly modest overall. We choose to 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 small towns. In the fourth column, where towns under 1,000 people are included in the sample the results are similarly unaffected. There is some evidence that weighting has an effect when looking by skill. In Appendix Table 8, 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 2.

As mentioned before, 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 very small shares - usually less than 10% - a 1% increase in the immigration share might correspond to a very small increase in actual people, which would have a correspondingly small effect on municipal budgets. These results show that the overall direction of

Table 3: Impact of Total Immigrant % on Municipal Finances - Robustness Table

(a) Change in Log Revenue per capita

	Main	Year FE	Unweight	All CSDs	Log %
Δ Immigrant % (Total)	1.535***	1.601***	1.186***	1.510***	
	(0.189)	(0.158)	(0.200)	(0.182)	
Δ Log Immigrant % (Total)					0.021*
					(0.009)
Kleibergen-Paap F-Stat	96.190	104.913	136.837	102.764	430.263
Observations	14,018	14,018	14,018	19,341	14,018

(b) Change in Log Expenditure per capita

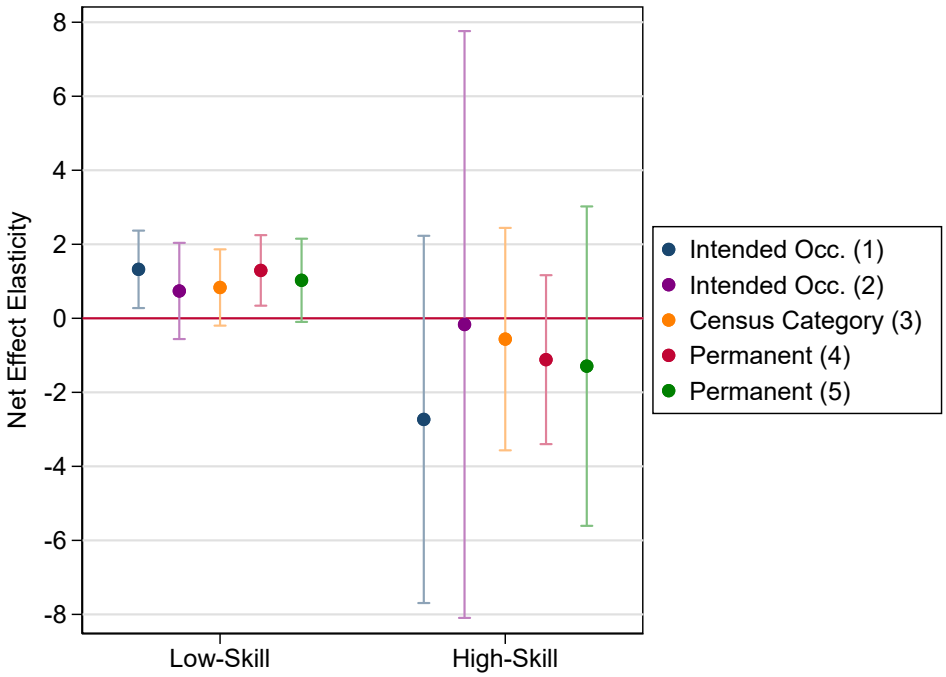
	Main	Year FE	Unweight	All CSDs	Log %
Δ Immigrant % (Total)	0.916**	0.343	0.858***	0.910**	
	(0.303)	(0.280)	(0.239)	(0.292)	
Δ Log Immigrant % (Total)					0.015
					(0.010)
Kleibergen-Paap F-Stat	96.190	104.913	136.837	102.764	430.263
Observations	14,018	14,018	14,018	19,341	14,018

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. "Year FE" uses just year FEs rather than year-by-province, "Unweight" does not weight results by population, "All CSDs" 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.

the effects is robust to specifying this regression in logs, but that the interpretation of the magnitude is important to consider.

In Figure 3 and Appendix Tables 9 and 10, we show how the results vary by the definition of skill used in the heterogeneity analysis. First, using the 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 does make the high-skill estimates much

Figure 3: Impact of Change in Immigration % 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 immigrant, 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.

noisier in part because it reduces the number of workers classified as high-skill in the sample substantially. That said, the rough pattern of low-skilled immigrants having a more positive effect still holds. The narrowing of this gap makes sense if these intermediate workers have more of a negative impact compared to other low-skilled workers.

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 are 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. It is interesting that the results are so robust to using different definitions of skill, but it suggests that there is substantial overlap across these different definitions.

5 Mechanisms

5.1 Revenue and Expenditure Categories

While the main results in this paper establish that immigrants have a positive impact on municipal budgets, this section explores the mechanisms through which this arises. As discussed in Section 2, this is a non-trivial question with relevant policy implications. If immigrants are net contributors - that is, they generate increased revenue themselves and it outweighs the increased expenditures they may command - then an influx of immigrants will be welfare enhancing for existing residents either through lower taxes or improved public services. However, if immigrants are net beneficiaries who improve municipal budget balances only because they lead to increased tax revenue generated from existing residents, this could mean that welfare for the existing population falls. Although it is not possible to directly disentangle these effects with this empirical framework, in this section we present some evidence that suggests immigrants are mainly net contributors. We also discuss some possible explanations for the counterintuitive findings that high-skill immigrants are a drag on municipal budgets balances, while low-skilled immigrants have a positive impact.

We start by examining how immigrants affect revenue by revenue stream. In Table 4, we show the results of separate regressions for each type of revenue stream as the dependent variable for both total immigration and by skill. The key result is that the increase in own revenue (tax revenue and user fees) appears to be driven almost entirely by user fees - a category that includes revenue streams such as transit fares, energy bills and other permits and fines. This is the one statistically significant result and it holds for both the total immigrant share and the low-skill share. The high-skill share is also positive, but smaller in magnitude and not statistically significant. The tax revenue stream does not appear to respond to immigration in a significant way.

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

Table 4: Impact of Immigrant % on Change in Log Revenue per capita - By Stream

(a) Total Immigrant %

	Tax Revenue	User Fees & Permits	Capital Income	Governm. Transfers	Other Revenue	Total Revenue	Own Revenue
Δ Immigrant % (Total)	0.149	3.665*	14.055	1.038	11.588	1.267**	1.535***
	(0.245)	(1.436)	(8.125)	(2.434)	(6.104)	(0.453)	(0.189)
Observations	14,018	14,018	14,018	14,018	14,018	14,018	14,018

(b) Immigrant % by Skill Level

	Tax Revenue	User Fees & Permits	Capital Income	Governm. Transfers	Other Revenue	Total Revenue	Own Revenue
Δ Immigrant % (High)	2.528	2.653	28.373	26.817	16.929	2.319	2.626
	(1.314)	(3.252)	(52.185)	(14.129)	(49.522)	(2.825)	(1.910)
Δ Immigrant % (Low)	-0.350	3.877*	11.049	-4.373	10.466	1.047	1.306***
	(0.371)	(1.729)	(9.128)	(3.497)	(8.805)	(0.720)	(0.360)
Observations	14,018	14,018	14,018	14,018	14,018	14,018	14,018

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.

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 as net contributors to the municipal budget.

In terms of expenditures, there is also little evidence that spending is increasing in categories that would be associated with immigration. In Appendix Table 11, 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.

5.2 Discussion

This paper explores the impact of immigration on municipal finances with a reduced-form lens and finds fairly robust evidence that Canadian immigrants have a positive impact. These results contrast fairly sharply with the American context, where Mayda et al. (2022) find highly heterogeneous effects depending on the skill level of the immigrants. Not only are the effects more broadly positive in Canada compared to the United States, but the role of skill is flipped entirely. This section will provide a few explanations for the counterintuitive results found in this paper.

The difference between Canada and the United States in the total effect can potentially be attributed to the overall "quality" of immigrant admitted on average. Canada relies on a points based immigration system, where in order to immigrate to Canada, one must match certain criteria set by the government. This includes work experience, language skills and other factors that might help an immigrant succeed in Canada. In the United States,

the quality of immigration is more bimodal. There is a restrictive high-skill immigration pathway that results in very talented immigrants at the top of the skill distribution as well as substantial lower skilled immigration coming from Latin America both legally and illegally. This is one possible explanation for the positive impact on average in Canada.

The reversing of the high and low-skill impacts in Canada is somewhat harder to explain without further analysis. One story is that high-skilled immigrants to Canada often move to and buy homes in suburban areas at a higher rate than low-skilled immigrants and even Canadian-born residents. Statistics Canada reports that immigrants own 310 units per 1,000 people compared to 271 for Canadian-born residents (Zhang & Hou, 2025). If it is more costly to provide public services to less dense areas, this could explain why high-skilled immigrants are having a larger effect on per capita expenditures than low-skilled immigrants who may be unable to afford houses in the suburbs and instead rent within the existing urban footprint of major cities. This story is also consistent with the trends in expenditure categories, where high-skilled immigrants are associated with higher spending on protective services (such as police and fire), water and waste management and planning and development.

Another story is that low-skill immigrants wield little political power and can therefore extract fewer concessions from local governments. Many of the low-skill immigrants in the sample are not permanent residents and are therefore not guaranteed future Canadian citizenship. As a result, they might be less engaged in the local political process and, conversely, local politicians will be less inclined to provide resources for these low-skilled immigrant communities. This is consistent with the fact that per capita expenditures for low-skill immigrants does not increase at all.

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. These effects are primarily 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. Finally, we find that it appears immigrants, particularly low-skill ones, are net contributors overall to municipal budget balances because they mainly increase user fees and permits rather than property taxes.

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.

These results also highlight the role of the urban built form in shaping outcomes at the municipal level. If the way cities are responding to population growth is inefficient from a municipal finance perspective, this could have relevant externalities on existing residents through the provision of services and generation of tax revenue. More work linking the role of urban growth with local public finance could yield interesting insights into the sustainability of urban public finances moving forward.

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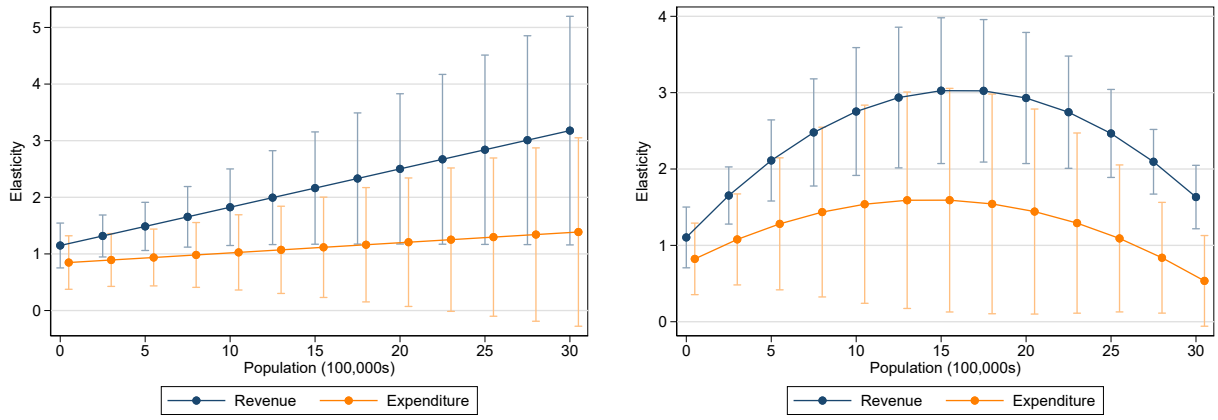
A Appendix

A.1 Figures

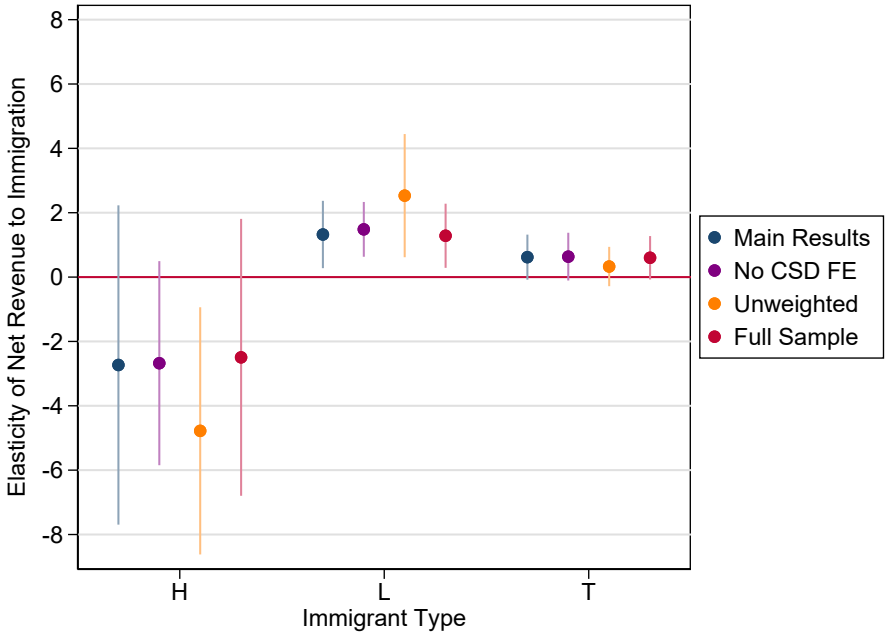
Figure 1: Impact of Change in Immigration % on Municipal Finances by City Size



(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.

Figure 2: Impact of Change in Immigration % 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 Immigration %

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Sim. Imm. % (Total)	0.776***	0.931***				
	(0.049)	(0.095)				
Δ Sim. Imm. % (High)			0.768***	1.078***	-0.144	0.394
			(0.116)	(0.107)	(0.309)	(0.296)
Δ Sim. Imm. % (Low)			-0.005	0.010	0.808***	0.832***
			(0.018)	(0.026)	(0.055)	(0.078)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	✓	×	✓	×	✓
Municipality FE	×	✓	×	✓	×	✓
Observations	14,018	14,018	14,018	14,018	14,018	14,018
R-Squared	0.447	0.708	0.254	0.491	0.509	0.754
Within R-Squared		0.377		0.260		0.422

Note: This table presents the first stage estimation results regressing the immigration 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)	0.805***	1.007***	0.269*	0.482***	0.620***	0.690***
	(0.184)	(0.169)	(0.118)	(0.121)	(0.151)	(0.125)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Observations	14,018	14,018	14,018	14,018	14,018	14,018

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (Total)	0.707**	0.791***	0.123	0.112	0.189	0.215
	(0.220)	(0.228)	(0.197)	(0.216)	(0.249)	(0.254)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Observations	14,018	14,018	14,018	14,018	14,018	14,018

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 - OLS

(a) Change in Log Own Revenue per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	2.359**	2.202**	0.205	-0.046	-0.014	-0.017
	(0.801)	(0.800)	(0.396)	(0.425)	(0.475)	(0.461)
Δ Immigrant % (Low)	0.409	0.694**	0.290	0.662**	0.836***	0.932***
	(0.246)	(0.232)	(0.212)	(0.207)	(0.250)	(0.232)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Observations	14,018	14,018	14,018	14,018	14,018	14,018

(b) Change in Log Expenditure per capita

	(1)	(2)	(3)	(4)	(5)	(6)
Δ Immigrant % (High)	0.965	0.748	-0.060	-0.196	-0.165	-0.271
	(1.132)	(1.102)	(0.829)	(0.844)	(0.917)	(0.978)
Δ Immigrant % (Low)	0.642**	0.802***	0.181	0.217	0.309	0.382
	(0.201)	(0.213)	(0.199)	(0.207)	(0.213)	(0.229)
Controls x Year FE	×	✓	×	✓	×	✓
Year x Province FE	×	×	✓	✓	✓	✓
Municipality FE	×	×	×	×	✓	✓
Observations	14,018	14,018	14,018	14,018	14,018	14,018

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 Total Immigrant % on Municipal Finances with City Size Interactions

	Revenue		**Expenditure**	
	(1)	(2)	(3)	(4)
Δ Immigrant % (Total)	1.1478***	1.1018***	0.8476***	0.8223***
	(0.2023)	(0.2037)	(0.2406)	(0.2396)
Δ Immigrant % (Total) × Pop.	0.068	0.2388**	0.018	0.112
	(0.0362)	(0.0729)	(0.0287)	(0.0969)
Δ Immigrant % (Total) × Pop. Squared		-0.0074**		-0.004
		(0.0024)		(0.0032)
Kleibergen-Paap F-Stat	61.585	36.721	61.585	36.721
Observations	14,018	14,018	14,018	14,018

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 5: 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)	-1.011	1.951	-2.730	3.107	6.289	-2.327
	(2.637)	(1.329)	(3.501)	(5.072)	(5.801)	(2.408)
Δ Immigrant % (Low)	2.192*	2.244***	1.407	-0.195	0.153	3.368***
	(0.901)	(0.450)	(1.662)	(1.722)	(2.196)	(0.847)
Kleibergen-Paap F-Stat	39.173	44.540	46.358	54.703	3.892	10.395
Observations	6,054	5,656	2,904	3,150	3,150	2,505

(b) Change in Log Expenditure per capita

	2004-2013	2014-2022	2004-2008	2009-2013	2014-2018	2019-2022
Δ Immigrant % (High)	5.913*	3.813	7.689**	5.637	16.335	1.765
	(2.988)	(3.126)	(2.879)	(4.526)	(12.316)	(4.362)
Δ Immigrant % (Low)	1.229	0.045	-0.353	2.468	-5.890	0.559
	(1.485)	(0.670)	(3.367)	(2.607)	(5.397)	(1.067)
Kleibergen-Paap F-Stat	39.173	44.540	46.358	54.703	3.892	10.395
Observations	6,054	5,656	2,904	3,150	3,150	2,505

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 6: Impact of Total Immigrant % on Municipal Finances by Province

(a) Change in Log Own Revenue per capita

	AB	BC	ON	QC
Δ Immigrant % (Total)	1.947***	1.054**	1.760***	-1.180
	(0.455)	(0.349)	(0.253)	(1.101)
Kleibergen-Paap F-Stat	187.914	33.724	83.496	5.412
Observations	3,211	2,091	6,408	2,308

(b) Change in Log Expenditure per capita

	AB	BC	ON	QC
Δ Immigrant % (Total)	1.671	1.352***	0.663*	-5.162
	(1.909)	(0.364)	(0.329)	(4.422)
Kleibergen-Paap F-Stat	187.914	33.724	83.496	5.412
Observations	3,211	2,091	6,408	2,308

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.

Table 7: 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)	17.982**	2.421	2.047	4.217
	(6.853)	(4.494)	(2.032)	(2.804)
Δ Immigrant % (Low)	-1.721	0.802	1.700***	-5.156*
	(1.467)	(1.159)	(0.285)	(2.149)
Kleibergen-Paap F-Stat	13.425	34.616	42.624	17.272
Observations	3,211	2,091	6,408	2,308

(b) Change in Log Expenditure per capita

	AB	BC	ON	QC
Δ Immigrant % (High)	19.342	6.312	4.334**	16.811*
	(16.906)	(3.525)	(1.499)	(6.839)
Δ Immigrant % (Low)	-2.371	0.438	-0.114	-21.356***
	(5.477)	(0.518)	(0.348)	(5.101)
Kleibergen-Paap F-Stat	13.425	34.616	42.624	17.272
Observations	3,211	2,091	6,408	2,308

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 8: Impact of Immigrant % on Municipal Finances By Skill - Robustness Table

(a) Change in Log Revenue per capita

	Main	Year FE	Unweight	All CSDs	Log %
Δ Immigrant % (High)	2.626	2.993	-0.418	2.292	
	(1.910)	(1.941)	(0.928)	(1.660)	
Δ Immigrant % (Low)	1.306***	1.319***	1.878***	1.337***	
	(0.360)	(0.331)	(0.425)	(0.339)	
Δ Log Immigrant % (High)					0.056
					(0.197)
Δ Log Immigrant % (Low)					-0.025
					(0.178)
Kleibergen-Paap F-Stat	29.078	38.798	35.825	18.665	1.653
Observations	14,018	14,018	14,018	19,341	14,018

(b) Change in Log Expenditure per capita

	Main	Year FE	Unweight	All CSDs	Log %
Δ Immigrant % (High)	5.358**	4.066**	4.361*	4.786***	
	(1.661)	(1.547)	(1.726)	(1.436)	
Δ Immigrant % (Low)	-0.017	-0.410	-0.653	0.053	
	(0.394)	(0.334)	(0.879)	(0.379)	
Δ Log Immigrant % (High)					1.082
					(0.675)
Δ Log Immigrant % (Low)					-0.975
					(0.621)
Kleibergen-Paap F-Stat	29.078	38.798	35.825	18.665	1.653
Observations	14,018	14,018	14,018	19,341	14,018

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. 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. "Year FE" uses just year FEs rather than year-by-province, "Unweight" does not weight results by population, "All CSDs" 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 9: 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)	2.626				
	(1.910)				
Δ Immigrant % (Low-Skill)	1.306***				
	(0.360)				
Δ Immigrant % (High-Skill)		8.433**			
		(3.212)			
Δ Immigrant % (Low-Skill)		0.650			
		(0.531)			
Δ Immigrant % (Economic)			4.621***		
			(0.761)		
Δ Immigrant % (Non-Economic)			0.890*		
			(0.358)		
Δ Immigrant % (Permanent)				3.087***	
				(0.699)	
Δ Immigrant % (Non-Permanent)				1.092***	
				(0.194)	
Δ Immigrant % (Permanent)					3.966***
					(0.779)
Δ Immigrant % (Non-Permanent)					1.137***
					(0.323)
Kleibergen-Paap F-Stat	29.078	16.350	40.151	22.091	67.074
Observations	14,018	14,018	14,018	14,018	14,018

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 10: 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)	5.358**				
	(1.661)				
Δ Immigrant % (Low-Skill)	-0.017				
	(0.394)				
Δ Immigrant % (High-Skill)		8.600***			
		(2.458)			
Δ Immigrant % (Low-Skill)		-0.089			
		(0.397)			
Δ Immigrant % (Economic)			5.183***		
			(1.331)		
Δ Immigrant % (Non-Economic)			0.057		
			(0.385)		
Δ Immigrant % (Permanent)				4.204***	
				(0.931)	
Δ Immigrant % (Non-Permanent)				-0.202	
				(0.446)	
Δ Immigrant % (Permanent)					5.258*
					(2.059)
Δ Immigrant % (Non-Permanent)					0.110
					(0.474)
Kleibergen-Paap F-Stat	29.078	16.350	40.151	22.091	67.074
Observations	14,018	14,018	14,018	14,018	14,018

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 11: 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)	0.878	0.498	-0.322	0.646	-3.372	4.993	0.696	0.916**
	(1.748)	(0.292)	(1.493)	(1.343)	(5.932)	(3.062)	(0.747)	(0.303)
Observations	14,018	14,018	14,018	14,018	14,018	14,018	14,018	14,018

(b) Immigrant % by Skill Level

	General Governm.	Protect. Services	Trans-portation	Water & Waste	Health & Welfare	Plan. & Develop.	Recrea. & Cultu.	Total
Δ Immigrant % (High)	21.263	1.904	-28.120	4.244	-18.235	7.596	3.342	5.358**
	(15.297)	(1.421)	(22.853)	(4.657)	(25.649)	(9.439)	(2.299)	(1.661)
Δ Immigrant % (Low)	-3.401	0.203	5.513	-0.109	-0.252	4.446	0.141	-0.017
	(2.211)	(0.475)	(4.696)	(1.237)	(7.117)	(2.465)	(0.924)	(0.394)
Observations	14,018	14,018	14,018	14,018	14,018	14,018	14,018	14,018

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.