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Comparison of short-term fertility intentions of albanian women in Italy with non-migrants in Albania and italian women

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Abstract
The central aim of this paper is to get a deeper understanding of short-term fertility intentions of native, migrant and non-migrant partnered women by testing for adaptation, socialization and selection theories while applying an origin-destination perspective. To find support for these hypotheses, data was drawn from several sources (FSS and SCIF for Italy, DHS for Albania), harmonized and merged into a unique dataset combining information on partnered women according to their migrant/non-migrant status. Binary regression models on positive fertility intentions, Average Marginal Effects, Adjusted Predictions for Prototypical Cases and multivariate non-linear decompositions are estimated to account for differences and/or similarities across groups of women. Results found that positive fertility intentions of Albanian migrant women resemble those of Italian women and are significantly lower than those of non-migrants, supporting adaptation theory. Findings also reported selection into migration, given that the gap in likelihood of being intended to have a child would be reduced if migrants were like non-migrants in terms of their educational attainment.

Keywords (4–6): fertility intentions · Data linkage · Migrant women · Multivariate nonlinear decomposition · Italy · Albania

1 Introduction

It is well known that international migration influences fertility at the individual level. Most literature on migrant fertility in Europe has been focused on comparing migrants from different origins – among them or with natives – to test for one or several of the

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main theoretical perspectives explaining variations in their fertility behaviours, that is, socialisation, adaptation, selection, disruption and interrelation of events (De Valk et al. 2004; De Valk and Liefbroer 2007; Kulu and González-Ferrer 2014; Kleinepier et al. 2015; Robards and Berrington 2016; Kulu et al. 2019). Despite its recent development, some downsides of research on this subject still persist (Puur et al. 2018). On the one hand, the heterogeneity in the reproductive choices of migrants, natives and non-migrants has not been sufficiently addressed. On the other, whether and how fertility preferences and intentions differ according to the migrant/non-migrant status, compared to fertility outcomes, has been understudied. Gaining a deeper knowledge of fertility intentions remains essential to enrich knowledge on migration and fertility, especially when considering that certain fertility intentions have been identified as good predictors of future fertility outcomes (Schoen et al. 1999; Toulemon and Testa 2005; Meggiolaro 2010; Fahlén and Oláh 2018).

Most research developing the origin–destination perspective (including non-migrants, also referred to as stayers) has been focused on fertility behaviour (Lübke 2015; Baykara-Krumme and Milewski 2017; Wolf and Mulder 2019; Impicciatore et al. 2020; Tønnessen and Mussino 2020; Lindström et al. 2022; Mussino and Cantalini 2022). Recently, there has been an increasing interest in migrants' fertility intentions (Kraus and Castro-Martín 2018; Carlsson 2018; Mussino et al. 2021; Alderotti and Trappolini 2022; Alderotti et al. 2022; García-Pereiro et al. 2023). However, to the best of our knowledge, only the research conducted by Puur et al. (2018) has developed an origin–destination perspective on fertility intentions, examining its relationship with views on gender roles among Russian migrants to Estonia, their descendants and women in the sending and host countries.

The scarcity of research directly relates to data limitations (Wolf and Mulder 2019), given that survey data on migrants is mainly collected in destination countries (not including information on non-migrants living in origin countries). A way to overcome this data limitation issue is to develop studies aimed at harmonising and merging survey microdata derived from different sources that collect information on several groups living in diverse settings (such as origin and destination countries).

This paper aims to fill this gap while disentangling and quantifying the influence of adaptation, socialisation and selection theories on the short-term fertility intentions of Albanian women living in Italy (hereinafter: Albanian migrants), Italian women (hereinafter: Italian natives) and Albanian women living in Albania (hereinafter: Albanian non-migrants). The focus on women coming and originating from Albania is threefold. First, Albanians are one of the most numerous migrant groups in Italy (Mussino and Strozza 2012b; Strozza and De Santis 2017; Gabrielli et al. 2019). Official figures from The Italian National Institute of Statistics (ISTAT, hereinafter) registered 423,212 Albanian residents in Italy in 2019, accounting for 8.5% of the total foreign residents and ranking second among all countries represented (after Romania). Second, fertility behaviours tend to diverge between migrants from this population group and natives (Mussino and Strozza 2012a; Impicciatore et al. 2020; Mussino et al. 2021). Third, and most important, microdata from several surveys that account for similar information about fertility intentions and their main determinants was available, allowing us to distinguish among these groups of women (migrants, natives and non-migrants).

One of the main contributions of our study is methodological and stems from the application of nonlinear multivariate decomposition techniques to test for the selection theory by directly comparing migrants' to non-migrants' likelihoods of intending to have a child, a subject that remains significantly understudied despite the recent interest in migrants' fertility-related behaviours. This method allows us to unravel any observed gaps in fertility intentions between Albanian migrants and non-migrants in two different components, one in which a certain amount of the gap is explained by differences in their individual characteristics, and the other that explains this gap through the effect that those characteristics might have had on their fertility intentions. However, this is not the only contribution stemming from the application of this technique, which we strongly believe to be the most relevant and novel added value of this article to advancing the knowledge of studies on migrants' fertility. In fact, we embrace a more comprehensive origin–destination perspective that compares different women and their fertility intentions in diverse settings, but we also go beyond previous efforts by including non-migrant women who are living in the country of origin. This became feasible once we engaged in work to harmonise and merge datasets coming from several sources.

The remainder of the paper is organised as follows. Section 2 presents the theoretical perspectives on fertility and migration, research hypotheses and some background on Albanian migration to Italy. In Sect. 3, we describe the data, variables and multivariate techniques applied. Section 4 presents the results of empirical analyses divided in two subsections: the first compares the fertility intentions of natives, migrants and non-migrants, and examines differences in the main determinants of positive fertility intentions among these groups of women; the second decomposes the observed migrant–non-migrant difference in positive fertility intentions. Section 5 is dedicated to the discussion of our results and main conclusions.

2 Theoretical perspectives, research hypotheses and background

Among the theories developing explanations for migrants' fertility, we address the *adaptation* and *socialisation* perspectives, observing differences between Albanian migrants, Italian natives and Albanian non-migrants; but we also account for the *selectivity* of migrants, testing for differences between migrants and non-migrants[1].

Our research hypotheses were built, firstly, around these three theoretical perspectives (*adaptation, socialisation* and *selection*, in this order), and, secondly, around

[1] We are completely aware of the importance of the *disruption* approach, according to which migration may temporarily diminish fertility and reduce the willingness to have children (Kulu 2005), and the *interrelation of events*, according to which women tend to have a higher likelihood of becoming mothers during the first years after migration (Milewski 2007; Mussino and Strozza 2012b). To examine their influence, it is necessary to disaggregate migrants according to the length of their stay. Unfortunately, we are not able to test for this due to the significant reduction of the sample resulting from such disaggregation. However, we expect that this will not bias our results, given that previous research has not found evidence supporting the disruption of Albanian migrants' fertility intentions (García-Pereiro and Paterno 2022).

available information on the reproductive behaviours[2] of natives and migrants in Italy and non-migrants in Albania, due to the lack of literature on fertility intentions disaggregated by migrant/non-migrant status in these settings. In this regard, the literature has reported that fertility intentions are good predictors of future fertility behaviours (Schoen et al. 1999; Testa and Toulemon 2006; Dommermuth et al. 2011; Mencarini et al. 2015). This is especially true when considering short-term (2–3 years) rather than long-term predictions and certain rather than plausible intentions (Schoen et al. 1999; Philipov 2009). However, certain individuals (young, already having one child, and engaged in a stable partnership) seem to be more likely to realise their intentions than others (Spéder and Kapitány 2015). Our analytic approach assumes that there exists an interdependence and interrelation of events among migration, union formation and fertility during the life course (Mulder and Wagner 1993; Milewski 2007).

Undoubtedly, reproductive choices and plans are embedded in a broader context of migration and settlement that must also be taken into account when analysing the fertility intentions of Albanian women in Italy. The massive emigration of Albanians after the downfall of the communist regime in the early 1990s, defined as "The Great Albanian Exodus", has been the most numerous case of recent east–west migration in Europe (Vullnetari 2007). According to the estimations of the Albanian Institute of Statistics (INSTAT), around 1.4 million Albanians were living abroad, representing nearly 25% of the total population of the country.

Albanian emigration has had some features that deserve to be highlighted (Carletto et al. 2006; Cela et al. 2022). First, Albanians emigrated mostly to two neighbouring countries, Greece and Italy. Second, emigration continued during the first decade of the 2000s but at a slower pace, while the countries of destination expanded across Europe and beyond. Third, the migratory project was originally male-dominated, men heading the migration project (pioneers) and women following them at a second moment (family reunification).

As stated by Abbasi-Shavazi and McDonald (2002), rigorous testing of the hypotheses linked to these theoretical backgrounds would be preferable. However, this is rarely possible, not only because of data limitations but also due to the elevated complexity of such interrelated events, especially when adopting an origin–destination perspective.

In spite of the former, some inferences can be drawn when the direction and magnitude of fertility intentions observed across groups are consistent not only with those of one of the theories under examination (adaptation, socialisation and selection) but also with fertility behaviours and women's characteristics in the destination and origin countries, accordingly.

For the adaptation perspective, the outcomes and reproductive choices of migrants in host countries tend to converge with those of natives over time (Kulu 2005; Gabri-

[2] As literature on fertility intentions and outcomes of Albanian migrants and non-migrants is still scarce, we also consider actual fertility behaviours of Albanians observed in Italy (host country) and in Albania (country of origin) as proxies of their future reproductive choices. For example, fertility behaviours are interpreted using the Total Fertility Rates (TFRs hereinafter) of Albanian women in Italy (migrants) and Albanian women in Albania (non-migrants). The TFR is a period synthetic fertility measure that indicates the average number of children a woman is expected to give birth to during her lifetime, taking into consideration current fertility rates.

elli et al. 2019). This process of convergence tends to be relatively quick, given that migrants are exposed to the same economic, social and cultural context as the natives (Kahn 1988; Hotz et al. 1997). Thus, the reproductive choices of migrants in host countries may resemble those of natives in these countries and differ from those of non-migrants in origin countries.

In Italy, the Albanian nationality was the one registering the fastest growth during the 1990s (Bonifazi and Sabatino 2003). Several years later, in 2001, the proportion of Albanians among the total migrant population was already around 12–13% (King and Mai 2002; Bonifazi 2007). An overlook on data on residence permits in Italy showed that Albania was listed as the non-EU country with the second highest number of citizens with a regular permit (after Morocco), representing 13.5% of all valid permits in the country by January 1st, 2012.

During the first years of the 2000s, the proportion of female Albanian migrants more than doubled due to one of the highest shares of family reunification ever registered. This balanced gender structure can be interpreted as an indicator of the higher propensity to settle that Albanian migrants have had compared to other migrant communities (Barbaja and King 2005). According to the most recent ISTAT data, females in 2019 represented 48.8% of all Albanian residents in Italy.

The structure of Albanian migration in this country has developed over time from male-headed to family-oriented (the typical Albanian household is pictured as a young married couple with children) and this, together with other important features, might also play a relevant role in explaining – at least partially – migrants' fertility intentions. Some reasons behind this could be related not only to the higher propensity of Albanians to settle permanently in Italy but also to their higher level of integration. In this sense, Cela et al. (2022), going beyond the demographic normalisation of this population, underpinned the Albanians' strategy, which comprises higher rates of acquisition of Italian citizenship and intermarriage with Italians, the lowest level of spatial segregation, and lower unemployment and irregular employment rates than other migrant counterparts.

Thus, to find support for this perspective, we expect that the fertility intentions of Albanian migrants will resemble those of Italian natives and, simultaneously, will be lower than those of Albanian non-migrants (*Research Hypothesis 1: Adaptation*), even after controlling for important determinants of fertility intentions already identified in the literature (Kraus and Castro-Martín 2018; Carlsson 2018; Mussino et al. 2021; Alderotti and Trappolini 2022).

For the second perspective, instead, it is the social and cultural environment experienced during childhood and the overall socialisation period that shapes future reproductive decisions (Andersson 2004; Kulu and Milewski 2007). According to the socialisation approach, norms and values experienced in origin countries will prevail over those experienced after migration and the fertility patterns of migrants resemble those of non-migrants in the country of origin (Kulu 2005).

In Albania, socioeconomic and political changes taking place since 1990 have framed the sharp decline in TFRs. This has been decreasing and, in 2011, reached 1.65 children per woman (Gjonca et al. 2008; Lerch 2013, 2015). Italy was the first country to reach the so-called "lowest-low" fertility (Billari and Kohler 2004) and, according to Italian Institute of Statistics (ISTAT), the TFR of Italian women in 2011

was 1.30, lower than the TFR of Albanian women. Moreover, this subpopulation is also contributing to fertility, having children while living in Italy: 11.8% of total foreign births in 2012 were registered as Albanian (10.8% in 2019), being the third nationality in the ranking after Romanian and Moroccan new births. Ranking women according to the level of the TFRs, the lowest value is registered among Italian natives, followed closely by Albanian migrants in Italy, and way less than Albanian non-migrants. Unfortunately, due to the scarcity of specialised literature, we were not able to collect information about fertility intentions in Albania and, consequently, we cannot advance any expectations in this regard.

All else being equal, to support socialisation, we expect that the fertility intentions of Albanian migrants will resemble those of non-migrants and differ from those of natives, being higher than those of Italian women (*Research Hypothesis 2: Socialisation*).

Given that migration is not a random event taking place in the life course of individuals, there are several characteristics that usually differentiate migrants from non-migrants. Thus, if migrants are a selected group, their fertility behaviour should be different from that of the population in the origin country (Milewski 2010; Wolf and Mulder 2019; Lindström et al. 2022). Migrants' selectivity can be expressed not only through a wide range of characteristics (level of education, age, family characteristics, etc.) but also through less evident features (such as cultural norms and values, aspirations, etc.) (Puur et al. 2018). In fact, differences in fertility behaviours may relate to the selectivity of migrants regarding their fertility intentions, which may resemble more those that are widespread in the host country instead of reflecting those prevalent in the country of origin. However, fertility differentials may also be triggered by socioeconomic and demographic differences between migrants at destination and non-migrants at origin, and these selected individuals may be more or less responsive to having children (Kahn 1988; Milewski 2010). Thus, comparisons between migrants in destination and non-migrants in origin places become significant only after controlling for the socioeconomic and demographic characteristics that distinguish these groups (Hervitz 1985; Baykara-Krumme and Milewski 2017). Albanian non-migrants have the highest likelihood of having a first child (Impicciatore et al. 2020), this despite the reduction experienced in the TFRs in Albania, which has diminished, reaching figures that are closer to those registered in Italy (Mussino and Strozza 2012a). Thus, if Albanian migrants are a distinct group, we expect them to have lower positive fertility intentions compared with Albanian non-migrants, even after controlling for their individual characteristics (*Research Hypothesis 3: Selection*). Unfortunately, due to data limitations, we are not able to compare groups according to their pre-migration characteristics and, accordingly, we focus our attention on testing the educational component, given that most migrants already achieved their highest educational attainment before leaving the country of origin.

In summary, there is some degree of interrelation among our research hypotheses. Some pairs of hypotheses are mutually exclusive, meaning that finding support for one of them immediately discharges finding support for the other; while other pairs are not, being possible to find support for two hypotheses simultaneously. The Adaptation *(Research Hypothesis 1)* and Socialisation *(Research Hypothesis 2)*, and Socialisation *(Research Hypothesis 2)* and Selection *(Research Hypothesis 3)* apper-

tain to the first group. Instead, Adaptation *(Research Hypothesis 1)* and Selection *(Research Hypothesis 3)* appertain to the second. In fact, the group of migrants – even if different in terms of composition – may show fertility intentions that are similar to those of natives in the host country.

3 Data, methods and empirical strategy

In order to count on the information regarding natives, migrants, and non-migrants, and be able to apply an origin–destination perspective, data were drawn from three different sources. Data on Italian natives were selected from the last available Families, Social Subjects and Life Cycle (FSS) Survey conducted in 2016 by ISTAT. It was not possible to obtain from this source a sample of migrants sufficient to estimate multivariate analyses. Then, data on Albanian migrants were drawn from the Social Condition and Integration of Foreign Citizens (SCIF), again carried out by ISTAT in 2011–2012. Finally, data on Albanian non-migrants were drawn from the last available Demographic and Health Survey (DHS) conducted in 2017–2018 by the Albanian Institute of Statistics (INSTAT). The merging of data was feasible given that information regarding short-term fertility intentions and their main determinants were available in all the data sources considered, allowing for comparable information to be harmonised[3] in a single dataset that included two new variables to identify the source (FSS, SCIF, DHS) and the migrant/non-migrant status (native, migrant and non-migrant). The final sample (n = 7,743, divided as follows according to the source FSS = 1,680; SCIF = 478; DHS = 5,585) was limited to women aged 18–44 living with their partner. The first sample restriction (women only) is due to data limitations of the Albanian DHS sample, which did not include males. The second, instead, is aimed at avoiding biased results, given that, on the one hand, fertility intentions are good predictors of reproductive behaviours only if embedded in a life course project and, therefore, the short-term fertility intentions of single women may be much lower than those of partnered women; on the other, that migrant women can be affected by the geographical separation of the couple. Models and decomposition estimates were computed including only harmonised variables.

Information on women's intentions to have a child within the next three years – following the survey – were harmonised and recoded into three categories that reflect how it was collected in the Albanian DHS Survey: intending to have another child (including a first child), undecided, and not intending to have more children. Our dependent variable in the empirical analyses is binary and identifies positive fertility intentions (intending to have another child vs. undecided, and not intending).

The main independent variable of interest gives information on the migrant/non-migrant status, allowing us to group partnered women as Italian natives, Albanian migrants and Albanian non-migrants. A descriptive overview of the total final sam-

[3] We merged microdata from different sources. This merging process was possible only after performing a time consuming and delicate procedure of harmonisation in which variables must be easy to use for comparisons across time and space. This requires that we provide the lowest common denominator of detail that is fully comparable across sources, and this implies that the complexity increases when not only the number of sources but also the diversity of information increases.

ple, considering independent variables included in model estimations by women's intention to have a child, is shown in Table 1.

We fully recognise that there might be other factors at play while trying to better understand the relationship between women's migratory background and their fertility intentions. Thus, we also presented supplementary descriptive statistics (Appendix Table A) on how age, parity, employment status, and educational attainment differ by women's migrant/non-migrant status (migrants, natives and non-migrants). Albanian migrants are the youngest group of women and Italian natives are the oldest. Albanian non-migrants are those with the highest parity levels (in terms of the number of children), while these figures are pretty much the same between Albanian migrants and Italian natives. Regarding employment, differences between migrants and non-migrants are almost negligible and, therefore, both groups differ significantly from natives, who display the highest employment share. Interestingly, a clear ranking emerges when observing the proportion of women with tertiary education: the lowest

Table 1 Descriptive overview of the sample by independent variables included in multivariate analyses (percentage distribution)

Independent variables	Intending to have a child	Undecided/ Not intending
Migrant/non-migrant status		
Italian native	7.64	25.81
	(92.02)	(7.98)
Albanian migrant	4.96	6.53
	(81.80)	(18.20)
Albanian non-migrant	87.40	67.66
	(72.55)	(27.45)
Age groups		
18–24	29.30	3.42
25–29	33.12	10.67
30–34	23.32	18.95
35–39	10.43	25.10
40–45	3.82	41.86
Parity		
Childless	23.43	3.96
1	53.88	15.03
2+	22.69	81.02
Employment status		
Employed	35.86	43.65
Unemployed/other situation	64.14	56.35
Educational attainment		
Primary or less	38.71	41.09
Secondary	34.83	43.38
Tertiary	26.45	15.53
Source		
FSS	7.64	25.81
SCIF	4.96	6.53
DHS	87.40	67.66
N	*1,754*	*5,989*

Note: row percentages of the migratory background (main variable of interest) in parentheses

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

value is registered by Albanian migrants, followed by Albanian non-migrants and Italian natives.

The first step of the empirical strategy is aimed at quantifying and comparing the positive fertility intentions of women according to their migrant/non-migrant status as the main independent variable of interest, while controlling for other covariates already identified by the literature as important determinants of migrants' fertility intentions and still available after data harmonisation (Kraus and Castro-Martín 2018; Carlsson 2018; Puur et al. 2018; Mussino et al. 2021; Alderotti and Trappolini 2022), such as: age groups (18–24, 25–29, 30–34, 35–39, 40–45), parity (childless, 1, 2 and 3 or more), educational attainment (primary or less, secondary, tertiary) and labour market status (employed, unemployed and other situation: inactive, student, housewife).

For the interpretation of the results, we computed Adjusted Predictions for Prototypical Cases (APPCs, hereinafter), holding control variables at their mean values after computing binary logistic regression models on positive fertility intentions by migrant/non-migrant status. In this step, we recoded the categorical variables (age groups, parity, educational attainment and employment status) and introduced them in the model estimations as dummies (0 indicating the absence and 1 the presence of the corresponding attribute) in order to obtain meaningful mean values. This analysis was designed to test for the first two competing research hypotheses (RH1: *Adaptation* and RH2: *Socialisation*). Next, we estimated one binary logistic regression separately for each migrant/non-migrant status (native, migrant and non-migrant) to further disentangle the differences in the main determinants of positive fertility intentions across groups of women. This was done by presenting and comparing Average Marginal Effects (AMEs, hereinafter) across migrant/non-migrant statuses, which express the differences in the probability of intending to have a child in terms of percentage points (pp, hereinafter).

Several methodological studies have shown that the marginal effects tend not to suffer from rescaling problems and show no changes across models, suggesting these as comparable measures across different groups (Best and Wolf 2012; Williams and Jorgensen 2023). However, other authors have underpinned the importance of formally testing whether marginal effects significantly differ across models (Mize et al. 2019). We opted for testing the statistical significance of differences in AMEs by applying the method suggested by Schwiebert (2016) based on the estimation of a Generalized Method of Moments to test the equality of marginal effects across models[4].

Finally, having identified (through the first two steps) whether there is a significant difference in positive fertility intentions between Albanian migrants and non-migrants, we apply a multivariate nonlinear decomposition (an extension of the Oaxaca–Blinder decomposition method) to quantify the contributions of characteristics and effects to group differences in average predictions from the multivariate binary logistic regression models.

[4] We also fitted a single model with interactions between the migrant/non-migrant status (our independent variable of interest) and each independent variable – which has been considered a statistically equivalent approach to the former (Long and Mustillo 2021). Results are available upon request.

Traditionally, decomposition methods have been widely used to analyse group differences (i.e. wage gaps across gender) in econometric studies and underutilised in the demographic and sociological fields. This is despite the fact that these techniques have been proven to be extremely useful to analyse changes occurring in fertility levels across population subgroups (Shapiro and Tenikue 2017; Riederer and Buber-Ennser 2019; Bashir and Guzzo 2019; Zhou and Guo 2021). In our case, the application of a nonlinear multivariate decomposition to the study of migrants' fertility is essential to advance towards a more comprehensive knowledge on the subject because it allows us to accurately test for selection. More specifically, it provides great and unique insights regarding whether and how Albanian migrant and non-migrant women differ in their fertility intentions and which characteristics may help explain why these fertility intentions differ.

The nonlinear multivariate decomposition for logit models of Powers et al. (2011) was chosen because it delivers the detailed decomposition and standard errors for both components (characteristics and coefficients) and includes several methods to deal with certain issues and assumptions. The first is path dependency, which makes the decomposition sensitive to the order in which independent variables are entered, detailed decompositions losing their sensitivity after computing weights from a first-order Taylor linearisation (Yun 2004). The second concerns the need to estimate asymptotic standard errors to assess the sampling variability of the detailed characteristics and coefficients components, by applying the method of Yun (2005a), whereby interval estimation and significance tests are computed using expressions for the gradients of the detailed components regarding the estimates, along with the variance–covariance matrix of the estimates from each group under observation. Finally, when dealing with dummy variables, the sum of the detailed coefficients effects of these variables depends on the choice of the reference category (identification problem). This problem is resolved by normalising the intercept and coefficients of all the dummy variables included in the model, averaging estimates permuting the reference groups, and using them in conjunction with the augmented design matrix to perform the decomposition analysis (Yun 2005b). Compared to similar techniques, the decomposition of Powers et al. (2011) decomposes a difference into both components, allowing us to incorporate model weights and offsets, carry out a detailed decomposition and provide normalised solutions for the dummy variables.

The overall decomposition starts with the decomposition of a difference in the first moments, where our dependent variable (the intention to have a child) is a function of a logit combination of predictors and regression coefficients:

$$Y = F\left(\frac{e^{X\beta}}{1 + e^{X\beta}}\right)$$

where Y denotes the N × 1 dependent variable vector (Y = 1 for women intending to have a child), F (·) is a logit function drawing the combination of X (Xβ) to Y, X is an N × K matrix of independent variables (represented by 11 dummy variables), and β is a K ×1 vector of the respective coefficients. Then, the mean difference in having positive fertility intentions Y between the two groups of women M (Albanian

migrants – comparison group) and NM (Albanian non-migrants – reference group) can be decomposed as:

$$\overline{Y_M} - \overline{Y_{NM}} = \overline{F\left(\frac{e^{X_M\beta_M}}{1+e^{X_M\beta_M}}\right)} - \overline{F\left(\frac{e^{X_{NM}\beta_{NM}}}{1+e^{X_{NM}\beta_{NM}}}\right)}$$

$$\overline{Y_M} - \overline{Y_{NM}} = \underbrace{\overline{F\left(\frac{e^{X_M\beta_M}}{1+e^{X_M\beta_M}}\right)} - \overline{F\left(\frac{e^{X_{NM}\beta_M}}{1+e^{X_{NM}\beta_M}}\right)}}_{E} + \underbrace{\overline{F\left(\frac{e^{X_{NM}\beta_M}}{1+e^{X_{NM}\beta_M}}\right)} - \overline{F\left(\frac{e^{X_{NM}\beta_{NM}}}{1+e^{X_{NM}\beta_{NM}}}\right)}}_{C}$$

where E and C are components reflecting counterfactual comparisons. E is the part of the differential that can be attributed to differences in characteristics (explained component), i.e. the expected difference if Albanian migrants have had the distribution of covariates of Albanian non-migrants. C is the part attributable to differences in coefficients or effects (unexplained component), i.e. the expected difference if Albanian migrants have experienced the behavioural responses of Albanian non-migrants with respect to the coefficients of each independent variable considered.

This technique allows us to assess whether and to what extent individual characteristics (in our particular case the level of education) can account for the gap in positive fertility intentions between Albanian migrants and non-migrants. This twofold decomposition divides the observed gap into two components: one attributable to compositional differences between groups (differences in characteristics between migrants and non-migrants -E-), and the other attributable to differences in the effects of characteristics (differences in behavioural responses, that is to say, the way in which characteristics affect the likelihood of being engaged in a certain behaviour -C-) (Powers et al. 2011). By decomposing the effects, we are able not only to test for our third research hypothesis (RH3: *Selection*) but also to identify which will be the selection variable, i.e. the main variable responsible for observed differences between the positive fertility intentions of migrant and non-migrants.

4 Results

4.1 Comparing fertility intentions of natives, migrants and non-migrants to test adaptation or socialisation hypotheses

In this section, we focus our attention on the association between our main independent variable of interest, the migrant/non-migrant status, and positive short-term fertility intentions. This allows us to test for our first two research hypotheses (RH1: *Adaptation* and RH2: *Socialisation*), regarding the probability of intending to have another child among women with different migrant/non-migrant statuses.

In order to compare all women according to their migrant/non-migrant status, we computed adjusted predictions for prototypical cases (APPCs), holding the control variables at their mean values[5] as displayed in Fig. 1. Focusing on our hypotheses

[5] For the mean values of the independent and control variables, see Table C of the Appendix.

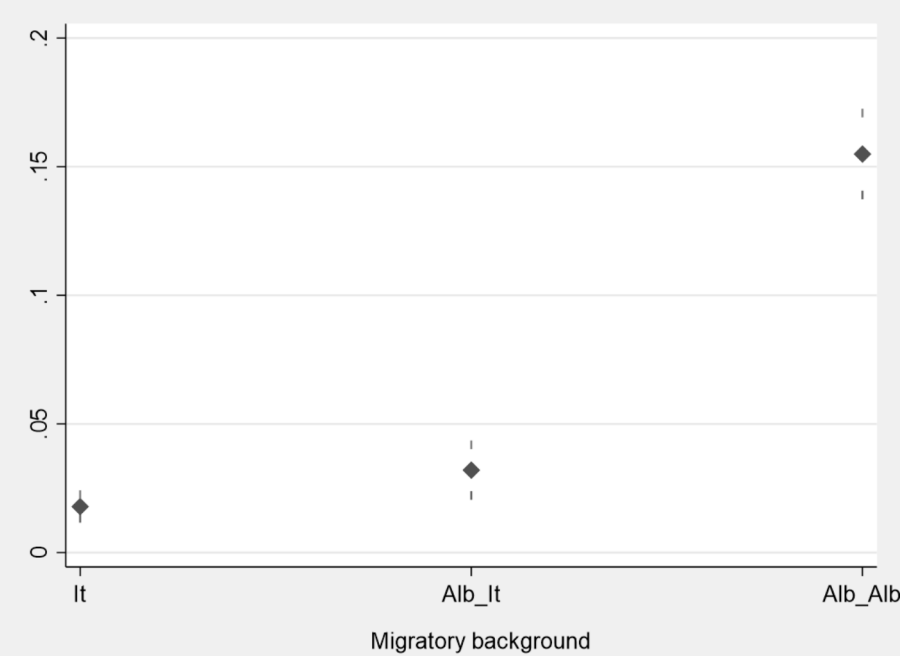

Fig. 1 *Adjusted Predictions for Prototypical Cases (APPCs) for the intention to have a child of women by migrant/non-migrant status while holding control variables at their mean values (95% confidence intervals)*
Note: for the full model, please see Table B of the Appendix
Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

testing, the figure is aimed at comparing women's fertility intentions across groups[6]. As shown, there is a clear ranking in the probability of intending to have a child: the lowest value is registered for Italian natives (It = 2.5%), followed closely by that of Albanian migrants in Italy (Alb_It = 4.1%), while the highest recorded is for Albanian non-migrants in Albania (Alb_Alb = 15.3%). That is to say, the difference in the likelihood of having positive fertility intentions is pretty similar between the first (natives) and the second group (migrants), but it becomes significantly larger when contrasting the former groups with non-migrants. Thus, we find support for our first research hypothesis (RH1: *Adaptation*).

Until this point, our results have identified that women's likelihood of wanting a(nother) child differs across groups, being similar between Italian natives and Albanian migrants (both low), and different from the intentions of Albanian non-migrants (much higher than the rest). However, it remains unclear whether and how the independent variables may differently affect positive fertility intentions across groups

[6] We also computed AMEs to have a clearer picture of differences across migrant/non-migrant statuses by defining Albanian migrants as the reference category (please refer to Table D of the Appendix). Some interesting features in the magnitude between pairs of groups arise: compared to Albanian migrants, Italian natives were only 1.4 percentual points less likely to intend to have a child in the next three years, while Albanian non-migrants were around 12.3 percentual points more likely to want to have a child.

of women. Thus, to this end, we estimate separate models for the native, migrant and non-migrant women[7] and compare the AMEs of each of these groups (Table 2). Having tested our first two hypotheses, we now turn our attention to the main determinants of short-term fertility intentions among women with different migrant/non-migrant statuses.

It is well known that age, parity, education and employment are the main drivers of fertility behaviours and intentions (Milewski 2010; Baykara-Krumme and Milewski 2017; Kraus and Castro-Martín 2018; Carlsson 2018; Wolf and Mulder 2019; Tønnessen and Mussino 2020; Impicciatore et al. 2020; Mussino et al. 2021; Lindström et al. 2022; Alderotti et al. 2022; García-Pereiro et al. 2023). However, as stated pre-

Table 2 Average Marginal Effects (AMEs) from binary logistic regression models on positive fertility intentions of women separately computed by migrant/non-migrant status

	Migrant/non-migrant status					
	Albanian migrants		Italian natives		Albanian non-migrants	
	AMEs	sig.	AMEs	sig.	AMEs	sig.
Age groups						
(18–24)						
25–29	-0.038		0.016		-0.038	
30–34	-0.070		0.006		-0.126	***
35–39	-0.126		-0.023		-0.274	***
40–45	-0.164	***	-0.042	***	-0.396	***
Parity						
(Childless)						
1	-0.364	***	-0.077	***	-0.272	***
2+	-0.540	***	-0.160	***	-0.702	***
Employment status						
(Employed)						
Unemployed/other situation	0.033		0.000		-0.008	
Educational attainment						
(Primary or less)						
Secondary	0.042	**	-0.018		0.030	**
Tertiary	0.080	**	-0.015		0.036	**
N	*478*		*1,680*		*5,585*	
Log likelihood	*-143.24*		*-315.36*		*-1868.08*	
Pseudo R2	*0.37*		*0.33*		*0.43*	

Notes: * $p<0.05$; ** $p<0.01$; *** $p<0.001$. Models control for age, parity, educational level and employment status. For the full model, please see Table E of the Appendix

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

[7] Please refer to Table E in the Appendix for the full models. Following Schwiebert (2016), we tested the null hypothesis that the AMEs for independent variables under analysis were equal across our models. The corresponding values of the Wald tests performed were under the limits of the reference significance levels, except for the employment status. Thus, for the rest of the variables under consideration (age groups, parity and educational attainment), we rejected the null hypothesis, finding that differences in AMEs across migrant, native and non-migrant women are statistically significant.

viously, there is still a lack of information on the specific effects that these may exert on different groups according to their migrant/non-migrant status.

In general, we found that age has an important effect on women's positive fertility intentions, which tend to decrease as age increases, but it does not equally affect the three observed groups. Among them, Albanian migrants aged 40–45 are 16.4 pp less likely to be intending to have a child than those aged 20–24, and this same figure is significantly lower for Italian natives (4.2 pp) and much higher (39.6 pp) for Albanian non-migrants.

The number of children they have already is also negatively related to positive fertility intentions in the three observed groups (positive fertility intentions diminish as parity increases) but, again, the strength of its effect is highly heterogeneous, especially for higher parities (those who already have two or more children). Among Albanian migrants, having one child is related to a decrease of 36.4 pp in the probability of having positive fertility intentions, while having two or more children leads to a lower probability of declaring positive fertility intentions of around 54.0 pp (compared to childless women). The effect for Italian natives is much lower for both categories (7.7 pp and 16.0 pp, respectively), while for Albanian non-migrants it is lower for those who already have one child (27.2 pp) and much higher for those with two or more children (70.2 pp).

Unemployment is related to a higher probability of intending to have a child (by 3.3 pp) only among Albanian migrants. Instead, having achieved a higher educational level is positively associated with having positive fertility intentions among both Albanian migrants and non-migrants. However, the results show that the effect is stronger for the first group. In fact, among Albanian migrants, having achieved secondary and tertiary education increases the probability of intending to have a child by 4.2 and 8.0 pp, respectively, while the figures for Albanian non-migrants are similar among educational levels and lower than those of Albanian migrants (3.0 pp for secondary and 3.6 pp for tertiary).

4.2 Decomposing the migrant–non-migrant difference in positive fertility intentions to test selection hypothesis

This last section is focused on the decomposition of the observed migrant–non-migrant difference in the likelihood of having positive fertility intentions to test for our third and last research hypothesis (RH3: *Selection*). Regarding characteristics, we have observed substantial compositional differences[8], with Albanian migrants having lower positive fertility intentions, a lower number of previous children, and being less educated and younger than Albanian non-migrants. Regarding the effects of covariates, the models estimated in the previous section to measure differences in available determinants of the intention to have a child (Table E, Appendix) show weaker effects on positive fertility intentions for those already having one child, and having achieved tertiary education among Albanian migrants.

Table 3 displays the results of the overall and detailed decompositions, in which we search for educational selection while controlling for available determinants of

[8] See Table A (Appendix) for descriptive statistics on both groups of partnered women.

fertility intentions (age groups and parity). The overall composition shows, first, differences in characteristics (E), that allow us to identify compositional heterogeneity; secondly, differences in effects or coefficients (C), that is to say, differences in the effect of explanatory variables, which might indicate divergences in behavioural responses across groups. The detailed decomposition, instead, shows the contribution of each dummy covariate to both characteristics (E) and effects or coefficients (C). The output of the decomposition is represented by coefficients and percentages. Coefficients indicate the direction of the contribution: negative values are related to an increase in the difference in fertility intentions observed between Albanian migrants and non-migrants, while positive figures are associated with a reduction of differences observed between these groups. Percentages, instead, represent the magnitude of the contribution.

The overall decomposition output in Table 3 suggests the presence of differences not only in the magnitude of the contributions to the migrant–non-migrant gap in fertility intentions (migrant women having lower intentions to have a child than non-migrant women), but also in its sign (direction).

As shown (Table 3, E: characteristics), the results attribute a reduction by 68.53% of the gap in fertility intentions of Albanian migrants and non-migrants to compositional differences, that is to say, to differences in observed characteristics between these groups. Thus, if Albanian migrants had similar age, parity and education profiles to Albanian non-migrants, their fertility intentions would resemble those of their non-migrant counterparts, reducing the differences between these women.

In particular, the detailed decomposition (Table 3, differences in characteristics, E) shows that the most important characteristic accounting for the gap in fertility intentions is the level of education. This is reflected by the largest positive coefficient of having primary education or less, which indicates that the highest reduction in the migrant–non-migrant gap would occur if Albanian migrants were equal to Albanian non-migrants in the distribution of this particular characteristic. This means that, if Albanian migrants included the same proportion of women having achieved only primary education or a lower level than non-migrant women, the migrant–non-migrant gap in positive fertility intentions observed would be expected to decrease by 25.5%. For instance, an increase in the percentage of Albanian migrants having a higher level of education, would imply an increase in their intention to have a child, which reduces the gap between Albanian migrants and non-migrants. Thus, as expected, Albanian migrants seem to be a distinct group in terms of education compared to Albanian non-migrants, a finding that supports the *Selection* hypothesis (RH3).

We also find interesting results for the control variables, the contributions of which to the overall observed gap indicate that if Albanian migrants included the same share of women with two or more children as Albanian non-migrants and the same percentages of women aged 40–45, the difference in their intentions to have a child would be expected to decrease by about 19% and 12%, respectively.

The overall decomposition results also attribute an increase in the gap to differences in the effects of the characteristics between these groups (that is to say, differences in the coefficients of explanatory variables). However, as displayed in the second part of the detailed decomposition (Table 3, differences in coefficients, C),

Table 3 Results of the multivariate non-linear decomposition from binary logistic regression models on positive fertility intentions of women

	Coeff.	sig.	%
E (characteristics)	0.063	***	-68.53
C (coefficients)	-0.155	***	168.53
R	-0.092	***	100
Due to difference in characteristics (E)			
Educational attainment			
Primary or less	0.023	***	-25.5
Secondary	0.005		-4.98
Tertiary	-0.004	*	4.72
Control variables			
Age groups			
18–24	0.003	***	-3.09
25–29	0.000	*	-0.2
30–34	0.001		-1.18
35–39	-0.000		0.25
40–45	0.011	***	-12.07
Parity			
Childless	0.005	***	-5.61
1	0.001		-1.54
2+	0.018	***	-19.13
Due to difference in coefficients (C)			
Educational attainment			
Primary or less	-0.026		28.85
Secondary	0.001		-1.22
Tertiary	0.007		-8.08
Control variables			
Age groups			
18–24	0.000		-0.80
25–29	-0.002		2.96
30–34	-0.000		0.78
35–39	-0.001		1.11
40–45	0.005		-5.42
Parity			
Childless	0.001		-1.51
1	-0.003		2.79
2+	-0.007		7.69
_cons	-0.129	***	141.38

Notes: * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

only the differences in intercepts are statistically significant, absorbing most of the difference in the effects (_cons 141.38%)[9].

[9] The constant value is larger than the accumulated coefficient differences of each covariate, suggesting that changes in the intention to have a child due to changes in behaviours are completely absorbed by the relevance of the constant, further supporting the importance of differences in characteristics (in particular, education) in explaining the fertility intentions gap between migrant and non-migrants.

5 Discussion and conclusions

The central aim of our research was to get a deeper understanding of short-term fertility intentions by applying an origin–destination perspective to test the *adaptation* vs. *socialisation*, and the *selection* hypotheses. In general, and in line with previous research on migrants' fertility in Italy (Mussino and Strozza 2012b; Impicciatore et al. 2020; Mussino et al. 2021; García-Pereiro and Paterno 2022), we find important differences in the intention to have a child within the next three years – that is, having positive short-term fertility intentions – between Albanian migrants and Italian natives, and also between Albanian migrants and Albanian non-migrants.

Firstly, we tested for two mutually exclusive hypotheses: on the one hand, we posit that the fertility intentions of Albanian migrants would resemble those of Italian natives and, simultaneously, would be lower than those of Albanian non-migrants (RH1: *Adaptation*); on the other hand, we expect that the fertility intentions of Albanian migrants would resemble those of Albanian non-migrants and would be higher than those of Italian natives (RH2: *Socialisation*). We find support for the *adaptation* hypothesis, having observed that the likelihood of intending to have a child of Albanian migrants is similar to that of Italian natives and significantly diverges from that of Albanian non-migrants. This also supports findings from previous research reporting a similar pattern of adaptation for the fertility intentions of migrant women in Italy (Mussino et al. 2021) in general, and for the transition to the first birth of Albanian women in Italy, in particular (Impicciatore et al. 2020).

Secondly, having stated that the fertility intentions of Albanian migrants differ from those of Albanian non-migrants, we searched for differences between these subpopulations, hypothesising that, if Albanian migrants were a distinct group, they would have lower positive fertility intentions than Albanian non-migrants (RH3: *Selection*). Our multivariate decomposition analysis shows that differences in the positive fertility intentions of the Albanian migrants compared to those of Albanian non-migrants can relate to the choice to migrate, given some important differences in the educational composition of these groups. The lower likelihood of intending to have a child among Albanian migrants might then, at least partially, be explained by their lowest educational attainment. Indeed, if migrant women had the same educational profile as non-migrants, the difference observed in having positive fertility intentions would significantly decrease. These results are in line with those of other studies that have found support for the choices made by migrants in their fertility behaviours (Baykara-Krumme and Miliewski 2017; Wolf and Mulder 2019; Lindström et al. 2022), but some interesting differences arise when considering the fertility choices of migrants based on education. For the most part, studies have shown that the educational attainment of migrant women is higher than that of women living in the country of origin and that fertility intentions tend to reduce as the level of education of migrant women increases (Milewski 2010). Instead, we not only observe that Albanian migrants have a lower likelihood of intending to have a child than Albanian non-migrants; but also that the likelihood of having positive fertility intentions is higher for Albanian migrants with tertiary education, this effect being stronger compared to that of Albanian non-migrants. Thus, if Albanian migrants included the same share of women with tertiary education as Albanian non-migrants, their

likelihood of reporting positive fertility intentions would increase, reducing the gap between these groups. We attribute this result to several factors which may be interrelated and responsible – to some extent – for their selectivity. On the one hand, there are significant differences in the effective levels of education achieved by Albanian migrants in Italy and Albanian non-migrants in their country of origin. If we compare the distribution of the educational level of the first group (using data from the SCIF) and the second (using data from the 2011 Albanian Population census), we find that around 4% of Albanian women in Italy declared having tertiary education, while the same figure among Albanian women living in their country of origin was three times higher (reaching 12%). On the other hand, there are some specific characteristics of Albanian return migration that deserve to be highlighted. The literature on this subject has reported the presence of a consistent group of young returnees who return to Albania after having completed their studies in Italy (García-Pereiro 2019). Finally, it is also important to consider the intrinsic nature of the migratory project of Albanians leaving their country to settle in Italy. In this sense, Albanian women are more likely to migrate for reasons of family reunification or couple formation, Albanian males being the forerunners (Gabrielli et al. 2019; Impicciatore et al. 2020). This is confirmed by the most recent research reporting Albania at the top of the distribution of nationalities having obtained residence permits in Italy for family reasons and among migrant groups, in which it is the wife who frequently reunites with her husband (Bonifazi et al. 2023).

Finally, we realise that both adaptation and selection might act simultaneously, confirming the findings of previous studies (Krapf and Wolf 2015; Wolf and Mulder 2019).

The main contribution of this paper to recent research on migrants' fertility regards the application of decomposition techniques to disentangle observed differences (in terms of characteristics and effects) between groups, techniques that have been underutilised for the study of migrant populations (Giraldo et al. 2015). In this regard, our analysis goes some way further than previous studies testing for selection, which have concentrated their attention on observing changes in coefficients after the inclusion of individual characteristics in their model specifications (i.e. Krapf and Wolf 2015; Baykara-Krumme and Miliewski 2017; Wolf and Mulder 2019; Lindström et al. 2022). We applied a decomposition technique that enabled us to obtain detailed estimates to identify the single contribution of each covariate to the overall gap observed in fertility intentions between Albanian migrants and non-migrants. More specifically, this technique allowed us to decompose differences in the likelihood of women's intentions to have a(nother) child between Albanian migrants and non-migrants into one part that can be explained by differences in characteristics between groups (in our case, differences in educational attainment) and another part that can be explained by the effect that these characteristics may have on their positive fertility intentions. The most interesting finding from the application of this technique concerns the quantification of the contribution that differences in the educational attainment between these groups have on the observed gap in fertility intentions between migrants and non-migrants (as a percentage of the total gap). But this is not the only contribution made by this research; all this was possible because we adopted an origin–destination perspective that allowed us to directly compare several groups

of women according to their migrant/non-migrant status, giving support for the adaptation and selection hypotheses. In fact, the inclusion of non-migrants in the analyses permitted us to perform a comparison of groups that was more comprehensive than efforts made in most previous studies (especially those focused on Italy as the host country), thus helping to draw a more comprehensive picture of Albanian migrant women and their fertility intentions. Finally, and closely related to the aforementioned contributions, we complemented existing research on the subject in an original way by harmonising and merging data to create new combined datasets bringing together information from several sources in the host and origin countries.

However, our research is not free from limitations. When linking data drawn from different sources, important restrictions must be acknowledged. During the harmonisation of these sources, and in the presence of relevant differences in data collection, some information must be aggregated, thus losing its initial potential and specificity. In this respect, we had to take several decisions to make it possible to obtain a completely comparable dataset. For example, we were unable to further distinguish either between the first and the second half of secondary education, or between housewives, the employed and self-employed due to data collection restrictions found in the DHS Albanian survey. Also, having comparable information on the timing of childbirth (to be linked to the timing of migration), but also on religiosity, norms and values related to family formation and/or on the partner characteristics of respondents might have been useful to further extend the selection hypothesis to include less obvious features regarding religion, values and partnerships, all of which are strongly related to fertility (Puur et al. 2018). Regarding our dependent variable, counting on information on short-term intentions to have a child, exclusive of degrees (such as: definitely not intended, probably not intended, definitely intended, probably intended), hampered us further, making it difficult to disentangle the effect of certain intentions (i.e. of those definitely intending to have a child). As shown by previous studies (Mencarini et al. 2015), this constraint might result in overestimating women's future fertility outcomes. Nevertheless, we are not able to link fertility intentions to fertility outcomes to evaluate whether and how this dichotomisation might be affecting women's future reproductive behaviours either in natives or in migrants and stayers. We deem that these limitations do not affect our results, since our main purpose was to test for differences between natives', migrants', and non-migrants' fertility, rather than explaining the determinants of the fertility intentions of Albanian women. Another limitation is linked to the former[10] and concerns, simultaneously, both the small number of Albanian migrant women included in the sample and the restriction of the sample selection to women only. In the first case, counting with a final sample of just a small number of migrants limited our analytical strategy, such that we dumped by default the empirical test for the disruption and interrelation of events approaches. In the second, with the final sample restricted to women only, important information regarding differences in the fertility intentions of men and women across groups with diverse migrant/non-migrant status is lost.

[10] Again, the DHS was restricted to women, not including men, and research has shown that most Albanian migrants to Italy are males (Paterno et al. 2006).

We are completely aware that the best path to test for the hypotheses linking migration and fertility would be to count on unique survey data simultaneously sampling population subgroups in their different settlements (natives and migrants in the host countries, and non-migrants in the countries of origin), but this kind of data is still not available and researchers must find innovative ways to deal with data shortcomings when analysing migrants (Marasini and Migliorati 2006). Thus, even if there might be some difficulties related to the comparability among groups, we strongly believe that, to obtain more complete and highly complex knowledge about Albanian migrants' fertility intentions and outcomes, it is necessary not only to combine and harmonise several data sources on migrants and natives (in the main countries of destination) and on non-migrants (in the country of origin: Albania), but also to explore and test for novel methods (such as decomposition techniques) that, even if already well established in other disciplines and despite their utility, remain underutilised in the field of study of migrants' fertility.

Appendix

Table A Descriptive overview of Albanian migrants, Albanian non-migrants and Italian natives by variables included in multivariate analyses (percentage distributions)

	Albanian migrants	Albanian non-migrants	Italian natives
Fertility Intentions			
Intending to have a child	18.20	27.45	7.98
Undecided/Not intending	81.80	72.55	92.02
Age groups			
18–24	15.48	11.24	1.01
25–29	18.62	18.32	6.43
30–34	24.48	20.38	17.20
35–39	21.34	20.47	26.25
40–45	20.08	29.60	49.11
Parity			
Childless	10.88	6.27	14.64
1	31.17	21.83	28.39
2+	57.95	71.91	56.96
Employment status			
Employed	36.82	36.31	61.85
Unemployed/other situation	63.18	63.69	38.15
Educational attainment			
Primary or less	6.28	55.24	1.49
Secondary	87.66	28.06	72.80
Tertiary	6.07	16.71	25.71
N	*478*	*5,585*	*1,680*

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

Table B Results of binary logistic regression models on positive fertility intentions

	Odds ratio	sig.
Migrant/non-migrant status		
(Italian natives)		
Albanian migrants	0.549	***
Albanian non-migrants	5.538	***
Age groups		
(18–24)		
25–29	0.85	
30–34	0.64	***
35–39	0.29	***
40–45	0.06	***
Parity		
(Childless)		
1	0.33	***
2+	0.03	***
Employment status		
(Employed)		
Unemployed/other situation	1.05	
Educational attainment		
(Primary or less)		
Secondary	1.16	**
Tertiary	1.23	***
_cons	1.96	**
N	*7,743*	
Log likelihood	*-2293.45*	
Pseudo R2	*0.45*	

Notes: * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

Table C Mean values of independent variables computed for APPCs from binary logistic regression models on positive fertility intentions of women by migrant/non-migrant status

Age groups	
20–24	0.09
25–29	0.16
30–34	0.20
35–39	0.22
40–45	0.33
Parity	
Childless	0.08
1	0.24
2+	0.68
Employment status	
Employed	0.42
Unemployed/other situation	0.58
Educational attainment	
Primary or less	0.41

Table C Mean values of independent variables computed for APPCs from binary logistic regression models on positive fertility intentions of women by migrant/non-migrant status

Age groups	
Secondary	0.41
Tertiary	0.18

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

Table D Average *Marginal* Effects (AMEs) from binary logistic regression models on positive fertility intentions of women by migrant/non-migrant status

Migrant/non-migrant status	AMEs	sig.
Ref. *Albanian migrants*		
Italian natives	−0.014	**
Albanian non-migrants	0.123	***
N	*7,743*	
Log likelihood	*-2293.450*	
Pseudo R2	*0.451*	

Notes: * p<0.05; ** p<0.01; *** p<0.001. Models control for age, parity, educational level and employment status. For the full model please see Table B above

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

Table E Results of binary logistic regression models on positive fertility intentions by migrant/non-migrant status

	Migrant/non-migrant status					
	Albanian migrants		Italian natives		Albanian non-migrants	
	Odds ratio	sig.	Odds ratio	sig.	Odds ratio	sig.
Age groups						
(18–24)						
25–29	0.75		1.35		0.86	
30–34	0.55		1.13		0.58	***
35–39	0.25	**	0.50		0.24	***
40–45	0.06	***	0.12	***	0.04	***
Parity						
(Childless)						
1	0.19	***	0.48	***	0.29	***
2+	0.02	***	0.02	***	0.02	***
Employment status						
(Employed)						
Unemployed/other situation	1.74	*	0.98		0.94	
Educational attainment						
(Primary or less)						
Secondary	2.63		0.44		1.25	**
Tertiary	4.22	**	0.52		1.29	**
_cons	1.04		1.38		13.15	
N	*478*		*1,680*		*5,585*	

Table E Results of binary logistic regression models on positive fertility intentions by migrant/non-migrant status

	Migrant/non-migrant status		
Log likelihood	*-143.24*	*-315.36*	*-1868.08*
Pseudo R2	*0.37*	*0.33*	*0.43*

Notes: * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Source: own elaboration on merged and harmonised data drawn from FSS, SCIF (Italy) and DHS (Albania)

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