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Balancing the books: Immigration and local finances in France

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Nur Bilge†

Abstract

This paper studies the effect of immigration on local public finances in France, combining population census data with municipal budget accounts over the period 2007–2017. To address the endogeneity of immigrants' location choices, I use an instrumental variables strategy based on historical settlement patterns by skill and nationality groups. The results show that immigration has a positive effect on per capita operating net revenues, as well as on both operating revenues and expenditures. Over the period under study, the immigrant share increased on average by 1.38 percentage points, from 8.63% to 10.00%, implying an estimated increase of 2.53% in total operating revenues per capita and 2.45% in total operating expenditures per capita. Immigration is also associated with higher investment activity. Overall, municipalities are able to maintain budgetary balance. Although migration is associated with higher debt levels, improvements in liquidity and self-financing capacity suggest that migration contributes to an expansion of local fiscal capacity.

Keywords: immigration; local public finance; budget accounts

JEL Classification Numbers: F22; H72; E62; H41

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1 Introduction

Given France's long history, international migration is far from being a new phenomenon. Nevertheless, immigration has been a recurring issue, especially in the political arena, and still a salient topic in designing immigration policies. As reported by INSEE,[1] in 2023, immigrants represent 10.7% of the total population in France, an increase from 9.7% in 2017. As the share of immigrants in the population grows and public debate intensifies, understanding natives' perceptions of migration rather than merely the size of immigrant inflows becomes salient.

Public opinion is therefore a key element for understanding natives' perceptions of public finances, particularly regarding the impact of migration (Preston, 2014). International Organization for Migration - IOM (2015), using Gallup World Poll (2012-2014), provides information on the global perspective on migration: in France 46% of respondents have positive economic perceptions, which is an important element of attitudes towards migration. Despite their pro-migration position, they are more concerned with the characteristics of migrants in terms of integration. 7^{th} round of European Social Survey - ESS (2014) indicates that 74% of the French population believes in the importance of immigrants speaking French, reflecting broader integration concerns.

Public opinion polls often reveal concerns about the benefits that migrants receive from the welfare system. However, it remains unclear whether these concerns reflect objective realities or are driven by subjective perceptions. To move from perception to evidence, this paper estimates the causal effect of immigration on the budgets of local authorities in France, focusing specifically on income and expenditures in both operating and investment accounts of municipalities for the period 2007-2017. The debates on the public finance take place in a bigger fiscal context as France's public debt hits a record level of 112% of GDP in the second quarter of 2024,[2] further fueling the debate on the sustainability of government spending and public services. The issue is still topical, as society's problems are often associated with immigrants in advanced economies.[3]

These perceptions of migrants' characteristics and benefits translate into broader attitudes toward redistribution and social spending. Anti-immigrant sentiments, often associated with lower support for redistribution, stem more from cultural factors than economic ones (Tabellini, 2020). Using General Social Survey (GSS), Luttmer (2001) demonstrate that individuals'

[1] INSEE Chiffres-clés, 29/08/2024, https://insee.fr/fr/statistiques/3633212

[2] INSEE Informations Rapides n° 247, 27/09/2024, https://www.insee.fr/fr/statistiques/8260877

[3] The new economics of immigration. (2025, Mar 13th). The Economist. https://www.economist.com/leaders/2025/03/13/the-new-economics-of-immigration

preferences for income redistribution is positively associated with the characteristics of recipients, such as race and ethnicity. This hypothesis is further supported by experimental evidence from Hurricane Katrina victims in the U.S. (Fong & Luttmer, 2009). Ethnic fragmentation also has a strong impact on local public goods spending (Alesina et al., 1999), reducing support for redistributive programs that benefit other groups. Alesina et al. (2023) report results from surveys conducted in six countries, including France. Concerning the attitudes toward redistribution, 24% of respondents in France believe that an average immigrant receives more than twice as much in government transfers as an average non-immigrant and additionally, 34% of respondents believe that this is because immigrants are favored by the social welfare system, not because of their financial status. In the presence of a redistributive welfare state, high-income individuals tend to oppose low-skilled migration, perceiving it as a burden on public finances (Facchini & Mayda, 2009). In a related paper, Senik et al. (2009), the perceived share of immigrants is negatively associated with support for the welfare state among anti-immigration natives, while the effect reverses for pro-immigration individuals.

Beyond perceptions, actual inflows of immigrants also shape individual preferences for redistribution. Murard (2017) explore the effect of migration on individual preferences for redistribution and immigration policies in European regions. An inflow of high-skilled immigrants led to stronger preferences for redistribution.

These individual-level and preference-based effects translate into political outcomes: Moriconi et al. (2019) analyze whether immigration leads to changes in votes for welfare states and public education or in the party's political agenda in European countries. They find that an increase in the inflows of high skill immigrants increases votes supporting the expansion of the welfare state. Mayda et al. (2022), using U.S. county-level data, find that an increase in the share of high-skilled immigrants significantly reduces the share of Republican votes, whereas the effect is reversed for low-skilled immigrants. Similarly, Edo et al. (2019) show that a higher support for far-right is driven by an increase in low-skill immigrants from non-Western countries, in the context of France.

Accounting for skill-level differences is essential: without such adjustment, the net fiscal impact of immigrants is overstated for high-skilled individuals and can obscure the fiscal burden of low-skilled immigrants (Clemens, 2022). Beyond differences in skills, the fiscal impact of immigration can also vary with immigrants' origins, reflecting ethnic and cultural heterogeneity. In the context of UK, adopting a static approach, Dustmann and Frattini (2014) point out the heterogeneity by immigrants from European Economic area (EEA). For the period 1995-2011,

immigrants from the EEA have made a positive fiscal contribution, while non-EEA immigrants contribute negatively to the financial system. Similarly, a positive contribution to the public finances is found for immigrants from the Central and Eastern European countries that joined the European Union in May 2004 (Dustmann et al., 2010). In the context of U.S., a high number of European, particularly Catholic and Jewish immigrants induce a decrease in tax rates and public expenditures in the destination (Tabellini, 2020). Together, these findings underscore the importance of heterogeneity in assessing fiscal impacts.

Several studies have assessed the long-term or national fiscal consequences of immigration: Chojnicki (2013) find a small long-term positive impact of immigration on public finances using the generational accounting approach developed by Auerbach et al. (1991). Furthermore, Chojnicki et al. (2022) develops an accounting methodology that allows the French primary budget deficit over the period 1979-2011 to be treated separately for the contributions of immigrants and natives. They find a small negative net contribution of immigrants over the period. Mackie and Blau (2017) adopt an inter-generational approach to explore fiscal impact in the US for the period 1994-2013, using a dynamic life cycle analysis.

Using a calibrated overlapping-generations general equilibrium model that distinguishes between immigrants and natives, Storesletten (2000) examines whether immigration policy reform alone can mitigate the fiscal pressures associated with population aging. Building on this framework, Kirdar (2012) accounts for endogenous return migration and estimates the fiscal effects of migration in Germany developing a dynamic stochastic model, using German socio-economic panel data. The results show that immigrants contribute positively, on net, to Germany's pension and unemployment systems.

Performing a dynamic general equilibrium model, Izquierdo et al. (2010) find a small positive effect of immigration on GDP per capita and a significant worsening situation of the social security system in Spain due to the increase in pension expenditures in the future. Chojnicki et al. (2010) find a positive effect of immigration on social protection finances in France, highlighting demographic aging. Migration is often a potential solution to tackle population aging and alleviate the financial pressures of rising health care costs. The two key channels through which immigration affects public finances: by increasing the host country's workforce (with a contribution to Social Security system) and by changing the age composition of the population (Dustmann et al., 2017), given the higher fertility rates of younger immigrants. The length of stay in the host country may also influence the outcomes (Lee & Miller, 1997; Preston, 2014). At the beginning of their arrival, migrants often depend on public support while seeking

employment, which has a cost for public finances. (d'Albis et al., 2019). Similarly, Lee and Miller (2000) indicate that while immigrants initially have a negative effect due to the education costs of children and low earnings, this impact becomes positive after 16 years. Chojnicki et al. (2011) find overall a large impact of immigration on social spending and public budget in the U.S. over the period 1945-2000, using a general equilibrium model. This study differs from those adopting an accounting approach, which typically estimate the fiscal effects of migrants relative to natives but produce results that are highly sensitive to underlying assumptions. It also departs from studies relying on macroeconomic models that are calibrated, which are often unable to capture the full range of mechanisms through which migration affects public finances, particularly indirect effects.

Only recently have a few studies attempted to identify the causal effect of immigration on public finance. Earlier contributions are mostly descriptive or correlational rather than causal. For instance, in the context of Italy, Bettin and Sacchi (2020) document a negative association between immigration and public health expenditures between 2003 and 2016, but their empirical strategy does not allow for causal identification due to the time-variant confounding factors. Similarly, Fiorio et al. (2024) examine the relative contributions of natives and migrants to fiscal revenues and government expenditures across EU-14 countries and show that migrants contribute more than natives after accounting for income distribution.

The first reduced-form causal estimates of immigration's effect on local fiscal outcomes are provided by Mayda et al. (2023), the study most closely related to this paper. Using U.S. county-level data from 1990 to 2010, they study the causal impact of immigration on the provision of public goods, focusing on per-capita tax bases and local revenues by migrants' educational attainment. They find that the opposite effects of low and high-skilled immigrants on local public revenues and expenditures tend to offset each other on average. Also, Mariani et al. (2025) examines the effect of immigration on local public finance in Italian municipalities over the period 2008-2015. The authors find that

Building on this literature, this paper analyzes the causal impact of immigration on the local authorities' financial accounts in France, including revenues and expenditures in operating accounts, investment accounts, self-financing capacity and debt-liquidity channels. To address potential endogeneity issue since immigrants may be drawn to areas with better public services, a shift-share instrument is constructed using the 1968 settlement of immigrants by skill-nationality groups following Edo et al. (2019). The results suggest that a one percent increase in the share of migrants is associated with a 1.6% increase in per capita total operating net revenues.

Decomposing this effect reveals a positive impact of immigration on both per capita total operating revenues and expenditures at department level over the period 2007-2017. Immigration is also correlated with higher per capita investment resources and investment expenditures. While higher immigrant shares are linked to higher debt levels, they are also associated with increases in self-financing capacity and liquidity indicators. Overall, the results suggest that immigration is not associated with a deterioration of municipal fiscal balances over this period.

This paper makes a twofold contribution to the literature. First, it provides causal evidence on local public finances in France, a setting that has been largely unexplored despite the country's extensive welfare state. In terms of both gross (before tax) and net social expenditures, France is the largest social spender in the OECD, at 30% of GDP (OECD, 2024). While Mayda et al. (2023) identifies causal effects of immigration on fiscal outcomes in the U.S., there is no comparable causal analysis for France given its unique institutional setting, nor one that focuses specifically on the detailed budgetary components of local governments. Second, the paper contributes by using highly granular financial data from local authorities to examine how immigration affects distinct components of both operating and investment accounts. This level of disaggregation allows me to identify the channels through which immigration shapes local fiscal outcomes, moving beyond the aggregate measures typically used in the existing literature.

The remainder of this study is structured as follows: Section 2 outlines the data and provides descriptive statistics. Section 3 presents the identification strategy and displays the empirical model. Section 4 shows the results with different specifications under the subsections of operating accounts, investment accounts, self-financing capacity and public facilities outcomes. Finally, Section 6 concludes.

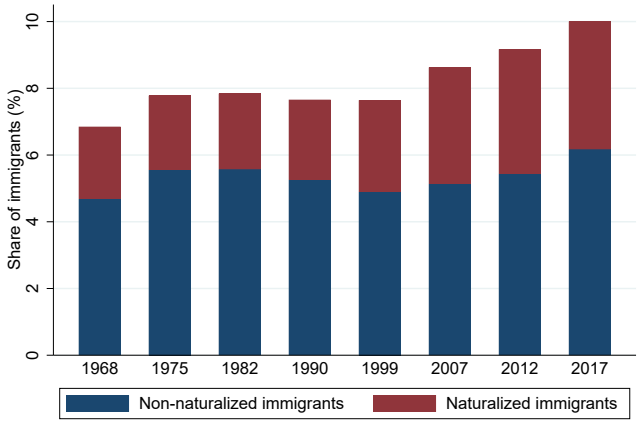
2 Data and descriptive statistics

In this study, I combine the French Population Census from *French National Institute for Statistics and Economic Studies (INSEE)* and the local authority financial data from *Ministry of Economy, Finance and Industrial and Digital Sovereignty* to conduct the empirical analysis.

The French population census: The data set provides information on the diversity and evolution of population, also, on the characteristics of individuals such as age, gender, marital status, socio-professional categories, birth / work place, previous / actual residence, education groups, nationality groups, activity sector etc. at 96 department level. Migrant status is measured based on country of birth: someone born abroad who was not a French citizen at birth and is

now living in France. Since everyone residing in France is subject to taxation regardless of nationality, this definition is relevant to analyze the impact of immigration on local authorities budget accounts. It enables me to identify the group of people whose arrival may impact both the revenue and expenditure of local authorities budget accounts. Even if immigrants are naturalized, the analysis focuses on immigration, and not on nationality transitions. Moreover, place of birth and nationality at birth are characteristics that remain constant even if naturalized migrants are perfectly integrated into the local population. On the other hand, many naturalized immigrants may continue to live in areas with high migration density. This can still affect local fiscal outcomes.

Figure 1: The share of immigrant over years



Note: The share of non-naturalized immigrants is defined as the ratio of non-French immigrants to total population. The share of naturalized immigrants is defined as the proportion of people who were not born French and who acquired citizenship in France as a percentage of the total population. Observations are weighted by the population size. Author's calculations on French population census (INSEE).

Figure 1 displays the evolution of the share of naturalized and non-naturalized immigrants over time. Especially for the period 2007-2017, which is the time period of the study, there is an upward trend in the share of immigrants. In 2007, the share of immigrants is 5.14% for non-naturalized individuals and 3.48% for naturalized immigrants. By 2017, the share of immigrants without French citizenship increases to 6.17%, while those with French nationality accounts for 3.83%. Overall, the total immigrant share, both naturalized and non-naturalized immigrants, reaches approximately 10% in 2017, representing an increase of 1.38 percentage points compared to 2007.

Understanding how the composition of the immigrant population changes over time also requires distinguishing individuals by education level, as educational attainment matters for

their labor market integration. The three education groups are defined as follows: high educated individuals are those who have obtained at least a general or technological high school diploma (Baccalauréat), including those with a university degree, while medium education category include individuals who have completed lower secondary education (Brevet d'Études du Premier Cycle - BEPC, now called Diplôme National du Brevet) and obtained vocational qualifications such as the Certificat d'Aptitude Professionnelle (CAP) and Brevet d'Études Professionnelles (BEP). These qualifications are generally attained after lower secondary education but before the high school. Low educated individuals have either no diploma or only completed primary education (Certificat d'études primaires - CEP). Table 1 displays the distribution of immigrants and French citizens by education levels for the period of the study and the basic year to create the instrument. Though overall, the share of immigrants both naturalized and non-naturalized with higher education is lower than that of French citizens, there is a general increase in the share of highly educated in all groups over the years.

Table 1: Descriptive statistics of population census by education level

Education	1968			2007			2012			2017		
(%)	IMM	NTR	FR	IMM	NTR	FR	IMM	NTR	FR	IMM	NTR	FR
Low	87.08	75.02	63.23	45.52	32.08	21.40	40.96	29.62	19.02	37.04	25.10	15.58
Medium	6.88	14.07	21.66	17.09	24.60	29.55	17.20	24.66	28.53	19.79	25.13	27.79
High	6.03	10.91	15.11	37.39	43.32	49.05	41.84	45.72	52.45	43.16	49.76	56.63
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Observations	272,272	126,943	3,239,512	655,869	389,987	6,224,897	707,106	396,628	6,095,617	828,353	418,757	6,286,017

Note: Non-naturalized immigrants (IMM), naturalized immigrants (NTR) and French-born citizens (FR) are categorized by their education level. Individuals with uncompleted studies are not included. Author's calculations on French population census (INSEE)

Having defined the education categories, I next describe another central aspect of population composition: nationality. Table 2 outlines the distribution of the population in France according to citizenship for the period of the analysis 2007-2017 and for basic year of the instrument as well as the alternative years. The classification follows the nationality categories provided by INSEE.[4] According to the sample survey, immigrants with French nationality make up 6.5 percent of the total population. Among non-naturalized immigrants from non-EU countries, without grouping by other countries, Algerians have the highest share of the population, followed by Moroccans. Within the group of immigrants holding EU-citizenship, Portuguese nationals represent the largest group. In 2017, the total number of EU nationals is 4.37 percent, while North African nationals account for 3.03 percent and those from other African countries for 1.86 percent of

[4]Note that the data do not provide information on the nationality of the naturalized immigrants, and the categorization used in the table is the only available one.

the population. The immigrants categories by nationality are created as follows: migrants from Italy-Spain-Portugal, other European migrants, migrants from North Africa (Algeria, Maroc and Tunisia), other African migrants, non-African and non-European migrants (Turks are included).

Table 2: Descriptive statistics of population census by nationality

Nationality (%)	1968	1975	1982	1990	2007	2012	2017
Born as French	87.94	87.14	87.40	86.55	84.07	83.16	82.07
Naturalized	4.19	3.97	3.85	4.63	6.53	6.62	6.58
Spanish	1.70	1.33	0.90	0.62	0.38	0.40	0.45
Italian	1.65	1.27	0.95	0.70	0.47	0.49	0.54
Portuguese	0.87	1.68	1.56	1.51	1.19	1.25	1.27
Other EU	1.57	1.28	1.10	1.10	1.74	1.98	2.11
Algerian	1.08	1.42	1.43	1.22	1.14	1.17	1.27
Moroccan	0.30	0.72	0.94	1.07	1.13	1.13	1.19
Tunisian	0.25	0.44	0.48	0.46	0.42	0.49	0.56
Other African	0.14	0.27	0.42	0.63	1.24	1.43	1.86
Turkish	0.04	0.17	0.32	0.48	0.55	0.55	0.52
Other nationalities	0.28	0.32	0.64	1.02	1.14	1.32	1.57
Observations	4,343,673	4,168,990	5,377,095	6,189,888	8,322,154	8,107,660	8,431,532

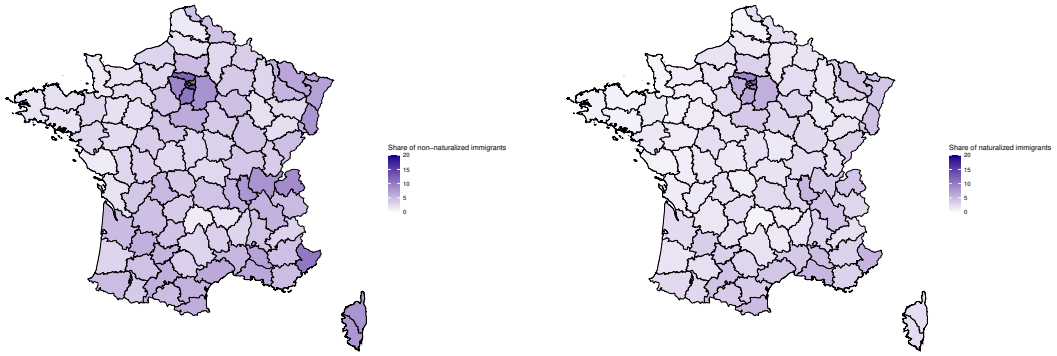
Note: Author's calculations (without weighting) on French population census (INSEE)

This classification is based on historical migration patterns and differences in integration of migrants, especially in access to the labor market given that EU citizens are not subject to labor market restrictions in France. Beyond legal status, this classification also underlines historical and socio-economic background. For instance, it's important to distinguish Italy-Spain-Portugal, which are older migration flows from the other EU countries. The migration flows from Italy and Spain to France began in the 1920s. As shown in Table 2, in 1968, 27.7% of total immigrants (including naturalized individuals) and 57.8% of European immigrants come only from Italy and Spain. While migration from Portugal started in the late 1950s, especially during the period 1956-1974. This phenomenon can explain the significant increase in their share their share among immigrants in 1975 in Table 2. Concerning the immigrants from North Africa, this group is treated separately because of France's colonial history in the Maghreb countries, i.e. the protectorate status of Tunisia and Morocco, and territory status of Algeria. Figure 2 represents visually the distribution of non-naturalized and naturalized immigrants in 2017. The figure shows a spatial concentration in some areas. Île-de-France is significant for hosting the largest shares of both type of immigrants. Besides, coastal and border regions as well as urbanized southern departments (e.g. the departments including Marseille, Lyon) also display relatively higher shares of both type of immigrants. There are some departmental disparities in the distribution of immigrants by naturalization status. For instance, the largest department

in metropolitan France, Gironde (located in the southwest and including Bordeaux), presents a relatively high share of non-naturalized immigrants, while the share of naturalized immigrants remains relatively low.

Figure 2: Spatial distribution of immigrants in 2017

(a) Non-naturalized immigrants **(b)** Naturalized immigrants



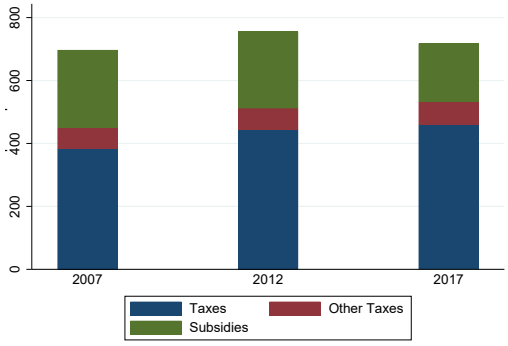
Note: The figure shows the spatial distribution of non-naturalized and naturalized immigrants in France. The migrant share is defined as the proportion of migrants to the total population in the department. Source: Author's calculations on French population census (INSEE)

Municipal budget data: The data provide detailed information on the revenues and expenditures of municipalities, which are mostly financially autonomous. Municipalities collect local taxes, receive grants and transfers from higher levels of government, and make spending decisions independently. At the same time, their autonomy is limited by borrowing constraints and certain mandatory expenditures. Local authority budgets are divided into two main sections: the operating section, which covers recurring expenses and revenues for daily public service functions, and the investment section, which finances long-term projects such as infrastructure and public facilities. Total operating income includes local taxes, other taxes, and overall operating subsidies. The biggest part of the revenues in local authorities is coming from the taxes, namely residence tax and land tax for build / non-build properties (see Figure 3). The subsidies are the amount of money transferred annually by the State to municipalities. The objectives of these subsidies are to provide localities with stable resources over time and to ensure equity by supporting them that lack sufficient revenues. These subsidies have a fixed part and an equalizing part, which depend on the characteristics of the municipalities (e.g. rural vs. urban). Briefly, overall operating subsidies are influenced by surface area, population and financial resources of the localities. On the other hand, total operating expenditures include staff costs, external purchases and expenses, financial expenses, contingencies and subsidies paid. As seen in Figure 3, personal charges are the main operating expense item for local authorities, followed by

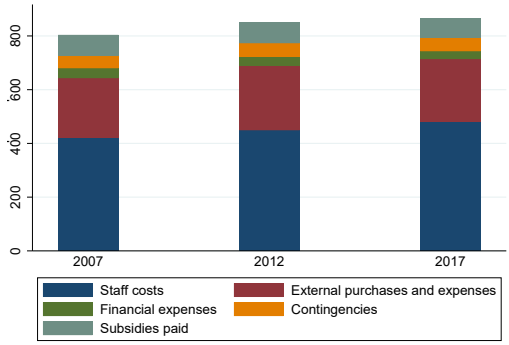
the external purchases and expenses. According to the law[5], a municipality must respect the principle of real balance, maintaining equilibrium between its revenues and expenditures. So, a local government cannot plan a deficit in its operating section and cannot finance operating expenses through borrowing. Borrowing is permitted only for investment purposes. When the operating section ends with a surplus, the municipality has a capacity for self-financing. This surplus may be transferred from the operating accounts to the investment accounts to finance investment projects, however the reverse is not allowed. Investment funds cannot be used to cover operating deficits. Such deficits must be covered by reserves or spending adjustments.

Figure 3: Analysis of operating accounts

(a) Revenue components over time



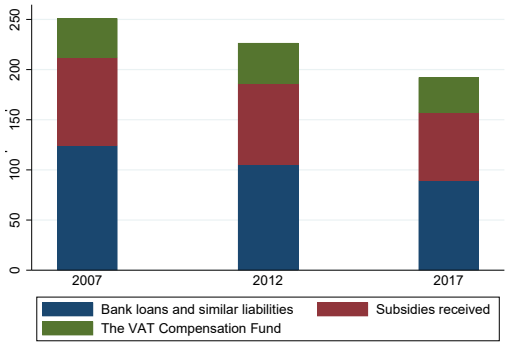
(b) Expenditure components over time



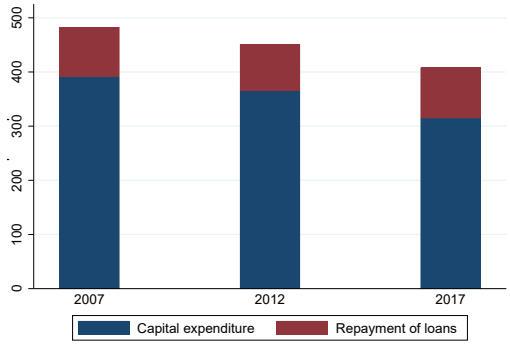
Notes: The graph displays the time variation in the local authority finances by the components. All variables are in terms of euro/capita. Revenue refers to the total operating income and expenditure refers to total operating expenditures.

Figure 4: Analysis of investment accounts

(a) Investment resource components over time



(b) Investment expenditure components over time



Notes: The graph displays the time variation in the local authority finances by the components. All variables are in terms of euro/capita. Resource refers to the total investment resources and expenditure refers total investment expenditures.

In the investment section, expenditures are often financed through a combination of self-financing and external resources. The main source of external financing is bank loans and

[5] Article L.1612-4 of the Code général des collectivités territoriales

similar liabilities, which are intended for investment purposes. Other resources include subsidies received from higher levels of government and The VAT compensation fund. The latest constitutes a small part of the resources. Figure 4 presents the components of investment accounts in terms of euro per capita. On the expenditure side, the capital expenditure take the largest share. It includes the repair of existing facilities as well as the settlement of new facilities. Repayment of loans incurred in the previous period is also included in capital expenditures. The difference between investment expenditures and investment revenues (including transfers from the operating section) gives us the gross funding requirement. It is a important indicator of the financial position of the investment account and reflects the need for financing when positive, or the capacity to self-finance when negative. In addition to direct investment transactions, the balance of transactions on behalf of third parties, such as fees collected or projects managed for government, public institutions, private companies etc., also affects the financing needs of the investment section. The investment financing requirement therefore combines the gross funding requirement with the balance of third-party transactions. Finally, the overall result of the accounts is obtained by subtracting the investment financing requirement from net operating revenues. This outcome provides a comprehensive view of the municipality's net financial position, indicating whether there is a surplus available for financing future projects or whether additional resources are required to cover both operating and investment liabilities.

Table A.1. in Appendix, outlines fiscal variables in more detail, with the population weighted means and standard deviation at 96 department level[6] for each year of the study. On average, municipalities collect approximately €1,064 per inhabitant in operating revenues at department level in 2007. Overall, there is a upward trend in per-capita operating revenues, driven primarily by local taxes, which increase especially between 2007 and 2012. Other operating revenues, including operating subsidies show a slight decline by 2017. On the expenditure side, the rise in total operating expenditures is mostly due to staff costs, which represent the largest share of operating spending. For the investment section, total investment resources per capita decline over the period, from €540 in 2007 to €450 in 2017. The main source of investment financing continues to be bank loans and similar liabilities, although their share decreases over time. Subsidies received and the VAT compensation fund contribute smaller, relatively same amounts. On the expenditure side, equipment expenditures show a clear decline over time, while repayment of borrowings remains stable. The measures of gross operating surplus and self-

[6]The approximately 36,000 municipal accounts are aggregated to the departmental level and expressed as per-capita variables.

financing capacity indicate that, on average, municipalities maintain a positive margin between operating revenues and expenditures. The net self-financing capacity after borrowings also remains positive, suggesting that most municipalities can partially finance their investments from operating surpluses, although borrowing remains necessary to cover the full investment requirement. Although the data on financial balance are at the municipal level, the population census is not available at this level due to confidentiality reasons, therefore the analysis is carried forward from the municipal to the departmental level.[7]

3 Empirical strategy

3.1 Empirical specification

To identify the effect of immigration on local finances in the department d at time t, the estimated equation is presented as follows:

$$\log y_{dt} = \theta_1 M_{dt} + \theta_2 X_{d,1968} \times t + \delta_t + \epsilon_{dt} \tag{1}$$

where M_{dt} is the share of immigrants over the total population. An immigrant is defined as someone born abroad who does not have French nationality at birth. Individuals who have been naturalized are also categorized as immigrants. The parameter δ_t capture time fixed effects and ϵ_{dt} is the error term. y_{dt} denotes per capita local government financial outcomes in both the operating and investment accounts. The vector of controls $X_{d,1968}$ includes a set of predetermined demographic and economic characteristics measured in 1968. It includes the share of inactive French citizens in the working age population, the share of married French citizens (more than 18 y.o.) in the total population, the share of young (18-30 y.o.) in the total population, the share of high-educated working-age population in the total working age population, the share of entrepreneurs in the employed population, the share of urban population,[8] The vector also includes the share of adult women (more than 30 y.o.) in the total population, as well as sectoral employment shares, namely the shares of workers employed in the industrial, agricultural, and construction sectors relative to total employment. All these economic and

[7] Administrative divisions in France are structured by size into three main levels: approximately 36,000 municipalities, 96 departments and 13 regions (reduced from 22 to 13 in 2016 following a territorial reform) in metropolitan France.

[8] This is the urban population for the municipalities with more than 2,000 inhabitants, so the percentage of the total population living in an area defined as urban by INSEE. It refers to a municipality or group of municipalities with a continuous built-up area (no break of more than 200 meters between two buildings) and at least 2,000 inhabitants.

demographic controls are predetermined, and taken from 1968. I interact them with time trend to restrict the potential endogeneity bias. One would expect the shares of inactive, youth and adult women population to have a negative impact on the financial net outcomes, as these groups contribute less to property-related revenues and business activity, while creating a higher demand for social services and transfers. In contrast, a higher share of high-educated individuals and a larger share of urban population are likely to have a positive effect through the channel of residency and property taxes. Urban areas tend to provide more revenues for local governments from property and residency taxes compared to rural areas. The share of married French citizens is also expected to positively affect fiscal outcomes, as married households generally have higher incomes and higher rates of property ownership, thereby expanding the local tax base. However, this effect can be partially offset by increased demand for family-related public services provided by municipalities, particularly kindergartens and primary schools. The share of entrepreneurs is also relevant because of the business tax contributions. Finally, the shares of industry, agriculture and construction are included to check for sectoral differences that could affect local fiscal outcomes. The standard errors are clustered at the departmental level to take into account the potential serial correlation in local finances across departments and observations are weighted by French population, defined as the sum of French-born individuals and naturalized citizens.

3.2 Identification strategy

In this framework, the spatial correlation approach is adopted as an identification strategy. The main concern is selection: the location choices of immigrants is potentially endogenous, as economic and demographic characteristics of certain areas may attract them (Jaeger, 2007). A generous welfare state, for instance, might attract low-skilled immigrants who seek to benefit from public spending while contributing relatively little in taxes (Chevalier et al., 2018). Additionally, some unskilled migrants may be drawn not only by job opportunities but also by the potential to access social insurance programs (Borjas, 1999). Unobserved time-varying factors could impact local finances and immigrants' resettlement decisions. So, the OLS estimates of Equation 1 could be biased. In order to deal with issues of endogenous sorting of immigrants across departments, an instrumental variable approach is adopted, which allows me to isolate the variation in new waves of immigrants across departments that is not correlated with public budgets. A network-based instrument is defined based on a shift-share methodology (Card, 2001), following the

hypothesis that the past settlements predict the current location of immigrants. The instrument combines the share of immigrants in 1968 at department d with the (shift) total number of immigrants in year t in France, considering skill-nationality groups. So, the predicted number of immigrants $\hat{M}_{dt}$ is defined as follows (Edo et al., 2019; Mayda et al., 2022, 2023):

$$\hat{M}_{dt} = \sum_{n} \sum_{e} \frac{M^{ne}_{d,1968}}{M^{ne}_{1968}} \times M^{ne}_{t}$$

where n represents nationality classifications and e denotes education levels. $M^{ne}_{d,1968}$ represents the number of naturalized and non-naturalized immigrants in each education-nationality group in department d in 1968, M^{ne}_{1968} denotes the total number of immigrants in France within the same education-nationality group in 1968 and M^{ne}_{t} is the total number of immigrants for the same education-nationality group at time t. The first nationality group includes immigrants from Italy, Portugal, and Spain. The second group includes immigrants from other European countries. The third group consists of non-naturalized immigrants from Algeria, Morocco, and Tunisia, while the fourth group contains immigrants from other African countries. Finally, the fifth group is made up of all other immigrants from outside the EU and Africa. Education levels are grouped into three levels, as described in Section 2: low, medium and high. The low level includes individuals with no formal qualifications or only primary school. The medium level refers to those who have completed lower secondary education. The high level covers individuals who hold at least a general or technological high school diploma. Therefore, the predicted number of immigrants is formed for each department d at time t by interacting the share of immigrants of each education-nationality group in department d in 1968 by total number of immigrants in France for the same education-nationality group at time t. Then, the instrument is the following:

$$\hat{I}_{dt} = \frac{\hat{M}_{dt}}{\hat{M}_{dt} + \hat{N}_{dt}}$$

where $\hat{N}_{dt}$ represents the predicted number of French-nationals, i.e. French-born individuals, at time t based on 1968 shares. Similarly, $\hat{M}_{dt}$ is the predicted number of including both non-naturalized and naturalized immigrants, i.e. those neither born in France nor as French, at time t based on 1968 share of immigrants. The sum of these two gives the total population predicted based on 1968 shares, which appears in the denominator. To address potential endogeneity related to population sizes, population sizes are also predicted (Edo et al., 2019).

3.3 Validity of the instrument

I use the predicted share of immigrants at the department level[9] over the total predicted population as an instrument for the current immigrant population to estimate causal impact of immigrant inflows on financial outcomes.

In this section, I check the plausibility of the identifying assumption. The instrument is constructed by combining the share of immigrants in a given nationality-education group in 1968 with current national inflows. Since most of the variation comes from historical differences across departments, rather than time variation in national inflows, identification in shift-share design relies on the exogeneity of initial shares of immigrants (Goldsmith-Pinkham et al., 2020). The validity of the instrument relies on assuming that the 1968 spatial distribution of immigrants in a given nationality-education group should be uncorrelated with the factors that cannot be observed. And, the only way through which the spatial distribution in 1968 influences financial outcomes is through its impact on the settlement patterns of actual immigrants, after controlling for regional characteristics and time trends. In this setting, the 39-year lag between the initial shares in 1968 and the analysis period strengthens the plausibility of this exogeneity by reducing the likelihood that historical shares are correlated with contemporaneous unobserved factors affecting immigrant settlement decisions.

As noted by Jaeger et al. (2018), a potential concern with shift-share instruments is serial correlation: if departments constantly receive large inflows over time, the instrument may violate the exclusion restriction because it can capture both ongoing responses to past shocks and current shocks, effectively conflating short-run and long-run effects of immigration. In the French context, however, immigration patterns by country of origin have changed over the decades (Edo et al., 2019; Ortega & Verdugo, 2016). The evolution of the share of immigrants by country of origin is presented in Table 2. The national composition changed significantly between 1968 and 2017. Consistent with Jaeger et al. (2018), such changes can weaken first-stage strength. This makes unlikely that 1968 shares are correlated with unobserved contemporaneous factors and mitigating concerns about serial correlation.

To further support the validity of this approach, I regress financial outcomes in 2000 on the 1968 share of immigrants, controlling for department characteristics. As shown in the Table A.27., the coefficients fluctuate around zero and statistically insignificant across all out-

[9] Working at the department level has the benefit that the SSIV based on education–nationality groups does not suffer from zero values. Aggregating to the department ensures that all group combinations are represented in the data, avoiding undefined or missing values.

comes, suggesting that the historical settlement patterns do not directly predict pre-period fiscal outcomes. Then, following Moriconi et al. (2019, 2022), I report the correlation between pre-treatment period growth of departmental characteristics, separately for 1990-1999 and 1982-1999, and the predicted growth of immigrants overall for the period 2007-2017 in Table A.28.. This pre-trend analysis indicates that none of the coefficients are statistically significant, suggesting that the predicted change in the immigrant share for the current period is not associated with pre-treatment departmental dynamics.

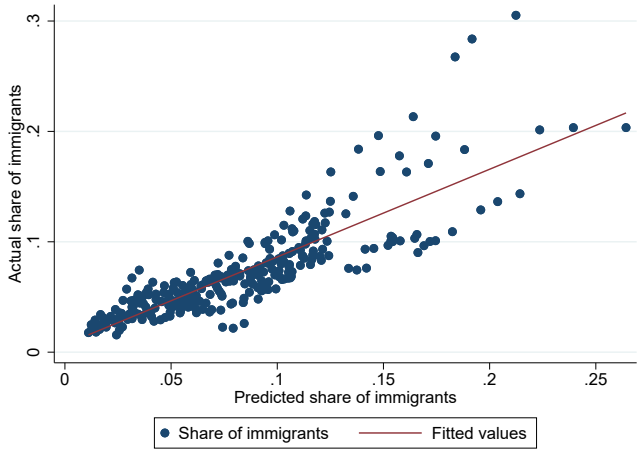


Figure 5: Correlation between the predicted and actual share of immigrants

Notes: The figure provides the visualization of the correlation between the predicted and actual share of immigrants, which equals to 0.848.

Following Edo et al. (2019), I construct the instrument by decomposing immigrant inflows by skill–origin groups rather than using aggregate inflows. In line with Card (2001), this approach mitigates concerns about serial correlation by further reducing the likelihood of serial correlation in migration flows to France.

As an additional test, I construct the shift-share instrument using alternative census years (1975, 1982, 1990) to check whether the results are sensitive to the choice of year for the historical immigrant distribution. Further details on these results are provided in the Section 5.

Finally, Figure 5 illustrates the relationship between the predicted share of immigrants and the actual immigrant share at the department level. The x-axis shows the predicted share based on 1968 settlement patterns, while the y-axis shows the observed share over the period 2007–2017. There is a positive correlation between the instrument and the endogenous immigration shares: departments with higher predicted shares tend to have higher actual shares. This visual evidence aligns with the first-stage regression results (Panel B, Section 4) and illustrates the strong relevance of the instrument for predicting immigrant settlement across departments.

4 Results

4.1 Operating accounts

This section presents the benchmark findings of the paper, beginning with an analysis of the operating accounts. In Table 3, I report the results of linear regressions where the dependent variables are operating resources, operating expenditures and net revenues, defined as the difference between revenues and expenditures. The table reports several specifications: columns (1), (3) and (5) include only year fixed effects.[10] Then, columns (2), (4) and (6) integrate the region fixed effects.

Table 3: Impact of immigration on total operating revenues and expenditures, OLS

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
OLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.211***	1.307***	1.104***	1.125***	1.913***	2.590***
	(0.303)	(0.418)	(0.332)	(0.421)	(0.412)	(0.682)
Share of inactive	-0.019***	-0.005	-0.020***	-0.003	-0.004	-0.017
	(0.007)	(0.013)	(0.007)	(0.013)	(0.010)	(0.018)
Share of youth	-0.028	-0.016	-0.017	0.002	-0.065	-0.127**
	(0.038)	(0.043)	(0.038)	(0.043)	(0.048)	(0.056)
Share of highly educated	0.026	0.018	0.025	0.012	0.045**	0.069**
	(0.020)	(0.026)	(0.021)	(0.027)	(0.017)	(0.027)
Share of entrepreneurs	0.062**	0.052*	0.067**	0.055*	0.027	0.037
	(0.028)	(0.029)	(0.030)	(0.029)	(0.040)	(0.041)
Share of adult women	-0.013	0.004	0.003	0.024	-0.099*	-0.140**
	(0.038)	(0.041)	(0.037)	(0.040)	(0.056)	(0.054)
Share of married	0.026	0.049*	0.013	0.037	0.093***	0.099***
	(0.021)	(0.025)	(0.021)	(0.024)	(0.029)	(0.029)
Share of urban population	0.009***	0.006*	0.010***	0.007**	-0.000	0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Share of industry	-0.016*	-0.010	-0.020**	-0.011	0.026**	0.007
	(0.009)	(0.010)	(0.009)	(0.010)	(0.012)	(0.014)
Share of agriculture	-0.017*	-0.012	-0.023**	-0.017	0.032**	0.026*
	(0.010)	(0.011)	(0.010)	(0.011)	(0.013)	(0.014)
Share of construction	-0.017	-0.001	-0.024	-0.012	0.071*	0.108***
	(0.020)	(0.024)	(0.020)	(0.024)	(0.037)	(0.038)
Adj. R2	0.826	0.845	0.852	0.874	0.370	0.438
Observation	288	288	288	288	288	288
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues per capita, log total operating expenditures per capita and log total operating net revenues per capita, respectively. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

[10] Almost all the variation in the immigrant share occurs between departments (SD = 0.0435), while the within-department variation over 2007–2017 is limited (SD = 0.00528). Including department fixed effects would remove the between-department variation, leaving only this little within-department change for identification, which makes the estimates imprecise. So, the benchmark models include year fixed effects, or year and region fixed effects

Across all specifications, the share of immigrants is positively associated with total operating revenues, expenditures and net revenues. However, immigrant settlement patterns are not random: immigrants may choose to locate in departments with higher revenues or better public services. This pattern creates a correlation between immigrant shares and unobserved fiscal determinants, leading OLS to be biased. For total operating revenues and expenditures, the OLS estimates are likely upward biased, consistent with immigrants' preference for fiscally stronger departments. In contrast, for net operating revenues per capita, OLS estimates appear downward biased, suggesting that unobserved expenditure needs in areas where immigrants settle partially

Table 4: Impact of immigration on total operating revenues and expenditures, 2SLS

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.836***	2.054***	1.774***	1.978***	1.621***	2.129**
	(0.454)	(0.624)	(0.478)	(0.629)	(0.520)	(0.854)
Share of inactive	-0.014*	0.002	-0.015*	0.005	-0.006	-0.022
	(0.008)	(0.014)	(0.008)	(0.015)	(0.009)	(0.017)
Share of youth	-0.019	-0.020	-0.008	-0.003	-0.069	-0.124**
	(0.036)	(0.043)	(0.036)	(0.043)	(0.047)	(0.054)
Share of highly educated	0.024	0.029	0.023	0.025	0.045***	0.062**
	(0.020)	(0.025)	(0.021)	(0.026)	(0.017)	(0.028)
Share of entrepreneurs	0.067**	0.055**	0.073**	0.058**	0.025	0.035
	(0.027)	(0.027)	(0.029)	(0.027)	(0.040)	(0.040)
Share of adult women	-0.015	-0.006	0.001	0.013	-0.098*	-0.134***
	(0.037)	(0.042)	(0.037)	(0.042)	(0.055)	(0.052)
Share of married	0.026	0.048**	0.012	0.036	0.094***	0.100***
	(0.021)	(0.024)	(0.020)	(0.024)	(0.028)	(0.028)
Share of urban population	0.009***	0.005	0.010***	0.005	-0.000	0.005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Share of industry	-0.013	-0.008	-0.017*	-0.010	0.025**	0.006
	(0.008)	(0.010)	(0.009)	(0.010)	(0.011)	(0.013)
Share of agriculture	-0.011	-0.009	-0.016	-0.013	0.029**	0.024*
	(0.010)	(0.011)	(0.010)	(0.011)	(0.012)	(0.014)
Share of construction	-0.015	-0.002	-0.022	-0.013	0.070**	0.109***
	(0.021)	(0.025)	(0.021)	(0.025)	(0.036)	(0.036)
Panel B: First Stage						
Predicted share of immigrants	0.846***	0.671***	0.846***	0.671***	0.846***	0.671***
	(0.162)	(0.095)	(0.162)	(0.095)	(0.162)	(0.095)
KP F-Stat	27.207	49.812	27.207	49.812	27.207	49.812
Observation	288	288	288	288	288	288
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

offset the net fiscal impact of immigration. To address this potential endogeneity, Table 4 reports 2SLS estimates based on Equation 1, using the predicted immigrant share by education–nationality group in 1968 as an instrument. Following the preferred specification in

columns (1) and (3), I find that a 1 pp increase in the share of immigrants produces an increase in the per capita total operating revenues by 1.84 percent, while an increase of 1.77 percent in the per capita total operating expenditures. This indicates that municipalities respond to a larger population by collecting more revenue on one hand and by increasing spending to sustain daily activities on the other. Importantly, The resulting increase in revenues slightly exceeds the increase in expenditures, suggesting that municipalities are able to maintain fiscal balance. Since the reported result in Table 4 corresponds to the pure fiscal balance, alternative measures are useful for gaining a deeper understanding of the self-financing channel. In this context, the gross operating surplus (EBF) is an important indicator of a municipality's operational performance and capacity, as it reflects the difference between current revenues and expenditures, excluding financial, exceptional, and non-cash items. Furthermore, a municipality's capacity to finance its investments independently is captured by its self-financing capacity (CAF), which provides a direct measure of the funds available for investment from operational activities. CAF is calculated by adjusting the gross operating surplus to account for net financial expenditures, such as interest on debt. The net self-financing capacity (CAF nette) is obtained by deducting mandatory debt repayments from CAF, representing the actual resources available for new investment. Table A.2. in Appendix reports the estimation for these measures. A 1 percent increase in the immigrant share increases the self-financing capacity of the municipalities by 1.89 percent. So, they are able to generate an operating surplus, which can potentially be transferred to the investment account to finance capital projects.

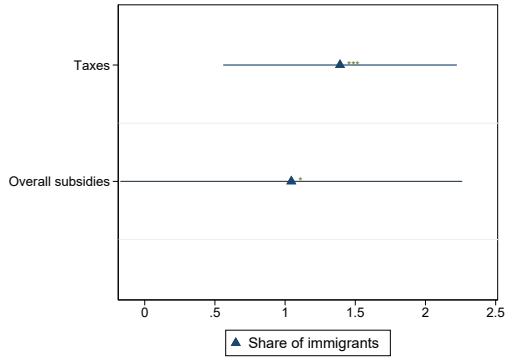
Decomposing operating accounts In the following empirical specification, I use the the components of revenues and expenditures to disentangle the effects. In Figure 6, the total operating revenues includes local taxes, other taxes and overall operating subsidies. Panel (a) of Figure 6 displays that the effect is mainly derives from taxes, which basically include residence tax[11] and land tax. A 1 percent increase in the share of immigrants is associated with a 0.99 percent increase in the per capita local taxes and 3.21 percent increase per capita other taxes. These taxes are used to finance the budgets of local authorities, mainly the municipalities. The owner is subject to property tax, whether he/she lives in the property or rents it out. He/she pays it to the municipality where the property is located. Renters are not therefore responsible for paying property tax. On the other hand, the residence tax applies to all occupied accommodation.

[11]Residence tax on main residences eliminated as of January 1, 2023. Currently, this tax is applied only to secondary residences. As this study covers the period 2007-2017, it includes residence taxes on primary residence.

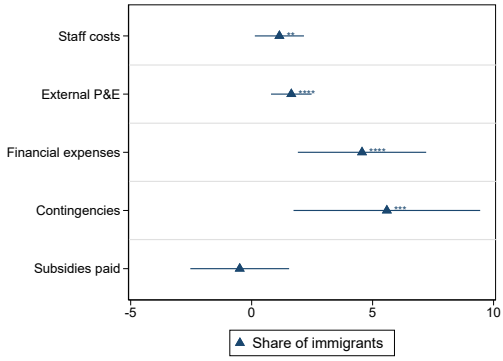
It is always paid by the occupant (owner or tenant).

Figure 6: Immigrant share effect by type of operating accounts

(a) Operating revenues



(b) Operating expenditures



Notes: The figure provides the visualization of the effect of immigrant share on operating revenues and expenditures by type. The independent variable is the share of immigrants in the department. Demographic, socio-economic and sector controls are included. The regression results are presented in Table A.3. and Table A.4. in Appendix. Standard errors are clustered at department level and observations are weighted by the population. * p<0.1, ** p<0.05, *** p<0.01.

Similarly, Panel (b) of Figure 6 represent the effect of immigrant share on different expenditure categories: staff costs, external purchases and expenses, financial expenses, contingencies and subsidies paid. These are the main items of expenditure necessary for the daily management of local government services and activities. I find a positive significant effect on staff cost, which represent the largest share of expenditures. It contains mainly wages and salaries paid to personnel employed, also social security contributions, social action benefits (housing or family assistance), transport reimbursements etc. This finding may be related to the law n°2007-148 of February 2, 2007 on the modernization of the civil service. The law aims to improve the career development of civil servants regarding training, mobility, professional ethics and multi-job holding. The right to lifelong professional training is the principle behind this. So, the staff costs may be driven by structural changes coming from training programs, tenure policies etc. As a consequence of this law, the increase in efficiency in the civil service, as well as administrative digitalization in France,[12] may have been a solution to the increase in the demand through efficiency gains. A remarkable point is that contingencies are positively associated with the share of immigrants. These are municipal contributions to specific public services, such as fire contingency. Both contingencies and participation fees are mandatory expenditures for local authorities. Based on various criteria, municipalities are required to contribute to the costs of

[12]The movement of modernization of public action started with the government's action program for the information society (PAGSI) in 1998 and an important step is the creation of "service-public.fr" in 2000 and "France Connect" in 2016.

certain services provided by the State or other local authorities. The positive effect of immigrant share also derives from their effect on financial expenses, which include loans and advances, equity investments and expenditure on financial participation. Also, a one percent increase in migrant share is associated with a 1.64 percent increase in external purchases and expenses. The latter category includes expenditures on raw materials or consumable goods (such as office supplies and small equipment), subcontracting, rents, leasing fees, and maintenance and repair work. On the other hand, the immigrant share has any significant effect on subsidies to public and private organizations, such as associations.

To sum up, over the period under study, the share of immigrants increased by 1.38 percentage points on average, rising from 8.63% in 2007 to 10.00% in 2017. This implies an estimated increase of 2.53 percent in total operating revenues per capita and 2.45 percent in total operating expenditures per capita. This change in the share of immigrants also results in an increase of 5.07 percent in total investment resources per capita and 4.93 percent in total investment expenditures. Comparing my results with Mayda et al. (2023), they found that the average increase in the share of immigrants between 1990 and 2010 led to a 2.4% annual decrease in per capita revenues and a less than 0.5% decrease in expenditures, resulting in a net effect of approximately 0.3% per year in the U.S. at the county level. My results therefore point to a different pattern in France, where the contribution of migrants to public finances appears stronger. This may be related to differences in institutional frameworks and in how local governments respond to immigration.

Together, the presence of positive net operating revenues implies that municipalities generate an operating surplus, which constitutes their main source of self-financing. Under the principle of real balance, this surplus can be transferred to the investment section, where it may be complemented by subsidies and borrowing. The next subsection therefore examines how immigration affects investment accounts and the financing of capital expenditures.

4.2 Investment accounts

I now move on to the investment accounts that record capital expenditures and financing sources. Local authorities are the leading public investors: in 2017, municipalities and EPCIs[13] made up 19.9% and 9.6% of total public investment, respectively. Local authority capital expenditure reach €43,4 billion in the same year (Decludt et al., 2023). Total investment resources include the revenues to finance the investment at the local level. Investment can be funded through operating

[13]EPCI (établissement public de coopération intercommunale à fiscalité propre) is the intercommunality, which enables municipalities to group together within a public intermunicipal cooperation body

surpluses from self-financing, subsidies, and bank loans. Given that borrowing is legally restricted to investment, changes in debt directly reflect municipalities' investment responses rather than operating imbalances. Total investment expenditure mainly covers activities that result in a change in the value of the local government's assets: purchases of durable equipment, construction of buildings or infrastructure, and acquisition of equity interests or other fixed assets. Table A.7. reports the OLS results for various specifications. The immigration is positively correlated with both per capita investment resources and expenditures.

Table 5: Impact of immigration on total investment resources and expenditures, 2SLS

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)		Investment financing requirement per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	3.674***	4.271***	3.574***	4.079***	-0.065	-0.137*
	(0.977)	(1.063)	(0.942)	(1.058)	(0.052)	(0.074)
Panel B: First Stage						
Predicted share of immigrants	0.846***	0.671***	0.846***	0.671***	0.846***	0.671***
	(0.162)	(0.095)	(0.162)	(0.095)	(0.162)	(0.095)
KP F-Stat	27.207	49.812	27.207	49.812	27.207	49.812
Observation	288	288	288	288	288	288
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

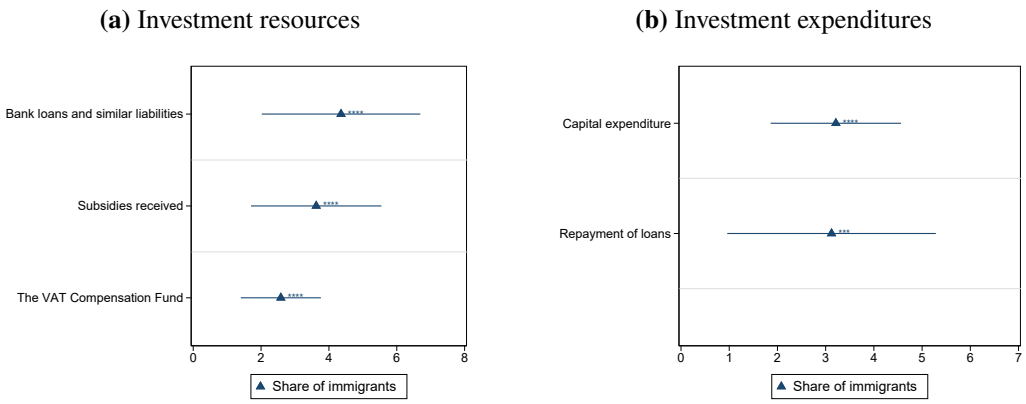
Notes: The dependent variables are: the logarithm of total investment resources per capita, the logarithm of total investment expenditures per capita, and the logarithm of the investment financing requirement per capita. The investment financing requirement is defined as total investment expenditures per capita minus total investment resources per capita, adjusted by adding the balance of operations on behalf of third parties. To deal with possible zero or negative values, 1 is added inside the logarithm before transformation. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Using the same specifications, Table 5 presents the IV results. The predicted share of immigrants based on the 1968 French population is used as the instrument. The estimates show that immigration has a positive effect on both per capita investment resources and expenditures. To assess whether an increase in the share of immigrants affects investment pressure on the municipality, I define the investment financing requirement per capita as the difference between expenditures and resources in the investment accounts, adjusted by adding the balance of transactions carried out on behalf of third parties such as the government, public institutions, or private companies. When investment resources exceed expenditures, the municipality has a surplus or capacity to fund investment; conversely, when expenditures exceed resources, there is a need for additional financing. Adjusting for transactions performed on behalf of third parties allows us to capture the net resources effectively controlled by the municipality, which acts as a trustee

in these operations. Table 5 suggests that migration is associated with a small decrease in the net per capita financing requirement (expenditures minus resources) of the investment section. While this negative effect is not statistically significant in baseline specification, it becomes significant after controlling for regional fixed effects. Overall, the results suggest that migration does not appear to increase financial pressure on municipalities.

Decomposing investment accounts To fund their investment expenditure, local authorities benefit from subsidies, loans granted by public or private sources and the value-added tax compensation fund (FCTVA). The latter is the main state aid for local investments and reimburses local authorities for non-recoverable VAT on investment expenditure. Also, in the case of a project to be financed or equipment to be operated, municipalities can receive subventions from other municipalities, departments, EPCI or other local authorities. Additionally, 'competition funding' can only be granted between EPCIs and their member municipalities, under the conditions that they finance infrastructure, are approved by both councils and do not exceed the recipient's self-funded share. The estimation results in Panel (a) of Figure 7 display that the share of immigrant is positively associated with all these investment resources.

Figure 7: Immigrant share effect by type of total investment



Notes: The figure provides the visualization of the effect of immigrant share on investment resources and expenditures by type. The independent variable is the share of immigrants in the department. Demographic, socio-economic and sector controls are included. The regression results are presented in Table A.5. and Table A.6. in Appendix. Standard errors are clustered at department level and observations are weighted by the population. * p<0.1, ** p<0.05, *** p<0.01.

On the expenditure side, capital expenditure refers to changes in the value or structure of a municipality's assets, including both tangible and intangible assets, as well as assets under construction. Also, the share of capital repaid is considered a part of investment expenditure. Since the local authority borrows from public or private institutions, at the end of the loan term,

both capital and interest must be repaid. Note that capital repayment can only be made using the local authority's own revenues. The effect of the share of migrants on both investment expenditures is positive, which can be seen as a result of increasing demand for public services.

The positive effect of immigration on investment expenditures naturally leads to questions about how these investments are financed. Since municipalities fund capital expenditures through a combination of operating surpluses, subsidies, and borrowing, higher investment spending can lead to changes in debt levels and liquidity positions. In particular, borrowing from public or private institutions increases financial obligations in the form of interest and principal repayments, which must ultimately be covered by the municipality's own revenues. Examining debt and liquidity therefore provides insight into how municipalities absorb the financial consequences of rising investment while maintaining fiscal stability.

4.3 Debt and liquidity

This subsection examines municipal debt and liquidity, which reflect the financial consequences of investment financing decisions. Since capital expenditures are funded through a combination of operating surpluses, subsidies and borrowing, higher investment spending may translate into higher debt levels and changes in cash balances. Examining these outcomes helps assess whether municipalities preserve fiscal stability when facing population shocks.

Table 6: Impact of immigration on debt, 2SLS

	Debt stock		Debt annuity	
	(1)	(2)	(3)	(4)
Share of immigrants	4.169***	3.666**	3.461***	2.898*
	(1.203)	(1.500)	(1.103)	(1.497)
KP F-Stat	27.207	49.812	27.207	49.812
Observation	288	288	288	288
Year FE	✓	✓	✓	✓
Region FE	✗	✓	✗	✓

Notes: Debt stock and flow are used as a dependent variable, expressed as per capita (in logs). Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Borrowing is an important tool in financing capital investments, but it differs from an increase in fiscal capacity. While debt allows municipalities to increase expenditures in the short run, it does not allow for a sustained expansion of financial resources. In this setting, financial

capacity is determined by the operating surplus that provides sustainable resources without further adjustments. Borrowing should therefore be understood as an intertemporal financing instrument rather than a source of long-term fiscal expansion.

I distinguish between the debt stock, which corresponds to the outstanding principal of all loans and liabilities contracted by the municipality up to the end of the year, and the debt annuity. The latter is defined as the sum of interest payments on outstanding loans, which are recorded as operating expenditure and principal repayments, which appear in the investment section. Together, these two measures capture both the accumulated level of indebtedness and the annual repayment burden faced by municipalities. The results in Table 6 show that an increase in the share of migrant is associated with an increase in both debt stock and annuity.

Table 7: Impact of immigration on liquidity, 2SLS

	Working capital		Overall budget balance	
	(1)	(2)	(3)	(4)
Share of immigrants	1.818*	3.334***	1.905***	2.832***
	(0.945)	(1.218)	(0.587)	(0.916)
KP F-Stat	27.207	49.812	27.207	49.812
Observation	288	288	288	288
Year FE	✓	✓	✓	✓
Region FE	✗	✓	✗	✓

Notes: Working capital and overall budget balance are used as a dependent variable, expressed as per capita (in logs). Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Debt reflects how investment is financed over time, whereas liquidity captures the short-term budget results of these choices. I therefore examine liquidity indicators to see whether higher borrowing is associated with tighter cash positions. Working capital is defined as the difference between long-term resources and fixed assets such as public buildings, infrastructure and long-term financial investments. Long-term resources provide funding, while fixed assets tie it up. The difference indicates how much of these resources remains available to cover short-term needs. Thus, the financial position of the municipality is measured through working capital. Table 7 shows that an increase in the share of immigrants seems to increase working capital of municipalities.

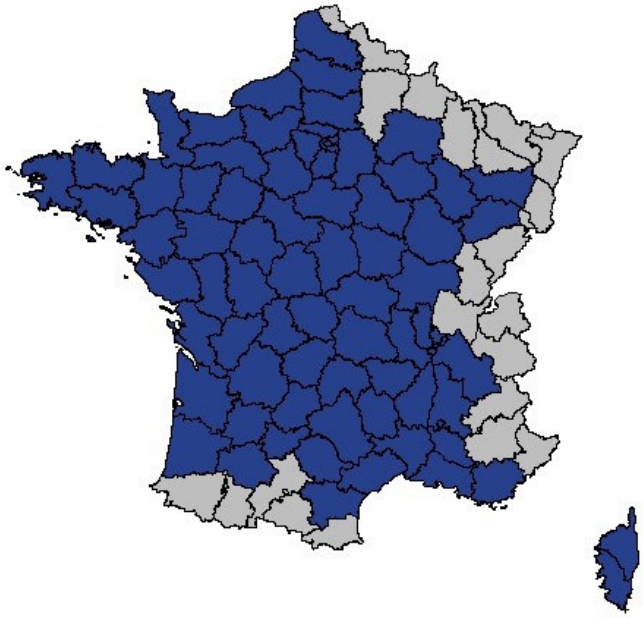
I now turn to the overall budget balance. The balance sheet lists all the assets held by the municipality at the end of the fiscal year, including buildings, infrastructure, equipment, receivables and cash. It also lists all liabilities, including grants, subsidies, and debts. The

overall balance is calculated as total revenues minus total expenditures. It shows whether the municipality ends the year with a surplus or a deficit. As shown in Table 7, an increase in the share of immigrants has a positive effect on the local budget. Municipalities are able to maintain fiscal balance, and while debt levels increase, liquidity and self-financing capacity also rise. This suggests that higher immigration does not create fiscal pressure but rather allows municipalities to expand their fiscal capacity.

5 Robustness

The results are not driven by the largest cities nor by the land border departments In this section, I present the robustness of the results. Table A.8. in the Appendix shows that the benchmark results on total operating revenues and expenditures are robust to exclude departments of the France's three largest cities: Paris, Lyon and Marseille, which are Paris, Rhône and Bouches-du-Rhône, respectively.

Figure 8: Exclusion of land border departments



Note: The figure illustrates the land border departments excluded from the analysis. Source: Author's visualization using UC Davis GIS Data.

In line with the estimates in Table 4, the share of immigrants has a positive effect on the per capita total operating revenues and expenditures. Based on the hypothesis that cross-border commuting may be possible in land border departments, the estimates in Table A.10. in Appendix

demonstrate that the results are robust to excluding the light colored border land departments and including only the dark colored departments presented in Figure 8.

Building instrument using origin groups instead of origin-education groups To build the instrument following Edo et al. (2019), the 1968 distribution by departments of migrants is used by grouping them by origin-education groups. In this subsection, I re-estimate the regression by instrumenting the immigrant share by using 1968 settlement of immigrants from the same origin group, without considering skill level. Table A.12. displays the results for origin-based instrument. The results are so similar, just the size of the effect is slightly smaller. When I aggregate over a broader category, using only origin groups instead of origin-education groups, the first-stage F-statistic declines slightly relative to the baseline specification in Table 4. This means that the instrument varies less across departments, which reduces the explanatory power. So, migrants with different educational backgrounds tend to settle in different places even if they have the same origin. When I consider just origin, I no longer capture that heterogeneity. That's why the instrument predicts less precisely the actual spatial distribution of migrants.

Robust findings to the choice of census for creating instrument As a robustness check, I construct the shift-share instrument using alternative census years for the historical settlement shares. Other years for which data are available in the census survey are 1975, 1982 and 1990. Instead of using the earliest available year in the population census, 1968, using the spatial distribution by origin-education in other years allows me to assess whether the results are sensitive to the choice of year for the historical distribution of immigrants. The columns (1), (3) and (5) in Table A.13., Table A.14. and Table A.15. display the results for the operating accounts and the columns (1) and (3) in Table A.17., Table A.18. and Table A.19. for the investment accounts by using the spatial distribution in 1975, 1982 and 1990, respectively. The findings remain consistent across all these specifications, suggesting that the results are not driven by the particular choice of base year. The first-stage F-statistics increases as the base year moves closer to the current period, from 1968 to 1990, which indicates a greater predictive power of more recent distributions for current settlement.

Furthermore, I repeat this robustness exercise using the same census years by constructing the instrument based only on origin groups, not considering the education levels. The columns (2), (4) and (6) in Table A.13., Table A.14. and Table A.15. display the results for the operating accounts and the columns (2) and (4) in Table A.17., Table A.18. and Table A.19. for the

investment accounts. The results are so similar in terms of sign and magnitude, supporting the robustness of the main findings. As expected, the first-stage F-statistics are slightly lower in this specification, consistent with the idea that migrants with different educational backgrounds tend to settle in different locations, even though they have the same origin.

Adopting an alternative definition of immigrants does not affect the results According to the definition adopted by the French High Council for Integration, an immigrant is a person who was born abroad with a foreign citizenship at birth and who currently lives in France. The population can be broadly divided into three categories: individuals who are French by birth, foreign-born individuals who have acquired French citizenship (naturalized) and foreign-born individuals who keep foreign citizenship (non-naturalized). In the main analysis, I define immigrants as the sum of naturalized and non-naturalized foreign-born individuals. As a robustness check, I adopt a narrower definition by considering only non-naturalized individuals as immigrants. This allows me to test whether the results are sensitive to the exclusion of naturalized immigrants, which might have different characteristics in terms of integration.

Table A.25. and Table A.26. present the estimated effects of non-naturalized migrants on operating and investment accounts, respectively. Compared to baseline results, while both specifications yield statistically significant positive effect on the different types of accounts, the coefficients for non-naturalized immigrants alone are larger. This may come from the differences in economic integration, tax contribution and service demands.

The effect appears in municipality accounts, not in department accounts The effect of migrants can be more visible at the municipality level than the departmental level. Given the structure of France's administrative geography, the departments consist of several municipalities, any local fiscal impact of migration may be attenuated when averaged across the department. In other words, low or high exposure to migration at the municipal level can cancel each other out at the departmental level, especially if migrants are unevenly distributed. For instance, residential segregation tends to be more pronounced in central cities like Aix-Marseille, Strasbourg, Nantes or in suburban areas of Paris, Lyon and Lille, than in the peripheries (Floch, 2017). As shown in Table A.20. and Table A.21., which report the results[14] for departmental operating and investment accounts respectively, the estimated effects are small and statistically insignificant, as expected.

Furthermore, municipal and departmental budgets are institutionally distinct: they cover

[14] Since there is no access to departmental accounts for 2007, the year 2008 has been used instead.

different scopes, responsibilities, and funding mechanisms. For instance, municipalities are responsible for primary education infrastructure and often bear the costs of family-oriented public services, which is a key channel through which immigration may affect public spending, especially in cases of family migration. In contrast, departments administer social benefits such as the RSA, which are not accessible to many migrants (those awaiting asylum or without residence permits), and some part of their revenues depend on real estate transaction taxes (droits de mutation), approximately 8% of the transaction. Some taxes are shared, but in the department's budget, it's not possible to see what goes to the municipality. Thus, aggregating municipal budgets provides a more accurate picture of the local fiscal response to migration, albeit with some limitations: unable to work at a highly granular level.

Excluding tax reform year yields similar results The business tax, which was introduced in 1975 by replacing the patente tax in France, was based on the company's receipts, the rental values of real estate assets and equipment, and wages. In 2010, following a major reform, the business tax was replaced by the local economic contribution (CET – contribution économique territoriale). The CET has two components: the value added contribution for companies (CVAE – cotisation sur la valeur ajoutée des entreprises) and the real estate contribution for companies (CFE – cotisation foncière des entreprises). Unlike in other European countries, this tax is particularly significant in France, accounting for 2% of GDP and 3.6% of firms' value added in 2016. Figure A.3. presents the subcomponents of operating income, where the business tax appears prior to the 2010 reform. Table A.22. investigates the effect of the migrant share on business tax revenues.[15] The estimates show a pronounced positive effect of migration on business tax revenues, so an increase in the migrant share may contribute to local economic activity.

In the same reform of 2010, the departmental share of the residence tax was transferred to municipalities and inter-municipal structures, which changes the distribution of local tax revenues. To ensure that the results are not driven by the characteristics of the pre-reform tax structure, I also impose a sample restriction by excluding the year 2007, which corresponds to the period before the tax reform. The results shown in Table A.23. and Table A.24. for operating and investment accounts respectively, go in the same direction as the baseline results.

[15] Results are estimated only for 2007, as there are no post-reform CET data available.

6 Conclusion

Understanding the fiscal implications of migration is relevant for the design of public policy in host countries. France, with a long history of immigration and repeated reforms of local public finance, provides an excellent context for such an analysis. This paper studies how immigration is associated to local authority budgets. Migrants contribute to local revenues through taxation, while at the same time increasing demand for local public services and infrastructure. To assess the net fiscal effect, I study the impact of immigration on operating accounts, investment accounts, self-financing capacity, and liquidity and debt outcomes of local authorities over the period 2007–2017.

The results indicate that immigration is positively associated with both revenues and expenditures in operating and investment accounts. Over the period 2007–2017, the share of immigrants increased by 1.38 percentage points on average, from 8.63% to 10.00%. Based on the estimated coefficients, this change corresponds to an increase of 2.53% in total operating revenues per capita and 2.45% in total operating expenditures per capita. Investment resources and investment expenditures also rise with the immigrant share. In addition, higher immigrant shares are associated with higher self-financing capacity. Although debt levels increase, liquidity indicators also improve, suggesting that higher borrowing is accompanied by greater internal resources rather than by tighter short-term financial constraints. Taken together, the results do not point to a deterioration of municipal fiscal balances associated with immigration over this period.

The findings are robust to excluding departments containing the largest cities and land-border departments, to alternative definitions of immigrants, to restricting the sample to the post–tax reform period, and to using different base years for the construction of the instrument.

The positive fiscal impact associated with a higher migrant share can be further amplified by implementing policies that promote the effective integration of migrants into the local economy and society. Measures such as language training, job placement programs, recognition of foreign qualifications etc. can help migrants become economically active contributors, so increasing their contributions to local tax bases and strengthening municipal fiscal capacity. Furthermore, policymakers should consider financial support to municipalities that experienced high inflow of migrants. The question remains open to further research to fully understand the long-term implications, role of fiscal transfers and potential spillover effects.

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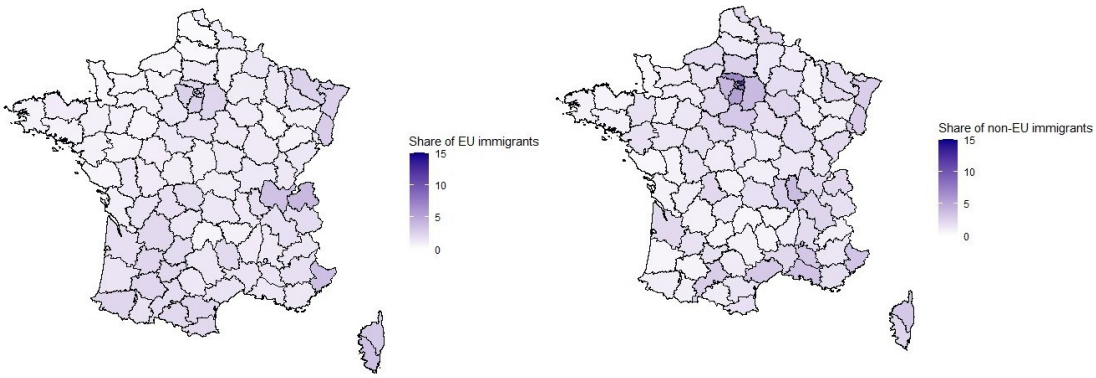
Appendix. Additional tables and figures

Figure A.1. : Spatial distribution of migrants by EU-citizenship

(a) EU-citizens **(b)** non-EU citizens



Notes: The figure provides the visualization of the spatial distribution of non-naturalized immigrants by EU-citizenship. Source: Author's calculations on French population census (INSEE)

Table A.1.: Descriptive statistics of fiscal variables

	2007		2012		2017	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Total operating revenues	1.06455	.2606196	1.129014	.2609086	1.129988	.281446
Total operating expenditures	.9129806	.2516175	.9641391	.2537597	.9867668	.2771695
Local taxes	.382971	.1118917	.4434706	.1172534	.4604246	.1204287
Other taxes	.0671081	.0501136	.0684947	.0468024	.0718435	.0381269
Overall operating subsidies	.2467899	.0537535	.2431437	.0483178	.1850418	.0437413
Residence tax	.1343245	.0463288	.1851308	.0564862	.1991543	.0709894
Land tax for build properties	.1726179	.0484021	.2080134	.054637	.2326421	.0615354
Land tax for non-build properties	.0148149	.0086744	.0161649	.0094488	.0168542	.0100782
Staff costs	.4220512	.1273417	.4493052	.1300078	.4804132	.1425278
External purchases and expenses	.2210994	.0534564	.2405218	.0512703	.2338391	.0432764
Financial expenses	.0370603	.0131541	.0339475	.0110603	.0292208	.0121356
Contingencies	.0473201	.0340969	.0495179	.0411983	.0503573	.048109
Subsidies paid	.0761636	.0380492	.0780271	.0368398	.0722446	.0383169
Total investment resources	.5404249	.1715667	.5171279	.1336042	.4522966	.1231119
Total investment expenditures	.5455053	.1679363	.5049526	.1273801	.4534612	.120408
Bank loans and similar liabilities	.1243176	.0477437	.1050929	.0320797	.0893027	.0359708
Subsidies received	.087474	.0422447	.0806674	.0393801	.0675356	.033184
The VAT compensation fund	.0392087	.0097921	.0407103	.0109852	.0352825	.0095239
Equipment expenditure	.3911631	.1224463	.3653744	.0921679	.3147414	.0804017
Repayment of borrowings and similar liabilities	.0915863	.0275138	.0856978	.0231666	.0930758	.0261565
Gross operating surplus	.2102597	.0502765	.2283696	.0496843	.1998418	.0444469
Self-financing capacity	.177269	.0428139	.199837	.050069	.1795424	.0391342
Net self-financing capacity after borrowings	.0856827	.0374328	.114124	.0415678	.0864516	.0319769
Observations	96		96		96	

Notes: This table reports population weighted means and standard deviations of fiscal variables. All variables are expressed in thousands of euros per capita, at 96 department level.

Figure A.2. : The relationship between the self-financing elements

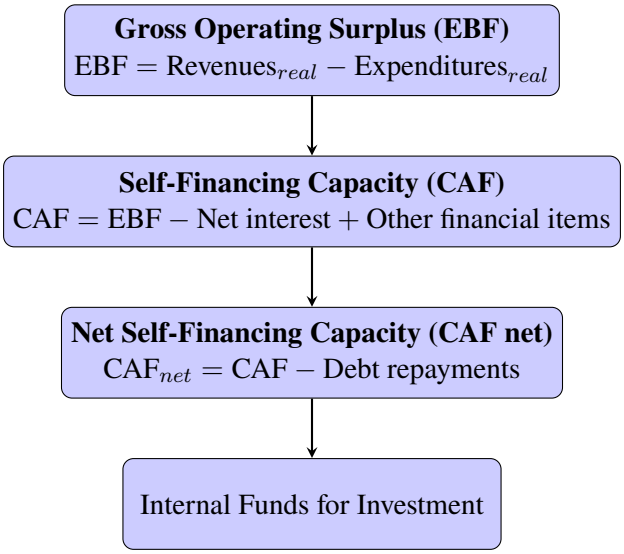


Table A.2.: Impact of immigration on self-financing elements, 2SLS

	Gross operating surplus		Self-financing capacity		Net self-financing capacity	
	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	2.319***	2.519**	1.886***	2.558***	0.053	0.234**
	(0.601)	(0.991)	(0.552)	(0.837)	(0.102)	(0.119)
KP F-Stat	27.207	49.812	27.207	49.812	27.207	49.812
Observation	288	288	288	288	288	288
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: Different types of self-financing elements are used as a dependent variable, expressed as per capita.Gross operating surplus (EBF) and self-financing capacity (CAF) are log-transformed. Net self-financing capacity (CAF nette) is transformed using the inverse hyperbolic sine to deal with negative values. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.3.: Impact of immigration on total operating revenues by type, 2SLS

Panel A:2SLS	Taxes per capita (in logs) (1)	Overall subsidies per capita (in logs) (2)
Share of immigrants	1.391***	1.044*
	(0.425)	(0.621)
Share of urban population	0.010***	0.006
	(0.003)	(0.004)
Share of inactive	-0.029***	-0.007
	(0.009)	(0.010)
Share of youth	0.047	-0.077
	(0.043)	(0.053)
Share of highly educated	0.041***	-0.104***
	(0.015)	(0.022)
Share of entrepreneurs	0.072***	-0.001
	(0.028)	(0.040)
Share of adult women	0.066	-0.056
	(0.046)	(0.062)
Share of married	-0.002	0.027
	(0.022)	(0.024)
Share of industry	-0.016*	-0.036***
	(0.009)	(0.012)
Share of agriculture	-0.010	-0.028**
	(0.010)	(0.012)
Share of construction	0.060**	-0.131***
	(0.028)	(0.045)
KP F-Stat	27.207	27.207
Observation	288	288

Notes: The dependent variable is the log of per capita operating revenues by type. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.4.: Impact of immigration on total operating expenditures by type, 2SLS

Panel A:2SLS	Staff costs per capita (in logs) (1)	External P& E per capita (in logs) (2)	Financial expenses per capita (in logs) (3)	Contingencies per capita (in logs) (4)	Subsidies paid per capita (in logs) (5)
Share of immigrants	1.147**	1.639***	4.562***	5.588***	-0.493
	(0.518)	(0.428)	(1.353)	(1.968)	(1.042)
Share of inactive	-0.015*	-0.011	-0.006	-0.037*	-0.007
	(0.008)	(0.008)	(0.021)	(0.021)	(0.015)
Share of youth	0.014	-0.099***	-0.216*	-0.047	0.239***
	(0.035)	(0.033)	(0.117)	(0.106)	(0.073)
Share of highly educated	0.026	0.068***	0.004	-0.091	-0.052*
	(0.017)	(0.025)	(0.057)	(0.058)	(0.027)
Share of entrepreneurs	0.078**	0.081***	0.170***	-0.063	0.095**
	(0.032)	(0.029)	(0.059)	(0.076)	(0.047)
Share of adult women	0.017	-0.130***	-0.227**	0.241*	0.219***
	(0.030)	(0.035)	(0.104)	(0.127)	(0.084)
Share of married	-0.046***	0.003	0.050	0.166***	0.095**
	(0.018)	(0.019)	(0.045)	(0.043)	(0.040)
Share of urban population	0.018***	0.003	0.017**	-0.029***	0.023***
	(0.003)	(0.002)	(0.007)	(0.009)	(0.005)
Share of industry	-0.017**	-0.011	-0.012	-0.011	-0.014
	(0.008)	(0.009)	(0.023)	(0.025)	(0.018)
Share of agriculture	-0.013	-0.016	0.000	-0.053**	-0.008
	(0.010)	(0.010)	(0.026)	(0.026)	(0.018)
Share of construction	-0.007	-0.001	-0.069	0.010	-0.034
	(0.025)	(0.020)	(0.066)	(0.077)	(0.062)
KP F-Stat	27.207	27.207	27.207	27.207	27.207
Observation	288	288	288	288	288

Notes: The dependent variable is the log of per capita operating expenditures by type. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.5.: Impact of immigration on investment resources by type, 2SLS

Panel A:2SLS	Bank loans and similar liabilities per capita (in logs) (1)	Subsidies received per capita (in logs) (2)	The VAT compensation fund per capita (in logs) (3)
Share of immigrants	4.357***	3.625***	2.583***
	(1.192)	(0.981)	(0.602)
Share of inactive	-0.006	0.065***	0.016
	(0.019)	(0.014)	(0.010)
Share of youth	-0.055	-0.305***	-0.071
	(0.106)	(0.084)	(0.052)
Share of highly educated	-0.077	0.086**	0.040*
	(0.053)	(0.043)	(0.021)
Share of entrepreneurs	0.103**	0.092*	-0.023
	(0.049)	(0.048)	(0.041)
Share of adult women	-0.017	-0.396***	-0.051
	(0.098)	(0.070)	(0.051)
Share of married	0.086**	0.086***	0.112***
	(0.037)	(0.031)	(0.026)
Share of urban population	0.006	-0.008	-0.000
	(0.006)	(0.005)	(0.004)
Share of industry	-0.024	-0.009	0.008
	(0.019)	(0.018)	(0.011)
Share of agriculture	-0.011	-0.008	0.012
	(0.023)	(0.020)	(0.013)
Share of construction	-0.097	-0.009	0.060*
	(0.063)	(0.051)	(0.032)
KP F-Stat	27.207	27.207	27.207
Observation	288	288	288

Notes: The dependent variable is the log of per capita investment resources by type. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.6.: Impact of immigration on investment expenditures by type, 2SLS

Panel A:2SLS	Capital expenditure per capita (in logs) (1)	Repayment of loans per capita (in logs) (2)
Share of immigrants	3.211***	3.122***
	(0.689)	(1.104)
Share of inactive	0.011	-0.002
	(0.011)	(0.018)
Share of youth	-0.061	-0.269**
	(0.055)	(0.113)
Share of highly educated	0.038	0.026
	(0.030)	(0.065)
Share of entrepreneurs	0.031	0.139***
	(0.038)	(0.049)
Share of adult women	-0.057	-0.286***
	(0.054)	(0.109)
Share of married	0.116***	0.058
	(0.028)	(0.043)
Share of urban population	-0.001	0.020***
	(0.004)	(0.007)
Share of industry	0.003	-0.000
	(0.012)	(0.026)
Share of agriculture	0.009	0.004
	(0.015)	(0.027)
Share of construction	0.024	-0.040
	(0.029)	(0.077)
KP F-Stat	27.207	27.207
Observation	288	288

Notes: The dependent variable is the log of per capita investment expenditures by type. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.7.: Impact of immigration on total investment resources and expenditures, OLS

OLS	Total investment resources per capita (in logs) (1)	(2)	Total investment expenditures per capita (in logs) (3)	(4)
Share of immigrants	1.896***	2.328***	1.927***	2.311***
	(0.504)	(0.727)	(0.501)	(0.722)
Share of inactive	-0.011	0.023	-0.009	0.023
	(0.012)	(0.018)	(0.011)	(0.017)
Share of youth	-0.072	-0.037	-0.086	-0.051
	(0.072)	(0.067)	(0.071)	(0.068)
Share of highly educated	0.022	0.021	0.021	0.018
	(0.030)	(0.041)	(0.030)	(0.041)
Share of entrepreneurs	0.050	0.058	0.040	0.042
	(0.047)	(0.057)	(0.047)	(0.059)
Share of adult women	-0.042	-0.009	-0.045	-0.012
	(0.067)	(0.066)	(0.065)	(0.067)
Share of married	0.112***	0.118***	0.112***	0.119***
	(0.033)	(0.033)	(0.033)	(0.033)
Share of urban population	0.006	-0.001	0.006	0.000
	(0.005)	(0.005)	(0.005)	(0.005)
Share of industry	-0.008	-0.001	-0.008	-0.000
	(0.014)	(0.015)	(0.014)	(0.015)
Share of agriculture	-0.008	0.003	-0.008	0.004
	(0.017)	(0.018)	(0.016)	(0.018)
Share of construction	-0.013	-0.022	-0.009	-0.016
	(0.040)	(0.039)	(0.039)	(0.039)
Adj. R2	0.618	0.658	0.617	0.654
Observation	288	288	288	288
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.8.: Impact of immigration on total operating revenues and expenditures, excluding the departments of Paris, Lyon and Marseille

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.520***	1.846***	1.425***	1.768***	1.765***	2.185***
	(0.336)	(0.540)	(0.362)	(0.549)	(0.432)	(0.723)
Share of inactive	-0.017***	-0.006	-0.019***	-0.002	-0.005	-0.027
	(0.006)	(0.013)	(0.007)	(0.013)	(0.009)	(0.017)
Share of youth	-0.016	-0.014	-0.005	0.004	-0.066	-0.130**
	(0.034)	(0.043)	(0.034)	(0.043)	(0.050)	(0.055)
Share of highly educated	0.032	0.026	0.032	0.022	0.032*	0.057**
	(0.020)	(0.022)	(0.021)	(0.023)	(0.019)	(0.027)
Share of entrepreneurs	0.087***	0.049*	0.093***	0.053**	0.033	0.009
	(0.022)	(0.027)	(0.025)	(0.027)	(0.040)	(0.040)
Share of adult women	-0.023	0.002	-0.008	0.023	-0.097*	-0.137**
	(0.040)	(0.049)	(0.040)	(0.050)	(0.058)	(0.059)
Share of married	0.021	0.044*	0.006	0.032	0.106***	0.102***
	(0.022)	(0.023)	(0.021)	(0.023)	(0.031)	(0.030)
Share of urban population	0.010***	0.007**	0.012***	0.007**	0.001	0.006
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Share of industry	-0.008	-0.011	-0.011	-0.012	0.018	-0.000
	(0.009)	(0.010)	(0.009)	(0.010)	(0.013)	(0.014)
Share of agriculture	-0.009	-0.011	-0.013	-0.015	0.024*	0.018
	(0.010)	(0.012)	(0.011)	(0.012)	(0.014)	(0.015)
Share of construction	-0.008	-0.002	-0.012	-0.013	0.042	0.089*
	(0.020)	(0.030)	(0.019)	(0.030)	(0.040)	(0.049)
KP F-Stat	49.030	70.889	49.030	70.889	49.030	70.889
Observation	279	279	279	279	279	279
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues per capita, log total operating expenditures per capita and log total operating net revenues per capita, respectively. Departments of Paris, Lyon and Marseille (Paris, Rhone and Bouches-du-Rhone, resp.) are excluded. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.9.: Impact of immigration on total investment resources and expenditures, excluding the departments of Paris, Lyon and Marseille

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)		Total investment net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	3.016***	3.550***	2.922***	3.356***	3.129***	3.588***
	(0.659)	(0.884)	(0.637)	(0.896)	(0.772)	(0.962)
Share of inactive	-0.004	0.015	-0.004	0.013	-0.004	0.022
	(0.011)	(0.019)	(0.010)	(0.018)	(0.012)	(0.020)
Share of youth	-0.038	-0.063	-0.052	-0.077	-0.056	-0.098
	(0.069)	(0.072)	(0.068)	(0.072)	(0.077)	(0.081)
Share of highly educated	0.043	0.056	0.042	0.051	0.018	0.020
	(0.035)	(0.040)	(0.034)	(0.041)	(0.039)	(0.042)
Share of entrepreneurs	0.094***	0.068	0.082**	0.050	0.110***	0.066
	(0.036)	(0.045)	(0.036)	(0.046)	(0.042)	(0.051)
Share of adult women	-0.055	-0.061	-0.054	-0.063	-0.075	-0.094
	(0.073)	(0.078)	(0.070)	(0.077)	(0.081)	(0.084)
Share of married	0.091***	0.092***	0.092***	0.094***	0.103***	0.104***
	(0.032)	(0.032)	(0.032)	(0.031)	(0.037)	(0.034)
Share of urban population	0.007*	0.002	0.007	0.004	0.011**	0.005
	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
Share of industry	0.016	0.004	0.016	0.004	0.004	-0.016
	(0.014)	(0.016)	(0.014)	(0.016)	(0.018)	(0.018)
Share of agriculture	0.020	0.012	0.018	0.011	0.010	-0.006
	(0.018)	(0.021)	(0.017)	(0.021)	(0.022)	(0.023)
Share of construction	0.031	0.000	0.034	0.005	-0.023	-0.076
	(0.040)	(0.046)	(0.039)	(0.045)	(0.049)	(0.055)
Panel B: First Stage						
Predicted share of immigrants	0.943***	0.755***	0.943***	0.755***	0.943***	0.755***
	(0.135)	(0.090)	(0.135)	(0.090)	(0.135)	(0.090)
KP F-Stat	49.030	70.889	49.030	70.889	49.030	70.889
Observation	279	279	279	279	279	279
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. Departments of Paris, Lyon and Marseille (Paris, Rhone and Bouches-du-Rhone, resp.) are excluded. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.10.: Impact of immigration on total operating revenues and expenditures, excluding border departments

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.918***	2.432**	1.991***	2.437**	0.796	1.934
	(0.518)	(1.016)	(0.546)	(1.016)	(0.632)	(1.372)
Share of inactive	0.005	0.045**	0.005	0.047**	0.008	0.026
	(0.010)	(0.019)	(0.011)	(0.019)	(0.011)	(0.024)
Share of youth	0.025	0.027	0.035	0.045	-0.008	-0.059
	(0.035)	(0.043)	(0.037)	(0.044)	(0.044)	(0.051)
Share of highly educated	0.016	0.036	0.015	0.035	0.030*	0.048
	(0.019)	(0.030)	(0.021)	(0.030)	(0.017)	(0.036)
Share of entrepreneurs	-0.032	-0.013	-0.023	-0.011	-0.097**	-0.020
	(0.053)	(0.044)	(0.056)	(0.046)	(0.043)	(0.065)
Share of adult women	0.068*	0.073	0.080**	0.094*	0.016	-0.050
	(0.036)	(0.050)	(0.038)	(0.052)	(0.048)	(0.064)
Share of married	0.006	0.005	-0.006	-0.007	0.051***	0.051**
	(0.017)	(0.020)	(0.017)	(0.020)	(0.019)	(0.024)
Share of urban population	0.006**	-0.000	0.007**	-0.000	0.002	0.003
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.005)
Share of industry	-0.007	-0.000	-0.011	-0.001	0.026**	0.009
	(0.008)	(0.009)	(0.009)	(0.009)	(0.012)	(0.013)
Share of agriculture	-0.006	0.001	-0.010	-0.003	0.035***	0.031**
	(0.010)	(0.010)	(0.010)	(0.010)	(0.012)	(0.014)
Share of construction	0.010	-0.021	0.005	-0.029	0.082**	0.061
	(0.027)	(0.026)	(0.029)	(0.027)	(0.039)	(0.041)
KP F-Stat	26.218	36.519	26.218	36.519	26.218	36.519
Observation	222	222	222	222	222	222
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. Border departments are excluded. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.11.: Impact of immigration on total investment resources and expenditures, excluding the border departments

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	2.825***	3.363**	2.772***	3.040**
	(0.933)	(1.550)	(0.920)	(1.533)
Share of inactive	0.031**	0.092***	0.030**	0.087***
	(0.015)	(0.028)	(0.014)	(0.027)
Share of youth	0.052	0.071	0.028	0.058
	(0.057)	(0.062)	(0.061)	(0.067)
Share of highly educated	0.009	0.037	0.007	0.026
	(0.030)	(0.042)	(0.030)	(0.043)
Share of entrepreneurs	-0.076	-0.095	-0.080	-0.124*
	(0.080)	(0.067)	(0.079)	(0.069)
Share of adult women	0.104*	0.147**	0.094	0.155**
	(0.058)	(0.075)	(0.060)	(0.078)
Share of married	0.059**	0.038	0.060**	0.038
	(0.028)	(0.030)	(0.029)	(0.032)
Share of urban population	0.005	-0.009	0.005	-0.007
	(0.004)	(0.006)	(0.004)	(0.006)
Share of industry	0.004	0.013	0.003	0.012
	(0.014)	(0.013)	(0.013)	(0.014)
Share of agriculture	0.019	0.025	0.016	0.023
	(0.017)	(0.017)	(0.017)	(0.017)
Share of construction	0.013	-0.035	0.013	-0.023
	(0.048)	(0.042)	(0.048)	(0.044)
Panel B: First Stage				
Predicted share of immigrants	0.872***	0.594***	0.872***	0.594***
	(0.170)	(0.098)	(0.170)	(0.098)
KP F-Stat	26.218	36.519	26.218	36.519
Observation	222	222	222	222
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. Border departments are excluded. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.12.: Impact of immigration on operating accounts (instrumented immigration using 1968 origin groups)

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.693***	1.963***	1.647***	1.959***	1.452***	1.667**
	(0.425)	(0.656)	(0.460)	(0.670)	(0.537)	(0.844)
Share of inactive	-0.015**	0.001	-0.016**	0.005	-0.008	-0.026
	(0.007)	(0.014)	(0.008)	(0.014)	(0.009)	(0.016)
Share of youth	-0.021	-0.019	-0.010	-0.003	-0.071	-0.121**
	(0.036)	(0.043)	(0.037)	(0.043)	(0.047)	(0.053)
Share of highly educated	0.025	0.028	0.023	0.025	0.046***	0.055*
	(0.020)	(0.026)	(0.021)	(0.026)	(0.017)	(0.028)
Share of entrepreneurs	0.066**	0.055**	0.072**	0.058**	0.023	0.034
	(0.028)	(0.027)	(0.030)	(0.027)	(0.041)	(0.042)
Share of adult women	-0.014	-0.004	0.001	0.013	-0.097*	-0.128**
	(0.037)	(0.043)	(0.037)	(0.043)	(0.056)	(0.052)
Share of married	0.026	0.048**	0.012	0.036	0.094***	0.100***
	(0.021)	(0.024)	(0.020)	(0.024)	(0.028)	(0.027)
Share of urban population	0.009***	0.005	0.010***	0.005	-0.000	0.006
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Share of industry	-0.014	-0.009	-0.017*	-0.010	0.024**	0.005
	(0.009)	(0.010)	(0.009)	(0.010)	(0.011)	(0.013)
Share of agriculture	-0.013	-0.009	-0.017	-0.013	0.027**	0.022*
	(0.010)	(0.011)	(0.011)	(0.011)	(0.012)	(0.013)
Share of construction	-0.016	-0.002	-0.022	-0.013	0.070*	0.109***
	(0.020)	(0.024)	(0.021)	(0.025)	(0.036)	(0.037)
Panel B: First Stage						
Predicted share of immigrants	0.702***	0.558***	0.702***	0.558***	0.702***	0.558***
	(0.142)	(0.089)	(0.142)	(0.089)	(0.142)	(0.089)
KP F-Stat	24.399	39.338	24.399	39.338	24.399	39.338
Observation	288	288	288	288	288	288
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. The shift-share instrument is created using the 1968's settlement of immigrants with similar origin. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.13.: Impact of immigration on operating accounts (instrumented immigration using 1975 origin-education and origin groups)

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.468***	1.451***	1.337***	1.323***	1.948***	1.963***
	(0.404)	(0.412)	(0.433)	(0.446)	(0.501)	(0.558)
Share of inactive	-0.022**	-0.022**	-0.023**	-0.024***	-0.011	-0.011
	(0.009)	(0.009)	(0.009)	(0.009)	(0.012)	(0.013)
Share of youth	0.034	0.033	0.049	0.049	-0.052	-0.052
	(0.039)	(0.038)	(0.039)	(0.039)	(0.056)	(0.057)
Share of highly educated	0.017	0.017	0.016	0.016	0.028*	0.028*
	(0.013)	(0.013)	(0.014)	(0.014)	(0.016)	(0.016)
Share of entrepreneurs	0.088**	0.088**	0.094**	0.094**	0.063	0.063
	(0.040)	(0.041)	(0.042)	(0.044)	(0.050)	(0.051)
Share of adult women	0.053	0.053	0.078	0.078	-0.114*	-0.114*
	(0.048)	(0.047)	(0.049)	(0.048)	(0.063)	(0.063)
Share of married	0.018	0.018	-0.002	-0.002	0.123***	0.122***
	(0.025)	(0.024)	(0.025)	(0.024)	(0.030)	(0.030)
Share of urban population	0.012***	0.012***	0.014***	0.014***	-0.004	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Share of industry	-0.004	-0.004	-0.009	-0.009	0.035***	0.035**
	(0.009)	(0.009)	(0.010)	(0.010)	(0.013)	(0.014)
Share of agriculture	-0.013	-0.013	-0.019	-0.020	0.031*	0.032*
	(0.014)	(0.014)	(0.015)	(0.014)	(0.017)	(0.018)
Share of construction	0.044	0.043	0.025	0.025	0.182***	0.183***
	(0.030)	(0.028)	(0.030)	(0.028)	(0.049)	(0.050)
Panel B: First Stage						
Predicted share of immigrants	0.834***	0.648***	0.834***	0.648***	0.834***	0.648***
	(0.112)	(0.104)	(0.112)	(0.104)	(0.112)	(0.104)
KP F-Stat	55.366	38.936	55.366	38.936	55.366	38.936
Observation	288	288	288	288	288	288

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. The shift-share instrument is created using the 1975's settlement of immigrants with similar origin-education in columns (1), (3) and (5), and with similar origin in columns (2), (4) and (6). First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1975's values interacted with time trend. Time fixed effects are included in all specifications. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.14.: Impact of immigration on operating accounts (instrumented immigration using 1982 origin-education and origin groups)

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.481***	1.556***	1.395***	1.454***	1.816***	2.126***
	(0.382)	(0.409)	(0.407)	(0.434)	(0.527)	(0.730)
Share of inactive	-0.023*	-0.022*	-0.024*	-0.024*	-0.015	-0.011
	(0.012)	(0.012)	(0.013)	(0.013)	(0.015)	(0.016)
Share of youth	0.030	0.031	0.043	0.044	-0.019	-0.013
	(0.051)	(0.052)	(0.055)	(0.055)	(0.062)	(0.063)
Share of highly educated	0.013	0.014	0.012	0.013	0.027	0.030
	(0.014)	(0.014)	(0.015)	(0.015)	(0.018)	(0.020)
Share of entrepreneurs	0.052	0.053	0.058	0.059	0.034	0.038
	(0.058)	(0.060)	(0.063)	(0.064)	(0.063)	(0.063)
Share of adult women	0.079	0.079	0.102*	0.102*	-0.069	-0.071
	(0.052)	(0.053)	(0.057)	(0.058)	(0.057)	(0.057)
Share of married	0.020	0.019	-0.001	-0.002	0.118***	0.114***
	(0.030)	(0.029)	(0.030)	(0.030)	(0.037)	(0.039)
Share of urban population	0.013***	0.013***	0.015***	0.015***	-0.003	-0.003
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Share of industry	-0.010	-0.009	-0.019*	-0.018	0.051***	0.055***
	(0.011)	(0.011)	(0.011)	(0.012)	(0.015)	(0.016)
Share of agriculture	-0.025	-0.023	-0.035**	-0.034*	0.042*	0.049**
	(0.017)	(0.017)	(0.017)	(0.017)	(0.022)	(0.024)
Share of construction	0.060	0.062	0.022	0.024	0.330***	0.336***
	(0.054)	(0.054)	(0.060)	(0.059)	(0.058)	(0.060)
Panel B: First Stage						
Predicted share of immigrants	0.883***	0.708***	0.883***	0.708***	0.883***	0.708***
	(0.077)	(0.083)	(0.077)	(0.083)	(0.077)	(0.083)
KP F-Stat	131.110	72.235	131.110	72.235	131.110	72.235
Observation	288	288	288	288	288	288

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. The shift-share instrument is created using the 1982's settlement of immigrants with similar origin-education in columns (1), (3) and (5), and with similar origin in columns (2), (4) and (6). First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1982's values interacted with time trend. Time fixed effects are included in all specifications. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.15.: Impact of immigration on operating accounts (instrumented immigration using 1990 origin-education and origin groups)

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.201***	1.473***	1.170***	1.462***	1.314**	1.431*
	(0.361)	(0.414)	(0.387)	(0.438)	(0.587)	(0.762)
Share of inactive	-0.026	-0.018	-0.034	-0.025	0.020	0.024
	(0.023)	(0.024)	(0.025)	(0.026)	(0.028)	(0.030)
Share of youth	-0.117	-0.118	-0.103	-0.104	-0.108	-0.109
	(0.100)	(0.101)	(0.108)	(0.109)	(0.127)	(0.127)
Share of highly educated	0.003	0.006	-0.001	0.002	0.031*	0.033
	(0.014)	(0.015)	(0.015)	(0.017)	(0.019)	(0.020)
Share of entrepreneurs	0.039	0.043	0.043	0.048	0.034	0.036
	(0.080)	(0.081)	(0.086)	(0.087)	(0.090)	(0.092)
Share of adult women	-0.001	-0.010	0.024	0.015	-0.138	-0.142
	(0.079)	(0.080)	(0.090)	(0.092)	(0.107)	(0.107)
Share of married	0.102**	0.100**	0.082	0.080	0.166**	0.165**
	(0.049)	(0.050)	(0.053)	(0.053)	(0.069)	(0.070)
Share of urban population	0.021***	0.021***	0.024***	0.024***	-0.001	-0.001
	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.009)
Share of industry	-0.017	-0.014	-0.031**	-0.027*	0.072***	0.073***
	(0.013)	(0.014)	(0.014)	(0.014)	(0.020)	(0.022)
Share of agriculture	-0.059**	-0.051**	-0.080***	-0.071***	0.087**	0.090**
	(0.026)	(0.026)	(0.026)	(0.027)	(0.037)	(0.041)
Share of construction	0.077	0.082	0.020	0.025	0.483***	0.485***
	(0.090)	(0.092)	(0.096)	(0.098)	(0.116)	(0.118)
Panel B: First Stage						
Predicted share of immigrants	0.845***	0.622***	0.845***	0.622***	0.845***	0.622***
	(0.041)	(0.060)	(0.041)	(0.060)	(0.041)	(0.060)
KP F-Stat	435.189	108.112	435.189	108.112	435.189	108.112
Observation	288	288	288	288	288	288

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. The shift-share instrument is created using the 1990's settlement of immigrants with similar origin-education in columns (1), (3) and (5), and with similar origin in columns (2), (4) and (6). First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1982's values interacted with time trend. Time fixed effects are included in all specifications. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.16.: Impact of immigration on investment accounts (instrumented immigration using 1968 origin groups)

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	3.240***	3.482***	3.124***	3.220***
	(0.904)	(1.029)	(0.861)	(1.009)
Share of inactive	-0.000	0.034*	0.000	0.032*
	(0.013)	(0.019)	(0.012)	(0.018)
Share of youth	-0.054	-0.043	-0.070	-0.056
	(0.070)	(0.067)	(0.068)	(0.067)
Share of highly educated	0.019	0.038	0.018	0.032
	(0.035)	(0.039)	(0.035)	(0.040)
Share of entrepreneurs	0.062	0.062	0.051	0.046
	(0.042)	(0.051)	(0.042)	(0.053)
Share of adult women	-0.046	-0.024	-0.048	-0.024
	(0.065)	(0.066)	(0.064)	(0.065)
Share of married	0.110***	0.118***	0.110***	0.119***
	(0.032)	(0.032)	(0.032)	(0.032)
Share of urban population	0.006	-0.004	0.006	-0.002
	(0.005)	(0.005)	(0.005)	(0.005)
Share of industry	-0.002	0.002	-0.002	0.002
	(0.014)	(0.015)	(0.014)	(0.014)
Share of agriculture	0.006	0.009	0.003	0.008
	(0.018)	(0.018)	(0.017)	(0.018)
Share of construction	-0.009	-0.024	-0.006	-0.017
	(0.039)	(0.039)	(0.039)	(0.039)
Panel B: First Stage				
Predicted share of immigrants	0.702***	0.558***	0.702***	0.558***
	(0.142)	(0.089)	(0.142)	(0.089)
KP F-Stat	24.399	39.338	24.399	39.338
Observation	288	288	288	288
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. The shift-share instrument is created using the 1968's settlement of immigrants with similar origin. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.17.: Impact of immigration on investment accounts (instrumented immigration using 1975 origin-education and origin groups)

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	3.073***	3.015***	2.952***	2.867***
	(0.741)	(0.785)	(0.723)	(0.763)
Share of inactive	-0.006	-0.007	-0.006	-0.007
	(0.013)	(0.014)	(0.013)	(0.014)
Share of youth	-0.021	-0.022	-0.041	-0.043
	(0.077)	(0.077)	(0.075)	(0.074)
Share of highly educated	0.019	0.019	0.015	0.015
	(0.025)	(0.025)	(0.025)	(0.024)
Share of entrepreneurs	0.076	0.075	0.060	0.059
	(0.059)	(0.061)	(0.060)	(0.062)
Share of adult women	0.000	-0.000	-0.006	-0.007
	(0.079)	(0.078)	(0.078)	(0.077)
Share of married	0.133***	0.133***	0.132***	0.133***
	(0.037)	(0.036)	(0.036)	(0.036)
Share of urban population	0.007	0.007	0.007	0.007
	(0.006)	(0.006)	(0.006)	(0.006)
Share of industry	0.021	0.020	0.019	0.018
	(0.015)	(0.015)	(0.015)	(0.015)
Share of agriculture	0.011	0.010	0.007	0.006
	(0.021)	(0.021)	(0.021)	(0.020)
Share of construction	0.143**	0.141***	0.136**	0.134**
	(0.056)	(0.054)	(0.056)	(0.053)
Panel B: First Stage				
Predicted share of immigrants	0.834***	0.648***	0.834***	0.648***
	(0.112)	(0.104)	(0.112)	(0.104)
KP F-Stat	55.366	38.936	55.366	38.936
Observation	288	288	288	288

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. The shift-share instrument is created using the 1975's settlement of immigrants with similar origin-education and origin groups. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1975's values interacted with time trend. Time fixed effects are included in all specifications. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.18.: Impact of immigration on investment accounts (instrumented immigration using 1982 origin-education and origin groups)

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	2.571***	2.811***	2.550***	2.696***
	(0.680)	(0.755)	(0.675)	(0.743)
Share of inactive	0.007	0.010	0.010	0.011
	(0.020)	(0.022)	(0.019)	(0.021)
Share of youth	-0.076	-0.072	-0.101	-0.099
	(0.102)	(0.103)	(0.098)	(0.098)
Share of highly educated	0.013	0.015	0.007	0.008
	(0.027)	(0.028)	(0.027)	(0.027)
Share of entrepreneurs	0.039	0.042	0.019	0.021
	(0.076)	(0.077)	(0.076)	(0.077)
Share of adult women	-0.005	-0.006	-0.010	-0.011
	(0.092)	(0.094)	(0.089)	(0.091)
Share of married	0.165***	0.162***	0.170***	0.168***
	(0.050)	(0.050)	(0.049)	(0.048)
Share of urban population	0.011	0.010	0.011	0.011
	(0.008)	(0.008)	(0.008)	(0.008)
Share of industry	0.033*	0.036**	0.033*	0.035**
	(0.017)	(0.017)	(0.017)	(0.017)
Share of agriculture	0.008	0.013	0.005	0.008
	(0.025)	(0.025)	(0.024)	(0.024)
Share of construction	0.217***	0.222***	0.215***	0.218***
	(0.078)	(0.077)	(0.076)	(0.074)
Panel B: First Stage				
Predicted share of immigrants	0.883***	0.708***	0.883***	0.708***
	(0.077)	(0.083)	(0.077)	(0.083)
KP F-Stat	131.110	72.235	131.110	72.235
Observation	288	288	288	288

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. The shift-share instrument is created using the 1982's settlement of immigrants with similar origin-education and origin groups. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1982's values interacted with time trend. Time fixed effects are included in all specifications. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.19.: Impact of immigration on investment accounts (instrumented immigration using 1990 origin-education and origin groups)

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	2.049***	2.535***	2.079***	2.428***
	(0.670)	(0.791)	(0.663)	(0.775)
Share of inactive	0.045	0.059	0.048	0.058*
	(0.034)	(0.036)	(0.033)	(0.035)
Share of youth	-0.283	-0.284	-0.312*	-0.313*
	(0.180)	(0.182)	(0.174)	(0.176)
Share of highly educated	0.015	0.020	0.012	0.015
	(0.026)	(0.029)	(0.026)	(0.027)
Share of entrepreneurs	0.092	0.099	0.069	0.074
	(0.106)	(0.106)	(0.104)	(0.105)
Share of adult women	-0.101	-0.116	-0.105	-0.116
	(0.126)	(0.129)	(0.123)	(0.125)
Share of married	0.265***	0.260***	0.272***	0.269***
	(0.078)	(0.081)	(0.075)	(0.077)
Share of urban population	0.020**	0.020**	0.021**	0.020**
	(0.010)	(0.010)	(0.010)	(0.010)
Share of industry	0.053**	0.060***	0.053**	0.058***
	(0.023)	(0.022)	(0.022)	(0.022)
Share of agriculture	-0.003	0.012	-0.006	0.005
	(0.041)	(0.042)	(0.040)	(0.040)
Share of construction	0.272**	0.281**	0.280**	0.286**
	(0.124)	(0.124)	(0.118)	(0.117)
Panel B: First Stage				
Predicted share of immigrants	0.845***	0.622***	0.845***	0.622***
	(0.041)	(0.060)	(0.041)	(0.060)
KP F-Stat	435.189	108.112	435.189	108.112
Observation	288	288	288	288

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. The shift-share instrument is created using the 1990's settlement of immigrants with similar origin-education and origin groups. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1990's values interacted with time trend. Time fixed effects are included in all specifications. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.20.: Impact of immigration on total operating revenues and expenditures, department accounts

Panel A:2SLS	Total operating revenues per capita (in logs) (1)	(2)	Total operating expenditures per capita (in logs) (3)	(4)
Share of immigrants	0.802	0.582	0.641	0.425
	(0.595)	(0.638)	(0.680)	(0.716)
Panel B: First Stage				
Predicted share of immigrants	0.846***	0.671***	0.846***	0.671***
	(0.162)	(0.095)	(0.162)	(0.095)
KP F-Stat	27.207	49.812	27.207	49.812
Observation	288	288	288	288
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues and expenditures per capita, respectively, using department accounts. Due to lack of access to data for 2007, the departmental account for 2008 has been used instead. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.21.: Impact of immigration on total investment resources and expenditures, department accounts

Panel A:2SLS	Total investment resources per capita (in logs) (1)	(2)	Total investment expenditures per capita (in logs) (3)	(4)
Share of immigrants	0.634	0.498	0.528	0.320
	(0.954)	(1.360)	(0.937)	(1.332)
Panel B: First Stage				
Predicted share of immigrants	0.846***	0.671***	0.846***	0.671***
	(0.162)	(0.095)	(0.162)	(0.095)
KP F-Stat	27.207	49.812	27.207	49.812
Observation	288	288	288	288
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources and expenditures per capita, respectively, using department accounts. Due to lack of access to data for 2007, the departmental account for 2008 has been used instead. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Figure A.3. : Operating income subcomponents for taxes

Note: The figure provides details of tax types, in addition to Figure 3.a. All variables are in terms of euro/capita.

Table A.22.: Impact of immigration on business tax, 2SLS

	Business tax per capita (in logs)	
Panel A:2SLS	(1)	(2)
Share of immigrants	18.714***	20.186***
	(3.402)	(4.107)
Panel B: First Stage		
Predicted share of immigrants	0.877***	0.716***
	(0.162)	(0.104)
KP F-Stat	29.438	46.958
Observation	96	96
Region FE	✗	✓

Notes: The dependent variable is the log business tax per capita, which does exist only for 2007. Control variables are the 1968's values interacted with time trend. Inclusion of time fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.23.: Impact of immigration on operating accounts (excluding 2007, before reform)

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	1.784***	2.070***	1.728***	2.046***	1.571***	1.692*
	(0.461)	(0.631)	(0.487)	(0.634)	(0.540)	(0.950)
Share of urban population	0.009***	0.005	0.010***	0.005	0.003	0.008*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
Share of inactive	-0.014*	0.003	-0.015*	0.007	-0.005	-0.024
	(0.008)	(0.014)	(0.008)	(0.014)	(0.010)	(0.019)
Share of youth	-0.028	-0.027	-0.015	-0.010	-0.119**	-0.150***
	(0.036)	(0.042)	(0.035)	(0.042)	(0.053)	(0.054)
Share of highly educated	0.021	0.031	0.021	0.029	0.034*	0.042
	(0.021)	(0.026)	(0.022)	(0.026)	(0.018)	(0.030)
Share of entrepreneurs	0.062**	0.053*	0.068**	0.060**	0.026	0.002
	(0.026)	(0.027)	(0.028)	(0.027)	(0.040)	(0.048)
Share of adult women	-0.023	-0.009	-0.006	0.007	-0.149***	-0.150***
	(0.036)	(0.040)	(0.035)	(0.040)	(0.058)	(0.055)
Share of married	0.025	0.045*	0.013	0.035	0.084***	0.089***
	(0.020)	(0.023)	(0.019)	(0.023)	(0.028)	(0.028)
Share of industry	-0.013	-0.008	-0.016*	-0.009	0.016	0.001
	(0.008)	(0.010)	(0.009)	(0.010)	(0.011)	(0.014)
Share of agriculture	-0.012	-0.007	-0.016	-0.011	0.021	0.020
	(0.010)	(0.011)	(0.010)	(0.011)	(0.013)	(0.014)
Share of construction	-0.023	-0.004	-0.028	-0.016	0.042	0.105**
	(0.020)	(0.024)	(0.021)	(0.025)	(0.035)	(0.042)
Panel B: First Stage						
Predicted share of immigrants	0.833***	0.657***	0.833***	0.657***	0.833***	0.657***
	(0.169)	(0.098)	(0.169)	(0.098)	(0.169)	(0.098)
KP F-Stat	24.260	44.872	24.260	44.872	24.260	44.872
Observation	192	192	192	192	192	192

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. The analysis is carried out by removing 2007, the year before the abolition of the business tax. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table A.24.: Impact of immigration on investment accounts, (excluding 2007, before reform)

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	3.417***	3.915***	3.356***	3.822***
	(0.877)	(1.027)	(0.859)	(1.040)
Share of urban population	0.005	-0.003	0.006	-0.001
	(0.004)	(0.005)	(0.005)	(0.005)
Share of inactive	0.000	0.033	0.001	0.035*
	(0.012)	(0.021)	(0.012)	(0.020)
Share of youth	-0.067	-0.056	-0.092	-0.077
	(0.067)	(0.063)	(0.067)	(0.065)
Share of highly educated	0.011	0.040	0.013	0.038
	(0.035)	(0.040)	(0.035)	(0.041)
Share of entrepreneurs	0.062	0.061	0.051	0.052
	(0.038)	(0.050)	(0.039)	(0.051)
Share of adult women	-0.062	-0.037	-0.073	-0.049
	(0.062)	(0.062)	(0.062)	(0.062)
Share of married	0.107***	0.116***	0.106***	0.117***
	(0.030)	(0.031)	(0.030)	(0.030)
Share of industry	-0.002	0.003	-0.003	0.003
	(0.014)	(0.015)	(0.014)	(0.015)
Share of agriculture	0.005	0.012	0.003	0.011
	(0.017)	(0.018)	(0.017)	(0.018)
Share of construction	-0.029	-0.021	-0.027	-0.022
	(0.040)	(0.041)	(0.039)	(0.041)
Panel B: First Stage				
Predicted share of immigrants	0.833***	0.657***	0.833***	0.657***
	(0.169)	(0.098)	(0.169)	(0.098)
KP F-Stat	24.260	44.872	24.260	44.872
Observation	192	192	192	192
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources and expenditures per capita, respectively. The analysis is carried out by removing 2007, the year before the abolition of the business tax. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.25.: Impact of immigration on total operating revenues and expenditures, with alternative definition (excluding naturalized people)

	Total operating revenues per capita (in logs)		Total operating expenditures per capita (in logs)		Total operating net revenues per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)	(5)	(6)
Share of immigrants	3.295***	3.588***	3.228***	3.328***	2.752***	4.471***
	(0.787)	(0.903)	(0.812)	(0.890)	(0.811)	(1.401)
Share of inactive	-0.011	0.006	-0.012	0.008	-0.005	-0.013
	(0.008)	(0.015)	(0.009)	(0.015)	(0.009)	(0.019)
Share of youth	-0.017	-0.024	-0.006	-0.006	-0.068	-0.131**
	(0.037)	(0.043)	(0.037)	(0.043)	(0.047)	(0.054)
Share of highly educated	0.028	0.034	0.027	0.028	0.049***	0.074**
	(0.023)	(0.027)	(0.024)	(0.027)	(0.018)	(0.029)
Share of entrepreneurs	0.068**	0.049*	0.074**	0.052*	0.024	0.029
	(0.027)	(0.027)	(0.030)	(0.027)	(0.039)	(0.036)
Share of adult women	-0.018	-0.013	-0.003	0.008	-0.100*	-0.149***
	(0.038)	(0.041)	(0.038)	(0.041)	(0.054)	(0.050)
Share of married	0.023	0.047*	0.009	0.035	0.091***	0.098***
	(0.021)	(0.024)	(0.021)	(0.024)	(0.028)	(0.028)
Share of urban population	0.009***	0.004	0.010***	0.004	-0.000	0.003
	(0.003)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)
Share of industry	-0.012	-0.008	-0.016*	-0.009	0.025**	0.007
	(0.009)	(0.010)	(0.009)	(0.010)	(0.011)	(0.013)
Share of agriculture	-0.009	-0.009	-0.014	-0.014	0.030**	0.026*
	(0.011)	(0.011)	(0.011)	(0.011)	(0.013)	(0.014)
Share of construction	-0.012	-0.003	-0.019	-0.014	0.073**	0.107***
	(0.022)	(0.026)	(0.023)	(0.027)	(0.035)	(0.036)
Panel B: First Stage						
Predicted share of immigrants	0.890***	0.731***	0.890***	0.731***	0.890***	0.731***
	(0.181)	(0.127)	(0.181)	(0.127)	(0.181)	(0.127)
KP F-Stat	24.252	33.158	24.252	33.158	24.252	33.158
Observation	288	288	288	288	288	288
Fixed effects						
Year	✓	✓	✓	✓	✓	✓
Region	✗	✓	✗	✓	✗	✓

Notes: The dependent variable is the log total operating revenues per capita, the log total operating expenditures per capita and the log total operating net revenues per capita, respectively. Alternative definition of immigrant is adopted, excluding naturalized immigrants. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.26.: Impact of immigration on total investment resources and expenditures, with alternative definition (excluding naturalized people)

	Total investment resources per capita (in logs)		Total investment expenditures per capita (in logs)	
Panel A:2SLS	(1)	(2)	(3)	(4)
Share of immigrants	6.152***	8.005***	6.000***	7.714***
	(1.816)	(1.897)	(1.734)	(1.852)
Share of inactive	0.007	0.053**	0.007	0.051**
	(0.013)	(0.025)	(0.012)	(0.023)
Share of youth	-0.047	-0.058	-0.063	-0.070
	(0.069)	(0.070)	(0.068)	(0.070)
Share of highly educated	0.026	0.066	0.025	0.060
	(0.043)	(0.045)	(0.042)	(0.045)
Share of entrepreneurs	0.064*	0.053	0.054	0.037
	(0.038)	(0.048)	(0.039)	(0.049)
Share of adult women	-0.053	-0.054	-0.055	-0.055
	(0.068)	(0.066)	(0.066)	(0.066)
Share of married	0.105***	0.114***	0.105***	0.115***
	(0.033)	(0.034)	(0.033)	(0.033)
Share of urban population	0.006	-0.008	0.006	-0.006
	(0.005)	(0.006)	(0.005)	(0.006)
Share of industry	0.000	0.005	0.001	0.005
	(0.016)	(0.016)	(0.016)	(0.015)
Share of agriculture	0.012	0.013	0.010	0.012
	(0.019)	(0.019)	(0.018)	(0.018)
Share of construction	-0.003	-0.028	0.000	-0.021
	(0.044)	(0.047)	(0.043)	(0.047)
Panel B: First Stage				
Predicted share of immigrants	0.890***	0.731***	0.890***	0.731***
	(0.181)	(0.127)	(0.181)	(0.127)
KP F-Stat	24.252	33.158	24.252	33.158
Observation	288	288	288	288
Fixed effects				
Year	✓	✓	✓	✓
Region	✗	✓	✗	✓

Notes: The dependent variable is the log total investment resources per capita and log total investment expenditures per capita, respectively. Alternative definition of immigrant is adopted, excluding naturalized immigrants. The shift-share instrument is created using the 1968's settlement of immigrants. First-stage regressions are reported in Panel B. Kleibergen-Paap rk Wald F statistic is presented in the table. Control variables are the 1968's values interacted with time trend. Inclusion of time and region fixed effects are indicated in the table. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.27.: Impact of migration share (1968) on financial outcomes (2000)

	prod (1)	charge (2)	res1 (3)	recinv (4)	depinv (5)	$log(1+f_{bf2})$ (6)	ebf (7)	caf (8)
Share of immigrants (1968)	0.046	0.051	-0.002	-0.059	-0.060	-0.002	0.026	0.031
	(0.031)	(0.031)	(0.046)	(0.073)	(0.076)	(0.005)	(0.047)	(0.046)
Observation	96	96	96	96	96	96	96	96

Notes: Control variables are the 1999's values interacted with time trend. Observations are weighted by the population at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.

Table A.28.: Correlation between growth of pre-treatment regional characteristics (1990-1999 and 1982-1999) and predicted growth of immigrants (2007-2017)

	Δ1990-1999 (1)	Δ1982-1999 (2)
Share of inactive	0.131	0.037
	(0.047)	(0.034)
Share of youth	-0.287	-0.392
	(0.123)	(0.085)
Share of highly educated	0.137	0.058
	(0.057)	(0.029)
Share of entrepreneurs	0.228	0.110
	(0.156)	(0.115)
Share of adult women	-0.596	-0.573
	(0.160)	(0.082)
Share of married	0.117	0.159
	(0.113)	(0.059)
Share of urban population	-0.079	-0.053
	(0.053)	(0.030)
Share of industry	-0.032	0.068
	(0.048)	(0.031)
Share of agriculture	0.061	0.049
	(0.047)	(0.027)
Share of construction	0.017	0.044
	(0.119)	(0.107)
Observation	96	96
R-squared	0.714	0.799

Notes: The dependent variable is the predicted growth of immigrants (2007-2017). Year fixed effects are included. Observations are weighted by the population in 1999 at the departmental level. Robust standard errors in parentheses are clustered at the departmental level. * p<0.1, ** p<0.05, *** p<0.01.