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Multiple Origins and Multiple Destinations: The Fertility of Immigrant Women in Europe

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Abstract
Studies on immigrant fertility typically compare immigrants and natives or different migrant groups at the same destination but rarely immigrants of the same origins in different destination countries. In this paper, we look at immigrants from multiple origins in multiple destination countries simultaneously, using the European Union Labour Force Survey to compare female immigrants from ten areas of origin in eight destination countries in Europe. Our results indicate a strong origin effect. However, they also suggest that when women migrate to a context where the fertility norm is different from that in their origin, they adjust their behaviors accordingly, which indicates that policy and normative context play an important role in shaping migrants' fertility. From a policy perspective, this is important because it suggests that the fertility of immigrant women, who are exposed to different norms and normative contexts, can resemble that of native women at the destination. Our findings contribute to strengthening the role of destination in shaping fertility behavior and highlighting the importance of looking at all the possible combinations of immigrants coming from and going to different fertility regimes.

Keywords Multiple origins · Multiple destination · Fertility · Migrants · Europe

Introduction

In Europe, the fertility patterns of immigrants have gained significant attention, both in demographic studies and policy discussions. This is not only due to the evolving population dynamics in the context of an aging society, but also because such patterns provide valuable insights into the intricate processes of integration. Understanding these fertility patterns can shed light on how changing social

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contexts influence individual and familial decisions. Parenthood is a critical step in the transition to adulthood and can reflect social inequalities as well as reproduce them, with respect to the life course of both mothers and their children. For instance, early motherhood can hinder women's opportunities for higher education or career advancement, leading to long-lasting negative impacts. In this way, immigrant fertility is both a determinant and a consequence of integration. Fertility behavior is strongly influenced by social and cultural norms as well as welfare policies. When it comes to immigrant fertility, norms may carry over from the origin country or be reshaped at the destination, while policy influences occur only at the destination.

Studies on immigrant fertility typically compare immigrants and natives or multiple migrant groups in the same destination but rarely immigrants of the same origins in different destination countries (Milewski & Mussino, 2019). In this paper, we look at immigrants from multiple origins in (the same) multiple destination countries simultaneously. By examining the same immigrant groups across various European countries, we can gain a deeper understanding of integration, in line with the European Commission's description of it as a mutual (two-way) process. This broader perspective not only highlights the influence of individual experiences on migrant fertility but also underscores the role of the host society in ensuring immigrants' rights to be upheld, as emphasized by the European Commission (2003: 17).

A similar "multiple-origin/multiple-destination" approach has been used for outcomes such as labor market participation and unemployment (Van Tubergen et al., 2004) but never on fertility or other demographic events. The idea behind this approach is that immigrants' fertility may be affected by the country they come from ("origin effect") and/or the country they migrate to ("destination effect"). Thus, we assume that fertility behaviors result from the interaction between immigrants' social and cultural norms and the new policy context at the destination. Moreover, immigrants' fertility may be driven by the specific interrelations between origin and destination ("community effect"); in other words, some immigrant groups might have different fertility in different destinations, irrespective of the general norm in the countries of origin and destination but specific to their characteristics in a determinate context (e.g., group size and education distribution).

Specifically, this research note aims to describe the fertility of immigrant women from multiple origins in (the same) multiple European destination countries, looking at the quantum of childbearing and discussing the potential of this approach. The different contexts of origin reflect differences in cultural background, which can be maintained after migration and shape fertility patterns (Milewski, 2007; Mussino & Strozza, 2012), while the country of destination presents new social norms and policy contexts that can also impact the fertility behaviors of migrants (Milewski, 2010; Tonnessen & Mussino, 2020).

Immigrant Fertility Theories and the Drive for a Broader Exploration

The scholarly discourse on immigrant fertility predominantly pivots around five core hypotheses: Adaptation, Socialization, Selection, Disruption, and Interrelation of events. Comprehensive examinations of these hypotheses can be found in the works

of noted scholars such as Kulu (2005), Kulu and González-Ferrer (2014), Milewski (2010), Mussino and Strozza (2012), and Adserà and Ferrer (2015). In brief, the *Socialization* hypothesis argues that fertility preferences are established during childhood, thus reflecting the ones of their origin even after migrating. Therefore, it suggests that the same migrant group maintains similar fertility levels/preferences in different destinations. The *Selectivity/Selection* hypothesis posits that migrants often represent a selected group from the population at origin, sharing observed and unobserved characteristics, including fertility preferences, which are more similar to those of people living in the destination country. As these characteristics contribute to the selection process and the choice of the destination country, the same migrant group may exhibit different fertility levels across various destinations. According to the *Adaptation* hypothesis, migrants' fertility behaviors may gradually align with the norms of their destination. Exposure to new social structures and ideas could shift these preferences and behaviors from those at the origin towards those at the destination. The *Interrelation* hypothesis argues that migration and childbearing are intertwined life events. Migrants often exhibit a swift progression from migration to the first child, indicating that migration frequently aligns with family planning motives. Finally, the *Disruption* hypothesis sees migration as a stressful occurrence that might temporarily reduce fertility.

Notably, much of the existing research tends to lean towards the examination of immigrants from various origins to a single destination with some comparative studies as exception. Conversely, there is a paucity of studies exploring the patterns of fertility among immigrants from multiple origins in (the same) multiple destinations, as highlighted by Milewski and Mussino (2019). While the aim of this paper is not to test all these hypotheses, it ventures to support some of them in an explorative way. Furthermore, these classical hypotheses can be enriched by our "multi-origin/multi-destination" approach. For instance, an origin effect might align with the Socialization hypothesis, while a destination effect may be more in line with the Adaptation hypothesis. However, when studying multiple origins in multiple destinations, these hypotheses need not be mutually exclusive. A single immigrant group can be influenced by the norms of their origin while simultaneously adapting their behaviors based on the specific norms at their destination. We adopt a data-driven methodology, transitioning from the prevailing single origin-single destination framework to a more inclusive model, examining multiple origins across multiple European destinations. This nuanced approach is pivotal for a holistic understanding of immigrant fertility patterns.

Materials and Methods

We used data from the European Union Labour Force Survey (EU-LFS 2005–2015). The EU-LFS, the European Union's primary source of data on the labor market at household level, provides information on employment status and other sociodemographic characteristics for all members of a household (e.g., age, place of birth, educational level, and occupation). Although fertility is not the main aim of this survey, its large sample size allows for the study of the fertility of immigrants settled in

different European countries. We focused on eight countries of destination: Belgium (BE), Germany (DE), Spain (ES), France (FR), Ireland (IE), Italy (IT), the Netherlands (NL), and the United Kingdom (UK). Overall, these countries have a relevant proportion of foreign-born and represent enough diversity in terms of range of fertility rate and welfare regime.[1] Unfortunately, it was not possible to include Scandinavian countries because of the unavailability of variables related to respondents' household characteristics (see below). As is common in the literature on immigrants' fertility (see Kulu et al., 2015, for a review) — and, more generally, in the sociodemographic research on fertility behaviors — we limited our analyses to the female population. After the listwise deletion of missing cases, the analytical sample included 2,498,998 women aged 25 to 44 (see Table 1).

The EU-LFS is one of the most reliable, recent, publicly available, and representative European surveys among those that do not strictly target immigrants and has been widely used for studying the relationship between migration and family dynamics (Cantalini & Panichella, 2019; Dubuc, 2012; Gabrielli & Impicciatore, 2020; Mussino and Cantalini 2022). However, its cross-sectional structure prevents access to (time-constant and time-varying) information on the migrant population both before and after the geographical movement, making it difficult to disentangle the effect of the mechanisms behind migration and fertility. Despite this limitation; however, EU-LFS data are currently the most suitable for analyzing the fertility of immigrants from multiple origins in multiple destinations. Indeed, longitudinal data including such information in comparative terms are still unavailable. Hence, our work is a first (descriptive) step toward comprehensive knowledge of fertility behaviors of immigrants from a comparative perspective, which is currently missing in the literature due to the unavailability of comparative longitudinal data.

Another limitation of the EU-LFS data is the lack of individual-level information on fertility behaviors. The dependent variable, number of children, was thus constructed using the "own-children method" (Cho et al., 1986). This technique has been extensively used with the same aim and on the same data (e.g., Bordone et al., 2009), specifically in studying immigrant fertility (e.g., Alderotti et al., 2023; Cantalini & Panichella, 2019; Coleman & Dubuc, 2010; Dubuc, 2012; Mussino and Cantalini 2022). Using variables related to family identification numbers and household composition and relationships, our procedure links children to their mothers in the same household and assumes that non-adult children recorded in a household comprise all the children born (and still alive) to the parents in that household. Of course, this method enables only the detection of those children who are still living with their mother at the time of the interview, indicating a possible underestimation of the total number of children. We tackled this issue by including in our analysis only relatively young women (aged 25 to 44 years), thus assuming that there were

[1] In 2015, the percentage of foreign-born individuals among the selected countries ranged from 9.5% (5,805,238 individuals) in Italy to 16.2% in Ireland (759,256 individuals). In the same year, the total fertility rate across these countries ranged from 1.33 in Spain to 1.93 in France. Regarding the welfare regime, Belgium, Germany, France, and the Netherlands exemplify conservative regimes, whereas Ireland and the UK represent the two European liberal regimes (Esping-Andersen 1990), with Italy serving as an example of the Mediterranean regime (Ferrera 1996).

Table 1 Composition of the sample by origin and destination

	BE (Belgium)	DE (Germany)	FR (France)	NL (Netherlands)	ES (Spain)	IT (Italy)	IE (Ireland)	UK (United Kingdom)	*Total*
Natives	125,442	297,122	173,419	173,813	205,843	770,729	269,651	119,343	2,135,362
Western Europe (EU15)	9427	5049	4672	4049	3886	14,082	24,052	3954	69,171
Eastern Europe (EU)	3441	8056	1100	1460	3344	31,294	21,864	4527	75,086
Outside EU28	4735	13,121	2604	4333	1341	34,352	1975	1045	63,506
North America/Oceania	325	554	398	578	142	2283	2889	1629	8798
North Africa	5304	598	8197	2743	2847	12,641	317	274	32,921
South-Central Africa	4131	947	4911	1637	640	6122	4858	4363	27,609
Near and Middle East	599	1915	533	1280	121	928	582	788	6746
Latin America	1265	1094	1440	5401	11,584	14,211	1570	1032	37,597
East Asia	748	1165	606	628	255	2943	1658	1036	9039
South-Southeast Asia	1801	2625	1636	2572	340	9620	5563	7006	31,163
Total	*157,218*	*332,246*	*199,516*	*198,494*	*230,343*	*899,205*	*334,979*	*144,997*	*2,496,998*

Source: EU-LFS (2005–2015)

no (or few) children living outside the household. As for foreign-born women (especially those from non-European countries; see Greulich and Dasrè, 2018), fertility may be underestimated here as well as some children are temporarily left behind with relatives in the country of origin. However, previous studies have shown that this issue does not significantly affect the estimates of the own-children method for established immigrant groups (see Dubuc, 2012).

EU-LFS data do not allow for distinguishing between children born before and after migration, as variables on age and years of residence in the host country are only available as categorical. Our dependent variable thus includes all children aged 24 or under, even if born abroad, describing the total contribution of immigrants' population to European countries. This strategy should not necessarily be considered a limitation, and has also been applied in previous studies (e.g., Toulemon & Mazuy, 2004; Dubuc, 2012). In fact, without longitudinal data including time-varying information on reproductive and migration behaviors, focusing only on those children born after migration would have meant that we considered only a portion of the migrants' life course — i.e., the period after migration — whereas for non-migrants we could have exploited the whole life course. Moreover, it may have caused us to overestimate migrants' fertility due to post-migration catch-up effects (see Dubuc, 2012).

The main independent variable was geographical origin, distinguishing immigrants from the native population according to country of birth; except for Germany, for which we used nationality, as information on country of birth was not available. Unfortunately, the EU-LFS data do not contain detailed information on country of birth; they do, however, provide aggregations in macro-areas of origin. We followed the highest level of detail available that allowed us to include the highest number of countries of destination, dividing the migrants into ten categories: (1) Western Europe (EU15); (2) Eastern Europe (entering the EU in 2004, 2007, and 2013); (3) outside EU28 (EFTA and residual European countries); (4) North Africa; (5) South and Central Africa; (6) Near and Middle East; (7) East Asia; (8) South and Southeast Asia; (9) North America and Oceania; and (10) Latin America. We also performed sensitivity analysis using a more detailed categorization of geographical origin for those countries having it available, which distinguished: (a) among immigrants from Eastern Europe, those born in countries entering the EU in 2004 and those born in countries entering the EU in 2007 or 2013; (b) among immigrants from countries outside the EU28, those born in EFTA countries and those born in other countries; and (c) among immigrants from Western non-European countries, those born in North America and those born in Oceania. This sensitivity analysis did not show substantial heterogeneities within macro-groups (see Fig. 2 in the Appendix). Additionally, to discuss our results, in Table 2 in the Appendix, we present the most frequent migrant groups in each destination, according to country of origin.

Despite the use of macro-area of birth instead of country of birth, there are currently no large-scale comparative data with information on the exact country of origin, making the EU-LFS the most suitable survey for our purposes.

We included the following control variables in the analysis: (a) educational attainment (lower-secondary or less; upper-secondary or post-secondary non-tertiary; and tertiary) allows to control for the differences in educational levels among various migrant groups in different countries, as well as in comparison to native populations; (b) employment condition (operationalized through the ISCO-08 code at one digit of the occupation, also

including two additional categories for unemployed and inactive) enables to analyze whether the gap between (different groups of) migrants and natives depends on their different inclusion in the labor market; (c) marital status (single, married, widowed, or divorced) helps to control for the close relationships between marriage and parenthood, as well as between marriage and migration. Models also controlled for the year of the survey and the age group (five 5-year dummies). Descriptive statistics of the sample, by origin and destination, are provided in Table 3 in the Appendix.

We estimated OLS regression models, applying weights to the data. The main aim of these models was to study the fertility of immigrant women from different geographical origins now living in different destination countries, including the comparison with the native population. Thus, the following model was estimated:

$$Y_i = \beta_0 + \beta_1(GEO\_ORIGIN \times COUNTRY) + \beta_2(z)$$

where geographical origin (*GEO_ORIGIN*) was interacted with country (*COUNTRY*) in order to study the heterogeneity of fertility patterns between multiple origins in multiple destinations, controlling for a vector of control variables involving sociodemographic characteristics (z). By estimating a pooled model with an interaction between origin and destination, net of variables such as age, education, employment condition, and marital status, we were able to control for the different compositions of (different groups of) immigrants and natives, as well as of immigrants in different destination countries (e.g., age structures and educational levels).

We performed a wide range of robustness checks, including estimation of Poisson models; estimation of separate models by country of destination; replication of the analyses considering only women living in a couple at the time of the interview; replication of the analyses excluding women living in a mixed couple; replication of the analyses on samples with narrower age ranges; and replication of the analyses excluding those immigrants who moved at school age (generation 1.5). The results (available on request) are substantially consistent with those presented here.

Results

Figure 1 shows the predicted number of children for migrant women, compared to the native population. Each panel refers to a specific origin group, and bars present the predicted number of children for immigrants (dark gray bars) and natives (light gray bars) in a specific country of destination. Predicted values are computed at the highest value of the covariate age (40–44 years)—i.e., when fertility can reasonably be regarded as completed — holding the values of the other covariates as they were observed. It is worth noting that the number of children for native women predicted by our regression models may not reflect the exact estimate of the related countries' period total fertility rates (TFRs). This discrepancy may arise from several factors. First, the limitations of the own-children method, which only detects children living with the mother at the time of the interview, can potentially lead to an underestimation of the total number of children (see above). Second, own-children counts are rather cohort data, and period

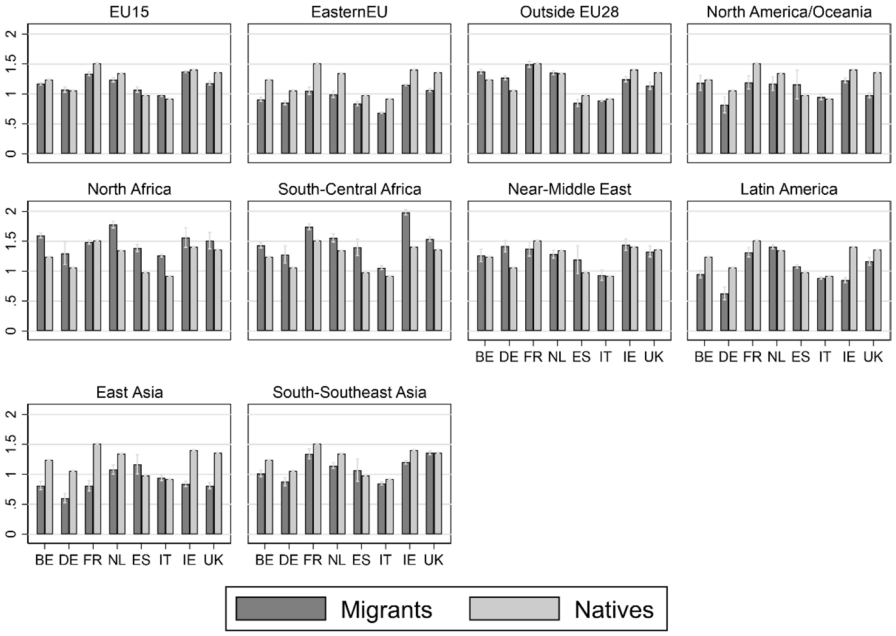

Fig. 1 Predicted number of children at 40–44 years (with 95% confidence intervals), by origin and destination. OLS. Controls: educational attainment, employment condition, marital status, age, year of survey Source: EU-LFS (2005–2015). Notes: BE, Belgium; DE, Germany; FR, France; NL, the Netherlands; ES, Spain; IT, Italy; IE, Ireland; UK, the United Kingdom

and cohort measures do not always result in the same estimations. Moreover, a country's period TFR measures the average number of children among the entire population, encompassing both native- and foreign-born individuals. In other words, the fertility rates of foreign-born individuals, whether higher or lower, contribute to the calculation of the national TFR in official statistics, with their impact increasing proportionally to their representation within the total population. Conversely, our models predict the number of children separately for the native and foreign-born populations. Finally, for both immigrants and natives, fertility is estimated net of a set of control variables; thus, their predicted number of children shifts up or down depending on the composition related to the different groups' age, education, occupation, and marital status (see also Table 3).

Immigrants from Eastern Europe have lower fertility than natives in all countries, indicating an origin effect for this group and aligning with the *Socialization* hypothesis. However, their fertility is higher — in absolute terms — in Ireland, France, or UK than in Italy or Spain, suggesting that country of destination plays an important role in Eastern European migrants' fertility. Indeed, for example, their low fertility in Italy may be due to social policies that do not adequately support work-family conciliation, as well as to socialization in a country with even lower fertility. Conversely, their high fertility in Ireland or France might be driven by an *adaptation* to relatively higher total fertility norms at the destination, either due to a change in preferences or norms or to country-specific policies.

Moreover, the different fertility of this origin group across countries may also depend on the internal composition of Eastern Europeans. Different national groups within this category tend to migrate to specific countries for various reasons. For instance, most Eastern European migrant women in Italy are Romanians, who primarily move without family and for work reasons, often finding jobs in the unskilled domestic care of elderly people (Mussino & Strozza, 2012). On the contrary, Eastern European women moving to the UK or Ireland come primarily from Poland. They are usually tied movers migrating for family reunification and can contribute to the population of the host country by either bringing their children born in the country of origin or giving birth to new children after migration.

The fertility of immigrants from EU-15 countries and North America is similar to — or even lower than — that of the native population. The TFRs of the destination countries affect the comparison between immigrants and natives, making the "penalty" of these two groups of immigrants higher in countries with higher fertility (e.g., France, the Netherlands, and the UK). However, it is in these destination countries that immigrant women from Western (both European and North-American) countries have the highest absolute fertility, suggesting that societies characterized by relatively generous childcare policies and public support for mothers' employment (e.g., extensive childcare services in France and flexible working hours in the Netherlands) can provide an advantageous context for migrants' fertility as well.

The fertility of migrant women from European countries not belonging to the EU28 is more heterogeneous across countries. This heterogeneity depends on the internal composition of this origin group, which includes immigrants from countries with different structural and cultural characteristics as well as different fertility and family norms, such as EFTA countries, the Balkans and Russia. It also depends on the different proportion of immigrants from these countries of origin across destinations, which can be considered a driver of a community effect. For instance, the comparatively higher number of children of migrants in Germany and Belgium may be related to the high proportion of those coming from Turkey (see Table 2), who are characterized by high risks of first, second, and third births in these countries (Kulu et al. 2017).

Immigrants from both Northern and Southern-Central Africa have substantially higher fertility than natives in all countries, which aligns with an origin effect for these migrant groups. This also confirms previous research on immigration and fertility, which generally supports the *Socialization* hypothesis for African migrants. These groups are likely to maintain — even in the long run — the reproductive preferences transmitted in the country of origin, characterized by early marriage and high fertility (Rosero-Bixby et al., 2011). This origin effect might also mask an *interrelation* between migration and family events, driven by either family formation or family reunification. Indeed, African women are likely to be tied movers and their migration is typically oriented to join their spouse — alone or with the children born to them in the country of origin — when the spouse has paid off the *disruptive* costs of the movement (e.g., search for house and job and creation of new social networks) (Ballarino & Panichella, 2018; Mussino & Strozza, 2012).

An origin effect can be found among Eastern Asian immigrants as well, although in this case their fertility is substantially lower compared to women born in the destination countries. Indeed, women from this origin group have been socialized in a context

characterized by very low fertility (i.e., China, South Korea, and Japan), which affects their fertility preferences in the country of destination. An exception to this is Eastern Asian immigrants in Southern Europe, who still have a low number of children in absolute terms, but slightly higher compared to that of the native populations. This finding aligns with previous literature on single destination countries. For instance, it has been shown that Chinese women's fertility bounces back after migration to Italy, making the number of children in this group of immigrants higher compared to family norms prevalent in both the origin and the destination societies (Mussino et al., 2009).

Finally, compositional effects related to the heterogeneity within origin groups may explain the heterogeneous results concerning immigrants from Southeast Asia (e.g., Indians and Pakistani vs. Thai), the Middle East and, especially, Latin America. Specific interrelations between country of origin and country of destination — i.e., community effects — might occur for this group. For instance, immigrants from Suriname and other former Dutch colonies are among the most frequent migrant groups in the Netherlands, and after migration tend to maintain the preferences toward early and high fertility transmitted in their country of origin (Alders, 2000). Moreover, immigrants from Spanish-speaking countries such as Ecuador, Peru, and Argentina frequently migrate to Spain as first movers, and their higher fertility compared to that of natives is primarily driven by a family reunification effect in the long run; i.e., husbands joining them, along with children left in the country of origin (González-Ferrer et al., 2017). As for women from South and Southeast Asia, higher fertility — compared to the same group moving to other countries — appears in the UK (see also Dubuc, 2012). This group includes both Pakistanis/Bangladeshis — who previous studies have found to have higher fertility than natives — and Indians — who generally have fertility similar to that of natives (Kulu et al., 2017).

In summary, our results highlight the significance of both origin and destination effects in explaining migrant fertility. While several groups, such as Eastern Europeans, Africans, and Eastern Asians, tend to maintain their fertility preferences from their countries of origin even after migration (referred to as the "origin effect"), there are instances where the same group exhibits different fertility behaviors depending on the destination. This underscores the importance of country-specific policies and fertility norms in influencing the fertility of migrant groups in different destinations ("destination effect"). Interestingly, the impact of the destination effect can be observed even when there is an origin effect, as demonstrated by Eastern Europeans. Furthermore, our findings reveal other crucial factors influencing migrant fertility. These include the internal heterogeneity within migrant groups and between destination countries, as in the case of Eastern Europeans, non-EU28 European migrants, South-Eastern Asians, and Latin Americans. Additionally, migration strategies and the reasons for migration vary across origins and destinations, exemplified by the case of African, Eastern European, and Latin American migrants.

Discussion and Conclusions

In this study, we have described a previously underexplored intersection between cultural norms, policy context, and immigrant fertility. Through our innovative approach, which can contribute to enrich the framework based on the classical hypotheses linking migration and fertility, we not only offer a fresh perspective

on the dynamics of immigrant fertility but also highlight the nuanced ways in which cultural and social norms interact with institutional and policy contexts. Our findings underscore the significance of considering the effect of both origin and destination when examining fertility patterns among immigrant populations. Our results indicate a probable strong *origin effect*, as seen in the case of African women exhibiting higher fertility than natives across all destinations. However, the results also suggest that when women immigrate to a context where fertility norms are different from those of their origin, they are likely to adjust their behaviors accordingly, indicating that policy and normative context play an important role in shaping immigrant fertility. It would not have been possible to reach the same conclusion regarding *destination effect* if we had used a single-destination approach.

From a policy standpoint, this finding is significant, as it implies that exposure to various specific normative contexts in destination areas may have diverse effects on migrant fertility. An example of this is immigrant women from Eastern Europe having lower fertility than natives at all destinations but comparably higher fertility in Anglo-Saxon countries than in Mediterranean ones, following the destination norms. However, in this respect, we could not rule out the possible selection effect of migrants, although migration to both these groups of countries is driven from Poland and Romania, we in fact know that the reason for migration in the Italian context is often linked to work, while in the UK there is also a predominant inflow for family reasons.

Community effects emerged as a pivotal factor in understanding variations in immigrant fertility patterns, with specific interrelations between origin and destination playing a discernible role. For instance, Asian women, across most destinations, exhibit lower fertility rates than native populations. Yet, this general trend reverses in Southern Europe. This is not new, and previous studies have indicated that Chinese women who migrate to Italy display a higher fertility rate, deviating from the normative trends observed in both their origin and other destinations (Mussino et al., 2009). This could be attributed to specific community support structures, social networks, or cultural exchanges that are more pronounced in Southern Europe for Asian communities.

Similarly, immigrants from non-EU28 countries, particularly in Germany and Belgium, manifest a noticeable rise in fertility rates. A significant contributor to this pattern can be traced back to the sizable and stable community of Turkish immigrants in these nations. Turkish communities in Germany and Belgium have a long-standing history, and over time, have developed robust community networks, which could influence social norms and fertility behaviors. The prominence of community centers, cultural events, and social institutions within these communities might serve as platforms that reinforce traditional norms or provide support systems that favor larger families. Such distinct fertility patterns underscore the importance of examining also the community dynamics. It suggests that while overarching policies and socio-economic factors are influential, the microcosm of individual communities and their interplay with larger societal structures have a profound impact on fertility choices and trends.

In general, our work contributes to the literature on fertility behaviors of immigrants from a comparative perspective, which is still in its first stages given the unavailability of longitudinal data including measures on both geographical origin and fertility in different countries. We argue that using cross-sectional data, like we have in our paper, serves as a first step toward studying the fertility of immigrants from multiple origins in multiple destination countries, although it comes with some limitations. For instance, we could not exploit time-varying information on migration and fertility, or on other relevant variables related to union history and occupational careers. In this respect, moreover, we could not measure the exact fertility of immigrants in the country of destination. The own-children method used in this paper — combined with an empirical strategy focusing on a relatively young sample of women — allows for an approximation of the total contribution of immigrants' fertility to the host population, but can still underestimate a total number of children due to parental separation and/or migration. In addition, cross-sectional data make it difficult to control for the selectivity of migrants, especially according to those unobserved characteristics (motivation, preferences, and family orientation) that might affect both migration and fertility behaviors (Chiswick, 1999). For these reasons, further research will benefit from the implementation of longitudinal surveys collecting information on migration and childbearing histories in comparative terms in order to provide new and more comprehensive evidence on the fertility of immigrants from multiple origins in multiple destinations.

These data should also offer more detailed information on country of origin, not least to more easily be able to differentiate between community and compositional effects, which is a rich area for future research. However, there are currently no large-scale comparative data with information on the exact country of origin, making the EU-LFS the most suitable survey for our purposes. With that said, we highly recommend two minor revisions to the EU-LFS that could provide significant improvements at a small cost. First, we suggest that individual countries include information about the parity of adults; although the survey primarily focuses on the labor market, this information is vital for studying work-life balance, which is an important aspect of labor market attachment. Second, during the harmonization phase, we recommend retaining more detailed information on the country of birth of migrants, as this should be feasible for most destination countries.

Despite the abovementioned limitations, by indicating different fertility patterns among immigrants from multiple origins in multiple destination countries, our findings contribute to strengthening the role of destination in shaping fertility behaviors (Milewski, 2007). This snapshot of the European panorama can serve as a reminder of the importance of looking at all the possible combinations of migrants coming from and going to different fertility regimes, as most literature still focuses on multiple origins in a single destination country, and the fertility at the destination is usually comparably lower than that in the immigrants' origin country (Milewski & Mussino, 2019; Lindström et al., 2022). This research note, simultaneously looking at several origins and destinations that reflect several combinations of fertility norms, offers a broader picture of a phenomenon that can stimulate further research and particularly should encourage the inclusion of the community perspective in order to understand in general the demographic behaviors of populations of migrant background.

Appendix

Table 2 Main countries of origin of migrant groups in each destination

	Belgium	Germany	France	Netherlands	Spain	Italy	Ireland	UK
Western Europe (EU15)	1) France 2) Netherlands 3) Italy	1) Italy 2) Greece 3) Austria	1) Portugal 2) Italy 3) Spain	1) Germany 2) Belgium 3) UK	1) UK 2) France 3) Germany	1) Germany 2) France 3) UK	1) UK	1) Ireland 2) Germany 3) Italy
Eastern Europe (EU)	1) Romania 2) Poland 3) Bulgaria	1) Poland 2) Romania 3) Bulgaria	1) Romania 2) Poland 3) Bulgaria	1) Poland 2) Bulgaria 3) Romania	1) Romania 2) Bulgaria 3) Poland	1) Romania 2) Poland 3) Bulgaria	1) Poland 2) Romania 3) Lithuania	1) Poland 2) Romania 3) Lithuania
Outside EU28	1) Turkey 2) Soviet Union 3) Yugoslavia	1) Turkey 2) Yugoslavia 3) Soviet Union	1) Turkey	1) Turkey 2) Yugoslavia 3) Soviet Union	1) Ukraine 2) Russia 3) Switzerland	1) Albania 2) Ukraine 3) Switzerland	1) Russia 2) Ukraine 3) Moldova	No data
North America/Oceania	1) USA 2) Canada 3) Australia	1) USA 2) Australia and Oceania	1) USA 2) Canada 3) Australia	1) USA 2) Australia 3) Canada	1) USA	1) USA 2) Canada 3) Australia	1) USA	1) USA 2) Australia
North Africa	1) Morocco 2) Algeria 3) Tunisia	No data	1) Algeria 2) Morocco 3) Tunisia	1) Morocco 2) Egypt	1) Morocco 2) Algeria 3) Egypt	1) Morocco 2) Egypt 3) Tunisia	No data	No data
South-Central Africa	1) DR Congo 2) Cameroon 3) Eq. Guinea	1) Nigeria 2) Eritrea 3) Ghana	1) Ivory Coast 2) DR Congo 3) Congo	1) Somalia 2) Ghana 3) Ethiopia	1) Senegal 2) Gambia* 3) Ethiopia*	1) Nigeria 2) Senegal 3) Ghana	No data	1) South Africa 2) Nigeria 3) Kenya
Near and Middle East	1) Syria 2) Iraq 3) Iran	1) Syria 2) Iraq	No data	1) Syria 2) Iraq 3) Iran	No data	1) Iran 2) Georgia 3) Syria	No data	No data
Latin America	1) Brazil 2) Colombia 3) Ecuador	No data	1) Haiti 2) Brazil 3) Colombia	1) Suriname 2) Antilles 3) Brazil	1) Ecuador 2) Colombia 3) Argentina	1) Brazil 2) Peru 3) Ecuador	1) Brazil 2) Venezuela	No data
East Asia	1) China 2) Japan 3) S Korea	1) China	1) China 2) Japan	1) China 2) S Korea 3) Japan	1) China	1) China 2) Japan 3) S Korea	No data	1) China

Table 2 (continued)

	Belgium	Germany	France	Netherlands	Spain	Italy	Ireland	UK
South-Southeast Asia	1) India 2) Afghanistan 3) Pakistan	1) Afghanistan 2) India	1) Vietnam 2) Sri Lanka 3) Cambodia	1) Indonesia 2) India 3) Afghanistan	1) Pakistan 2) Philippines 3) India	1) India 2) Philippines 3) Bangladesh	1) India	1) India 2) Pakistan 3) Bangladesh

All the data from 2018 except Germany (2020) and Ireland (2016). For some countries that appear to only report large groups, there is only one country rather than the top three. China includes Hong Kong and Macao

* Refers to 2007

Table 3 Descriptive statistics of the sample by origin and destination

	Number of children	Age	Lower sec	Upper sec	Tertiary	ISCO-08 8–9	Unemployed or inactive	Married
Belgium								
Natives	1.08 (1.16)	35.00 (5.61)	14.97	37.69	47.34	8.68	19.23	50.23
Western Europe (EU15)	1.04 (1.18)	35.53 (5.52)	20.49	30.27	49.23	8.83	28.09	51.39
Eastern Europe (EU)	0.92 (1.01)	34.08 (5.35)	23.13	37.11	39.76	26.96	33.79	61.70
Outside EU28	1.66 (1.36)	34.88 (5.45)	48.51	26.82	24.67	15.50	61.03	76.07
North America/Oceania	1.07 (1.25)	35.15 (5.54)	5.85	16.00	78.15	0.93	39.38	60.00
North Africa	1.97 (1.57)	34.77 (5.48)	56.24	27.09	16.67	12.37	70.81	81.41
South-Central Africa	1.40 (1.45)	34.62 (5.50)	34.04	35.34	30.62	12.64	50.83	49.04
Near and Middle East	1.44 (1.40)	34.21 (5.59)	32.22	28.21	39.57	6.68	68.78	68.61
Latin America	1.00 (1.15)	34.85 (5.33)	26.56	34.23	39.21	21.43	42.06	60.71
East Asia	0.83 (1.01)	34.86 (5.32)	13.24	25.94	60.83	4.27	43.45	62.97
South-Southeast Asia	1.19 (1.25)	34.39 (5.46)	38.15	30.04	31.82	15.88	48.26	71.07
Germany								
Natives	0.94 (1.02)	34.97 (5.67)	10.63	61.77	27.60	6.40	21.27	52.07
Western Europe (EU15)	1.06 (1.09)	35.40 (5.58)	28.03	35.10	36.88	12.06	30.29	61.04
Eastern Europe (EU)	0.96 (1.00)	34.37 (5.35)	20.89	50.55	28.56	19.55	35.43	63.47
Outside EU28	1.63 (1.23)	35.10 (5.43)	56.82	27.44	15.73	19.05	54.78	82.44
North America/Oceania	0.95 (1.17)	34.72 (5.47)	14.26	26.53	59.21	5.23	38.27	67.33
North Africa	1.70 (1.38)	33.73 (5.25)	47.83	28.60	23.58	8.19	77.59	86.62
South-Central Africa	1.45 (1.30)	34.38 (5.42)	52.59	34.32	13.09	20.69	58.81	52.90
Near and Middle East	1.71 (1.45)	33.83 (5.26)	45.64	27.31	27.05	9.45	71.28	77.96
Latin America	0.88 (0.96)	35.09 (5.31)	29.71	30.80	39.49	10.96	52.01	71.30
East Asia	0.60 (0.82)	33.36 (5.27)	10.13	26.35	63.52	2.40	54.42	63.18
South-Southeast Asia	1.26 (1.15)	35.03 (5.46)	54.36	25.83	19.81	16.27	54.02	79.96

Table 3 (continued)

	Number of children	Age	Lower sec	Upper sec	Tertiary	ISCO-08 8–9	Unemployed or inactive	Married
France								
Natives	1.33 (1.13)	35.04 (5.58)	18.35	42.09	39.56	9.82	23.14	45.46
Western Europe (EU15)	1.39 (1.10)	36.68 (5.35)	33.86	31.49	34.65	18.95	28.96	60.81
Eastern Europe (EU)	1.03 (1.00)	33.79 (5.36)	17.00	31.09	51.91	13.91	40.64	63.45
Outside EU28	1.89 (1.25)	34.77 (5.43)	50.54	26.34	23.12	10.56	62.67	79.49
North America/Oceania	0.99 (1.11)	34.22 (5.55)	12.31	24.12	63.57	5.78	34.42	43.47
North Africa	1.83 (1.42)	35.29 (5.52)	47.71	27.74	24.55	11.38	59.82	74.59
South-Central Africa	1.79 (1.50)	34.65 (5.42)	44.94	31.20	23.86	18.59	45.06	49.30
Near and Middle East	1.45 (1.19)	35.04 (5.45)	17.45	27.20	55.35	6.57	48.22	69.61
Latin America	1.60 (1.55)	35.08 (5.40)	44.38	24.03	31.60	14.24	53.89	47.01
East Asia	0.78 (0.96)	33.72 (5.47)	20.13	17.16	62.71	4.79	48.52	58.91
South-Southeast Asia	1.55 (1.25)	35.17 (5.41)	40.83	28.24	30.93	12.96	50.49	71.70
Netherlands								
Natives	1.36 (1.15)	35.41 (5.53)	17.49	46.33	36.19	5.01	16.43	60.58
Western Europe (EU15)	1.24 (1.08)	35.69 (5.31)	14.25	45.37	40.38	6.00	19.79	58.04
Eastern Europe (EU)	1.01 (0.94)	34.11 (5.27)	17.67	47.81	34.52	13.97	31.03	59.25
Outside EU28	1.66 (1.38)	35.23 (5.25)	43.50	38.06	18.44	15.27	48.95	76.07
North America/Oceania	1.28 (1.20)	36.35 (5.27)	12.46	37.89	49.65	4.16	26.47	61.42
North Africa	2.28 (1.38)	34.63 (5.28)	54.39	33.18	12.43	12.87	60.67	81.99
South-Central Africa	1.64 (1.31)	34.95 (5.47)	37.45	40.99	21.56	12.64	46.73	47.95
Near and Middle East	1.57 (1.19)	34.66 (5.52)	24.22	40.08	35.70	4.38	61.32	68.98
Latin America	1.36 (1.10)	35.74 (5.33)	28.75	46.71	24.53	9.78	30.84	44.33
East Asia	1.13 (1.01)	34.84 (5.40)	20.86	33.12	46.02	7.01	28.98	62.58

Table 3 (continued)

	Number of children	Age	Lower sec	Upper sec	Tertiary	ISCO-08 8–9	Unemployed or inactive	Married
South-Southeast Asia	1.34 (1.18)	34.82 (5.38)	30.83	40.75	28.42	15.75	42.15	71.89
Spain								
Natives	0.97 (0.96)	35.25 (5.57)	35.15	21.45	43.40	9.78	34.92	57.38
Western Europe (EU15)	1.08 (0.96)	36.40 (5.02)	32.71	25.63	41.66	9.77	37.67	58.13
Eastern Europe (EU)	0.89 (0.88)	33.79 (5.44)	29.43	48.21	22.37	34.27	38.73	66.24
Outside EU28	0.85 (0.85)	34.82 (5.23)	18.05	29.68	52.27	19.16	35.50	60.03
North America/Oceania	1.10 (1.12)	36.68 (5.30)	11.97	14.79	73.24	1.41	29.58	64.08
North Africa	1.81 (1.35)	34.16 (5.50)	73.80	17.70	8.50	14.79	73.13	83.56
South-Central Africa	1.61 (1.35)	34.22 (5.29)	58.59	24.84	16.56	17.50	58.91	72.50
Near and Middle East	1.51 (1.29)	34.19 (5.84)	10.74	28.93	60.33	20.66	46.29	80.17
Latin America	1.05 (1.03)	34.75 (5.41)	34.11	38.15	27.75	29.69	32.69	54.44
East Asia	1.34 (1.08)	34.71 (5.81)	58.04	21.96	20.00	3.53	21.57	81.18
South-Southeast Asia	1.33 (1.36)	34.90 (5.60)	48.24	28.53	23.24	22.06	52.94	77.94
Italy								
Natives	1.00 (1.00)	35.57 (5.50)	32.13	46.75	21.13	6.69	40.17	58.91
Western Europe (EU15)	1.20 (1.03)	36.26 (5.18)	35.95	42.59	21.47	6.81	48.59	64.29
Eastern Europe (EU)	0.84 (0.90)	34.54 (5.34)	27.55	59.65	12.80	26.12	40.67	59.58
Outside EU28	1.22 (1.00)	35.28 (5.41)	41.96	42.24	15.80	20.17	49.76	71.73
North America/Oceania	1.23 (1.04)	37.22 (4.92)	24.75	48.49	26.76	5.82	47.13	70.26
North Africa	1.82 (1.23)	34.41 (5.36)	64.85	26.12	9.03	12.33	75.66	85.03
South-Central Africa	1.38 (1.21)	35.28 (5.23)	62.04	30.37	7.60	25.17	51.91	69.86
Near and Middle East	1.15 (1.10)	35.60 (5.43)	15.95	42.35	41.70	10.99	51.19	63.25
Latin America	1.01 (0.98)	35.36 (5.34)	35.95	48.12	15.93	23.83	41.52	56.73

Table 3 (continued)

	Number of children	Age	Lower sec	Upper sec	Tertiary	ISCO-08 8–9	Unemployed or inactive	Married
East Asia	1.26 (1.04)	35.07 (5.14)	72.31	16.41	11.28	15.09	38.81	71.22
South-Southeast Asia	1.36 (1.12)	34.47 (5.39)	57.54	31.75	10.72	28.00	60.19	83.63
Ireland								
Natives	1.35 (1.31)	34.95 (5.52)	15.62	37.34	47.05	4.31	30.30	53.22
Western Europe (EU15)	1.40 (1.34)	36.19 (5.37)	15.66	30.17	54.17	3.90	35.18	55.08
Eastern Europe (EU)	0.99 (1.03)	31.94 (4.82)	14.67	39.65	45.69	19.06	32.63	54.23
Outside EU28	1.03 (1.03)	34.09 (5.01)	10.89	23.14	65.97	7.54	48.20	72.86
North America/Oceania	1.27 (1.16)	35.39 (5.47)	4.15	17.03	78.82	1.66	32.47	62.03
North Africa	2.11 (1.54)	34.85 (5.03)	20.50	26.81	52.68	1.89	78.23	85.80
South-Central Africa	2.22 (1.52)	35.48 (5.01)	15.73	33.74	50.54	4.07	54.73	64.97
Near and Middle East	1.76 (1.31)	35.27 (5.25)	9.45	20.62	69.93	4.81	67.69	73.88
Latin America	0.75 (1.08)	32.33 (4.99)	13.50	28.22	58.28	10.83	42.74	49.55
East Asia	0.80 (0.99)	33.17 (5.41)	7.72	27.80	64.48	6.93	43.25	60.49
South-Southeast Asia	1.38 (1.16)	34.51 (5.13)	8.88	13.16	77.96	3.15	33.76	84.76
UK								
Natives	1.24 (1.14)	35.19 (5.59)	23.47	38.62	37.92	5.60	23.94	49.53
Western Europe (EU15)	1.03 (1.13)	34.74 (5.39)	11.73	34.24	54.02	5.44	24.91	47.55
Eastern Europe (EU)	0.91 (0.97)	32.27 (5.04)	16.61	48.09	35.30	28.16	25.45	52.64
Outside EU28	1.29 (1.09)	34.50 (5.46)	24.31	33.40	42.30	4.78	49.67	67.08
North America/Oceania	0.88 (1.08)	34.55 (5.51)	6.38	31.12	62.49	1.78	24.62	58.87
North Africa	1.88 (1.35)	35.23 (5.19)	17.88	38.32	43.80	1.82	71.16	79.20
South-Central Africa	1.53 (1.36)	35.06 (5.37)	20.26	36.95	42.79	5.67	37.20	53.11
Near and Middle East	1.62 (1.43)	34.25 (5.27)	23.48	31.47	45.05	1.90	66.37	72.21

Table 3 (continued)

	Number of children	Age	Lower sec	Upper sec	Tertiary	ISCO-08 8–9	Unemployed or inactive	Married
Latin America	1.13 (1.09)	34.79 (5.48)	17.44	38.47	44.09	9.89	34.40	54.84
East Asia	0.85 (1.00)	34.49 (5.55)	13.32	30.41	56.27	4.73	41.60	65.93
South-Southeast Asia	1.68 (1.38)	34.45 (5.26)	30.29	33.87	35.84	7.11	52.42	83.70

Source: EU-LFS (2005–2015)

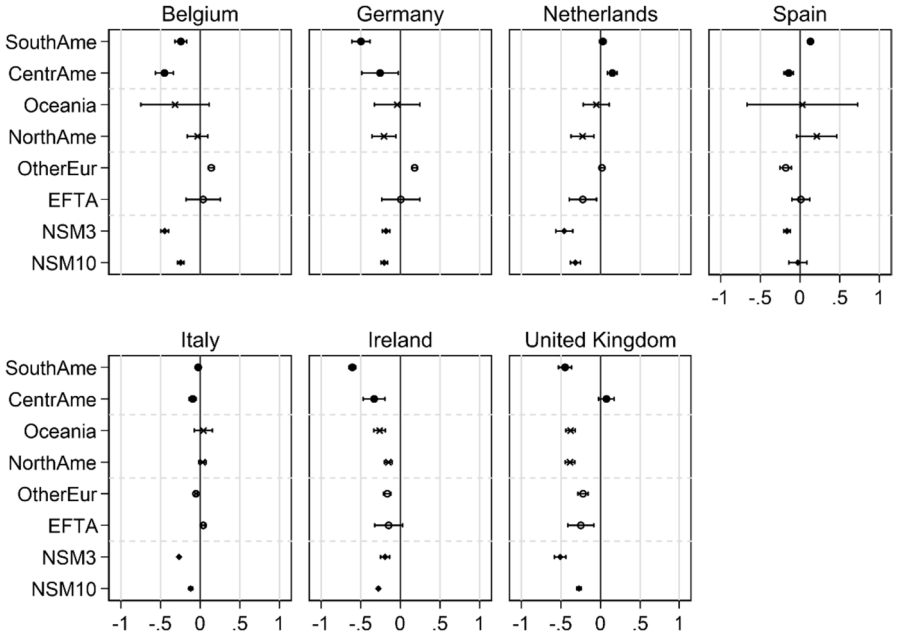

Fig. 2 Differences between migrants and natives in predicted number of children, by origin and destination. OLS model. Controls: educational attainment, employment condition, marital status, age, year of survey. Source: EU-LFS (2005–2015). Notes: Results for other origins are included in the model but are not presented. France is excluded from the analysis because this level of detail on geographical origin is not available in the data for this country

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Data Availability The data that support our findings are available from EUROSTAT. Restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available.

Declarations

Conflict of Interest The authors declare no competing interests.

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