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Migration and Fertility Patterns in the European Union: Spatial Differences in the Role of Foreign-Born Mothers in 2024

ABSTRACT

This study examines the role of foreign-born mothers in fertility patterns across the European Union through a cross-sectional comparative analysis. Using harmonized 2024 Eurostat data, the research investigates the contribution of immigrant women to live births, their impact on total fertility rates (TFR), and the relationship between these dimensions. Ratio calculations and Pearson correlation analysis were applied within a unified EU-wide comparative framework, highlighting East–West and core–periphery differences in migration–fertility patterns. The findings show that the proportion of births to foreign-born mothers increased steadily across the EU between 2013 and 2024, reaching nearly 25% by 2024. Significant spatial disparities persist: in most East-Central European countries, the share remains below 5%, while several Western and Southern European states, as well as Luxembourg, Malta, and Cyprus, display exceptionally high values. In contrast, the impact on TFR is generally moderate and heterogeneous. Nevertheless, a strong positive correlation ($r = 0.812$) was identified between the proportion of births to foreign-born mothers and their fertility effect. The study concludes that immigration primarily reshapes the composition of live births rather than substantially increasing overall fertility levels in the European Union.

Keywords: demography, European Union, fertility, immigration, total fertility rate

Research article / Received: 2 April 2026 / Revised: 26 May 2026 / Accepted: 14 June 2026

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How to cite: Pári, A., Agócs, G., Izing, M. A., & Uhljár, P. (2027). Migration and fertility patterns in the European Union: Spatial differences in the role of foreign-born mothers in 2024. *Modern Geográfia*, 22(2), 121–139. <https://doi.org/10.15170/MG.2027.22.02.06>

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INTRODUCTION

The absence of a unified demographic policy within the European Union, given that family policy and population policy remain under the competence of the member states, has resulted in substantially different, and often contradictory, strategies aimed at counterbalancing population ageing and disproportional age structures across the Union (Treaty on European Union, Article 5, 2012). Closely related to this issue is one of the most divisive questions of the present day: immigration. In contrast to family policy, however, active centralization efforts by the European Union have increasingly emerged in this field in recent years. At the same time, immigration is directly or indirectly intertwined with the other two primary demographic factors, namely mortality and fertility. The aim of the present study is therefore to examine a specific area within this broader context: the fertility patterns of women with a migration background.

Our approach is twofold. First, through quantitative correlation analysis, we provide an objective overview of the circumstances under which the presence of foreign-born mothers and potential mothers may contribute to addressing the fertility crisis, as well as the situations in which their demographic presence and fertility behaviour may further intensify it. Second, the study seeks to draw attention to the integration-related challenges potentially associated with insufficiently considered immigration policies. These issues are examined independently of ideological approaches, with the intention of providing a well-founded point of departure for European and national policymaking concerning the spatial interpretation and assessment of social differences.

In accordance with these objectives, the study formulates three research questions. First, what proportion of newborns in the individual member states is attributable to mothers with a migration background? Second, beyond the proportion of newborns, how does the presence of foreign-born mothers influence fertility in the member states? Third, how are these two phenomena—namely the proportion of newborns and the Total Fertility Rate (TFR effect)—related to one another?

LITERATURE REVIEW

The Relationship Between Migration and Fertility

According to Pál Demény (2016), Europe is simultaneously confronted with two demographic crises. The first, the “visible” crisis, concerns low fertility and population ageing, phenomena that are widely recognized and documented. The second, the “unrecognized” crisis, is linked to the transformation of the institution of the family and the weakening of childbearing norms, indicating deeper structural changes within society. Demény also emphasized that the impact of immigration on TFR varies across countries and is generally moderate, as its effects are at most temporary and limited. Restoring demographic balance therefore primarily requires strengthening social and institutional environments that support family formation and childbearing. From this perspective, demographic challenges cannot be reduced merely to population replacement strategies—such as immigration—but also require a comprehensive reconsideration of the underlying social and cultural processes.

Between 2010 and 2020, childbearing within the European Union became strongly polarized by age. While 62% of childbearing was concentrated in the 25–34 age group, the role of the extreme age groups (younger and older women) remained limited, although displaying distinct spatial patterns. In 2020, 2.2% of total births occurred among women aged 15–19, whereas only 0.4% occurred among women aged 40–49. Regional disparities increased among younger age groups but decreased among older cohorts. In addition, marked regional clusters can be identified: in East-Central Europe, the contribution of the 15–24 age group may exceed 25%, whereas in Southern and Western Europe the proportion of late childbearing (40–49 years) may reach 6–7% (Uhljár, 2025).

Migration processes affect substantial numbers of women statistically considered to be of reproductive age (15–49 years), not to mention girls under the age of 15 whose cohorts will later enter childbearing age (Wilson et al., 2013). At the same time, examining the relationship between migration and fertility is methodologically highly complex, since immigration and emigration, temporary and permanent settlement, as well as life-course-based reproductive patterns all constitute differentiating factors (Bagavos, 2019; Wilson, 2020). The timing and motivation of migration, together with the degree of adaptation to the host society, also significantly shape childbearing decisions (Ortensi, 2015; Mussino & Strozza, 2012). Consequently, the fertility effects of migration can only be captured to a limited extent by simple cross-sectional indicators (Andersson, 2004).

It is far from irrelevant how the impact of immigrants on population dynamics is interpreted. Fundamentally, a distinction must be made between the population-replacement effect and the birth-replacement effect of immigration. The latter contributes to increasing fertility rates, whereas the former contributes to replenishing excessively small cohorts (Wilson et al., 2013). Consequently, replacement migration may constitute an alternative solution to population decline. However, if fertility among the native population remains low and the size and composition of incoming populations cannot be regulated—which is itself a difficult task—serious social, economic, and cultural adaptation challenges may arise (Bouvier, 2001). Precisely for these reasons, research on immigration may be particularly important in countries characterized by low TFR values (González-Ferrer et al., 2017).

In Europe, immigration is unlikely to generate substantial increases in fertility, even if the absolute number of immigrants appears large (Frejka et al., 2008). The reason is that, according to empirical experience, the presence of foreign populations is capable of modifying national TFR values only by a few tenths in either a positive or negative direction (Sobotka, 2008). From this perspective, a high childbearing propensity among the immigrant subpopulation alone is insufficient; simultaneously, the size of the immigrant female population aged 15–49 must also be substantial relative to the total population (Volant et al., 2019). Consequently, if any of these conditions are not met, the impact on the Total Fertility Rate (TFR) in European Union member states may be negligible or even negative.

In this regard, another regularity can also be observed: the more advanced the sending country is in the process of the Second Demographic Transition, the greater the likelihood that large-scale immigration will not increase but rather reduce the aggregate fertility rate of the receiving country. In other words, the underlying mechanism lies in the fact that fertility behaviour adapted from the sending country may result in lower fertility levels if the sending society itself is in a more advanced stage of the Second Demographic Transition associated with declining fertility (Puur et al., 2017).

Nevertheless, such effects are best measured through long-term longitudinal analyses (Andersson, 2004), even though differences are also detectable in cross-sectional comparisons.

Despite the limited effect, examining immigrant fertility remains important because indirect demographic effects are not reflected in fertility rates. A good example is that the formula does not account for migrants' life-course dynamics. This becomes particularly problematic in the case of older women who had already given birth to several children in their country of origin prior to migration. If such individuals have already reached the age of fifty, their completed fertility effectively materialized before migration. Nevertheless, according to statistical classification, these individuals may still belong to the 15–49 reproductive-age cohort, which may distort the interpretation of fertility indicators in the receiving country.

In such cases, children who migrated together with their mothers do not subsequently appear in the numerator of the TFR formula as newborns. However, once reaching the age of fifteen, they may enter the 15–49 reproductive-age cohort and thus ultimately participate in the replenishment of the maternal generation, that is, in reproduction itself (Bagavos, 2019). Consequently, it is advisable to examine the entire reproductive period rather than isolated periods (Wilson, 2020), since the fertility effect of these “brought” children may be substantial (González-Ferrer et al., 2017). This also raises the question of what proportion of live births is represented by children born to foreign-born mothers, even in cases where the TFR effect itself remains limited.

At the same time, immigration also exerts other, multiply indirect effects on fertility. Under conditions in which opportunities for marriage and partner selection are restricted, the arrival of foreigners may generate positive demographic changes, while the opposite relationship may also occur. A characteristic example is Lithuania, where the absence of male guest workers employed abroad weakens family relationships, a circumstance that measurably affects the likelihood of second or third births (Sobotka, 2008).

Another case of statistical distortion concerns the culturally insensitive effects of citizenship-based classifications. A relevant example is the criteria system applied by the French statistical office (INSEE) concerning immigrant status, which includes several restrictions. One such criterion is that persons who acquire citizenship after arriving in the country are still classified as immigrants due to their place of birth (provided that neither parent was a French citizen). Another illustrative case occurs when a child of foreign-born parents is born in France. Such individuals receive French citizenship, yet this excludes the possibility of identifying them later, once they enter the maternal generation, as second-generation immigrants (Volant et al., 2019). In this respect, it can be concluded (Kincses, 2020) that focusing on country of birth rather than citizenship constitutes a more advantageous methodological solution in migration research.

Overall, no unified model can be identified that universally explains the fertility patterns of immigrant communities (Impicciatore et al., 2020). What can be stated with certainty is that socialization factors significantly influence not only attitudes toward family formation and partnerships, but also demographic outcomes. At the same time, both minority subcultures and majority societies shape the behaviour of ethnic groups, although the former tends to exert a stronger influence (Kulu & Hannemann, 2016). This is supported by research conducted in Finland, according to which fertility

patterns converge more slowly toward the characteristics of the host society when higher proportions of individuals of similar origin live in the immediate social environment of the examined couples or women (Puur et al., 2021).

Besides the socialization effect of the environment, the country of origin also represents a defining characteristic. In this regard, an important shortcoming can be identified: studies examining immigrant fertility tend to focus predominantly on migrants arriving from high-fertility countries, while women originating from low-fertility societies receive only marginal attention (Mussino et al., 2021). Additional important determinants include age at migration, the life-course trajectories of specific cohorts (Wilson, 2020), and the motivation for migration. For example, women arriving primarily for employment purposes often require a longer period to decide whether they wish to have children at all, or additional children (Mussino & Strozza, 2012). Consequently, female migration patterns play a key role in both the timing of first births and the number of children born after migration (Ortensi, 2015). At the same time, adaptation to local fertility patterns is a relatively rapid process, again suggesting that the demographic impact of immigration may be less substantial than often assumed (Andersson, 2004). One characteristic indicator of assimilation is the increasing educational attainment within immigrant groups, as this factor is capable of substantially reducing differences in fertility patterns (Pailhé, 2017).

METHODS

The methodological framework of the study is based on the tools of quantitative analysis. The empirical database was derived from Eurostat (Eurostat, 2026a, 2026b), specifically from the datasets entitled “Population on 1 January by age group, sex and country of birth” and “Live births by mother’s age and country of birth” (online database codes: migr_pop3ctb, demo_facbc).

When examining the impact of immigrant mothers, we considered whether citizenship status or country of birth should be treated as the primary classification criterion. Ultimately, country of birth was selected, as the extent of missing data was substantially lower, while citizenship status may produce misleading results. A characteristic example is Hungary, where, according to the analysis of the Hungarian Central Statistical Office (2017), 647 thousand individuals not residing in Hungary acquired Hungarian citizenship after 2011, primarily from four neighbouring countries—Romania, Serbia, Slovakia, and Ukraine—as a consequence of the simplified naturalization procedure introduced by the 2010 amendment to the Hungarian Citizenship Act. Regarding data incompleteness, the proportion of missing observations in the birth database by maternal origin amounted to 4.8% when classification was based on citizenship, compared to only 0.8% when country of birth was used.

All calculations were based on the most recent live birth data for 2024 published in 2026 (Eurostat, 2026a, 2026b). Although the analysis represents a cross-sectional comparison, the fertility effects of immigration reflect the outcomes of long-term demographic processes. Consequently, we assume that member states strongly affected by the phenomenon in 2024 had also experienced a substantial expansion of populations with migration backgrounds in previous periods, and vice versa.

Regarding the indicators, the analysis first examined the proportions of live births according to maternal background, including the contribution of native-born mothers (born in the given country), foreign-born mothers, and—through a further differentiation of the latter category—mothers born outside the European Union. The second major comparative indicator was the Total Fertility Rate (TFR), which estimates the expected number of children a woman would give birth to during her reproductive lifespan between ages 15 and 49, assuming the fertility patterns of a given year remain constant. The calculation is based on the number of children born to women belonging to the five-year age groups 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, and 45–49, as well as the mid-year female population within these same cohorts. Finally, Pearson’s correlation analysis was applied to examine the relationship between the proportion of newborns and the TFR effect, in order to identify the direction and strength of the association between these two demographic and fertility indicators within the European Union in 2024.

One of the most important methodological limitations of the present research is that the analysis is fundamentally cross-sectional in nature, as it is primarily based on the comparison of Eurostat data referring to 2024. Consequently, the study captures the relationship between immigration and fertility at a specific point in time, while remaining only partially suitable for identifying causal mechanisms or long-term demographic processes. The fertility patterns of immigrant populations constitute life-course-based and temporally dynamic phenomena that are strongly influenced by the timing of migration, the process of assimilation, and the cultural differences between sending and receiving societies. As emphasized throughout the study, the fertility effects of migration can often only be measured accurately through longer-term longitudinal or intergenerational analyses. In addition, potential distortions may arise from the fact that Eurostat is not always capable of accurately tracking the childbearing patterns of populations living abroad or characterized by temporary mobility. Furthermore, no comprehensive database is available regarding the countries of origin of fathers. Therefore, we consider it justified to interpret these methodological limitations within a separate analytical framework and to evaluate the findings with appropriate caution, particularly when drawing conclusions concerning longer-term reproductive and societal consequences.

RESULTS

The examination of the impact of immigrant mothers consists of two principal components: their proportion within the total number of newborns and their effect on the Total Fertility Rate (TFR). Accordingly, the analysis first investigates the proportion of newborns, subsequently examines fertility effects, and finally explores the relationship between these two analytical dimensions.

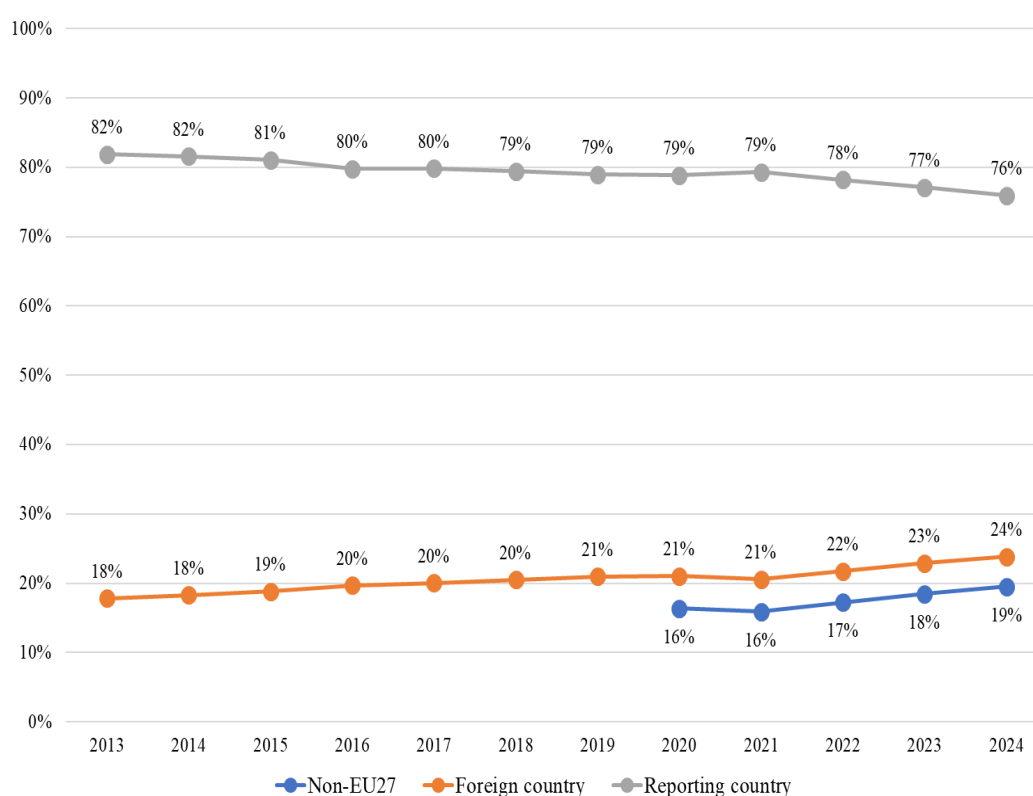
Proportion of Newborns in the EU

Regarding the proportion of children born to foreign-born mothers, the longitudinal comparison presented in Figure 1 demonstrates that, based on the available data since 2013, the phenomenon is far from recent. At the beginning of the aggregated time series covering the current 27 member states

of the European Union, children born to immigrant mothers accounted for less than one-fifth of all live births. During the examined period, this ratio displayed a continuous and nearly linear increase, reaching almost 25% by 2024. According to the statistics available since 2020 concerning mothers born outside the European Union, the proportion of second-generation children originating from non-EU countries reached 19% during the past five years. This also implies that, among the affected non-native newborn population, only every fifth child originates from a non-EU member state.

At the same time, it can be assumed that the actual number of births attributable to non-native mothers originating from within the European Union is even higher. According to Haragus (2022), Eurostat publishes rates for certain member states that differ substantially from those provided by national statistical authorities. The explanation lies in the fact that Eurostat systematically overestimates fertility rates in member states characterized by significant emigration, particularly Bulgaria, Romania, Poland, Hungary, Slovakia, and the Baltic states. The primary reason for this distortion is that Eurostat is likewise unable to accurately track where women giving birth abroad—for example, women maintaining permanent Romanian residence while delivering in another member state—officially register their children.

Figure 1. Changes in the Proportion of Newborns in the European Union—Excluding the United Kingdom—by Mother's Country of Birth, 2013–2024



Source: Eurostat 2026a

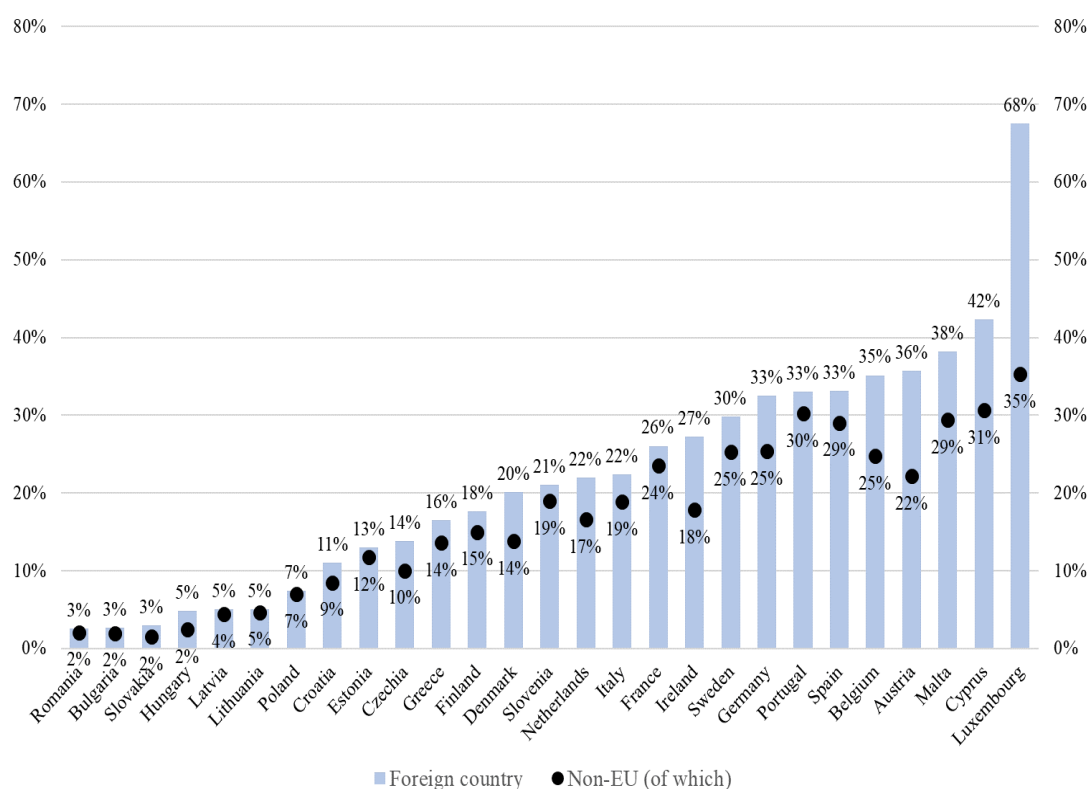
The 2024 cross-sectional comparison demonstrates the proportion of live births attributable to foreign-born and non-EU-born mothers across individual member states. In every member state, at least half of second-generation, locally born children possess non-EU family roots. The Pearson

correlation coefficient between the proportion of children born to non-EU-born mothers and the aggregated proportion of children born to foreign-born mothers was $r = 0.9417$ ($p < 0.001$), indicating an exceptionally strong positive relationship between the two phenomena. Consequently, the EU-level tendency identified previously appears to be valid for virtually all member states.

As a methodological clarification, it should be noted that Eurostat does not provide a complete and harmonized database regarding fathers' countries of birth. Therefore, it remains possible that some newborns can only partially be considered as having a migration background due to paternal origin. Nevertheless, despite these potential statistical distortions, it is clearly observable that immigration exerts a significant impact on the examined fertility dimension, irrespective of whether one refers specifically to mothers born outside the European Union or more broadly to foreign-born mothers.

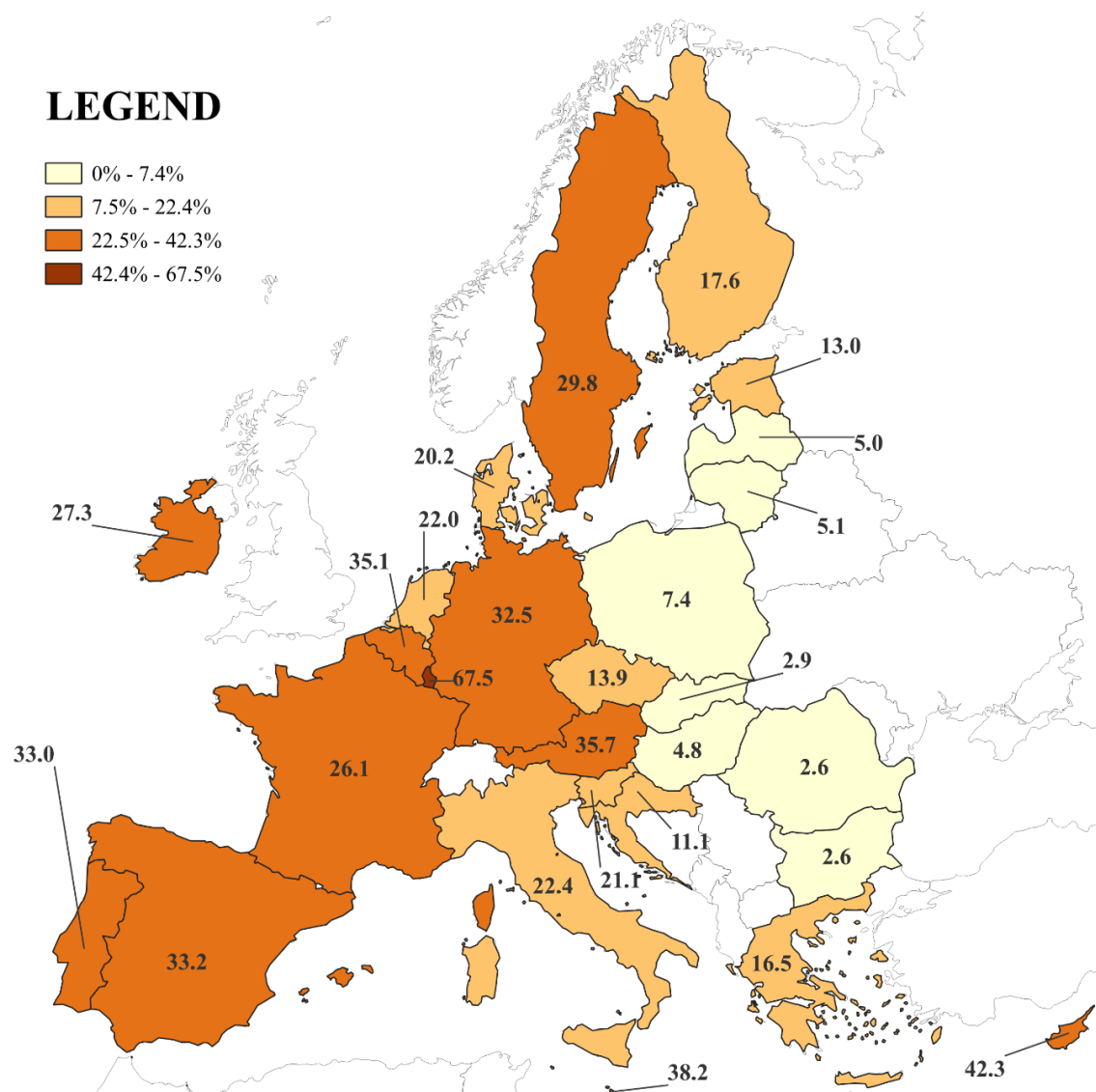
Only six countries constitute exceptions, where the examined proportion does not exceed 5%. These include East-Central European member states that generally function as net sending countries within the European migration system, namely Romania, Bulgaria, Slovakia, Hungary, Latvia, and Lithuania. The opposite extreme is represented by immigration-oriented Western and Southern European countries, such as Spain and Austria. Particular attention should also be drawn to the two so-called microstates—defined as countries with a territory of less than 1,000 km² or populations below 500,000 inhabitants—as well as Cyprus, where demographic exposure is exceptionally high. In Malta, Cyprus, and Luxembourg, respectively, 38%, 42%, and 68% of live births are second-generation births.

Figure 2. Proportion of Newborns in the Member States by Mother's Country of Birth, 2024



Source: Eurostat 2026a

Figure 3. Spatial Differences in the Proportion of Children Born to Foreign-Born Mothers, 2024



Source: Eurostat 2026a

Overall, the observed spatial pattern indicates that Europe's demographic structure is becoming increasingly divided along migration-related lines. Whereas in East-Central European countries—including Romania, Bulgaria, Slovakia, and Hungary—children born to foreign-born mothers continue to account for only a minor share of births, in Western and Northern Europe, as well as in several Southern European countries, immigration has already become one of the principal sources of population replacement. In countries such as Germany, Belgium, Austria, and Sweden, every third newborn is born to a foreign-born mother, which no longer represents a marginal phenomenon but rather a structural factor shaping society in the long term.

These differences are primarily driven by economic and migration-related factors. Countries characterized by higher income levels and more favourable labour-market conditions have long attracted workers and families, while several East-Central European states continue to function predominantly as emigration countries within the European migration system. This pattern is clearly reflected in birth statistics. The data also demonstrate that immigration is no longer solely a labour-market phenomenon



but increasingly a demographic one: in numerous Western European countries, natural population decline is partially counterbalanced by childbearing among families with migration backgrounds.

Particularly noteworthy are the exceptionally high values observed in small international economic centres such as Luxembourg and Cyprus. In these countries, the scale of foreign labour and international mobility is so substantial that demographic reproduction has become largely associated with populations of migrant background. In Luxembourg, the 68% proportion means that more than two-thirds of newborns have mothers who were not born in the country, an exceptionally high figure even by European standards.

In the longer term, the data also point toward cultural, educational, and political consequences. In countries with high proportions of foreign-born mothers, societies are changing more rapidly in ethnic, linguistic, and cultural terms. This may simultaneously represent an economic advantage—for example, through alleviating labour shortages—and a societal challenge, particularly in the fields of integration, education, and housing. Conversely, societies characterized by low proportions of foreign-born mothers remain more homogeneous, although they frequently face more severe challenges associated with population ageing and demographic decline.

Overall, the data clearly illustrate that Europe's demographic future is increasingly shaped by migration. Across the continent, not only economic disparities but also distinct demographic models can now be observed: in certain countries, immigration has become a central component of population maintenance, whereas other states continue to operate with low immigration levels and declining populations.

The Effect of Foreign-Born Mothers on the Total Fertility Rate (TFR)

When examining the TFR effect and building upon the findings presented in the previous section, we did not consider it necessary to treat mothers born outside the European Union as a separate category within the broader group of foreign-born mothers, since the correlation coefficient ($r = 0.7174$; $p < 0.001$) demonstrated a strong positive relationship with regard to both fertility-increasing and fertility-reducing effects.

The modifying effect was calculated as follows. First, the national TFR was calculated for each member state, including both native-born and immigrant mothers. Subsequently, an alternative TFR value was calculated in which the mid-year female population excluded foreign-born women and the number of live births excluded children born to foreign-born mothers. After subtracting one TFR value from the other, the fertility-increasing or fertility-reducing effect attributable to foreign-born mothers was obtained (Table 1).

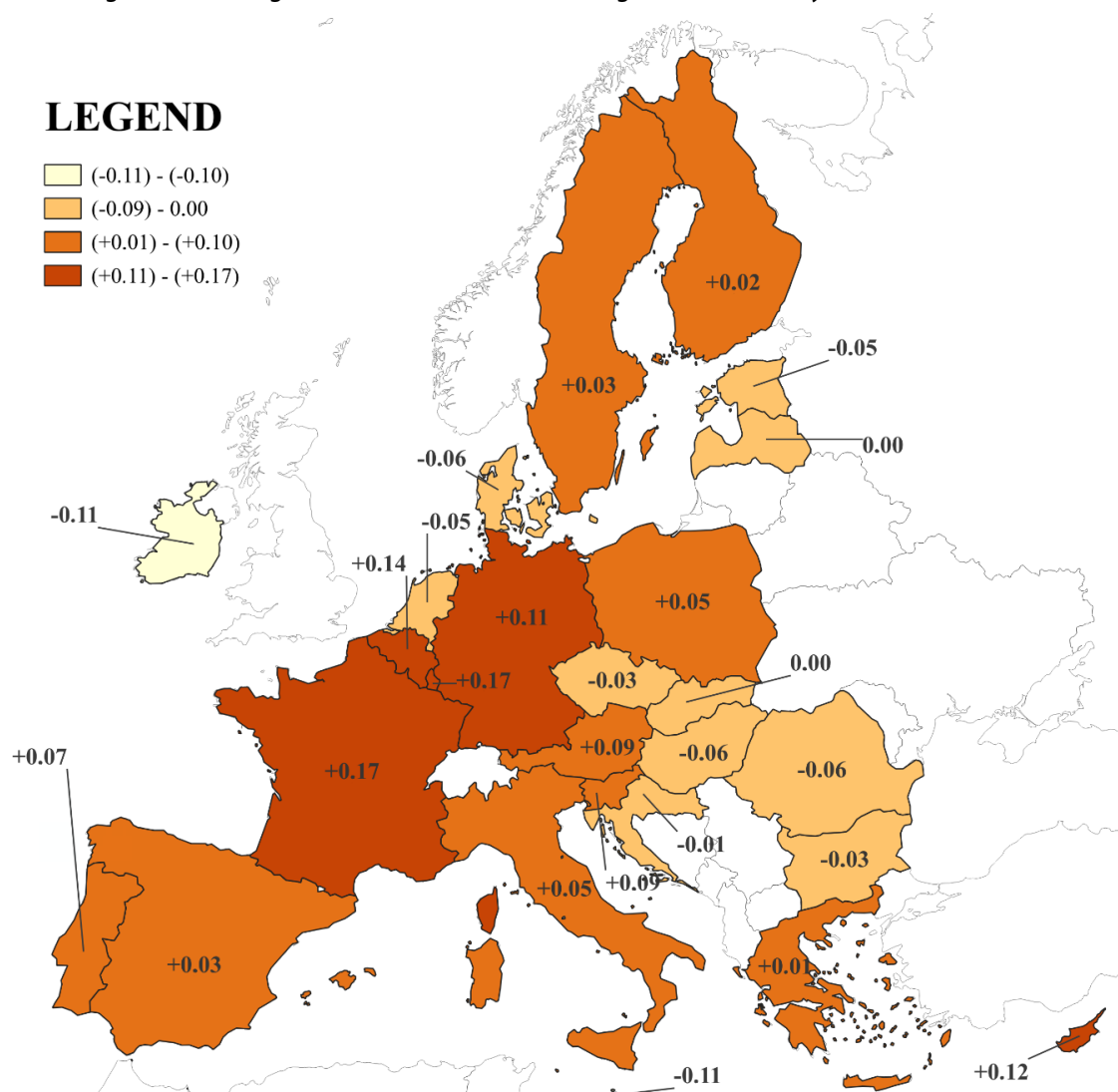
One of the most important conclusions is that the demographic impact of immigration in Europe is far from uniform. Although it is frequently assumed that migrant-background populations invariably increase birth numbers, the available data present a considerably more nuanced picture.

Table 1. The Effect of Foreign-Born Mothers on the Total Fertility Rate (TFR), 2024

	TFR	Without foreigners	Effect		TFR	Without foreigners	Effect
Malta	1.02	1.13	-0.11	Finland	1.26	1.24	0.02
Ireland	1.47	1.58	-0.11	Spain	1.10	1.07	0.03
Hungary	1.41	1.47	-0.06	Sweden	1.44	1.41	0.03
Denmark	1.47	1.53	-0.06	Italy	1.18	1.12	0.05
Romania	1.38	1.43	-0.06	Poland	1.14	1.08	0.05
Estonia	1.17	1.22	-0.05	Portugal	1.40	1.33	0.07
Netherlands	1.43	1.48	-0.05	Slovenia	1.52	1.43	0.09
Bulgaria	1.70	1.73	-0.03	Austria	1.32	1.22	0.09
Czech Republic	1.36	1.39	-0.03	Germany	1.36	1.25	0.11
Croatia	1.46	1.47	-0.01	Cyprus	1.38	1.26	0.12
Latvia	1.24	1.24	0.00	Belgium	1.44	1.30	0.14
Slovakia	1.45	1.45	0.00	France	1.61	1.44	0.17
Greece	1.23	1.22	0.01	Luxembourg	1.26	1.09	0.17

Source: Eurostat, 2026a, 2026b

Figure 4. The Magnitude of the Effect Influencing the Total Fertility Rate (TFR), 2024



Source: Eurostat, 2026a, 2026b

Overall, the correlation between the magnitude of the 2024 national TFR and the scale of the migration-related effect was $r = 0.4437$ ($p = 0.001$), indicating a moderate positive relationship. The significance of this finding lies in the fact that, in the field of fertility policy, the admission of potential mothers does not necessarily constitute a conscious demographic strategy on the part of member states. Even countries characterized by relatively high TFR values may experience negative fertility effects associated with foreign-born mothers. Denmark provides a characteristic example: while the TFR among native-born mothers reaches 1.53 children per woman, the national TFR declines to 1.47 children per woman once migration effects are taken into account.

At the same time, this demographic mechanism does operate in certain member states. In France, for example, the presence of foreign-born mothers increases the national TFR by 0.17 children per woman, raising it to 1.61. This is largely attributable to substantial immigration from high-fertility regions of North Africa—primarily Morocco, Algeria, and Tunisia—as well as Sub-Saharan Africa, including Senegal, Côte d'Ivoire, Cameroon, the Republic of the Congo, the Democratic Republic of the Congo, the Comoros, and Madagascar. In the French case, the strength of historical colonial and francophone cultural ties plays a determining role in shaping these migration patterns.

Nevertheless, the overall effect generally remains limited and may even be negative in several cases, as demonstrated by Hungary and Ireland. According to Eurostat's 2020 database on foreign-born women, several clear statistical relationships can also be identified. In Hungary, foreign-born women account for only 5.7% of the female population, compared to the EU average of 13.6%. However, apparent contradictions also emerge. Ireland, jointly ranking last with Malta in terms of the TFR effect of foreign-born mothers, has a foreign-born female population share of 20.3%, whereas France—ranking first—remains close to the EU average at 12.6%.

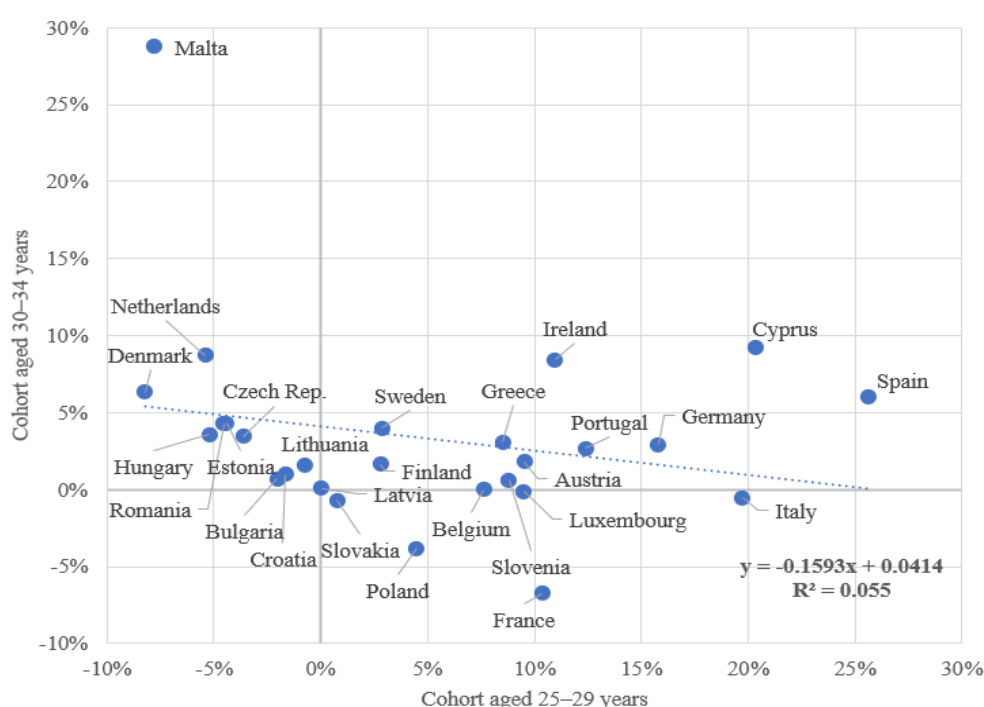
Consequently, immigrants in Ireland display substantially lower average fertility than the host population, whereas the opposite pattern characterizes France. Drawing upon the database of the Migration Policy Institute (2024), the principal explanation is that Ireland's migration system is predominantly connected to low-fertility European countries. This finding supports the conclusion of Volant et al. (2019), according to which two conditions must simultaneously be fulfilled for immigrant minorities to exert significant demographic effects—whether positive or negative: a large population size and high fertility.

Since the Total Fertility Rate incorporates the age-specific fertility rates of seven five-year cohorts—beginning and ending with the generally low-fertility groups aged 15–19 and 40–49—the effects of specific subpopulations should also be examined in a more focused manner. Within the European Union, approximately two-thirds of all live births are attributable to women aged 25–29 and 30–34, the cohorts characterized by the highest fertility levels.

The results indicate that foreign-born mothers exert a substantial effect within the 25–29 age group, suggesting that women settling in the European Union tend to have children earlier than the native-born population. Earlier childbearing further increases the likelihood that these women will subsequently have additional children. This mechanism may therefore partially explain the previously observed increase in the proportion of children born to foreign-born mothers.

At the same time, the effect cannot be considered particularly strong overall, since among women aged 30–34 the age-specific fertility of foreign-born mothers differs far less from the corresponding value observed among native-born mothers. This suggests the existence of an age-specific adaptation pattern relative to the socialization patterns characteristic of the 25–29 age group. Supporting this argument mathematically, the correlation between the two age-specific effects was $r = 0.4270$ ($p = 0.0016$), indicating a moderate positive relationship. Consequently, although the relationship between earlier childbearing and higher parity exists, it cannot be regarded as strongly deterministic.

Figure 5. Differences in the Age-Specific Fertility of Foreign-Born Mothers Compared With Native-Born Mothers in the 25–29 and 30–34 Age Groups, 2024



Source: Eurostat, 2026a, 2026b

The Relationship Between the Proportion of Newborns and the TFR Effect

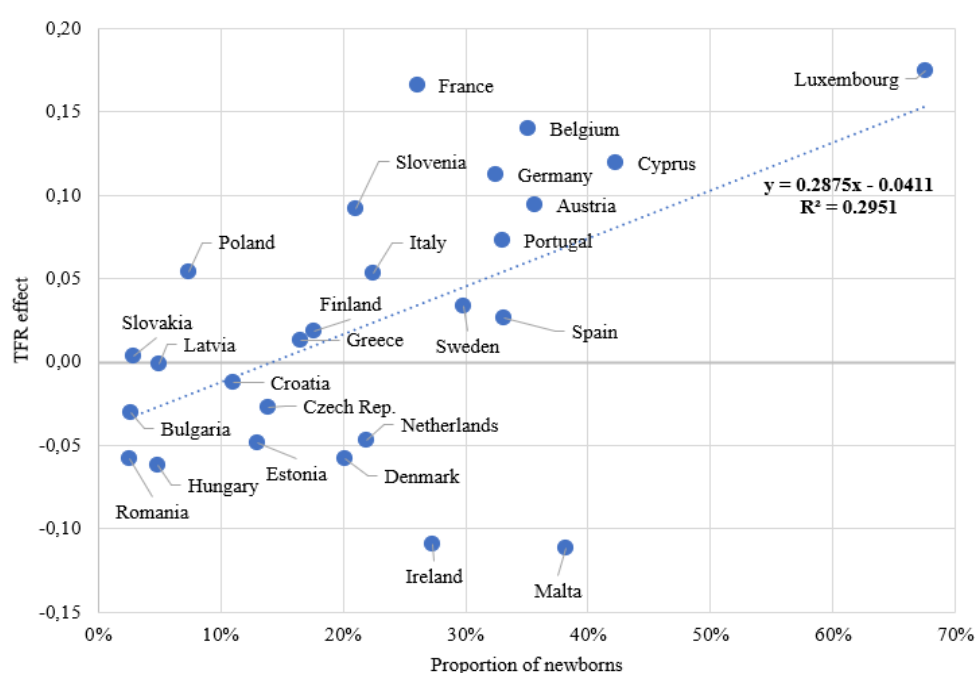
Finally, we examined the relationship between the proportion of newborns and the TFR effect. (During this analysis, the effect of mothers born outside the European Union was likewise not separated, as identical patterns were observed.) Figure 6 demonstrates a clear regularity: the higher the proportion of newborns attributable to foreign-born mothers, the greater the fertility effect. This relationship is also confirmed by the Pearson correlation coefficient ($r = 0.8120$, $p < 0.001$). Consequently, exceptions to this tendency are relatively uncommon, apart from the already mentioned cases of Ireland and France.

At the same time, in those member states where immigrant mothers contribute only marginally to the total number of newborns—primarily in the post-socialist countries, including Hungary—a specific form of fertility heterogeneity can be observed. In these cases, the childbearing behaviour

of immigrant populations tends to reduce the national TFR rather than increase it. The primary explanations for this phenomenon are either that immigrant women had already become mothers before migration and therefore do not appear in fertility statistics, that they arrive without childbearing intentions, or alternatively that they give birth in, or officially register their children within, the sending countries irrespective of their actual place of residence.

On the other hand, it must also be emphasized that immigration-oriented demographic policies may be further reinforced by fertility effects if the receiving society is capable of admitting sufficiently large numbers of women characterized by relatively high fertility levels during the earlier stages of their reproductive life course.

Figure 6. Relationship Between the TFR Effect and the Proportion of Newborns in the Case of Foreign-Born Mothers



Source: Eurostat, 2026a, 2026b

Moving beyond demographic indicators alone, it is important to consider the potential social, educational, and integration-related implications associated with situations in which a substantial proportion of annual newborns originate either from other member states or from outside the European Union. It should be taken into account that, fifteen years later, these second-generation children will enter reproductive age, and twenty-five years later they will enter the peak reproductive stage of their life course—in the latter case effectively becoming potential mothers themselves.

Among second-generation populations, assimilation in terms of fertility behaviour may not necessarily occur in relation to the majority society. In such cases, the socialization pattern—alongside the so-called disruption pattern—may prevail, meaning that these individuals identify with the potentially significantly higher fertility norms characteristic of their countries of origin. Consequently, one possible long-term scenario is that, after 2050, a substantial proportion—potentially even the majority—of newborns in today's immigration-oriented European societies may become

third-generation or second-generation children as a consequence of the fertility behaviour of today's second-generation and future first-generation mothers.

Although statistical registries generally do not measure third-generation populations, and demographic statistics therefore tend to classify them as native populations, or will do so in the future, this implies that distinctions between autochthonous and allochthonous populations may gradually disappear. Such developments complicate the policy assessment of economic, social, and cultural risks, as well as the evaluation of the specific needs generated by relatively recently arrived populations.

Both perspectives—the risk-oriented and the needs-based approach—may be illustrated through the questions of educational and labour-market integration, together with the examination of policy interventions free from ideological considerations. These issues are equally crucial for states already relying on immigration and for those currently reconsidering their migration policies.

CONCLUSIONS

The present study examined the relationship between immigration and fertility within the European Union, with particular emphasis on the ways and extent to which foreign-born mothers influence demographic reproduction. Our starting point was the observation that migration affects substantial numbers of women of childbearing age and therefore potentially shapes fertility processes.

The research was based on Eurostat data for 2024, and immigrant status was defined according to mothers' countries of birth, as this approach provides a more accurate representation than citizenship status. The analysis focused on three principal questions: the proportion of children born to immigrant mothers, the impact of their presence on the Total Fertility Rate (TFR), and the relationship between these two phenomena.

The findings demonstrate that the role of immigrant mothers within the population of newborns has been continuously increasing within the European Union. Whereas in 2013 their proportion remained below 20%, by 2024 it had approached 25%. The share of mothers arriving from outside the European Union is particularly substantial, indicating that a large proportion of second-generation children have non-EU backgrounds. If fertility patterns do not converge towards those of the receiving society, the demographic impact of immigration may become stronger in the future. Conversely, in cases of rapid adaptation, differences diminish and the effect gradually weakens over time (Mussino et al., 2021).

Our results reveal a pronounced East–West divide in the demographic role of foreign-born mothers within the European Union. While foreign-born mothers account for a substantial share of live births in several Western and Southern European countries, their demographic significance remains limited in most East-Central European member states.

At the level of member states, however, substantial differences can be observed. In East-Central European countries—such as Hungary and Romania—the proportion of children born to immigrant mothers remains low, frequently below 5%, whereas considerably higher values characterize immigration-oriented Western and Southern European countries. Particularly striking values can be

observed in smaller states: in Luxembourg, more than two-thirds of newborns are born to foreign-born mothers, while in Cyprus and Malta similarly substantial proportions of newborns are born to foreign-born mothers.

By contrast, the impact on the Total Fertility Rate is considerably more moderate. According to the calculations, the presence of immigrant mothers generally modifies TFR values only by a few hundredths or tenths, and even the direction of the effect remains ambiguous. In certain countries—such as France and Luxembourg—immigration increases the average number of children per woman, whereas in others—such as Ireland and Hungary—it tends to reduce it. These differences are primarily explained by the fertility patterns characteristic of the immigrants' countries of origin, the size of immigrant populations, and their degree of social integration. At the same time, immigrant women frequently enter motherhood at younger ages compared with native populations, which may increase the likelihood of subsequent childbearing.

Nevertheless, a strong relationship can be identified between the two examined phenomena—the proportion of newborns and the effect on TFR. It can be concluded that the greater the proportion of immigrant mothers among live births, the stronger their positive effect on fertility indicators. This relationship also proved to be statistically strong. At the same time, exceptions can be observed: for example, despite the relatively large immigrant population in Ireland, the effect remains negative, whereas in France a substantial positive effect is observable despite a comparatively average proportion of immigrants. The explanation lies in the differing origins of immigrant populations: in Ireland, immigrant mothers predominantly arrive from European countries characterized by relatively low TFR levels, whereas in France immigration mainly originates from African countries with considerably higher fertility rates.

From a policy perspective, these findings indicate that immigration alone cannot provide a long-term solution to the fertility crisis. Although under certain circumstances it may contribute to increasing birth numbers, it is generally incapable of counterbalancing the structural causes of persistently low fertility. In this regard, coordination between family policy and migration policy is of key importance, particularly from the perspective of long-term demographic sustainability.

Overall, the study concludes that within the European Union immigration reshapes the composition of newborn populations to a much greater extent than it increases fertility levels themselves. Although in certain countries immigration may moderately raise TFR values, it does not generally constitute a solution to low fertility. At the same time, the effects may intensify over the longer term as second-generation populations reach adulthood, particularly if fertility patterns do not converge towards those of the majority host society.

Within the European Union, marked spatial differences can be observed both in the proportion of foreign-born mothers and in the impact these mothers exert on fertility indicators. In countries characterized by substantial immigration, the proportion of second- and third-generation births is increasing among newborn populations, which may contribute to growing diversity and create new challenges for integration policies.

Altogether, these findings suggest that the relationship between migration and fertility cannot be interpreted as a unified European pattern; rather, it manifests differently across distinct regional and societal contexts. Accordingly, immigration cannot generally be regarded as a universally applicable demographic solution to low fertility, although in certain countries it may mitigate unfavourable processes affecting demographic reproduction.

Declarations

Funding

This research and the preparation of the manuscript received no specific external funding.

Competing interests

The author(s) declare that they have no financial or non-financial competing interests relevant to the content of this article.

Author contributions

Conceptualization: [P.U., A.P., G.A.]; Methodology: [P.U., A.P., M.I.]; Data curation: [P.U., A.P., M.I.]; Formal analysis: [P.U., A.P., M.I., G.A.]; Investigation: [P.U., M.I.]; Visualization: [P.U.]; Writing – original draft: [P.U., G.A.]; Writing – review & editing: [A.P., M.I. All authors have read and approved the final version of the manuscript.

Data availability

The data supporting the findings of this study are available in [Eurostat] at [https://doi.org/10.2908/DEMO_FACBC; https://doi.org/10.2908/MIGR_POP3CTB].

Ethical approval

Not applicable: this study did not involve human participants, animal experiments, or sensitive personal data requiring ethical approval.

Informed consent

Not applicable.

Use of AI tools

The author(s) did not use generative artificial intelligence (AI) tools in the preparation of this manuscript.

Publisher/editorial disclaimer

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