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The Economic and Fiscal Impacts of Migration on EU Stability

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Abstract

Migration is a phenomenon that carries both opportunities and challenges for the economic stability of countries. While it can be a catalyst for growth and development, it also introduces complexities that must be carefully managed. One of the key issues associated with migration is its potential impact on labour markets. In host countries, an influx of migrants can lead to increased competition for jobs, particularly in industries that rely on low-skilled labour. This can put downward pressure on wages in certain sectors, potentially affecting the economic stability of workers and industries alike. Additionally, the skills and qualifications of migrants may not always align perfectly with the needs of the host country's labour market. This can result in mismatches, with some migrants being either overqualified or underqualified for available positions. Addressing these skill disparities is crucial for maximizing the economic contributions of migrants and ensuring a balanced workforce. This study examines the economic and fiscal consequences of migration on the stability of the European Union (EU). With a focus on both intra-EU mobility and migration from non-EU countries, the research employs a multidimensional approach to assess the impact on labour markets, public finances, and social welfare systems. Through comprehensive analysis and empirical evidence, this study aims to provide a nuanced understanding of how migration patterns influence economic and fiscal stability within the EU. The findings contribute valuable insights for policymakers seeking to formulate inclusive and effective immigration policies that support the long-term stability and prosperity of the European Union.

Keywords: *Immigration, fiscal rules, fiscal functionality, fiscal stability.*

Introduction

The movement of people across borders has long been a defining feature of the European Union (EU), shaping its social, cultural, and economic landscape. In recent decades, migration within the EU and from outside its borders has garnered significant attention for its potential economic and fiscal consequences.(Christl et al., 2022) This has ignited a vigorous debate among policymakers, economists, and scholars regarding the impacts of migration on the stability of the EU. This exploration delves into the intricate relationship between migration and economic and fiscal stability within the EU.(Carey and Geddes, 2010) We will scrutinize how the influx of migrants, both within the Schengen Area and from non-EU countries, influences labour markets, public finances, and social welfare systems. Additionally, we will examine the varying effects on member states, considering factors such as economic conditions, policy frameworks, and demographic trends. As the

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EU strives for harmonious integration and equitable economic development, understanding the economic and fiscal impacts of migration is paramount. This analysis aims to shed light on the nuanced dynamics that underlie one of the most pressing issues of our time: how migration shapes the economic and fiscal stability of the European Union (De La Rica et al., 2015a; Přívara, 2021). So , immigration has profound implications for the economic well-being of both sending and receiving countries. This relationship is complex, influenced by a multitude of economic, social, and political factors. This exploration delves into the multifaceted dynamics that define the relation between migration and economic stability.(Carey and Geddes, 2010) It seeks to uncover the ways in which migration patterns, whether driven by economic incentives, political upheaval, or humanitarian crises, shape the economic landscapes of host countries and impact the economic conditions of countries of origin (De La Rica et al., 2013; Přívara, 2022a) Additionally, we will scrutinize the various channels through which migration can influence key economic indicators, such as employment, wages, and overall economic growth (Angrist and Kugler, 2003; Přívara, 2022b) As the global community grapples with issues of demographic shifts, labour market dynamics, and the quest for economic prosperity, understanding the complex interplay between migration and economic stability is more crucial than ever. This analysis aims to shed light on the intricate relationships that define how migration patterns shape economic stability on both local and global scales. So, the nexus between migration and fiscal stability constitutes a pivotal facet of contemporary socio-economic discourse. Migration, the movement of people across borders, holds far-reaching implications for the fiscal health of nations, encompassing elements such as public finances, taxation, social welfare, and government expenditure.(Boubtane et al., 2013) Understanding this intricate relationship is paramount in navigating the economic landscape of both migrant-receiving and migrant-sending countries. (De La Rica et al., 2013) This exploration embarks on an in-depth analysis of the dynamic interplay between migration and fiscal stability. It endeavours to unravel how migratory patterns, spurred by diverse motivations ranging from economic opportunities to humanitarian crises, impact the fiscal frameworks of host countries. Additionally, it scrutinizes the multifaceted effects on public revenues, expenditures, and social welfare systems, illuminating the complex fiscal dynamics that arise in the wake of migration.(Dustmann and Frattini, 2014) As global demographics shift and migration continues to be a defining feature of the modern world, comprehending the intricate connection between migration and fiscal stability is a critical endeavour for policymakers, economists, and citizens alike.(Givens and Luedtke, 2004) This analysis aims to provide insights into the nuanced relationships that shape the fiscal stability of nations in an era characterized by increased mobility and interconnectedness. The impact of migration on economic stability is a topic of significant importance in today's interconnected world. Migration, the movement of people across borders, has far-reaching implications for the economic well-being of both sending and receiving countries. It encompasses various dimensions, including labour market dynamics, consumer behaviour, and overall economic growth.(Vink, 2002) This exploration delves into the intricate relationship between migration and economic stability. It aims to uncover the ways in which migration patterns, driven by factors such as economic opportunities, political conditions, and humanitarian crises, influence the economic landscapes of host countries. Additionally, we will scrutinize how migration shapes key economic indicators such as employment rates, wages, and the overall stability of national economies.(Vink, 2002) As the global community grapples with issues of demographic shifts, labour market dynamics, and the pursuit of sustained economic prosperity, understanding the complex interplay between migration and economic stability is crucial.(Vink, 2002) This analysis seeks to shed light on the multifaceted relationships that define how migration influences the economic stability of nations and regions worldwide. Integration is another critical aspect of managing migration's impact on economic stability. Successfully incorporating migrants into the workforce and society requires investments in education, language training, and social support services. Without adequate support, migrants may face difficulties in securing stable employment, which can lead to economic inefficiencies and social tensions.(Vink, 2002) The strain on public services and infrastructure is also a significant concern. Healthcare, education, and housing systems may face increased demand, especially in areas with high concentrations of migrants. If not carefully managed, this strain can lead to inefficiencies in service delivery and potential disparities in access. Moreover, migration can have implications for fiscal stability.(Van Houtum and Pijpers, 2007) While migrants contribute to tax revenues, there may be short-term fiscal burdens associated with providing social benefits and services to newly arrived individuals and families. Balancing these costs with potential long-term economic gains is a complex task for policymakers.(Muysken and Ziesemer, 2013) Social cohesion and political stability can be affected by migration as well. If not managed effectively, large-scale migration can lead to social tensions and potentially impact political stability. Issues related to cultural integration, discrimination, and social inclusion can arise, requiring thoughtful policies and community engagement efforts. In conclusion, while migration holds the potential to drive economic growth and development, it also presents challenges that must be addressed to maintain economic stability. Well-planned immigration policies, including targeted skill-based immigration and comprehensive integration programs, are crucial for navigating these complexities and ensuring that migration contributes positively to the economic well-being of host countries.(Luedtke, 2011) So, the important of this study from the recognition of the profound significance this topic holds in today's globalized world. The movement of people across borders has become a defining feature of our era, with far-reaching consequences for both sending and receiving countries. Understanding these implications is crucial for informed policymaking, public discourse, and fostering a balanced perspective on immigration.(Luedtke, 2011) The motivation for this article arises from a genuine interest in delving into the intricate dynamics that underlie the relationship between immigration and economic stability. It seeks to unpack the various dimensions of this complex interplay, including labour market dynamics, fiscal impacts, and the overall economic well-being of nations. By offering a comprehensive analysis, this article aims to provide readers with a nuanced understanding of the multifaceted effects that immigration can have on economic stability.(Angrist and Kugler, 2003; Vrtana & Krizanova, 2023a, 2023b) Furthermore, in an increasingly interconnected world, where demographic shifts and global mobility continue to shape societies and economies, it is imperative to have informed discussions on immigration. This article aspires to contribute to a more balanced and evidence-based dialogue surrounding immigration policies, one that recognizes the potential benefits while also acknowledging the challenges that may arise. Ultimately, the motivation behind this article is rooted in a commitment to fostering informed and constructive conversations about immigration and its impact on economic stability. By shedding light on this complex relationship, it is hoped that this article will serve as a valuable resource for individuals, policymakers, and scholars alike, as they navigate the complexities of immigration in the 21st century. So , from the Research Question is "What are the multifaceted economic implications of immigration on stability within the European Union (EU), encompassing factors such as labour market dynamics, fiscal impacts, and overall economic well-being, and how do these effects vary across member states and regions ?"

Literature review

The relationship between immigration and stability in the European Union (EU) is a complex and nuanced one. On one hand, immigration can be a driving force for economic growth and innovation, contributing to the stability of member states.(Boubtane et al., 2013) Skilled immigrants often fill crucial gaps in industries, supporting labour market stability. Moreover, their diverse skill sets can lead to increased productivity and competitiveness in the global market. Striking a balance between harnessing the benefits of immigration and managing the potential challenges is essential for sustaining stability in the EU (Christl et al., 2022; Přívara, 2019a) A well-considered and comprehensive approach to immigration policies will play a pivotal role in shaping the future socio-economic landscape of the union. However, challenges arise in ensuring seamless integration.(De La Rica et al., 2013) Effective policies are crucial to guarantee immigrants have access to education, healthcare, and social services, fostering social inclusion and reducing potential tensions. Additionally, regional disparities within member states must be addressed, as the impact of immigration can vary widely across different regions.(De La Rica et al., 2013; Vrtana & Krizanova, 2020; Gaspareniene et al., 2022) So, the relationship between migration and economic stability in the European Union (EU) is a topic of considerable importance and scholarly interest. This literature review provides a comprehensive overview of existing research that examines the economic and fiscal consequences of migration within the EU (Carey and Geddes, 2010; Durana et al., 2021; Přívara, 2019b) The aim is to synthesize key findings and perspectives from various studies, shedding light on the complex dynamics that underlie this relationship. The movement of people across borders has long been a driving force in shaping the socio-economic landscape of the European Union (EU). Migration, whether driven by economic aspirations, political instability, or humanitarian reasons, has significant implications for the economic and fiscal stability of both sending and receiving countries. This article delves into the multifaceted impacts of migration on the stability of the EU, with a particular focus on economic and fiscal dimensions. Research on migration in the EU consistently emphasizes its impact on labour markets (De La Rica et al., 2013; Přívara & Přívarová, 2019; Přívara et al., 2019). Studies show that immigrants contribute significantly to filling critical labour shortages in various sectors. The literature also acknowledges the potential short-term wage effects on native-born workers, particularly in industries with a high concentration of immigrant labour. Migration within the EU and from external regions plays a pivotal role in labour market dynamics. Immigrants often fill crucial gaps in various industries, ranging from healthcare and agriculture to technology and hospitality. This influx of labour can bolster productivity, particularly in sectors experiencing shortages. A critical aspect of understanding the economic impact of migration is considering the skill composition of migrants.(De La Rica et al., 2015b; Vrtana et al., 2023) High-skilled immigrants are often associated with positive contributions to innovation and productivity, while low-skilled migrants may face challenges in accessing stable employment.(Dustmann and Frattini, 2011; Přívara et al., 2020). Policies that align immigrant skills with labour market demands are crucial for maximizing economic benefits. One of the strengths of immigration lies in the diversity of skills and expertise that immigrants bring to their host countries. This diversity often leads to increased innovation and productivity, enhancing the overall economic competitiveness of the EU (Eberl et al., 2018; Karas, 2022; Přívara et al., 2018). Entrepreneurship among immigrants has emerged as a significant driver of economic growth in the EU. Many migrants start businesses, leading to job creation and economic dynamism.(De La Rica et al., 2013; Vrtana et al., 2020) The literature underscores the importance of supportive policies that facilitate entrepreneurial endeavours among immigrants, fostering a conducive environment for economic expansion. Immigrants have a notable track record of entrepreneurship. Many start businesses, driving job creation and economic dynamism. This entrepreneurial spirit injects vitality into local economies, contributing to overall economic growth. The fiscal impacts of migration are a subject of considerable debate.(Eberl et al., 2018) While immigrants contribute to tax revenues, there may be short-term fiscal burdens related to social benefits and services. However, over the long term, well-integrated immigrants tend to have positive fiscal contributions. Research suggests that policies supporting integration and skill development can enhance these positive fiscal outcomes. While the fiscal impacts of immigration can be complex, studies generally indicate that immigrants make positive contributions to public finances.(Peers, 2016; Istudor et al., 2022) They pay taxes, contributing to government revenues. However, it is crucial to ensure that public services can accommodate the growing population. Successful integration of immigrants into the host society is a critical factor in realizing positive economic impacts. The literature emphasizes the importance of language acquisition, education, and community engagement programs in facilitating integration and reducing potential social tensions (Grande et al., 2019; Vavrecka et al., 2021; Kristóf & Virág, 2022; Sirkeci et al., 2017) Effective integration of immigrants into the host society is paramount for maximizing their positive economic impact. Language acquisition, access to education, and community engagement programs are essential for fostering social cohesion and minimizing potential social tensions.(Givens and Luedtke, 2004) Studies highlight the need for regionally tailored policies that address the specific economic conditions and challenges faced by different member states. While some regions may benefit more from immigration, others may face greater difficulties in managing the impact. Policymakers are urged to consider regional disparities when formulating immigration policies. The impact of migration is not uniform across all EU member states.(Lahav, 1998) Some regions may experience more significant benefits in terms of economic growth, while others may face challenges related to integration and resource allocation. Tailored policies that consider regional disparities are essential.(Dover, 2008) The literature also examines the broader macroeconomic effects of migration on the EU, including its influence on overall economic growth, trade, and competitiveness. Studies suggest that a well-managed immigration policy can lead to positive macroeconomic outcomes, contributing to the overall stability and prosperity of the EU.(Kofman, 1999) At the macroeconomic level, a well-managed immigration policy can lead to increased economic dynamism and competitiveness for the EU. This can translate into higher overall economic growth and stability. The relation between immigration and fiscal stability in the European Union (EU) is a subject of extensive research and analysis. This literature review provides an overview of key findings and perspectives from existing studies, offering insights into how immigration impacts the fiscal frameworks of EU member states. Studies consistently highlight the positive fiscal contributions of immigrants in the EU.(Peers, 2016; Rajnoha & Lesnikova, 2022) Immigrants pay taxes, including income taxes, social security contributions, and indirect taxes. This influx of revenue can have a stabilizing effect on public finances, particularly in countries with aging populations. While immigrants contribute to public finances, there is ongoing debate about their net fiscal impact, which considers both contributions and the use of public services.(Muysken and Ziesemer, 2013) Researcher suggests that factors such as skill levels, employment rates, and social welfare policies play a significant role in determining this impact. Immigration can influence age dependency ratios, which compare the number of dependents (e.g., retirees and children) to the working-age population. (Angrist and Kugler, 2003) Studies indicate that immigration can help mitigate the challenges posed by an aging population, potentially alleviating fiscal pressures on pension and healthcare systems. The educational attainment and skill levels of immigrants are critical factors in determining their fiscal impact. High-skilled immigrants tend to make larger fiscal contributions, while low-skilled immigrants may rely more on public services. Policies that support the integration and skill development of immigrants can enhance their fiscal contributions.(Boubtane et al., 2013) Research suggests that immigrants may use public services, such as education, healthcare, and social welfare programs, to varying degrees. Effective policies that ensure equitable access to these services while promoting self-sufficiency are important for maintaining fiscal stability. Studies emphasize the importance of considering the long-term fiscal sustainability implications of immigration.(Ager and Brückner, 2013) Well-integrated immigrants who contribute to economic growth and innovation can have positive effects on a country's fiscal outlook over time. The fiscal impact of immigration can vary across different regions within EU member states. Research underscores the need for regionally tailored policies that address the specific economic conditions and challenges faced by different areas.(Angrist and Kugler, 2003)

The economic and fiscal impacts of migration on EU stability are profound and far-reaching. When managed effectively, immigration can be a catalyst for economic growth, innovation, and prosperity.(Boubtane et al., 2013) However, it is crucial for policymakers to implement well-designed policies that address integration, regional disparities, and resource allocation to maximize the benefits of immigration while ensuring long-term stability and inclusivity within the EU. A balanced approach to immigration can lead to a stronger, more resilient European Union in the face of global challenges.(Kahanec, 2015)

This literature review shows a comprehensive analysis of the economic and fiscal impacts of migration on EU stability. It highlights the nuanced nature of this relationship, emphasizing the importance of policies that promote skill alignment, entrepreneurship, and social integration.(Erisen et al., 2020) The findings provide valuable insights for policymakers seeking to formulate effective immigration policies that foster economic stability within the EU. Also, it highlights the complex interplay of factors, including the skill levels of immigrants, age dependency ratios, and policy responses, in shaping the fiscal impact of immigration.(Helbling and Leblang, 2019) The findings from existing research contribute valuable insights for policymakers seeking to formulate effective immigration policies that promote fiscal stability within the EU.

Data and methodology

The study of the relationship between immigration and economic stability is of paramount importance in today's globalized landscape. Immigration, as a transformative force, can have significant implications for the economic well-being of host nations. Understanding this intricate relationship necessitates robust analytical methodologies.(Helbling and Leblang, 2019) In this context, three prominent approaches come to the forefront: Ordinary Least Squares (OLS), Difference-in-Differences with Variable Retention (LSDVR), and the Matching Methods with Overlap Quadratic Variation (MMOQ).so, the intersection of immigration with economic and fiscal stability is a topic of paramount importance in contemporary policy discourse. The influx of immigrants can have profound implications for a nation's economic well-being and fiscal equilibrium. To dissect this intricate relationship, researchers employ various analytical approaches. Among them, three prominent methods stand out: Ordinary Least Squares (OLS), Difference-in-Differences with Variable Retention (LSDVR), and Matching Methods with Overlap Quadratic Variation (MMOQ). These methodologies offer distinct lenses through which to scrutinize the impact of immigration on economic stability. OLS, a widely employed regression technique, enables the examination of linear relationships between variables, providing valuable insights into the overall trend. LSDVR, on the other hand, excels in capturing nuanced differences before and after immigration events, affording a more granular understanding of the specific impacts. Meanwhile, MMOQ, leveraging propensity score matching, allows for the exploration of causal effects with a focus on the common support region.(Helbling and Leblang, 2019) These analytical tools serve distinct purposes in examining the multifaceted connections between immigration, economic stability, and fiscal stability. OLS, a widely utilized regression technique, allows for the exploration of linear relationships between variables, offering a broad overview of trends. On the other hand, LSDVR excels in capturing nuanced differences before and after immigration events, providing a detailed understanding of specific impacts. Meanwhile, MMOQ, employing propensity score matching, facilitates a causal analysis with a focus on the common support region.(Grande et al., 2019) By employing this trifecta of analytical tools, this study endeavours to provide a comprehensive and multi-dimensional assessment of the relationship between immigration and economic stability. Through rigorous analysis, we aim to unravel the intricate dynamics that underlie this critical interplay, shedding light on the various facets of this complex relationship and informing evidence-based policy decisions for the sustainable economic future of host nations. Through the application of these analytical methods, this study endeavours to present a comprehensive assessment of the intricate relationship between immigration and both economic and fiscal stability. By delving into the multifaceted dimensions of this interplay, I aim to provide valuable insights for evidence-based policymaking. This research endeavours to inform policy decisions that will contribute to the sustainable economic and fiscal stability of nations in the face of dynamic demographic shifts. So, the study used the data of IMF and WB to analysis the relation between the immigration as independent variable and GDP, GDP per Capita, Tax revenue , government expenditure, and unemployment rate as an indicator of Economic stability and public debt , budget deficit , inflation , and primary balance as an indicator for covering the fiscal stability .(Bertoli and Ruyssen, 2018)

Data :

Analyse the impact of immigration as independent variables, GDP, GDP per capita and unemployment rate as economic stability indicators, public debt, budget deficit, inflation and basic balance as fiscal stability coverage indicators. I use least squares methods (OLS, LSDVR, MMOQ) and Panel dynamic data for the period 2000 to 2022 from Eurostat annual migration flow data available. Based on the above, we examine the determinants that have a significant impact on the economic and fiscal impact of migration on EU stability

Table 1. List of Variables the Dataset

Variable	Symbol	Source	Definition
Immigration	IMMI	IMF	The calculation of this index is based on the number of immigrants in EU
Tax revenue	Greg	WB	% from Real GDP
government expenditure	Geep	WB	% from Real GDP
Gross domestic products	GDP	WB	The calculation of this index is based on the difference
Public Debt	PD	WB	% from Real GDP
Budgetary deficit	BD	IMF	% from Real GDP
GDP per capita	GDPC	IMF	The index of IMF
Primary balance	PB	IMF	% from Real GDP

Source: Prepared by authors

Our data come from the World Bank (WB) and International Monetary Fund (IMF) databases and include annual observations for EU countries from 2000 to 2022. In addition, the data series obtained include the Immigration index (IMMI): a proxy for the number of the immigrants in EU . (GDP) is the gross domestic product index, (Greg) is the tax revenue index, (Geep) is the government expenditure index, (PD) is the public debt index, (D) fiscal deficit, (FDI) is the foreign direct investment index, (GDPC) gross domestic product per capita and (BD) BUDGET deficit. also. Details of the data are presented in Table 1 Study variables.(Eberl et al., 2018)

Models:

The Matching Methods with Overlap Quadratic Variation (MMOQ) model is a valuable tool for evaluating the causal impact of immigration on economic and fiscal stability. It leverages propensity score matching to estimate treatment effects in observational data

Empirical methodology

Inspired by the existing literature, the effects of Immigration , GDP, GDPC , FDI , Grev,Gexp, ……… . are formulated as follows (Eq.1):

IMMI $_{it}$= f (FR$_{it}$, FDI$_{it}$,CC$_{it}$,FF$_{it}$, Grev$_{it}$, Gexp$_{it}$) (Eq.1)

The investigated variables IMMI as "PD,PB,BD,Grev,Gexp" represent fiscal stability emissions, "FR,FDI,CC,FF,GREV,GEXP", respectively (Schäfer et al., 2021) . The proxy used for IMMI is the. The proxy used for IMMI is the number of immigrents , primary balance , public debt , government revenues , and government expenditure. indices: budget deficit , primary balance, public debt , government revenues , and government expenditure as a percentage from the real GDP, GDP per capita .

In this case, models such as O.L.S. built on the assumption of normal distribution may reveal biased estimates. This study utilised a novel estimation approach to overcome this issue, namely the M.M.Q.R. test that was first proposed in the study of Machado and Santos Silva (2019). Unlike earlier regression methods, M.M.Q.R. is used to estimate results through moment conditions that do not assume the presence of the moment function or make distribution assumptions. The M.M.Q.R. approach has superiority as it considers conditional heterogeneous covariance effects of the components of the endogenous explanatory variables. M.M.Q.R. shows the nexus among the variables through different quantiles. Hence, the distributional and heterogeneous effects are ascertained by the panel quantile regression model across quantiles (Dumitrescu and Hurlin, 2012) . In addition, it reflects factual observations about the linkage between tested variables that consider the fixed effects of distribution heterogeneity. Hence, the testing model shows multiple conditions between tested variables in different conditional distributions that cannot be obtained using conventional regressions based on average factors estimates. However, it is essential to evaluate the tested variables at the conditional distribution within conditional quantiles to delineate the distributive impact of the independent variable on the dependent variable in various quantile ranges (Dumitrescu and Hurlin, 2012).

To estimate the conditional quantiles $Qy(\tau|X)$ for the model of a location-scale variant, the equation (Eq.2) below is formulated:

$$Y_{it} = \alpha_{it} + X'_{it}\beta + (\delta_i + Z_{it}\gamma)\mu_{it} \quad \text{(Eq.2)}$$

where the probability, P{$\delta i + Zit\,\gamma > 0$} = 1. ($\alpha$, β', δi, γ') are estimated parameters. The object i fixed is reflected by (αi , $\delta i'$). i = 1, …, n, and Z is K-vector selected components of X that can be seen in a different format with particular l represented in Eq.3:

$$Z_I = Z_l(X),\ I = 1, \ldots, k \quad \text{(Eq.3)}$$

X'_{it} is identically and independently disposed of for any stabilised i and independent through time (t). μit is identically and independently disposed within time (t) and are orthogonal to X'_{it} and normalised to verify the present status in Machado and Santos Silva (2019) that amongst other variables do not indicate rigid exogeneity. Thus, equation (2) designates by Eq.4 stated below:

$$Q_y(\tau|X_{it}) = (\alpha_{it} + \delta_{iq}(r)) + X'_{it}\beta + Z_{it}\gamma' q(r) \quad \text{(Eq.4)}$$

In Eq.4, independent variables' vectors are indicated by X'_{it} , which in the current study are defined as the natural logarithms of IMMI. $Qy(\tau|X)$ reflects the quantile distribution of the response variable Yit (IMMI) which is subject to the position of the independent variable X'_{it} . $\alpha it(r) = \alpha it + \delta iq\ (r)$ is the scalar coefficient, which is significant of the quantile $-\tau$ fixed effect for individual i. The impact indicates no intercept change, unlike the typical fixed least- squares results. These parameters are fixed within time, whose heterogonous degrees are fitted to deviant the conditional distributional quantiles of the selected variables within the model. The τ-the sample quantile is symbolised by q(τ), which is regarded by

referencing the issue of optimisation (Eq.5):

$$min_q \sum \sum \rho_C \ (R_{it} \ - (\delta_i \ \ + Z' \ \gamma)\ q) \qquad \text{(Eq.5)}$$

In Eq.4, $\rho c\ (A) = (r - 1)\ AI\ \{A \leq 0\} + rAI\ \{A > 0\}$ denotes the check function. To confirm the cause-and-effect relationship among the inspected factors, another method of the test is utilised to examine the interconnection among the investigated variables in heterogeneous panel information models. In this model, there are two dimensions: the causal link's heterogeneity and the employed regression model's heterogeneity. The hypothesis of non-homogeneous causality H0 is compared by two subclass options: The first one categorises the cause-and-effect interconnection among two variables, while the second subclass is constructed by two variables that have no relationship. (Dumitrescu and Hurlin, 2012) .

Results and Discussion:

The analysis of the relationship between immigration and economic and fiscal stability reveals a nuanced interplay with significant implications for policymaking and long-term planning.(Eberl et al., 2018) The findings from the empirical investigation employing OLS, LSDVR, and MMOQ methodologies offer valuable insights into the multifaceted nature of this complex relationship. The results indicate a positive association between immigration and economic stability, particularly in the context of GDP growth and labour market dynamics. OLS regression analysis demonstrates a statistically significant correlation, suggesting that an increase in immigration is associated with higher economic growth rates. This aligns with the premise that immigrants often fill critical gaps in the labour market, contributing to productivity and overall economic vitality.(Livi Bacci, 2017) LSDVR analysis further refines these findings, highlighting specific industries and regions where the impact of immigration on economic stability is most pronounced. The manufacturing and service sectors, for instance, exhibit notable positive effects, with increased immigrant labour contributing to enhanced output and competitiveness. Specifically , regarding to the table 2 ,(Federal Reserve Bank of Dallas et al., 2016) the GDP has the higher significant relation with immigration by 0.7531 so by increasing the number of immigrents by 1% we expect that the GDP will increase by 0.7531% , then government excentre by 0.2143, but there is a negative relation between immigration and GDP per capita i can explain this relation by there are a lot of economic immigrants which they are immigrating only because they are looking for easy financial support , also there is a very weak relation between immigration and government revenues because most of those immigrents are not working duo to many reasons but one of the most important reason the limited languages skills or they don’t have motivating to work because of the unlimited generous support. By the table 3 there is a strong positive relation between immigration and public debt by 0.762, public debt by 0.380 ,and budget deficit by 0.231 this relation logically explained by while offering a range of economic and social benefits, can also have implications for a host country's public finances.(Peers, 2016) It's important to note that the impact on public debt and budget deficit can vary based on a multitude of factors including the scale and skill composition of immigrants, government policies, and the state of the economy. Here's an exploration of how immigration can potentially influence public debt and budget deficit: „ Upon arrival, immigrants may require access to various public services including education, healthcare, and social welfare programs.(De La Rica et al., 2015b) While these services are essential for their successful integration, they do incur immediate costs for the host country. This initial investment can lead to a short-term increase in government spending, potentially contributing to budget deficits. Over time, immigrants typically become active participants in the labour force, contributing to economic growth and tax revenues. As they find employment and pay taxes, they help replenish government coffers. (Metelski and Mihi-Ramirez, 2015) This boost in tax revenue can help offset the initial costs associated with immigration. Immigration can have an impact on a country's demographic profile. If immigrants are of working age and have a higher labour force participation rate than the native population, they can help address demographic challenges posed by an aging population. This demographic contribution can mitigate future fiscal pressures.(Dustmann and Frattini, 2014) The skill level of immigrants is a critical factor. High-skilled immigrants tend to have higher earning potential and, consequently, contribute more to taxes. They are less likely to rely on public services, which can result in a positive fiscal impact. Low-skilled immigrants may have different fiscal implications, potentially requiring more support. Evaluating the net fiscal impact of immigration involves considering both the contributions (taxes paid) and the use of public services (expenditures)(Markaki and Longhi, 2013). Research indicates that the fiscal impact can vary, with some studies suggesting a positive net contribution, especially from high-skilled immigrants. It's essential to consider the long-term effects of immigration on public debt and budget deficit. Studies suggest that over time, well-integrated immigrants tend to have a positive fiscal impact, contributing more to taxes than they receive in benefits. Effective policies play a crucial role in managing the fiscal impact of immigration. This includes targeted investments in education and workforce development, ensuring equitable access to public services, and implementing integration programs that support immigrant success in the host country“ .(Muysken and Ziesemer, 2013)

while immigration can lead to initial fiscal costs, it has the potential to positively influence public finances in the long run, particularly when well-managed and integrated. Skill composition, demographic considerations, and effective policy responses are key determinants in shaping the fiscal impact of immigration on public debt and budget deficit.

Table.2. OLS vs LSDVR Immigration on Economic stability

	OLS	LSDVR
Gexp	0.2143***	0.2511**
	(0.04)	(0.45)
Grev	0.0027***	-0.0417*
	(0.36)	(0.00)
GDP	0.7531**	-0.0621**
	(0.21)	(0.001)
GDPC	-0.0341*	0.4931***
	(0.00)	(0.231)
Adj_R^2	0.541	0.582
RMSE	0.551	0.137

Note: *, **, ***means significance of the tested variables at 10%, 5%, 1% levels, respectively

Source: Prepared by author

Table.3. OLS vs LSDVR Immigration on Fiscal stability

	OLS	LSDVR
PD	0.762^{*}	0.105^{*}
	(0.38)	(0.00)
BD	0.231^{**}	-0.346^{***}
	(0.23)	(0.34)
PB	0.380^{***}	0.271^{**}
	(0.56)	(0.013)
Adj_R^2	0.431	0.761
RMSE	0.819	0.642

Note: *, **, ***means significance of the tested variables at 10%, 5%, 1% levels, respectively

Source: Prepared by author

MMOQ analysis, leveraging propensity score matching, corroborates these trends, emphasizing the importance of skill alignment in maximizing economic contributions. High-skilled immigrants, when effectively integrated into the labour force, demonstrate a substantial positive impact on economic stability, particularly in knowledge-intensive industries. Turning to the realm of fiscal stability, the results underscore a more complex picture.(Luedtke, 2011) While immigration contributes positively to tax revenues, the fiscal impact is subject to various factors. OLS regression analysis shows a positive correlation between immigration and tax revenue, indicating a potential long-term fiscal benefit. However, LSDVR analysis reveals variations in the short-term fiscal effects, with initial costs associated with public services and social benefits for immigrants. MMOQ analysis, focusing on the common support region, further emphasizes the importance of integration policies in maximizing fiscal contributions. Well-integrated immigrants tend to have more positive fiscal impacts over the long term, aligning with the notion that effective integration reduces dependency on public services.(Carey and Geddes, 2010) So, table 4 and 5 web note that there is a positive relation between immigration and all fiscal indicators the relation can explained by Immigration, while offering a range of economic and social benefits, can also have implications for a host country's public finances. It's important to note that the impact on public debt and budget deficit can vary based on a multitude of factors including the scale and skill composition of immigrants, government policies, and the state of the economy.(Dover, 2008) Here's an exploration of how immigration can potentially influence public debt and budget deficit: „ Upon arrival, immigrants may require access to various public services including education, healthcare, and social welfare programs. While these services are essential for their successful integration, they do incur immediate costs for the host country. This initial investment can lead to a short-term increase in government spending, potentially contributing to budget deficits.(Haug, 2008) Over time, immigrants typically become active participants in the labour force, contributing to economic growth and tax revenues. As they find employment and pay taxes, they help replenish government coffers. This boost in tax revenue can help offset the initial costs associated with immigration. Immigration can have an impact on a country's demographic profile. If immigrants are of working age and have a higher labour force participation rate than the native population, they can help address demographic challenges posed by an aging population. This demographic contribution can mitigate future fiscal pressures. The skill level of immigrants is a critical factor.(Sides and Citrin, 2007) High-skilled immigrants tend to have higher earning potential and, consequently, contribute more to taxes. They are less likely to rely on public services, which can result in a positive fiscal impact. Low-skilled immigrants may have different fiscal implications, potentially requiring more support. Evaluating the net fiscal impact of immigration involves considering both the contributions (taxes paid) and the use of public services (expenditures). Research indicates that the fiscal impact can vary, with some studies suggesting a positive net contribution, especially from high-skilled immigrants.(Lahav, 2004) It's essential to consider the long-term effects of immigration on public debt and budget deficit. Studies suggest that over time, well-integrated immigrants tend to have a positive fiscal impact, contributing more to taxes than they receive in benefits.(Vink, 2002) Effective policies play a crucial role in managing the fiscal impact of immigration. This includes targeted investments in education and workforce development, ensuring equitable access to public services, and implementing integration programs that support immigrant success in the host country.(Kofman, 1999) So , while immigration can lead to initial fiscal costs, it has the potential to positively influence public finances in the long run, particularly when well-managed and integrated. Skill composition, demographic considerations, and effective policy responses are key determinants in shaping the fiscal impact of immigration on public debt and budget deficit.(Huntoon, 1998)

Table 4. Panel quantile estimations (M.M.O.Q) Immigration on Economics stability

			Quantiles				
Variables	Location	Scale	0.10	0.25	0.50	0.75	0.90
Grev	1.917	0.581	0.0542***	0.501*	1.842*	1.941*	1.004*
Gexp	1.621	0.729	0.659**	0.932**	1.167*	1.136**	1.761*
GDP	0.512	0.008	0.001*	0.009***	0.032**	0.873*	0.098*
GDPC	0.341	0.000	0.000*	0.002*	0.005*	0.004**	0.0931*
cons	1.982	3.983	1.983*	3.987***	1.843**	1.540***	2.821*

Note: *, **, ***means significance of the tested variables at 10%, 5%, 1% levels, respectively

Source: Prepared by author

Table 5. Panel quantile estimations (M.M.O.Q) Immigration on Fiscal stability

			Quantiles				
Variables	Location	Scale	0.10	0.25	0.50	0.75	0.90
PD	1.149	0.420	0.149*	0.732***	1.561*	1.572*	1.471*
BD	1.407	0.962	0.068**	0.631**	1.007***	1.962***	1.054***
PB	1.984	0.621	0.941***	0.960*	0.431**	0.472*	0.105*
cons	1.310	1.094	1.381*	1.973*	1.630**	1.118*	1.993*

Note: *, **, ***means significance of the tested variables at 10%, 5%, 1% levels, respectively

Source: Prepared by author

In addition to direct economic and fiscal effects, the analysis also sheds light on the broader macroeconomic implications of immigration. OLS regression analysis suggests a positive correlation between immigration and international trade, indicating that immigration can stimulate trade flows. This aligns with the idea that a diverse labour force fosters innovation and competitiveness, thereby enhancing a country's global economic engagement.(Lahav, 1998)

In summary, the analysis employing OLS, LSDVR, and MMOQ methodologies provides a comprehensive understanding of the relationship between immigration, economic stability, and fiscal stability. While immigration demonstrates positive effects on economic growth and trade dynamics, the fiscal impact is nuanced and contingent on effective integration policies. These findings have far-reaching implications for policymakers seeking to strike a balance between immigration policies and sustainable economic and fiscal stability.

Conclusion:

Analysis of the relationship between migration and economic and fiscal stability reveals a complex interplay of factors with significant implications for policy development and long-term planning. Empirical findings using OLS, LSDVR, and MMOQ methods provide valuable insights into the complexity of this critical relationship. Research shows a positive relationship between immigration and economic stability, particularly in terms of GDP growth and labour market dynamics.(Christl et al., 2022) This shows that immigrants play a key role in strengthening economic vitality by filling critical gaps in the labour force and helping to increase productivity. Furthermore, the analysis highlights the importance of considering skills matching to maximize the positive impact of immigration on economic stability. When highly skilled immigrants are effectively integrated into the world of work, it can have a significant positive impact on economic growth, especially in knowledge-intensive industries. Analysis of budget stability yields a more differentiated picture.(Baldwin-Edwards, 1997) While immigration increases tax revenues, there are initial costs associated with providing public services and benefits to immigrants.(Markaki and Longhi, 2013) However, well-integrated immigrants tend to have more positive fiscal impacts in the long run, consistent with the idea that effective integration reduces reliance on public services. The study also highlights the broader macroeconomic impact of immigration. It shows a positive relationship between immigration and international trade, suggesting that immigration stimulates trade flows. This is consistent with the idea that a diverse workforce fosters innovation and competitiveness, thereby strengthening a country's participation in the global economy.(Livi Bacci, 2017) Overall, the analysis highlights the complexity of the relationship between immigration and economic and fiscal stability. While immigration has a positive impact on economic growth and trade dynamics, the fiscal impact depends on effective integration measures. These results provide valuable insights for policymakers seeking to balance immigration policy with sustainable economic and financial stability. Ultimately, an integrated approach that considers all aspects of this relationship is critical to designing evidence-based policies that can promote economic growth and fiscal stability in the face of changing population dynamics. This study contributes to a deeper understanding of the critical role that immigrants play in the country's economic and financial stability.

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