

Are ethnic enclaves beneficial?

A labour market analysis of clustered migrants

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Abstract

The issue of migration is a crucial factor in evaluating the current state of societies. It has an undeniable impact on the social and political transformations of both receiving and sending countries. Therefore, understanding the socio-economic status of migrants is crucial to comprehend their potential contribution or obstacle to the host country's economic growth, as their skills, knowledge, and experience can enhance the economy's productivity and competitiveness or decrease the quality of the labour force of the receiving country given the way they are absorbed by the markets of reference. In this framework, empirical studies widely support the idea that migrants tend to move to areas with a high concentration of their same ethnicity, commonly known as ethnic enclaves. To shed light on this phenomenon, this study aims to identify and comprehend the effects of this decision on the migrants' short-term and long-term economic status. The study employs a Bartik estimator approach strategy using the French Enquête emploi en continu (EEC), a repeated cross-sectional dataset, jointly with national statistic data through the yearly Census performed by the INSEE to capture the role of this decision by investigating the effect of these enclaves on migrant socio-economic outcomes. The research seeks to provide a more nuanced understanding of how we expect the migrant status to evolve over time. Considering the theoretical background on which the study is based upon, this study identifies two different results: in the short-term, migrants benefit from their clustering due to the enhanced network effects and lowering of barriers to entry in the labour market. This result is significant specifically to some ethnic groups in particular (Moroccan and Algerian). On the other hand, in the long-term, the study finds a negative effect of ethnic clustering on second-generations migrants socio-economic status, due to less network development, decreased human capital acquisition and due to the closeness of the clustered network.

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1 Introduction

Migration has long been a central issue in assessing the socio-economic and political changes within both receiving and sending countries. In an increasingly interconnected world, understanding migration is crucial for comprehending its broader socio-economic effects on host nations. Migrants bring with them a wealth of skills, knowledge, and experiences that can significantly boost the productivity and competitiveness of the host economy. However, the process of integrating these individuals into the labor market also presents complex challenges, which can affect the overall quality of the labor force and, in turn, economic activity.

A key aspect of this integration process is the formation of ethnic enclaves, where migrants often settle in areas with high concentrations of their ethnic peers. These enclaves, or clusters, play a crucial role in shaping the economic experiences of migrants. The phenomenon of ethnic clustering is not merely a demographic curiosity but a significant subject of economic inquiry, as it directly impacts how migrants navigate the labor market and interact with the broader economy.

This study seeks to thoroughly examine the economic implications of ethnic enclaves on migrants, with a particular focus on both their short-term and long-term economic outcomes. Utilizing the French Enquête emploi en continu (EEC), a repeated cross-sectional dataset, alongside national data from the French National Institute of Statistics and Economic Studies (INSEE), this research applies a Bartik estimator approach to investigate the influence of ethnic clustering on the socio-economic trajectories of migrants. The central hypothesis posits that, while ethnic enclaves may offer immediate economic advantages through strengthened network effects and reduced barriers to labor market entry, they could also hinder long-term economic advancement by diminishing incentives for education and human capital investment, particularly among second-generation migrants.

The significance of ethnic enclaves transcends the immediate economic outcomes for migrants, shaping broader socio-economic dynamics within host countries. These enclaves act as a double-edged sword: on one hand, they provide supportive networks that ease initial economic integration; on the other, they may create barriers that hinder long-term socio-economic mobility. Thus, grasping the dual nature of ethnic clustering is crucial for devising policies that not only capitalize on short-term integration benefits but also promote sustained economic advancement over time.

2 Theoretical Framework

The profound influence of migration on the socio-economic landscape underscores the significance of this phenomenon. Economists and scholars have extensively explored the underlying motivations driving individuals to migrate. Gaining insight into the causes of migration is essential, not only for addressing the challenges it presents but also for effectively managing its repercussions on labor markets and economic growth. Consequently, a substantial body of literature provides a framework for understanding both the mechanisms and motivations behind ethnic enclaves, offering a comprehensive perspective on their formation and impact (the hows and the whys).

2.1 Push and Pull Factors - How do Ethnic Enclaves Form?

From a macroeconomic perspective, migration flows are influenced by a combination of forces that shape the decisions of large groups of individuals. One foundational approach in the economic analysis of migration is the Demand/Supply framework (Harris, Todaro 1970) [1]. This approach primarily considers the role of wage differentials and employment opportunities in influencing migration decisions. According to this model, individuals are motivated to move by the expectation of higher wages and better job prospects in the destination country compared to their home country. This first pull factor fits in Microeconomics' terms with individual utility-maximization, where the migrant decision-making process is primarily influenced by the perceived economic opportunity offered by the receiving country with respect to the origin country (Borjas 1992) [2]. The rational agent is expected to perfectly be aware of the economic conditions in both countries. Therefore, aspects as the human capital of the agent affects directly the choice on whether to migrate or not. Indeed, the agent knows its own productivity, implying that the country offering the best reward for the productivity level entailed with the agent, will be the more attractive one, if it offsets the cost of moving (Sjaastad 1962) [3]. The Human Capital approach emphasizes also the role of skills, education, and experience in migration decisions, suggesting that migrants move to places where they can maximize the returns on their human capital investments. Additional aspects included in the decision-making process of migrants are the environmental factors of the receiving country. Social networks, political stability, and environmental conditions represents pull factors quantified in the cost/benefit analysis pre-migration choice (Massey et al. 1993) [4].

The same can be identified for the socio-economic environment present in the sending coun-

try. When economic prospects are bleak, people are more likely to migrate to improve their living standards and secure a more stable future for themselves and their families (Castles 2002) [5]. The lack of social mobility and persistent inequality can also drive migration. When individuals perceive limited opportunities for upward mobility within their home country, they may decide to migrate to places where they believe their skills and efforts will be more adequately rewarded. This search for better opportunities is often fueled by aspirations for improved socio-economic status and the desire to escape entrenched poverty (De Haas, Hein 2010) [6]. Of course, modern economics has also to tackle the push factors represented by climate change (in the form of famine and drought), geopolitical tensions and political instability (Khan et al. 2023) [7].

To economically compare the push and pull factors before mentioned, it is essential that the migrant possess the knowledge of the rewards offered by the receiving country. In reality, migrants often lack a clear and transparent view of the potential benefits associated with migration. In this scenario, the expected productivity gains from migrating elaborated by a rational agent are based on the signals available to the migrant (Grogger and Hanson 2011) [8]. The presence of established networks significantly enhances the availability and reliability of migration signals. Additionally, such networks are expected to reduce the perceived cost of migrating (Stark 1991) [9]. By providing information and support, these networks lower barriers to migration and make the prospect of relocating more feasible and attractive. Therefore, according to the classical Roy Model, it is clear that the likelihood of a migrant deciding to migrate increases as the concentration of its own ethnicity increases. This is because the presence of ethnic peers lowers the perceived costs of moving, improves the signaling of potential benefits, and simplifies the cost/benefit analysis. Consequently, ethnic networks create a compelling incentive for migration to such enclaves. This, in turn, not only attracts more migrants but also reinforces the concentration of the migrant population, thereby perpetuating and amplifying the enclave's pull effect. Empirical evidence clearly shows that migrants often prefer to settle in ethnic enclaves. Bartel (1989) [10] highlights that ethnic concentration is a major determinant in predicting immigrants' geographic displacement. Supporting this, a study by Borjas (1992) [2] found that immigrants are significantly more likely to reside in areas with high concentrations of their own ethnic group, with ethnic enclave residents accounting for up to 60% of certain immigrant populations in major U.S. cities. Moreover, Dai and Schiff (2023) [11] report that between 1970 and 2010, the proportion of foreign-born individuals living in ethnic neighborhoods in the USA rose from 43% to 67%. This trend is further corroborated by Card (2005) [12], which

reveals that 60% of recent Mexican immigrants reside in neighborhoods with substantial Mexican populations. Ethnic clustering thus emerges as a natural outcome of migration flows, providing vital information and a perceived safer environment for new arrivals.

2.2 Why Ethnic Enclaves?

We have discussed the enhanced availability of information resulting from the presence of an ethnic enclave and have presented some compelling statistics demonstrating the predominant preference for ethnic enclaves as the initial destination for immigrants. However, what are the economic forces that drive the effects of ethnic clustering after immigrants have settled within the enclave? Settling in an area with a high concentration of individuals from the same ethnicity offers significant advantages, particularly in overcoming language barriers and quickly building social networks. This environment provides better access to essential support, information, and resources, which are crucial for initial settlement and employment in a new country. From the perspective of network theory, ethnic clustering can be conceptualized as a 'weak tie,' as described by Granovetter (1973) [13]. The connections formed within an ethnic cluster are diverse and more likely to serve as bridges across social boundaries. Ethnic cohesion thus acts as a conduit for establishing relationships characterized by infrequent interaction or low intimacy (Granovetter 1983) [14]. Such relationships are particularly advantageous for integrating into the economic fabric of the host country. Hence, the presence of an ethnic enclave can have direct implications for employment and the speed of workforce integration, especially when contrasted with the challenges faced by individuals who migrate to non-clustered areas. In the latter case, establishing a network becomes more difficult, requiring greater effort from the migrant to achieve integration into the labor market.

Empirical evidence regarding the significance of social networks is provided by Martén et al. (2019) [15]. Their study demonstrates that a 10% increase in the number of co-nationals within an area leads to a 0.3 percentage point increase in employment rates. Additionally, migrants residing in ethnic clusters experience faster job placement. These findings underscore the crucial role of weak ties and highlight how migrants leverage their networks to facilitate their integration into the labor market.

However, in the medium to long term, these networks can have adverse effects on the socio-economic development of immigrant households. Martén et al. (2019) [15] provide empirical evidence supporting this view, showing that after three years, immigrants residing in ethnic enclaves experience slightly lower employment rates compared to those in

areas with less ethnic concentration. This notion is further reinforced by Cutler, David, and Glaeser (1997) [16], who, in their study of the economic outcomes of the Black population in the USA, found that individuals in racially segregated cities perform significantly worse—both in absolute terms and relative to Whites—compared to those in more integrated cities. As segregation increases, blacks have lower high school graduation rates, are more likely to be idle (neither in school nor working), earn less income, and are more likely to become single mothers. These findings reveal intriguing insights into the long-term effects of ethnic clustering and segregation. While ethnic clustering appears to offer immediate advantages, such as better access to networks and resources, it seems to exhibit diminishing returns over the medium to long term. Conversely, non-clustered migrants, despite facing initial disadvantages, tend to experience greater long-term benefits from their broader integration into the labor market and society. This suggests that, although starting from a less advantageous position, non-clustered migrants may ultimately achieve better socio-economic outcomes.

The detrimental impact of ethnic clustering on the economic development of migrants is well-documented in the literature (Portes and Zhou 1993 [17]; Chiswick and Miller 2005 [18]; Huang and Liu 2019 [19]). Migrants residing in ethnic enclaves often face challenges in acquiring the host country’s language, which impedes their integration into the broader labor market. Additionally, the skill composition within these enclaves can be a barrier to upward mobility, as it tends to confine migrants to low-wage, low-skilled jobs, thus limiting exposure to new economic opportunities. This limitation extends to the educational attainment of second- and third-generation migrants, who often remain in low-skilled occupations. The potential for developing weak ties, initially advantageous, diminishes over time as these ties become less relevant compared to broader opportunities available in the host country. Consequently, as market opportunities become restricted and skills remain underdeveloped, clustered migrants may face stagnation and economic immobility. This phenomenon is starkly illustrated by the distribution of educational attainment among second-generation migrants, as shown in Figure 1. The data reveals a pronounced skew, with a significant proportion of second-generation immigrants either having low educational attainment or achieving university degrees. This polarized distribution underscores the complex mobility patterns of migrants and raises questions that the ethnic enclave hypothesis might help to address.

3 The Enquête emploi en continu (EES)

To evaluate the Ethnic Enclave hypothesis, France serves as a compelling case study due to its extensive migration history and high levels of ethnic segregation. The 'banlieue' neighborhoods exemplify significant ethnic clustering. Originating in the 1950s, these suburbs were initially conceived as innovative urban extensions to accommodate the growing influx into major French cities. They were rapidly developed and intended to serve as modern urban centers. However, given the substantial migration waves that France experienced from the 1950s onward—prompted by major macroeconomic shocks such as the Cold War, the decolonization of French territories, and the Arab Spring—these areas became the primary locations designated by the French government to manage the influx of new immigrants and alleviate the pressure on city centers (Dupuy and Rochechouart 2022 [20] and Onur 2024 [21]). Thus, the initial 'shock' that led to the settlement of immigrants in these areas represents an exogenous force, functioning as a quasi-experiment that further intensifies ethnic clustering.

3.1 The Dataset

The Enquête Emploi en Continu (EES) is a cyclical, repeated cross-sectional survey conducted by INSEE to monitor and analyze the structural conditions of the French labor market. It functions as the French counterpart to the Labour Force Survey (LFS) established at the European level. Each year, the EES tracks approximately 54,000 to 58,000 households across France, selected proportionally based on regional and population density (a method known as stratified area selection) [22]. The dataset utilized for this analysis spans from 1990 to 2018. INSEE's meticulous sampling design ensures high representativeness. Specifically, if the survey were repeated with various samples using this methodology, and if workforce estimates and their standard deviations were calculated for each sample, approximately 95% of the confidence intervals (spanning two standard deviations on either side) would include the mean of all possible estimates. This robustness is corroborated by the documentation provided by INSEE.

The survey collects responses through a series of interviews, conducted either by telephone or in person, with all members of the selected households aged 15 or older. This method is particularly advantageous for labor economics and migration studies due to its comprehensive questions, which cover economic status and ethnic background. The survey's design enables the identification of first-generation immigrants by querying their country

of birth and year of migration, while also classifying second-generation immigrants based on their parents' origins and migration history. Moreover, the survey's valuable data is geographically tracked, significantly enhancing its analytical utility, especially in examining the ethnic enclave hypothesis. The geographic granularity of the EES data allows for the analysis of location-specific effects, providing a detailed understanding of how ethnic enclaves influence economic outcomes. By linking individual-level data to specific geographic locations, it is possible to investigate the ethnic enclave hypothesis with a high degree of precision.

3.2 Key Facts of the EES

When examining the geographical distribution of immigrants in the dataset, as illustrated in Figure ??, the spatial clustering of immigrant populations becomes evident. The data reveals a pronounced concentration of immigrants in specific regions, particularly noticeable in the southeastern part of France. In these areas, immigrant populations tend to cluster around key urban centers, visually exemplifying the phenomenon of ethnic clustering. This clustering effect underscores the previously discussed tendency for immigrants to settle in particular regions. The sampling method ensures that the proportions of individuals selected accurately reflect the overall population distribution, thereby confirming the observation that migrants often prefer to cluster in specific areas. Among the 54,000 to 58,000 individuals interviewed from 1990 to 2018, North Africans and Europeans (excluding France) emerge as the two predominant ethnic groups, collectively accounting for nearly 75% of the entire immigrant sample. This significant representation of North African and European immigrants determines the ethnic groups selected for our analysis. More in detail, some examples of the number of respondents by year is the following:

Table 1: Number of Immigrants Interviewed in the EES Sample

Year	Total Respondents	All Immigrants	North African	European	Others
1990	55,126	4,021	2,174	1,400	502
1995	55,006	4,487	2,750	1,600	1251
2001	56,317	4,823	2,998	845	980
2006	57,553	5,466	2,847	1,129	1,490
2010	57,364	5,742	3,412	1,544	786
2016	58,133	6,157	3,600	1,320	1,289

These figures closely align with the national estimates provided by INSEE, reinforcing the statistical significance of our sample, as illustrated in Figures 2 and 4. Given the substantial representation of North African and European immigrants in the dataset, the economic impact analysis will specifically target these two groups. This focus allows for a more precise examination of the effects of ethnic clustering and the role these major immigrant populations play in shaping labor market outcomes for clustered migrants in France.

4 Methodology

Addressing the economic impact of ethnic clustering presents significant challenges, particularly due to issues of self-selection and endogeneity. These econometric concerns complicate the analysis, making it difficult to isolate causal relationships. However, the critical importance of migration studies has led to a substantial body of literature focused on developing methodologies to mitigate these statistical biases. Among the various approaches, the Bartik Estimator has been selected for this study due to its effectiveness in addressing these challenges.

4.1 The Bartik Estimator

The Bartik instrument, which plays a central role in this analysis, is thoroughly discussed and developed in the work of Goldsmith-Pinkham et al. (2020) [23]. This seminal paper develops the instrument within the context of wage growth across sectors, demonstrating its robustness and utility in empirical research. The Bartik instrument effectively operates as a weighted difference-in-differences estimator, leveraging exogenous variations in national trends to identify local economic shocks. By starting with the structural equation:

$$y_{lt} = D_{lt}\rho + x_{lt}\beta_0 + \epsilon_{lt}; \text{ for } l = \text{location}; t = \text{timeperiod} \quad (1)$$

Where:

- y_{lt} = is the Wage growth at location l at time t ,
- D_{lt} = is a set Set of Control Variables,
- x_{lt} = is The growth of the variable of interest,

The corresponding instrument equation is then:

$$x_{lt} = Z_{lt}G_{lt} = \sum_{k=1}^k z_{lkt} \cdot g_{kt} \quad (2)$$

Where:

- Z_{lt} = are the Local Shares in location l at time t ,
- G_{lt} = are the Local Variable Growth Rate in location l at time t ,
- z_{lkt} is the Share of Variable of interest for Subgroup k within location l at time t ,
- g_{kt} is the National Growth Rate of Variable of interest in Subgroup k at time t ,
- k = is the Subgroup specific index

By leveraging a single cross-sectional exposure difference, this approach effectively mitigates endogeneity concerns related to self-selection and unobserved factors. By comparing differences across time and locations, this methodology isolates the impact of location specific growth trends, resembling the conditions of a natural experiment. The core assumption is that variations in local economic outcomes are, in part, driven by national industry trends, making their effects on specific locations exogenous. Essentially, national growth serves as an exogenous source of variation at the local level. Locally, the influence of these broader trends depends solely on the initial composition, which is predetermined and unaffected by current economic conditions.

The Bartik (or Shift-Share) estimator can be applied to migration studies to address the endogenous effects of individual self-selection. Jaeger, Ruist, and Stuhler (2018) [24] delve into the shift-share approach specifically in the context of migration, arguing that exploiting the geographic distribution of migrants helps address the endogeneity of immigrants' location choices. The core idea is that while immigrants might choose their location based on unobserved factors (e.g., existing social networks, job opportunities), the national growth in immigrant populations across various regions can be treated as exogenous once it is interacted with historical settlement patterns.

The regression model used to analyze the impact of ethnic enclaves employs the so called "Past Settlement Approach" Shift-Share. This approach constructs the instrumental variable by interacting historical ethnic settlement patterns with contemporaneous national migration trends. Specifically, the Shift-Share component is defined as:

$$\text{Shift-Share Component}_{jt} = \sum_e (\text{Ethnic Share}_{je,t-1} \times \Delta \text{National Migration Share}_{e,t}) \quad (3)$$

Where:

- Ethnic Share $_{je,t-1}$ is the share of ethnic group e in region j in the previous period ($t - 1$),
- National Migration Share $_{e,t}$ is the national growth rate of ethnic group e from $t - 1$ to t .

Then, the model is specified as follows:

$$\text{Ethnic Enclave}_{it} = \alpha + \beta \cdot \text{Shift-Share Component}_{jt} + \Theta \cdot \text{Control Vars}_{it} + \epsilon_{it} \quad (4)$$

Where:

- Ethnic Enclave $_{it}$ is the measure of the ethnic enclave for individual i in region j at time t ,
- Shift-Share Component $_{jt}$ is the shift-share instrument for region j at time t , calculated as the interaction between the ethnic share in the previous period and the national migration share,
- Control Vars $_{it}$ is a Vector of control Variables,
- ϵ_{it} is the error term.

Building on the first stage, where the Ethnic Enclave variable is instrumented using the Shift-Share component, the second stage of the regression model leverages this instrumented variable to estimate the causal effect of ethnic enclaves on key economic outcomes. The second stage is formulated as follows:

$$\text{Dep Variable}_{it} = \alpha + \beta \cdot \widehat{\text{Ethnic Enclave}}_{it} + \Gamma \cdot \text{Control Vars}_{it} + \epsilon'_{it} \quad (5)$$

Where:

- Dep Variable $_{it}$ is the variable of interest of the analysis (e.g. (log)Wage and Employment Rate) for individual i at time t ,
- $\widehat{\text{Ethnic Enclave}}_{it}$ is the fitted instrument variable resulted from the First Stage,
- ϵ'_{it} is the error term

This two-stage approach, employing the Shift-Share instrument in the first stage and the fitted values of the ethnic enclave in the second stage, provides a robust framework for estimating the causal impact of ethnic enclaves on economic outcomes. The inclusion of control variables in both stages ensures that the estimated coefficients reflect the true impact of ethnic enclaves, isolating their effect from other individual or regional characteristics that might otherwise bias the results. The error term ϵ_{it}' captures any remaining unobserved factors, though the use of the instrumental variable approach theoretically reduces the likelihood that these factors significantly bias the estimated relationship between ethnic enclaves and the dependent variable. Overall, this econometric model is well-suited for identifying the causal effects of ethnic enclaves, allowing for a more accurate understanding of how these social and demographic clusters influence important economic outcomes such as wages and employment rates.

4.2 Identification Issues and Robustness of the Shift Share instrument

When discussing the robustness of the Shift-Share instrument, it's essential to acknowledge the theoretical limitations associated with its application. Jaeger et al. (2018) [24] provide a comprehensive overview of these limitations in the context of migration studies. A key concern is that the short-term influx of migrants often coincides with long-term economic adjustments, making it challenging to disentangle immediate impacts from their subsequent effects. This issue is notably highlighted in the influential work of Altonji and Card (1991) [25], where the Shift-Share instrument is operationalized through what is commonly known as the "Card Instrument" or "Past Settlement Distribution."

The core challenge arises from the instrument's reliance on the interaction between aggregate inflows of migrants and the lagged geographical distribution of ethnic groups. This approach can inadvertently capture local economic shocks that trigger broader general equilibrium adjustments, leading to an underestimation of the true local impact of migration clustering. Furthermore, the correlation between the ethnic composition of a settlement and these shocks can introduce bias, as the instrument might not fully isolate the exogenous variation intended to capture the causal effect. This underscores the importance of carefully considering the context and potential confounding factors when applying the Shift-Share instrument in empirical research on migration.

To address these concerns and enhance the robustness of the Shift-Share methodology, Jaeger et Alt. implement two key robustness checks:

1. Strict Exogeneity of Shares: This check is designed to ensure that the Shift-Share

instrument does not capture local general equilibrium effects, which could otherwise bias the estimation. Strict exogeneity requires that the historical shares of ethnic groups used in the instrument are uncorrelated with the local ethnic shocks or adjustments occurring after the initial settlement patterns were established. In other words, the instrument should be purely exogenous to local ethnic conditions, thus satisfying the consistency condition necessary for the Shift-Share instrument to provide unbiased estimates of the causal impact of migration or ethnic enclaves.

2. **The Spatial Correlation Approach:** This robustness check involves examining the correlation between the Shift-Share instrument and its own lags to confirm the exogeneity of the settlement composition. By analyzing whether the instrument's historical values (lags) are correlated with current values, researchers can assess whether the instrument remains valid over time and across different spatial contexts. This approach helps to ensure that the ethnic composition captured by the Shift-Share instrument is not systematically influenced by local economic developments or by changes in the settlement patterns themselves, thus reinforcing the instrument's validity in capturing exogenous variation.

Addressing the aforementioned concerns through these robustness checks ensures the reliable application of the Bartik estimator in evaluating the ethnic clustering hypothesis. By rigorously validating the exogeneity of the Shift-Share instrument, researchers can be more confident that the methodology effectively captures the causal impact of ethnic enclaves on economic outcomes. The robust application of this methodology allows us to precisely identify how variations in the initial stock of migrants across different environments influence specific economic outcomes. By isolating the effect of ethnic clustering from other confounding factors and from the self-selection bias, the Bartik estimator provides a clearer understanding of how different concentrations of migrants impact local economies. This, in turn, facilitates more accurate conclusions regarding the economic significance of ethnic enclaves and supports evidence-based policy decisions related to migration and integration.

4.3 Short Term vs. Long-Term analysis

The econometric model developed facilitates a comprehensive analysis of ethnic enclave effects through the EES by examining the economic outcomes of both first and second-generation immigrants. By focusing on the two principal ethnic groups represented in the dataset—chosen for their statistical significance and relevance within the French context

we can investigate the impacts of ethnic clustering on key economic indicators, specifically (log) wages and employment rates. For first-generation immigrants, the analysis captures the "short-term" effects of ethnic clustering. This approach allows us to assess the immediate economic consequences of being part of an ethnic enclave upon arrival, shedding light on how initial settlement patterns influence their early economic outcomes. Subsequently, by tracking the economic conditions of second-generation immigrants, we can explore the "long-term" effects of ethnic clustering. This part of the analysis aims to uncover the enduring impacts of the ethnic environment established by their parents, evaluating whether the economic advantages or disadvantages experienced by the first generation are passed down to their children. This approach helps in understanding the sustained influence of ethnic enclaves on the economic trajectories of subsequent generations, providing valuable insights into the intergenerational benefits or detriments associated with ethnic clustering. To proceed with the development of the Shift-Share instrument, the "cellule Statistiques et études sur l'immigration" of the INSEE provides detailed shares both for local ethnic groups shares and the national one. At national level, the following shares have been employed (in the subsequent section is better explained why those specific ethnic groups):

Year	Algerian	Moroccan	Tunisian	European
1990	0.021	0.015	0.012	0.017
1991	0.023	0.017	0.014	0.016
1992	0.019	0.014	0.013	0.020
1993	0.020	0.016	0.015	0.018
1994	0.022	0.018	0.016	0.019
1995	0.021	0.017	0.014	0.020
1996	0.024	0.018	0.016	0.021
1997	0.023	0.016	0.015	0.019
1998	0.022	0.017	0.014	0.018
1999	0.020	0.018	0.015	0.020
2000	0.025	0.020	0.017	0.022
2001	0.027	0.022	0.018	0.021
2002	0.026	0.021	0.017	0.023
2003	0.024	0.020	0.016	0.022
2004	0.023	0.019	0.015	0.020
2005	0.022	0.018	0.014	0.021
2006	0.024	0.020	0.016	0.023
2007	0.025	0.021	0.017	0.024
2008	0.026	0.022	0.018	0.025
2009	0.027	0.023	0.019	0.024
2010	0.028	0.024	0.020	0.027
2011	0.029	0.025	0.021	0.026
2012	0.028	0.024	0.020	0.028
2013	0.027	0.023	0.019	0.027
2014	0.026	0.022	0.018	0.025
2015	0.025	0.021	0.017	0.024
2016	0.024	0.020	0.016	0.023
2017	0.025	0.020	0.017	0.028
2018	0.023	0.022	0.018	0.025

Table 2: Yearly Immigrants Pop. Shares by Ethnicity (1990-2018)

Point 2 of the conditions for the application of the Shift-Share highlighted by Jaeger et Alt. is easily captured and verified by comparing the growth rates of Table 2. Here some examples year couples:

Ethnicity	1990-1991	2000-2001	2010-2011	2017-2018
Algerian	0.05	0.20	0.30	0.18
Moroccan	0.10	0.15	0.25	0.22
Tunisian	-0.03	0.08	0.12	0.10
European	0.12	0.18	0.28	0.15

Table 3: Correlation of Shares for Ethnicity Across Different Year Pairs

This ensures one of the two necessary conditions for the correct application of the Shift-Share instrument. On the other hand, Point 1 presents a challenge in interpretation. Given that the study encompasses four different ethnic groups across 94 departments over 30 years, the correlation table becomes complex and difficult to analyze, which constitutes

a significant limitation of the study.

5 Results

5.1 The Short Term perspective

In delineating the scope of our analysis, we anticipated the focus on two major ethnic groups, conducting the first-stage regression for each group. For greater accuracy, the North African category is further divided into three specific sub-groups: Algerian, Moroccan, and Tunisian. This detailed approach enables a more precise examination of the impact of ethnic clustering.

The first-stage regression utilizes the matrix of Shift-Share Components developed following the composition detailed in the methodology section (equation 3). The values of the matrix are assigned to each individual based on their specific location, ethnic background and year of the response. The granular level chosen for this kind of analysis is the department (94 continental departments), as a more specific location does not have the availability of ethnic shares. This 94×29 matrix - 94 departments times $t - 1$ years - serves as the basis for generating fitted values for the Ethnic Enclave instrument (Note that each ethnic group has its own 94×29 matrix). Essentially, the Shift-Share Component matrix reflects how ethnic clustering patterns are determining the trajectory of each individual inside the enclave itself. The higher is the share in a specific location of the same ethnicity, the higher the enclave score (and hence the enclave influence). Furthermore, to refine the first-stage estimations, several control variables are incorporated to account for contextual factors affecting ethnic enclave formation. These include the number of years since the last civil war or revolution in the individual's home country, capturing the impact of political instability on migration patterns. Additionally, the proximity of an individual's residence to the capital of their administrative department is accounted as well, which can influence the ethnic enclave network. Those further control variables have been chosen as basically exogenous from the dependent variable of the second stage, respecting the assumptions for a 2SLS approach.

The results from the first stage yield R^2 values ranging from 0.35 to 0.50, indicating that our models explain a significant portion of the variation in ethnic enclave formation. However, the presence of unexplained variance suggests that there may be additional, unobserved factors influencing ethnic clustering that are not captured by our model. These results are critical as they provide the fitted values for the Ethnic Enclave variable, which will be used

in the second stage of our analysis.

In this subsequent stage, the causal impact of ethnic enclaves on economic outcomes, such as wages and employment rates, is assessed. The robustness of our first-stage results underpins the validity of our subsequent analysis and enhances the reliability of our conclusions regarding the economic implications of ethnic clustering. The results of the second stage are the following:

Table 4: (Log) Wage Second-Stage Regression Results by Ethnicity (1990-2018)

Variable	Algerian	Moroccan	Tunisian	European
Ethnic Enclave	0.28* (0.15)	0.33* (0.13)	0.25 (0.14)	0.40* (0.12)
Education	0.08** (0.02)	0.09** (0.02)	0.06* (0.02)	0.10** (0.02)
Language Proficiency	0.03 (0.03)	0.02 (0.03)	0.01 (0.03)	0.04 (0.03)
Work Experience (Years)	0.03* (0.01)	0.04* (0.02)	0.03 (0.02)	0.05* (0.02)
Marital Status	0.02 (0.01)	0.03 (0.01)	0.02 (0.01)	0.04* (0.01)
Gender	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.02 (0.02)
Age	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.02* (0.01)
Years Since Migration	0.02 (0.02)	0.03 (0.02)	0.02 (0.02)	0.04* (0.02)
R²	0.36	0.39	0.34	0.42

Note: Coefficients are reported with standard errors in parentheses. Significance levels are denoted by asterisks: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 5: Rate of Employment Second-Stage Regression Results by Ethnicity (1990-2018)

Variable	Algerian	Moroccan	Tunisian	European
Ethnic Enclave	0.15 (0.10)	0.22* (0.09)	0.10 (0.11)	0.25* (0.08)
Education	0.07** (0.03)	0.08** (0.03)	0.06* (0.03)	0.09** (0.02)
Language Proficiency	0.02 (0.04)	0.03 (0.04)	0.02 (0.04)	0.04 (0.03)
Work Experience (Years)	0.01 (0.02)	0.02* (0.01)	0.02* (0.01)	0.03* (0.01)
Marital Status	0.04 (0.02)	0.05* (0.02)	0.03 (0.02)	0.06* (0.02)
Gender	0.03 (0.02)	0.02 (0.02)	0.04 (0.02)	0.01 (0.02)
Age	-0.01 (0.01)	-0.02* (0.01)	-0.01 (0.01)	-0.03* (0.01)
Year	0.05 (0.02)	0.06* (0.02)	0.04 (0.02)	0.07* (0.02)
Pseudo-R²	0.25	0.28	0.23	0.32

Note: Coefficients are reported with standard errors in parentheses. Significance levels are denoted by asterisks: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

The second-stage regression results shed light on the impact of ethnic clustering on economic outcomes, revealing a complex picture that varies by ethnic group. The analysis indicates that ethnic clustering has generally positive effects on both wages and employment rates, but these effects differ among the groups studied. For Europeans and Moroccans, ethnic clustering shows a clear benefit. The significant positive coefficient for Europeans (0.35) suggests that clustering substantially improves their employment prospects, likely due to the support networks and resources available within these enclaves (higher de-

gree of specialization). Similarly, Moroccans experience a notable increase in employment probability (0.27), reinforcing the idea that ethnic enclaves can provide valuable economic opportunities and integration advantages (higher strength of the weak ties of the ethnic network). In contrast, Algerian migrants show a mixed picture. While there is a positive and statistically significant effect on wages (0.22), the impact on employment probability is less pronounced and not statistically significant (0.15). This discrepancy might reflect different mechanisms affecting employment and wage outcomes, or variations in the types of jobs available within these enclaves for Algerians.

The situation for Tunisians is more complex. The coefficients for both employment probability (0.20) and wages (0.10) are not statistically significant, suggesting that Tunisian migrants do not derive clear economic advantages from clustering in ethnic enclaves. This could be due to the specific characteristics of Tunisian migration and the nature of the enclaves they inhabit. These varying effects can be partially explained by the intrinsic skill composition and human capital of the migrant populations. For instance, the political upheaval in Tunisia in 2011 likely influenced migration patterns, resulting in a more diverse group of migrants with varying economic motivations. This geopolitical shock may have diminished the benefits typically associated with ethnic enclaves for Tunisians. Conversely, migrants from Algeria and Morocco, who might have been historically driven more by economic opportunities due to the ties with the French economy, could have chosen in the past to settle in areas where they anticipated greater economic benefits, thereby generating greater economic turnover for future migrants in their own cluster.

5.2 The Long Term perspective

Regarding second-generation immigrants, the hypothesis is that the enclave may deteriorate the economic opportunities offered. Statistically, the second stage is regressed on all the respondents in the EES having at least one of the parents which migrated to France in the past and that are actually considered in the labour force (either employed or unemployed according to the OECD definition). The result of the second stage are the following:

The results from the long-term analysis largely corroborate the expectation that ethnic enclaves may impede the economic advancement of migrants. Specifically, the data reveals that both Algerian and Moroccan migrants experience adverse effects on wages and employment when situated within ethnic enclaves. This finding aligns with the hypothesis that the networks formed within these enclaves are more insular and less conducive to upward mobility and broader integration into the labor market. In contrast, the im-

Table 6: Second-Stage Regression: Impact on (Log) Wages for Second-Generation Migrants

Variable	Algerian	Moroccan	Tunisian	European
Ethnic Enclave	-0.05* (0.03)	-0.07** (0.03)	-0.02 (0.04)	-0.01 (0.02)
Education	0.225*** (0.06)	0.230*** (0.06)	0.245*** (0.06)	0.250*** (0.06)
Parents' Education	0.155* (0.07)	0.165** (0.07)	0.175** (0.07)	0.185** (0.07)
Parents' Income	0.017** (0.02)	0.016** (0.02)	0.014* (0.02)	0.018** (0.02)
Department Emp Rate	0.028* (0.02)	0.030* (0.02)	0.033* (0.02)	0.031* (0.02)
R²	0.36	0.39	0.42	0.44

Note: Coefficients are reported with standard errors in parentheses. Significance levels are denoted by asterisks: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 7: Second-Stage Regression: Employment Rate

Variable	Algerian	Moroccan	Tunisian	European
Ethnic Enclave	-0.07* (0.04)	-0.08** (0.04)	-0.03 (0.05)	-0.04 (0.05)
Education	0.220*** (0.06)	0.230*** (0.06)	0.240*** (0.06)	0.250*** (0.06)
Parents' Education	0.150* (0.07)	0.160* (0.07)	0.170* (0.07)	0.180** (0.07)
Parents' Income	0.014** (0.02)	0.015** (0.02)	0.016* (0.02)	0.017** (0.02)
Department Emp Rate	0.025* (0.02)	0.028* (0.02)	0.030* (0.02)	0.033* (0.02)
R²	0.35	0.37	0.40	0.42

Note: Coefficients are reported with standard errors in parentheses. Significance levels are denoted by asterisks: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

pact of the department's employment rate, a broader and more inclusive market force, reveals divergent effects on migrant economic outcomes, highlighting a complex interplay between enclave-specific constraints and wider labor market dynamics. Turning to the Tunisian cohort, our analysis previously indicated that the presence of an ethnic enclave does not significantly influence the economic outcomes for this group. This observation persists in the long-term analysis, suggesting that the Tunisian enclaves might not exert any substantial impact on the economic trajectories of their members, either in the short or long term. This finding invites further investigation into the unique attributes of Tunisian enclaves that could account for this phenomenon, as it unveils an intriguing aspect of enclave dynamics that merits deeper examination to fully understand its economic implications. European enclaves present a different narrative. While they appear to offer

economic benefits to migrants in the short term, these advantages do not persist over the long term, as evidenced by their lack of statistical significance in the latter analysis. This divergence highlights the distinctive characteristics of European enclaves, reflecting the diversity within the European migrant group itself, which comprises a heterogeneous mix of individuals with varied cultural, linguistic, and socioeconomic backgrounds. Such results suggest that the benefits provided by European enclaves are likely transient and influenced by the unique and diverse nature of their constituent populations. This variation underscores the need for a more nuanced exploration of ethnic enclaves to unravel the underlying factors driving these distinct outcomes. Of course, all those discussions are based on the economic outcomes chosen as dependent variables. Using the employment rate and the wage of second-generation migrants may tell more a story about the environment itself of the ethnic enclave rather than the effect it has on further generations.

6 Limitations

When evaluating the methodology, it is crucial to recognize that the Shift-Share instrument relies on a key assumption: local ethnic shares do not influence national shares, thereby allowing for a clean estimation of the instrument. While this assumption is essential for applying the methodology, it may not always hold perfectly in practice, potentially impacting the validity of the instrument and, by extension, the robustness of the findings. According to the assumptions established by Jaeger et al., the validity of Point 2 has been confirmed. However, as previously highlighted, proving Point 1 remains challenging.

Regarding the elaboration of the results, the study employs a repeated cross-sectional dataset derived from the yearly survey, which, while offering a broad snapshot of the population, inherently limits the depth of insights that could have been gained from a longitudinal approach. The inability to track the same individuals over time means that the study can only generalize about the average experience of ethnic groups, rather than capturing the nuanced trajectories of individuals as they navigate the economic landscape. This is a significant limitation, as understanding the progression of an individual's economic integration over time would provide a much richer and more accurate picture of the impact of ethnic enclaves. However, due to the privacy restrictions of the European Employment Survey (EES), such longitudinal tracking was not feasible. This constraint forced the study to treat each individual as a singular data point within a specific ethnic category, which diminishes the analytical power and the ability to draw more precise conclusions. Moreover, the relatively small number of entries available for each ethnic group

further complicates the analysis. To mitigate this, the study combined multiple years of survey data, thereby increasing the number of observations and enhancing the statistical significance of the results. Yet, this method introduces its own set of challenges, particularly the risk of double-counting individuals who may have participated in multiple years of the survey without being identifiable across datasets. This potential duplication could introduce bias and obscure the true effects being studied.

The limitations of using a cross-sectional approach become even more pronounced when attempting to understand the duration and persistence of the economic effects of ethnic enclaves. The study is unable to capture the temporal dynamics: how long the impact of an enclave lasts for first-generation migrants or how it evolves as migrants move through different stages of integration. This inability to observe the long-term effects over time restricts the study's capacity to draw conclusions about the enduring influence of ethnic enclaves on economic outcomes, leaving an important aspect of the migration experience unexplored.

Another significant limitation of this study lies in the level of geographic granularity selected for the analysis. The study operates at the administrative department level, which, although useful for certain types of regional analysis, is not the most precise spatial unit available. The survey data also provided information at the commune level, which would have allowed for a more detailed and localized examination of ethnic enclaves. However, the unavailability of ethnic group shares at the commune level constrained the study's ability to analyze the effects with finer spatial resolution. This limitation could result in a miscalculation of the ethnic enclave effect, as enclaves are often more accurately associated with neighborhoods rather than larger administrative units like departments. The inability to precisely capture the localized impact of enclaves may obscure the true nature of their influence on economic outcomes.

Furthermore, the study's focus on wage levels and employment rates as the primary economic outcomes, while important, is inherently restrictive. These two metrics, though crucial, do not encompass the full spectrum of economic integration and upward mobility, particularly for second-generation immigrants. By limiting the analysis to individuals who are part of the labor force, the study may overlook other critical dimensions of economic life, such as educational attainment, entrepreneurial activity, or social mobility beyond mere employment and income. For second-generation immigrants, who often face distinct challenges and opportunities compared to the first generation, these additional factors are essential to understanding their economic progression. This narrow focus also restricts

the study's ability to explore the full picture of intergenerational mobility, an area that warrants further investigation. The evolution of income, educational achievements relative to parental background, and other indicators of socio-economic advancement are crucial to understanding the broader economic landscape. As suggested in the long-term analysis, wage and employment data alone may not adequately capture the entire story of second-generation migrants' economic experiences, particularly in terms of their integration and upward mobility within the host society.

Lastly, the study may oversimplify the complex interactions within ethnic networks, an issue highlighted by the varying effects observed across different ethnic groups. The historical and socio-cultural factors that influence an ethnic network's capacity to support economic activity are critical and may vary significantly between groups. The distinct case of the Tunisian enclave, for example, hints at deeper, underlying dynamics that are not fully captured in this study. These differences suggest that ethnic enclaves do not operate uniformly across all contexts; rather, their impact is shaped by a multitude of factors, including historical context, the nature of the ethnic community, and the specific economic and social conditions of the enclave. Understanding these nuances requires a more detailed and focused inquiry, beyond the scope of the current study, to fully grasp the reasons behind the varying effects of ethnic enclaves on economic outcomes.

7 Conclusion

Ethnic Enclaves are both a natural arrival point of immigration fluxes and a tool for ethnic groups to offer cooperation in the first stages of their settlement. Exploiting the wide advantages in terms of integration in the labour market and exploitation of networks and weak ties in the job placement phase, this study finds substantial evidence that there is an actual economic advantage in clustering. By exploiting the wide variety of literature present on the topic, this study used a Shift-Share approach to extrapolate the relevance of the ethnic enclaves on the main economic outcomes of first and second generation migrants. The results displayed that the ethnic cluster is particularly relevant to economic groups that displaced themselves for economic reasons rather than for geopolitical matters. In fact, the possibility to exploit the advantages of grouping is increased as the ethnic group is more economically integrated.

On the other hand, when turning on the long standing effect of the enclave, its presence hinders the economic outcomes of second generation migrants, which are harmed by the narrowing of the opportunities that they could grasp if put into a more diverse and wide economic tissue.

8 References and Appendix

References

- [1] John R. Harris and Michael P. Todaro. Migration, Unemployment and Development: A Two-Sector Analysis. *The American Economic Review*, 60(1):126–142, 1970. Publisher: American Economic Association.
- [2] George J. Borjas, Stephen G. Bronars, and Stephen J. Trejo. Self-selection and internal migration in the United States. *Journal of Urban Economics*, 32(2):159–185, September 1992.
- [3] Larry Sjaastad. The costs and returns of human migration. *National Bureau of Economic Research, Inc*, pages 80–93, 1962.
- [4] Douglas S. Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor. Theories of International Migration: A Review and Appraisal. *Population and Development Review*, 19(3):431–466, 1993. Publisher: [Population Council, Wiley].
- [5] Stephen Castles. Migration and community formation under conditions of globalization. *The International Migration Review*, 36(4):1143–1168, 2002.
- [6] Hein De Haas. Migration and development: A theoretical perspective. *International Migration Review*, 44(1):227–264, 2010.
- [7] Md Imran Khan, Majed Alharthi, Ansarul Haque, and Asheref Illiyan. Statistical analysis of push and pull factors of migration: A case study of india. *Journal of King Saud University - Science*, 35(8):102859, 2023.
- [8] Jeffrey Grogger and Gordon Hanson. Income maximization and the selection and sorting of international migrants. *Journal of Development Economics*, 95(1):42–57, 2011.
- [9] Oded Stark and J. Edward Taylor. Relative Deprivation and Migration: Theory, Evidence, and Policy Implications. *EconStor Open Access Articles and Book Chapters*, pages 121–144, 1991. Publisher: ZBW - Leibniz Information Centre for Economics.
- [10] Ann P Bartel. Where do the new u.s. immigrants live? *Journal of Labor Economics*, 7(4):371–91, 1989.

- [11] Tianran Dai and Nathan Schiff. The structure and growth of ethnic neighborhoods. *Journal of Urban Economics*, 137:103570, 2023.
- [12] David Card and Ethan G Lewis. The diffusion of mexican immigrants during the 1990s: Explanations and impacts. Working Paper 11552, National Bureau of Economic Research, August 2005.
- [13] Mark S. Granovetter. The strength of weak ties. *American Journal of Sociology*, 78(6):1360–1380, 1973.
- [14] Mark Granovetter. The strength of weak ties: A network theory revisited. *Sociological Theory*, 1:201–233, 1983.
- [15] Linna Martén, Jens Hainmueller, and Dominik Hangartner. Ethnic networks can foster the economic integration of refugees. *Proceedings of the National Academy of Sciences*, 116(33):16280–16285, 2019.
- [16] David M. Cutler and Edward L. Glaeser. Are ghettos good or bad? *The Quarterly Journal of Economics*, 112(3):827–872, 1997.
- [17] Alejandro Portes and Min Zhou. The new second generation: Segmented assimilation and its variants. *Annals of The American Academy of Political and Social Science - ANN AMER ACAD POLIT SOC SCI*, 530, 01 2010.
- [18] Chiswick Barry R. and Paul W. Miller. Do enclaves matter in immigrant adjustment? *City & Community*, 4(1):5–35, 2005.
- [19] Xi Huang and Cathy Liu. Immigrant entrepreneurship and economic development: A local policy perspective. *Journal of the American Planning Association*, 85:1–21, 08 2019.
- [20] E. Dupuy and L. Rochechouart. Quartiers prioritaires de la politique de la ville. *Agence nationale de la cohésion des territoires*, 2022.
- [21] Zeynep Onur. French banlieues and the consequences of spatial segregation. *Howard University Quarterly Report*, 2024.
- [22] Jerzy Neyman. On the two different aspects of the representative method: the method of stratified sampling and the method of purposive selection. In *Breakthroughs in statistics: Methodology and distribution*, pages 123–150. Springer, 1992.

- [23] Paul Goldsmith-Pinkham, Isaac Sorkin, and Henry Swift. Bartik Instruments: What, When, Why, and How. *American Economic Review*, 2020.
- [24] Joakim Jaeger, David A.; Ruist and Jan Stuhler. Shift-share instruments and the impact of immigration. *NATIONAL BUREAU OF ECONOMIC RESEARCH*, 2018.
- [25] Joseph G. Altonji and David Card. The effects of immigration on the labor market outcomes of less-skilled natives. *National Bureau of Economic Research*, pages 201–234, 1991.