Research Article

Advanced or postponed motherhood? Migrants' and natives' gap between ideal and actual age at first birth in Spain

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Contents

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Abstract

BACKGROUND
The analysis of migrants' preferences on the timing of fertility offers insights on how the migration experience and the contextual characteristics at destination might shape migrant women's expectations and behaviors.

OBJECTIVE
This paper explores the ideal age at first birth among Spanish and foreign-born women in Spain and its gap in relation to the actual age at first birth among those who are mothers.

METHOD
We use the 2018 Spanish Fertility Survey to study respondents' ideal age at first birth and the gap between ideal and actual age – whether a postponement or an advancement. We analyze the variation of the gap by age at arrival into Spain and the motherhood status at migration, together with contextual and sociodemographic characteristics.

RESULTS
Migrants report an earlier ideal age for having their first child than do natives. Migrants from Africa and Western Europe are more likely to have had children after their ideal age, while on average migrants from Latin America and Eastern Europe became mothers earlier than desired. In addition, both migrants who arrived as children and those who were already mothers on arrival report a negative gap (advancement of motherhood), while adult women who were childless at arrival report a positive gap (postponement of motherhood).

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CONCLUSION
Preferences on the ideal timing of fertility among migrant women display important differences by origin, age at arrival, and motherhood status at migration. We posit that the socialization and adaptation hypotheses explain the gap between ideal and actual age at first birth of child migrants and migrant mothers, while the interruption and adaptation (and perhaps selection) hypotheses are likely behind the fertility gap of adult migrants who become mothers after migration.

CONTRIBUTION
This study provides new empirical evidence in the underexplored area of migrants' ideals concerning fertility timing and the gap between ideals and behaviors.

1. Introduction

The literature on fertility and migration emphasizes the importance of cultural and contextual factors in the countries of both origin and destination to explain migrants' reproductive behavior (Kulu 2005; Milewski 2007; Milewski and Mussino 2018). However, while research focusing on migrants' fertility behavior is extensive, fertility preferences and particularly the timing of fertility remain under-studied. Women's ideal fertility timing is shaped not only by personal and interpersonal characteristics and life experiences but also by structural characteristics, such as community transmission of values, family policies, the labor market, and the economic climate (Holland and De Valk 2013; Melnikas and Romero 2020). Understanding the differences in the ideal timing at first birth between migrant and native women can provide a more complete picture of how the migration process and contextual factors influence migrants' family trajectories, norms, and expectations regarding the timing of motherhood, all of which might directly impact migrants' integration processes.

Past studies on migrants' fertility preferences focused more on the ideal number of children (Afulani and Asunka 2015; Mussino and Ortensi 2018; Penn and Lambert 2002) or on short-term intentions (Carlsson 2018; Puur, Vseviov, and Abuladze 2018) and less often on the ideal timing at motherhood (Holland and De Valk 2013; De Valk 2013). Moreover, studies exploring migrants' fertility preferences in the case of Spain have been extremely limited so far (Kraus and Castro-Martín 2018) due to the lack of data. In filling this gap, this paper explores, first, the reported ideal age at first birth for women in Spain according to their origins and, second, whether there is a disparity between the reported ideal and the actual age at first birth among mothers in the 2018 Spanish Fertility Survey (SFS). The gap between the ideal and actual age at first child is a measure that allows us

to assess women's unmet fertility timing in general, as well as the potential impact of migration on fertility timing for migrant women.

2. The study of fertility preferences

The literature on personal ideals and intentions conceives of ideals as a representation of the future when people are asked to describe how they envision short-term or long-term events in their lives (Vignoli et al. 2020). Higgins (1987) defines ideals as the representation of someone's hopes, aspirations, or wishes for themselves. Thus, the ideal timing of fertility can be understood as the ideal age at which people envision themselves becoming parents (or would have liked to have had their first child if they are already parents) in absence of obstacles or constraints.

Miller (2011) points out that intentions are more reliable predictors than ideals, while ideals are more stable than intentions. Conversely, it has also been argued that fertility ideals are flexible and changing rather than stable (Ray et al. 2018; Trinitapoli and Yeatman 2018). For example, the preference construction theory holds that fertility preferences are not predetermined; instead, people construct their preferences every time based on their current situation and contemporary circumstances (Ní Bhrolcháin and Beaujouan 2015). So ideal age might not be static over the life course. We acknowledge that life course events can influence fertility timing to the same extent that fertility preferences can be imbedded in past events and experiences (Morgan and Rackin 2010). In relation to fertility, longitudinal studies have found that intended family size and intentions to remain childless vary over the years (Heaton, Jacobson, and Holland 1999; Heiland, Prskawetz, and Sanderson 2008). Hence, in relation to timing preferences as well, there may be a process of ex post rationalization when thinking about the ideal age for first birth, as we discuss in this study.

Unlike fertility intentions, which are defined as more concrete plans, fertility ideals represent early life goals and later life adjustments to realized fertility (Ray et al. 2018). Individual preferences for the ideal timing of fertility may be influenced by one's individual experiences and life transitions, such as completion of education, employment changes, or partnership status, and also by prevailing social norms in a certain context (Philipov and Bernardi 2012). Liefbroer and Billari (2010) explore whether social norms are relevant to understanding people's ideas about whether there is a minimum and maximum ideal age at which to have children.

As ideational and normative changes associated with the Second Demographic Transition and surrounding family formation patterns spread out across world regions at different paces, the ideal age at childbearing has been increasing in most of the Western world, concurrently with important cultural and societal changes (Testa 2007; Tomiknson

2019). It is therefore relevant to study whether the ideal fertility timing of migrants arriving from origins that have experienced those socionormative changes to different degrees differs from that of Spanish-born women. The analysis of how ideal timing differs from actual timing by migrant status among those who are already mothers is a natural research sequel to this work. In this study, we propose what to our knowledge is a new indicator – the gap between ideal and actual age at first child – as an exploratory measure to assess women's unmet fertility timing.

2.1 The Spanish context

The Spanish context is an interesting case study for two main reasons. First, while Spanish fertility is among the *lowest* and motherhood timing among the *latest* in the world (Billari and Kohler 2004; Van Bavel and Nitsche 2013), Spaniards' desired fertility is *higher* and their ideal age at childbirth is *earlier* than their actual corresponding levels (Adserà 2006; Sobotka and Beaujouan 2014). Since the 1990s, the total fertility rate in Spain has been below 1.5 children per woman, and it was 1.19 in 2020 according to the Spanish Statistical Office. The mean age at first birth in 2020 was 31.2 (31.8 among natives and 28.4 among foreign-born women), while the latest Spanish Fertility Survey shows the mean ideal age at first birth to be 28.2 years among Spanish-born women and 26.3 years among foreign-born women living in Spain (Spanish Fertility Survey 2018). Ideal age at first child has increased over time due to both cultural and social changes, as predicted by the Second Demographic Transition, as well as changes in the material conditions under which women and couples desire or consider it feasible to have children. Harsher material conditions have pushed upward age norms for childbearing among young adults (Bueno 2020). Employment uncertainty, seeking financial stability, and the lack of a stable partnership are the main reasons reported by women to explain motherhood postponement (Esteve and Treviño 2019). Indeed, rising female education and growing aspirations of women to be economically active are two consolidated reasons behind the postponement of the ideal timing for childbearing (Van Bavel 2012; Van Nimwegen et al. 2002). As a consequence, there has been a generational change in the gradual loosening of age norms regarding union formation and fertility decisions (Bueno 2020; Liefbroer and Billari 2010). Women often delay the decision to have children beyond the prime reproductive ages, making fecundity issues an obstacle for childbearing (Esteve et al. 2020). Macro-contextual factors that contribute to the dramatic postponement of fertility among young Spaniards include economic uncertainty, labor market precariousness, and the lack of social support for families (Adserà 2011; Bueno and Brinton 2019).

Between 2000 and 2018, the foreign-born population in Spain increased from 3% to 13% of the total population. Previous studies have shown that, in general, the tempo and quantum of migrants' fertility are, respectively, earlier and (moderately) higher than those of natives (Castro-Martín and Rosero-Bixby 2011; Devolder and Bueno 2011). Transition to parenthood among migrant men and women in Spain happens earlier than for natives (González-Ferrer et al. 2017), even after controlling by education and employment status (Vidal-Coso and Miret 2017). Indeed, other research notes that socioeconomic factors (e.g., economic uncertainty) associated with fertility postponement do not affect migrants as strongly as they affect natives, given migrants' upholding of cultural patterns from their origin countries (Del Rey and Grande 2017). On the contrary, it has also been indicated that migrants who were childless at arrival in Spain delayed parenthood as much as natives; a similar trend is observed for migrants' descendants, particularly those of Latin American origin (González-Ferrer et al. 2017). Fertility patterns of child migrants converging toward those of the native population were also observed in other European destinations (Wilson 2020). Yet despite the increase in the ideal age, there is a gap between the ideal and the observed average age at first birth among native-born and foreign-born women who became mothers in Spain. In 2018, according to Spanish national birth registers, the age at first child was 31.6 years for Spanish-born women and 28 years for foreign-born women. This figure provides only a partial view of the childbearing preferences and behavior of migrant women, as national birth registers refer only to those who had their first child in Spain. These figures, however, cannot measure the gap between the ideal and actual age at first birth among migrant women who had their children in their countries of origin, and how the gap differs across different origins and migration experiences. As a result, little is known about migrants' fertility preferences in Spain, mostly because of the absence of a suitable dataset to measure them. The 2018 Spanish Fertility Survey is a unique dataset with which to study this question and allows us to start filling in this gap.

2.2 Theoretical approaches

We draw from the main theories on migrants' actual fertility behavior to also study the ideal time for childbirth and, subsequently, to analyze how the gap between the two – ideal and actual age – differs between foreign-born and native-born women. In this regard, previous studies argue that factors influencing fertility ideals are also associated with fertility behavior (Kohler 2001; Van de Kaa 2001). In particular, the literature sets forth three main hypotheses (not necessarily exclusive of each other): socialization, adaptation, and interruption (Adserà and Ferrer 2014; Kulu 2005; Lindstrom and Giorguli 2007; Milewski 2007).

First, the *socialization hypothesis* would anticipate fertility preferences and behaviors to be closely aligned with those of the countries where women grew up, and one would expect the age at arrival to strongly mediate this prediction. Indeed, the context where someone spends childhood is particularly relevant for shaping multiple socioeconomic outcomes, including the timing of fertility (Adserà et al. 2012; Bleakley and Chin 2010). By the same token, although child migrants would be mostly socialized in the destination country, they might be indirectly exposed to cultural norms from their (parents') country of origin through intergenerational transmission of age norms (De Valk and Liefbroer 2007), and those may influence the ideal or actual age at childbirth. In addition to the family environment, the extent to which women live in areas with high immigration rates (i.e., ethnic enclaves) may moderate the socialization process at the destination. Hence preferences for fertility timing may vary according to the age at arrival in Spain and may be further from those of native-born women among those who were socialized in their countries of origin and arrived after childhood.

Second, the *adaptation hypothesis* would foresee patterns in preferences and actual behavior converging toward fertility timing in the destination country. This perspective emphasizes the role of the macro-socioeconomic and cultural context at the country of destination in shaping migrants' individual preferences, and how the exposure to different sociocultural norms and economic constraints may alter migrants' fertility ideals and behaviors. Similarly, actual fertility might also be postponed relative to that of peers in origin if migrant women face the same contextual constraints that delay fertility for native-born women. Because the process of adaptation is gradual, it takes time to impact fertility. Hence the length of exposure to the destination country plays, again, an important role in determining the extent of adaptation. Preferences of women who arrived as children, or as young adults, may be more likely to converge with those of native-born women, whereas fertility preferences of seasonal or recent migrants may be less likely to do so (Chattopadhyay, White, and Debpuur 2007). Since, by definition, fertility ideals belong to idealized scenarios with no obstacles or constraints, the impact of actual living conditions and contextual factors on these ideals may be lower than they are on actual fertility behavior. However, some research has shown how labor market opportunities are linked to adjustments in women's timing preferences (Sennott and Yeatman 2012) and how "fertility preferences, rather than fixed, are flexible and respond to contingencies, inputs, and shifts that occur at the micro and macro levels" (Trinitapoli and Yeatman 2018: 88), including personal, interpersonal, and structural levels (Melnikas and Romero 2020). Hayford (2009) highlights the difficulty of reconciling "idealized views" with real lives, which are affected by contextual factors and are "more likely to form based on general social norms rather than specific desires" (Hayford 2009: 767). In the case of migrant women, idealized views may be even more complex when internalized social norms from their origin contexts interact with norms, expectations,

and living experiences in the destination country. In the context of international migration, timing preferences are susceptible to change, particularly when young adults face an uncertain future (Trinitapoli and Yeatman 2018). So not only individual experiences and characteristics but also macro-contextual factors may mediate personal imaginaries regarding the ideal timing for motherhood. Both aggregate economic uncertainty and individual unemployment are associated with fertility postponement in Europe (Adserà 2011; Kravdal 2002). In the case of Spain, aggregate unemployment levels delay childbearing, particularly for the low and middle educated (Adserà 2011). Hence, based on the adaptation hypothesis, the ideal and especially the actual age at first child would be influenced by contextual factors in the destination country. Thus, the gap between the two may vary as a function of how ideal age differs across groups.

Third, motherhood status at the time of migration may play an important role in explaining the gap between ideal and actual age at first birth. In the case of childless migrants, the migration experience on its own and the arrival to a new social context might impact both the actual age at which they finally become mothers (if they do) and their perceptions of the ideal timing in line with what the *interruption hypothesis* predicts about actual fertility. This hypothesis posits that fertility would decline right before and immediately after the migration process given the personal and material costs surrounding the migration event. Childless migrants may adjust their ideal and especially their actual timing of motherhood to their current life circumstances and constraints, thus distancing themselves from the age norms prevalent in their origin countries. This is less likely to happen among those who migrate as mothers, since contextual factors at the destination country did not directly influence their motherhood transition but can influence their perception of the ideal age. However, as for any mother, the ideal age may be partly affected by post rationalization. As a result, the ideal–actual fertility timing gap for migrant mothers is likely to be smaller (or even negative).

In sum, the exposed hypotheses may contribute to our understanding of both the ideal and the actual age at first child, and consequently the gap between the two, representing women's unmet fertility timing.

2.3 Current study and working hypotheses

This study aims to (1) explore differences on the ideal age at first child between foreign-born and native-born women, which in turn illuminates (2) the reasons, size, and direction of the gap between the ideal and the actual age at first birth, if any, among the subset of mothers. Additionally, we assess how age at migration and motherhood status at migration might mediate both indicators. Based on the theoretical discussion above, we explore the following hypotheses:

Hypothesis 1: We expect migrant women to have an earlier ideal age at first birth compared to Spanish-born women.

Hypothesis 2: Among migrants arriving from origins that portray both more traditional gender role norms and weaker access to contraception (e.g., Latin America, Africa) than other regions (e.g., Europe), the gap between ideal and actual age at having a first child would likely be negative and migrant women would have had their children earlier than the age they consider ideal.

Hypothesis 3: The age at arrival and motherhood status at the time of migration would mediate the size and direction of the gap.

- *Hypothesis 3a:* Based on the *socialization-at-destination* hypothesis, child migrants would report an ideal age at first birth closer to that of native women and higher than that reported by adult migrants, but their actual age at motherhood would likely be earlier than that for native women. Therefore the gap is expected to be negative (or close to zero).

- *Hypothesis 3b:* Based on the *socialization-at-origin* hypothesis, women who were already mothers at migration would have an early actual age at first birth. However, in line with the adaptation hypothesis, their ideal age at first birth may converge toward that of natives and would thus likely be postponed. This would result on a negative gap.

- *Hypothesis 3c:* On the contrary, in light of the *interruption* and *adaptation* hypotheses, women who migrated as adults but were childless would report an actual age at first birth later than they would have wished due to the migration disruption and possible constraints faced during the process of adaptation to a new country, resulting in a positive and larger gap compared to migrant mothers. Alternatively, later preferences for fertility timing among adult childless migrants might result from unobservable selection effects. In other words, fertility preferences and behaviors of adult childless migrants might already be closer to those of the destination country than to those of the origin country.

3. Data and methods

Data come from the 2018 Spanish Fertility Survey. This survey was carried out by the Spanish National Institute of Statistics (INE) and contains information on 14,556 women aged 18 to 55. It covers the whole Spanish population, except for people living in institutions. Among these women, 8,209 were mothers at the time of the survey. Of these,

13.2% are foreignborn (N = 1,084). After the exclusion of missing values in the main variables and the exclusion of women from low-represented regions of origin, the final sample size in the models is 14,486 women, of whom 8,157 are mothers.

3.1 Measures of fertility timing

The 2018 SFS asked, "What do you think is the ideal age to have the first child?" This measure allows us to, first, estimate differences in the ideal age for all women and then for the subset of mothers. Second, we descriptively explore the reasons behind the advancement or postponement of the first child among mothers. The 2018 SFS further asked mothers, "Why did you have your first child later than you think is ideal?" or, alternatively, "Why did you have your first child sooner than you think is ideal?" For delayed motherhood, we grouped response options into: (1) health reasons; (2) values (e.g., wanted to continue studying, wanted to pursue other accomplishments); (3) partner-related reasons (e.g., not having a partner, partners' discrepancy on fertility intentions); and (4) material reasons (e.g., financial instability, work–family conflict, housing conditions). For advanced motherhood, we grouped the reasons into (1) the partner wanted to have a child, (2) unexpected pregnancies, and (3) other reasons.

Third, we calculate the gap between the ideal and the actual age at the birth of the first child for mothers at the time of the survey. To estimate the gap, we subtract the ideal age at first birth from the actual age.[4] As a result, positive values of the gap indicate postponement (mothers had their first child later than their stated ideal age), and negative values indicate that women became mothers earlier than they would have preferred.

3.2 Variables

Besides Spanish-born women, we classify migrant women's countries of birth into four regions of origin: (1) Western Europe (N = 210, of whom 124 are mothers), (2) Eastern Europe (N = 300, of whom 183 are mothers), (3) Africa (N = 260, of whom 193 are mothers), and (4) Latin America (N = 911, of whom 581 are mothers). Women born in North America (N = 3), Asia (N = 8), and Oceania (N = 1) are excluded from the analysis.

In addition, our models control for demographic, socioeconomic, and migration characteristics:

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[4] We calculated the gap between actual and ideal age using only the year of birth, without considering the birth month. We further confirmed the robustness of results based on using year of birth instead of year and month.

- • Demographic characteristics include age, partnership status (not partnered, partnered), parity (no children, one child, two children, three or more children), fertility intentions (no children, one child, two children, three or more children), religiosity (not religious, none or low religious practice, moderate or high religious practice), and own mother's age at first child. Our data are cross-sectional; hence current age controls for life cycle differences.
- • Socioeconomic characteristics[5] include education (up to secondary school, post-secondary school, college or more), employment (inactive, unemployed, employed), and difficulty in making ends meet (yes, no).
- • Migration characteristics comprise age at arrival (0–13, 14–17, 18–22, 23–27, 28–32, 33–55 for the first set of models; 0–13 or 14 or more for the second set of models) and motherhood status at the time of migration (migrant mother, childless at migration).

Finally, our models include three contextual variables. First, to proxy for the climate of economic uncertainty in Spain, we include the regional unemployment rate, which measures the percentage of unemployed men and women by respondents' region of residency in Spain. Data come from the Spanish Labor Force Survey and report the mean of the four quarters in 2018. Second, to proxy for the potential existence of ethnic enclaves and to test the role of the network community in the destination country, we include data from the population registers on the percentage of foreign-born population in the region. Third, to test the relevance of the cultural and normative influence from the countries of origin, we include the mean age at first birth in each woman's country of birth; information is drawn from United Nations data and national statistical offices.

3.3 Multivariate analysis

We run separate sets of models to estimate two main outcomes: (1) the ideal age at first birth; (2) the gap between ideal and actual age at first birth. First we estimate a linear regression model to explore the association between ideal age at first birth and region of origin, both in the full sample (i.e., including mothers and non-mothers at the time of the survey) and then for the subset of mothers. Model 1 is the baseline without any additional controls, and Model 2 includes all the control variables, including age at arrival.

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[5] In preliminary analysis, we estimated the interaction effect between place of birth and educational attainment to account for additional heterogeneity within groups. For all origins, we found that those with lower education levels recorded earlier ideal ages than those with higher education. Hence models considering educational attainment as a control variable are already accounting for such differences. These results are available upon request.

Second, to understand the gap between ideal and actual age at first birth, we start by descriptively exploring the answers mothers gave to the question "Why did you have your first child later than you would have liked?" or, alternatively, "Why did you have your first child sooner than you would have liked?" Next we run three linear regression models to assess the factors associated with the size and direction of the gap between ideal and actual age at the birth of first child among mothers. Model 1 is a baseline model. Model 2 adds all controls as well as whether migrants arrived before age 14 and their motherhood status at migration. Model 3 combines the last two by differentiating (1) migrants who arrived as children (before age 14); (2) migrants who arrived at 14 years old or later and were childless; and (3) migrants who arrived as mothers at 14 years old or later. To ease the interpretation of the results, we display the predicted values of both the ideal age at first child and the gap between the ideal and the actual age, in which we adjust all control variables at the means of each subpopulation group. The full tables are available in the appendix. We estimate all models with Stata 17 using survey weights.

3.4 Sample description

Table A-1 includes descriptive statistics of the full sample (N = 14,486), and Table A-2 shows those for the subset of mothers (N = 8,209). In the full sample (Table A-1), the mean ideal age at first child is 28.2 years for Spanish-born women and 28 years for those from Western Europe. This is followed by Latin American women, who report an ideal age of 27.2 years, then by Eastern Europeans (26.1 years) and then women from Africa (24.6 years). These numbers are slightly higher than those reported by the subset of mothers at the time of the survey (Table A-2), for whom the mean ideal age at first child ranges from 24.3 years among African women to 27.5 years among Spanish women.[6] In additional analysis (see Table A-3), we run a test on equity of mean ideal ages between mothers and non-mothers for all origin groups. The difference ranges between 1.3 and 2 for all groups, and those who are mothers at the time of the survey clearly show an earlier ideal age at first birth. This may be explained by both an ex post rationalization process and a possible selection effect. First, regarding ex post rationalization, non-mothers may report a later ideal age according to their experiences compared to mothers. Alternatively, there could be also selection among migrants according to their motherhood status at arrival. Those who were childless at arrival may prefer later childbearing than those who were already mothers before migration or those who arrived at younger ages.

As shown in Table A-2, more than half of migrant mothers (54.1%) were born in Latin America, 17.7% in Eastern Europe, 15.4% in Africa, and 12.8% in Western Europe. The geographic distribution of the full sample is similar. Even though there may be cross-

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[6] Five outlier cases reporting an ideal age between 52 and 60 were excluded from the analysis.

country differences within continental groups, the inclusion of control variables in the analysis, such as education, allowed us to control for part of this heterogeneity.[7] The age distribution in our full sample and in the subset of mothers is also similar. Interestingly, a larger proportion (84.6%) of Western European women arrived before the age of 14 and are mostly descendants of Spanish-born parents. Finally, among migrant women, ideal ages at first birth are slightly higher among those who arrived childless and became mothers in Spain, compared to those who migrated as mothers. This may indicate either some adjustment of values for those who became mothers after migrating or a selection effect, but this cannot be confirmed with our data.

4. Results

4.1 Ideal age at first child by region of origin

Figure 1a (based on Model 2 of Table A-4) shows the predicted ideal age at first birth for all women. Except for Western Europeans, whose ideal age is similar to that of Spanish-born women, those of all other origins have, on average, an earlier ideal age at first birth, as we hypothesized (Hypothesis 1). Compared to those who arrived during their teen years or early 20s, migrants who arrived before age 14 record an earlier mean ideal age, closer to that of the Spanish-born. This pattern suggests support for the socialization hypothesis. However, note that in the predictions, controls are set at their means for each subgroup and category, which increases the nonlinearity by age at migration of the predicted outcomes, even though, in Model 2, none of the differences across age at arrival coefficients are sizable.

Further, within each origin except Africa, women who arrived during their late 20s and early 30s report the oldest ideal ages at first birth compared to their counterparts who arrived at other ages. Exceptionally, Africans who migrated in their mid-30s display the oldest ideal ages within this group. This nonlinear pattern can signal how an interruption effect occurring when migration takes place during the main childbearing years, as well as adaptation to the contextual circumstances in the destination, might also affect the perception of fertility ideals. Additionally, differential selection by age at arrival, by which those migrating in their 20s might hold preferences for late motherhood, is another potential mechanism behind the moderate decrease in ideal age when moving from the

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[7] In our sample, 63% of Western European women were born in France, Germany, and Portugal. Among Eastern Europeans, 55% were born in Romania. Those from Africa came mostly from Morocco and Algeria (83%). Among Latin Americans, 61% were born in the Andean region (Ecuador, Colombia, Peru, and Bolivia) and Venezuela; 13% came from Argentina, Chile, and Uruguay; and 21% came from Mexico, Central America, and the Caribbean.

20s to the late 30s. However, given the absence of differences by age at arrival in Model 2, these differences in predicted ideal age are likely driven by differential characteristics of African women who arrived at different age ranges.

When we compare results for all women with those for the subset of mothers (Figure 1b from Model 2 in Table A-5), the overall patterns are quite similar and support for Hypothesis 1 persists. Those who arrived as children and in their 20s report an ideal age closer to that of Spanish-born women than those who migrated during their 30s and have a lower ideal age at childbearing. Women from Latin America and Eastern Europe who are currently mothers and migrated in their early 20s show a later ideal age than those who arrived at similar ages in the full sample. This suggests that women who migrated in their 20s and became mothers might have altered their perceptions of the ideal age of childbearing to a greater extent than what we observe in the full sample. As Model 2 does not fully interact origin and age at migration, differences in the predicted gaps by age at arrival across origins in Figure 1b are driven by compositional differences across groups. Among Africans and Western Europeans, the general trend is also similar to that in the full sample, but the mean ideal ages at first birth decrease for those who enter Spain in their 30s or later. Since they migrated at a later age, they presumably were not recent mothers at the time of migration and did not experience the constraints of combining childrearing with adaptation to a new country. As a consequence, their perceptions of ideal age might not be as influenced by migration as they are for women who migrated at younger ages. Indeed, the relatively higher ideal age for those who migrated in their early 20s can also be related to the interruption effect surrounding migration and the difficulties of adjusting to a new context. Those who were still not mothers at the time of migration may report older ideal ages either because of a selection effect of their preferences or because they needed to postpone motherhood to have time to settle down in the receiving country before becoming mothers. Those who arrived as mothers in their early 20s might have faced the hurdles of motherhood in a new context.

Individual characteristics such as age and education are positively associated with ideal age at first birth among the full sample and the subset of mothers (see Tables A-4 and A-5). Education is the control variable with the largest explanatory value in our models. Conversely, for the full sample, being partnered, already having children, a higher intended number of children, and a higher religious practice are all associated with an earlier ideal age at childbearing, conditional on all other variables in the analysis. When the sample is restricted to mothers, partnership status and fertility intentions become no longer associated with ideal age. Finally, the ideal age reported by migrant women does not seem to be associated with the mean age at childbirth in the origin country.[8]

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[8] In additional analysis (see Table A-7), we estimated the interaction effect between mean age at first birth at the country of origin and the age at arrival in Spain to see whether social norms brought from origin countries

Figure 1a: **Predicted ideal age at first child by place of birth and age at arrival, all women (N = 14,486), Spain, 2018**
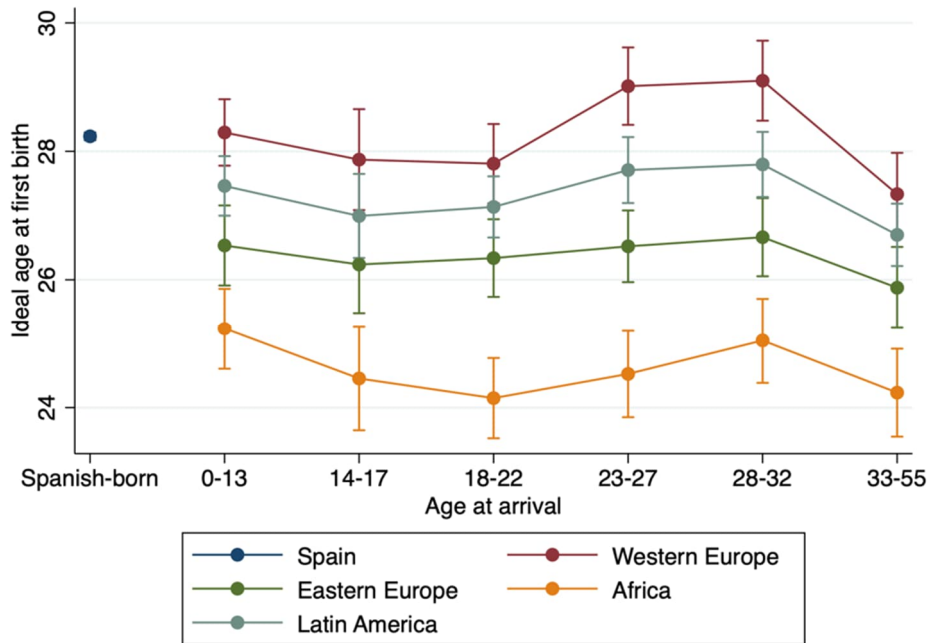
Note: Full controls added and averaged at their means for each subgroup and category (Model 2, Table A-5).
Source: 2018 Spanish Fertility Survey (INE).

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were more relevant for those who arrived as adolescents or adults (14-plus years old) and were more socialized in origin than they were for those who arrived before age 14, and we do not find differences in the coefficients.

Figure 1b: **Predicted ideal age for first child by place of birth and age at arrival, mothers at the time of the survey (N = 8,157), Spain, 2018**
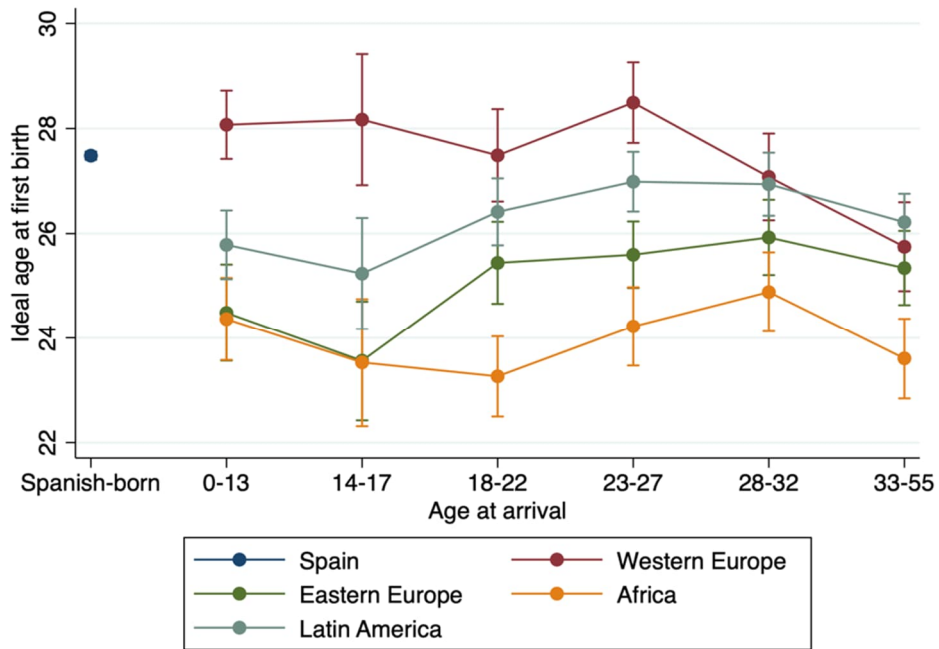
Note: Full controls added and averaged at their means for each subgroup and category (Model 2, Table A-4).
Source: 2018 Spanish Fertility Survey (INE).

4.2 The gap between ideal and actual age at first child

Figure 2 shows that more than half of Eastern European and Latin American women had their first child sooner than they would have ideally liked. Among these two origins, around half of those who had their first child sooner did it as a result of unexpected pregnancies. Conversely, half of Western European and more than half of Spanish-born women recorded motherhood delayed beyond their ideal age, often indicating material reasons as the cause, followed by partner-related reasons, with not having a partner being the leading factor. However, it is important to consider the role that ex post rationalization might have on how mothers report these reasons. Personal reasons such as material conditions, partner-related situations, or personal values might make one's ideal age more malleable compared to having had an unexpected pregnancy.

Figure 2:   Gap between actual and ideal age at first child by place of birth and reported main reason, only mothers (N = 8,214), Spain, 2018
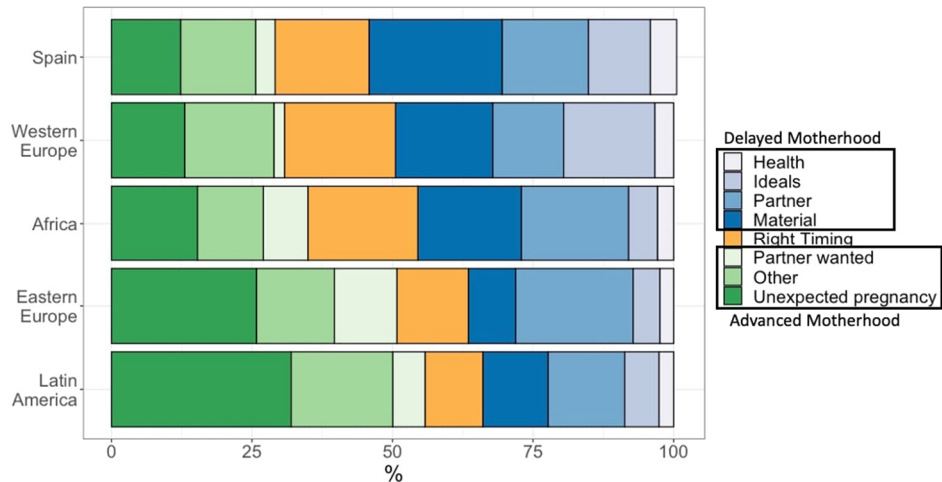
Next we explore which individual and contextual characteristics contribute to understanding these differences in fertility timing patterns.

4.3 Factors associated with the gap between ideal and actual age at first child

Figure 3 displays the predicted outcomes from linear regression models on the gap between ideal and actual age at first birth with all controls at their means for each subgroup and category (see coefficients and p-values in Table A-6). Panel A shows differences by region of origin using estimates from Model 2. Compared to Spanish-born women, who postponed motherhood 1.3 years beyond their ideal age, women from Western Europe and Africa also postponed their first child beyond their ideal age, by 1.15 and 0.92 years, respectively. Conversely, Eastern European and Latin American mothers recorded a negative predicted gap of –0.83 and –1.76 years, respectively. This means that they became mothers earlier than they would have preferred. These results partially confirm our second hypothesis, which predicted a negative gap for non-European migrants.

Panel B from estimates in Model 3 shows the predicted gap by a combined variable of age at migration − whether migrants arrived as children (before age 14) or not − and

motherhood status at migration for those who arrived after childhood. In this model, we pool together all origins, because sample sizes are too small to predict differences by age at arrival separately for each origin, and we combine age at arrival and motherhood status for simplicity. This is done using weighted averages across origin.

Compared to Spanish-born women, child migrants arriving before age 14 became mothers 1.45 years before their ideal ages. Child migrants can be considered a 1.5 generation, who found themselves between two cultural contexts (Rumbaut 2004). An interpretation of the finding could be that they had their first child according to the social norms of their origin communities via intergenerational transmission of childbearing patterns. However, their preferences were closer to those of Spanish-born women after having transitioned into adulthood in Spain (attending local schools, learning of peers' preferences, and so on). That combination may have resulted in an age at first birth that, a posteriori, they judged to be too early. A mechanism behind the continuity of childbearing patterns from the origin community could be a selection effect of parents who migrated with young children or an effect associated with ethnic enclaves in the destination setting, where young migrants were socialized, and the educational or labor opportunities they faced. Thus, we confirm Hypothesis 3a, which posited a negative gap for child migrants.

Migrants who became mothers in their countries of origin also report a negative gap of 2.8 years. That is, they believe they became mothers around three years before their ideal age. While the socialization-at-origin hypothesis would explain their early actual age at first child, the adaptation hypothesis lets us interpret their ideal age. That is, after these migrant mothers experienced the constraints associated with international migration and adjusting to a new country, their perception about the ideal age for a first child might have been updated upward, resulting in a negative gap, as we predicted in Hypothesis 3b. Conversely, migrants who arrived in Spain after age 14, in most cases in early adulthood, and became mothers in Spain registered a positive gap of 2.07 years. Thus, the adaptation to fertility patterns in the destination country and the interruption effect of migrating in early adulthood on childbearing patterns are likely mechanisms to explain this, as we hypothesized in Hypothesis 3c. As childless young adults arriving in Spain, they were more likely economic migrants aspiring to work, and they faced even more difficulties than natives when establishing themselves in the labor market, among other potential constraints (e.g., language and cultural barriers). These results align with previous studies that show a delay of transition to parenthood among childless migrant women in Spain (González-Ferrer et al. 2017). Alternatively, it is plausible that selection accounts for part of this pattern.[9]

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[9] In additional analysis (Table A-8), we tested the association between age at arrival and the contextual variable mean age at childbirth in the origin to predict the gap between ideal and actual age at first birth and to better understand the possible differences regarding age at arrival. This indicator may help clarify the role of the

Figure 3: **Predicted gap between actual and ideal age at first birth by place of birth, age at arrival, and motherhood status at migration, only mothers (N = 8,157), Spain, 2018**

Panel A: Predicted gap by region of birth (Model 2, Table A-6)
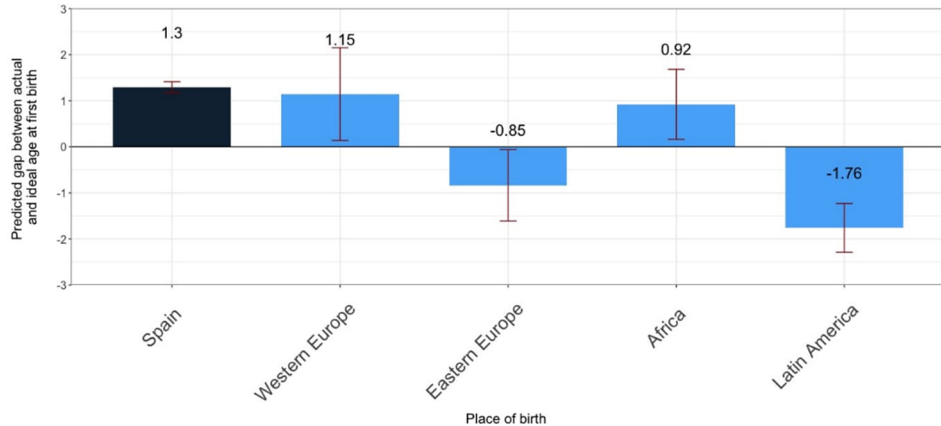
Panel B: Predicted gap by age at arrival and motherhood status at migration (Model 3, Table A-6)
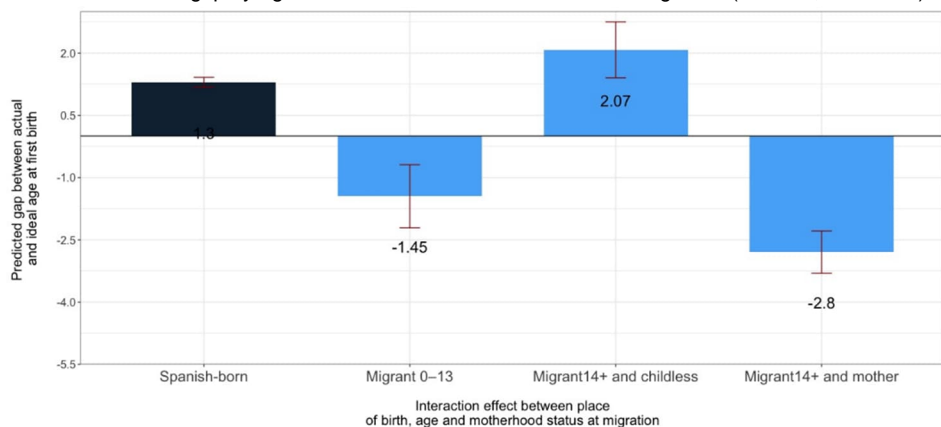
Note: Full controls added and averaged at their means for each subgroup and category. Standard errors are shown for the predicted values. See full models in Table A-6.
Source: 2018 Spanish Fertility Survey (INE).

socialization process in the origin for adult migrants and in the destination for child migrants. Results indicate that the gap does not seem to be affected by age at arrival. Hence the differences in the gap will be driven by differences in ideal age.

Finally, both employment status and the unemployment rate of the region of residence were associated with the gap in Model 3. In particular, being inactive increased the gap by 0.48 compared to being employed. Both inactive and unemployed women stated an earlier ideal age than employed women (Tables A-4 and A-5), but results imply that inactive women fail to fulfill those earlier childbearing plans more than others. Additionally, the present-day aggregate unemployment rate in the region of current residence is associated with an advancement of fertility: each percentual point of unemployment rate in the region decreased the gap by 0.04. Of course, lack of full longitudinal data on residence does not allow us to follow market conditions faced throughout a woman's lifetime. Among other contextual factors tested in Model 3, the influence of social networks of migrant origin – measured as the percentage of the foreign-born population in the region – was found to be weakly associated with the gap, as was the mean age at first birth in the women's country of birth.

5. Conclusions

This study uses the 2018 Spanish Fertility Survey to examine a scarcely explored dimension of migrants' and natives' fertility preferences: the ideal timing of fertility and the gap between the ideal and the actual age at which to have a first child. An innovative aspect of this study is to explore the factors associated with advanced or delayed motherhood vis-à-vis preference for each origin.

The fertility postponement among Spanish-born women has been well documented in previous research (Adserà and Lozano 2021; Esteve et al. 2020; Esteve and Treviño 2019; Adserà 2006). In this study, we observe that migrants' ideal age is, overall, earlier than that of Spanish women (Hypothesis 1) and that the gap between ideal and actual age varies by origin (Hypothesis 2) and is moderated by age at arrival and motherhood status at migration (Hypotheses 3a, 3b, and 3c).

We found that the ideal age at first child for migrants is younger than that for natives (Hypothesis 1) but varies substantially across subgroups, with African women showing the earliest mean ideal age, followed by Eastern Europeans and Latin Americans, with no difference between Spanish and Western European women. We also observed that child migrants who arrived before adolescence reported a later ideal age compared to those who arrived during adolescence or in their early 20s, which can be the result of being socialized in Spain. Additionally, we also identified a slightly older predicted ideal age among migrants who arrived in the prime ages of childbearing – mid- and late 20s and early 30s – compared to adolescents. We posited that those differences by age at arrival were partly driven by compositional variation. We interpret this as a likely sign of the interruption and adaptation effects, but it also could also be explained by a selection

effect driven by women with later fertility preferences than their counterparts in origin at those ages.

For the subsample of mothers, we were able to confront the ideal and actual age at first birth and calculate the gap between the two. Unlike Spanish women, Eastern Europeans and Latin American migrant women display a negative gap. For them, unexpected pregnancies were one of the main reasons reported for becoming mothers earlier than desired. Conversely, Western European women and, to a lesser extent, African women reported a positive gap. Not surprisingly, Western Europeans do not differ much from Spanish women given that they come from countries with age norms presumably similar to those in Spain and some of them are children of former Spanish migrants themselves. Spanish and Western European women reported the closest mean ideal age at first child, 27.5 and 27.4, respectively. African women reported the earliest mean ideal age at first child (24.3 years), which mechanically reduces the likelihood of African women reporting motherhood advancement. These results partially support Hypothesis 2, which predicted a negative gap for Latin American and African women as compared to European migrants.

In analyzing the gap between the ideal and the actual age at first birth by motherhood status and age at migration, we highlight three main findings in light of our working Hypotheses 3a–3c. First, we found that migrants who arrived as children show a negative gap, as on average they become mothers before they would like (Hypothesis 3a). This is interpreted as partial support for the socialization-in-destination hypothesis delaying their ideal age while their actual behavior might still follow patterns of fertility close to those of their cultural heritage of origin. In this regard, some literature has pointed to the idea of cultural entrenchment to explain how some descendants of migrants challenge the adaptation expected among child migrants and second generations by maintaining the fertility patterns of their parents' cultures of origin, despite having been born and socialized in the destination country (Abbasi-Shavazi and McDonald 2002). Second, migrant women who arrived in Spain already as mothers show the largest negative gap, indicating that they had a child before they would have wished (Hypothesis 3b). For many of these women, their actual age at first child likely aligns with early timing for childbearing in their countries of origin. Their childbearing pattern is based on the socialization-in-origin hypothesis. However, the migration event and the constraints associated with arriving in and adapting to a new country might have affected their perception of the ideal age, thus resulting in a negative gap between actual and ideal. Third, migrant women who arrived childless show a positive gap (Hypothesis 3c), delaying their first child beyond their desired age. The slowdown in childbearing due to the interruption effect around the time of migration and the process of adaptation to the new societal context might be behind this pattern. However, we cannot dismiss that a selection effect may also drive women's ideal and actual fertility timing, since the

preferences of these women might have already been closer to those in the destination country and distinct from women in the country of origin at the time of migration.

Additionally, differences across groups might be influenced by unobservable cultural and ideational traits. That is, prerequisites and living conditions (housing, financial stability, career development, or personal goals) women and couples from different origins feel they need to have in place to transition to parenthood might vary. The need to meet such conditions before parenthood – presumably stronger among the Spanish-born than among the foreign-born – might therefore influence the ideal age at which they consider it feasible to eventually have a first child. It might also explain the differences in the size of the gap. In addition, it is important to mention that migration inflows from North Africa to Spain started earlier than those from other regions. Hence we might expect that, on average, migrants from Africa would have been longer exposed to the social norms of the destination country; they may also perceive contextual constraints to a greater extent. However, more recent arrival groups may face more labor market instability and less established networks when navigating in the new country.

One of the main limitations of this analysis, due to the use of cross-sectional data, is the inability to explore changes in timing preferences over the life course. This deserves further exploration if adequate data are available in future research. Second, in regard to mothers, it is important to emphasize that their reported ideal age may be affected by a post rationalization process based on their actual fertility behavior. This limitation is unavoidable in cross-sectional data. Women's perception of their ideal age for motherhood at the time of the survey is the result of their cumulative life experiences, including personal, family, and work life. Thus, reported ideal ages are very sensitive to women's disparities in life trajectories. Future longitudinal studies asking about ideal fertility timing would be highly valuable for this field. A third and common limitation of migration studies is the inability to disentangle selection effects through survey data. If selection is very important, we might be observing a sample of migrant women whose ideal fertility timing is distant from fertility norms in their societies of origin. Likewise, we are identifying women by their countries of birth, and we cannot account for cultural traces that might influence age norms of native women born to foreign-born parents or those of foreign-born daughters of Spanish-born emigrants. Unfortunately, we cannot control for such effect with our data beyond acknowledging it. Fourth, sample sizes for migrant women other than Latin American women were relatively small ($N \leq 200$), which might compromise some of the observed patterns and limits our ability to make stronger conclusions. Future surveys should warrant a better representation of the migrant population. Fifth, because of sample size, we could not compare results for the male sample. The 2018 survey includes a sample of only 2,619 men, which did not allow for representative subsamples by origin of male migrants. Fertility surveys in the future should give more importance to men's fertility.

Despite the limitations just mentioned, this study contributes to the under-explored area of migrants' fertility timing preferences. We offer insights on how socialization and adaptation processes might shape values and beliefs concerning family and individual expectations. At the same time, this study offers insights on how contextual factors and constraints in the destination country might influence migrants' family formation patterns and how the migration process interferes with migrants' perceptions of life course transitions. A better understanding of migrants' fertility preferences also has implications for health and social policy. For example, it has implications for reproductive health care access, which might contribute to reducing the socioeconomic inequality that is often present with foreign-born minorities from low-income countries arriving in high-income, developed destination countries (Mussino, Wilson, and Andersson 2021).

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Appendix

Table A-1: Sample description, full sample of women (N = 14,486)

		Spain	Western Europe	Eastern Europe	Africa	Latin American
N		12,805	210	300	260	911
Mean ideal age at first child		28.2	28.0	26.1	24.6	27.2
Mean own mother's age at having her first child		24.4	24.0	21.4	20.8	21.6
Age at time of survey (%)	18–24 years	13.1	4.9	10.2	13.5	14.2
	25–29 years	10.3	4.1	12.5	12.6	10.8
	30–34 years	11.3	5.9	18.9	14.8	13.2
	35–39 years	13.5	17.1	22.5	20.8	20.5
	40–44 years	16.4	16.7	15.7	16.3	16.5
	45–49 years	16.4	21.5	12.6	12.6	11.4
	50–55 years	19.1	29.6	7.6	9.5	13.4
Age at arrival (%)	0–13 years	--	36.9	7.7	14.4	12.1
	14–17 years	--	3.0	6.1	7.8	8.3
	18–22 years	--	15.9	19.7	22.1	14.9
	23–27 years	--	17.4	29.1	23.8	18.1
	28–32 years	--	15.9	17.1	16.6	23.2
	33–55 years	--	11.0	20.3	15.3	23.4
Motherhood at migration (%)	Migrant mother	--	10.2	30.5	27.7	35.9
	Childless at migration; now mother		44.5	29.6	41.4	25.5
	Still childless		45.3	39.9	31.0	38.7
Educational level (%)	Up to secondary	35.6	33.2	46.9	69.1	49.5
	Post-secondary	29.7	28.3	27.8	18.7	30.0
	College or more	34.7	38.5	25.3	12.2	20.5
Religiosity (%)	Not religious	36.9	48.7	21.7	3.7	23.8
	None or low practicing	54.4	40.5	64.0	24.8	59.7
	Moderate or high practicing	8.8	10.9	14.4	71.5	16.5
Partnership status (%)	Not partnered	26.2	21.7	25.6	30.0	32.7
	Partnered	73.8	78.3	74.4	70.0	67.3
Parity (%)	No children	45.6	45.3	39.9	31.0	38.7
	One child	20.2	16.5	29.5	11.5	26.4
	Two children	28.4	25.9	24.1	24.8	24.0
	Three or more children	5.7	12.3	6.5	32.7	10.9
Fertility intentions (%)	None	12.9	20.5	6.6	7.7	8.3
	One child	13.7	12.8	22.7	5.5	16.5
	Two children	48.5	39.8	45.2	31.4	43.9
	Three or more children	24.9	27.0	25.5	55.5	31.3
Employment status (%)	Inactive	23.2	28.0	20.8	43.9	22.6
	Unemployed	12.3	7.4	18.1	21.3	17.0
	Employed	64.5	64.6	61.1	34.9	60.4
Difficulty in making ends meet (%)	Yes	42.9	43.3	52.5	73.0	64.3
	No	57.1	56.7	47.5	27.1	35.7
Mean age at first birth in origin country		28.4	27.7	22.7	24	21.8

Source: 2018 Spanish Fertility Survey.

Table A-2:   Sample description, subset of mothers at the time of the survey (N = 8,209)

		Spain	Western Europe	Eastern Europe	Africa	Latin American
N		7,125	127	183	193	581
Mean ideal age at first child among mothers		27.5	27.4	25.3	24.3	26.5
Mean ideal age at first child among migrant women who arrived as mothers			25.3	24.5	23.4	26.3
Mean ideal age at first child among migrant women who arrived childless			27.8	26.1	24.8	26.8
Mean own mother's age at having her first child		23.9	23.4	21.2	20.6	21.3
Age at time of survey (%)	18–24 years	0.6	0.0	1.2	1.7	2.8
	25–29 years	2.7	0.0	6.7	13.8	6.7
	30–34 years	8.5	2.8	17.6	16.8	13.2
	35–39 years	16.7	17.3	26.6	23.9	24.4
	40–44 years	22.5	23.0	21.5	19.9	20.9
	45–49 years	22.5	25.3	17.6	13.7	14.9
	50–55 years	26.5	31.6	8.9	10.2	17.0
Age at arrival (%)	0–13 years	--	37.61	8.85	15.4	13.37
	14–17 years	--	2.3	4.96	6.77	7.04
	18–22 years	--	15.94	19.7	22.06	14.94
	23–27 years	--	17.35	29.06	23.83	18.09
	28–32 years	--	15.85	17.14	16.63	23.19
	33–55 years	--	10.96	20.29	15.3	23.37
Motherhood at migration (%)	Migrant mother	--	19.0	50.8	40.1	58.5
	Childless at migration		81.0	49.2	59.9	41.5
Educational level (%)	Up to secondary	43.1	34.3	50.6	73.8	54.2
	Post-secondary	25.5	29.4	26.2	13.0	26.9
	College or more	31.4	36.3	23.2	13.2	18.9
Religiosity (%)	Not religious	29.0	39.7	16.4	4.0	19.3
	None or low practicing	60.8	49.3	67.7	18.6	63.5
	Moderate or high practicing	10.3	11.0	15.9	77.4	17.3
Partnership status (%)	Not partnered	11.9	18.4	18.7	25.9	13.9
	Partnered	88.1	85.4	81.6	81.3	74.1
Parity (%)	One child	37.2	31.0	49.0	16.6	43.1
	Two children	52.3	47.0	40.1	36.0	39.1
	Three or more children	10.5	22.0	10.9	47.4	17.8
Fertility intentions (%)	None	0.3	0.6	0	1.1	0.4
	One child	16.1	15.2	23.4	4.7	17.5
	Two children	53.5	44.8	44.8	31.0	43.8
	Three or more children	30.1	39.4	31.8	63.2	38.3
Employment status (%)	Inactive	18.6	31.3	23.3	46.5	20.3
	Unemployed	13.3	9.6	19.2	24.0	17.3
	Employed	68.1	59.1	57.5	29.5	62.4
Difficulty in making ends meet (%)	Yes	48.2	51.3	56.1	77.0	71.0
	No	51.8	48.7	43.9	23.0	29.0
Mean age at first birth in origin country		28.4	27.7	22.7	24	21.8

Source: 2018 Spanish Fertility Survey.

Table A-3:   **Test of differences of reported ideal ages between mothers and non-mothers by place of origin**

Subgroup	Motherhood	Mean ideal age	p-value
All sample	Childless	28.9	0.000
	Mothers	27.3	
Spanish	Childless	29.1	0.000
	Mothers	27.5	
Western Europeans	Childless	28.8	0.005
	Mothers	27.4	
Eastern Europeans	Childless	27.4	0.000
	Mothers	25.3	
Latin Americans	Childless	28.6	0.000
	Mothers	26.5	
Africans	Childless	25.6	0.015
	Mothers	24.2	

Source: 2018 Spanish Fertility Survey.

Table A-4: **Linear regression models of the ideal age at first child, all women, Spain, 2018** (N = 14,486)

		Model 1			Model 2		
		Coef.	SE	p-value	Coef.	SE	p-value
Place of birth (ref. Spain)	Western Europe	0.12	0.26	0.645	–0.27	0.33	0.412
	Eastern Europe	–1.87	0.25	0.000	–1.64	0.58	0.005
	Africa	–3.65	0.30	0.000	–2.02	0.54	0.000
	Latin America	–0.91	0.16	0.000	–0.40	0.62	0.522
Age at arrival (ref. Spanish-born)	0–13 years				0.34	0.32	0.295
	14–17 years				0.08	0.41	0.843
	18–22 years				0.12	0.33	0.714
	23–27 years				0.42	0.34	0.217
	28–32 years				0.71	0.34	0.037
	33–55 years, omitted				–		
Age (ref. 18–24)	25–29 years				0.77	0.13	0.000
	30–34 years				0.85	0.15	0.000
	35–39 years				0.99	0.14	0.000
	40–44 years				0.96	0.14	0.000
	45–49 years				0.61	0.14	0.000
	50–55 years				0.09	0.13	0.482
Own mother's age at having her first child (ref. before 20)	20–24 years				0.30	0.11	0.007
	25–29 years				0.49	0.11	0.000
	30 years or older				0.81	0.14	0.000
	No information				0.56	0.16	0.000
Educational level (Ref. up to secondary)	Post-secondary				0.89	0.08	0.000
	College or more				1.62	0.08	0.000
Religiosity (Ref. not religious)	None or low religious practice				–0.38	0.07	0.000
	Moderate or high religious practice				–1.05	0.12	0.000
Partnership status (Ref. not partnered)	Partnered				–0.39	0.08	0.000
Parity (Ref. no children)	One child				–1.01	0.11	0.000
	Two children				–1.20	0.10	0.000
	Three or more children				–1.54	0.17	0.000
Fertility intentions (Ref. no children)	One child (intended)				–0.02	0.15	0.872
	Two children (intended)				–0.53	0.12	0.000
	Three or more children (intended)				–1.14	0.13	0.000
Employment status (Ref. employed)	Inactive				–0.28	0.09	0.002
	Unemployed				–0.27	0.10	0.007
Difficulty in making ends meet (Ref. no)	Yes				–0.32	0.07	0.000
Percent of foreign-born population in the region					0.00	0.01	0.89
Mean age at first birth in the origin country					0.04	0.09	0.662
Regional unemployment rate					–0.02	0.01	0.008
Constant		28.23	0.03	0.000	27.64	2.46	0.000
Observations			14,486			14,486	
R-squared			0.040			0.202	

Source: 2018 Spanish Fertility Survey.

Table A-5: **Linear regression models of the ideal age at first child, mothers at the time of the survey, Spain, 2018 (N = 8,157)**

		Model 1			Model 2		
		Coef.	SE	p-value	Coef.	SE	p-value
Place of birth (Ref. Spain)	Western Europe	0.19	0.35	0.600	–0.52	0.43	0.224
	Eastern Europe	–1.99	0.29	0.000	–1.78	0.69	0.010
	Africa	–3.45	0.32	0.000	–1.88	0.64	0.003
	Latin America	–0.98	0.19	0.000	–0.48	0.74	0.523
Age at arrival (Ref. Spanish-born)	0–13 years				0.89	0.41	0.028
	14–17 years				0.81	0.61	0.189
	18–22 years				0.63	0.40	0.121
	23–27 years				0.78	0.37	0.033
	28–32 years				0.70	0.38	0.069
	33–55 years, omitted				–		
Age (Ref. 18–24)	25–29 years				2.17	0.48	0.000
	30–34 years				2.80	0.46	0.000
	35–39 years				3.50	0.44	0.000
	40–44 years				3.86	0.44	0.000
	45–49 years				3.76	0.44	0.000
	50–55 years				3.27	0.44	0.000
Own mother's age at having her first child (Ref. before 20)	20–24 years				0.40	0.13	0.002
	25–29 years				0.65	0.14	0.000
	30 years or older				0.90	0.18	0.000
	No information				0.26	0.21	0.201
Educational level (Ref. up to secondary)	Post-secondary				0.87	0.10	0.000
	College or more				1.67	0.10	0.000
Religiosity (Ref. not religious)	None or low religious practice				–0.34	0.10	0.000
	Moderate or high religious practice				–0.93	0.15	0.000
Partnership status (Ref. not partnered)	Partnered				–0.04	0.14	0.794
Parity (Ref. one child)	Two children				–0.59	0.10	0.000
	Three or more children				–1.05	0.17	0.000
Fertility intentions (Ref. no children)	One child (intended)				0.28	0.88	0.755
	Two children (intended)				0.15	0.87	0.866
	Three or more children (intended)				–0.30	0.88	0.729
Employment status (Ref. employed)	Inactive				–0.43	0.11	0.000
	Unemployed				–0.29	0.12	0.020
Difficulty in making ends meet (Ref. no)	Yes				–0.39	0.09	0.000
Percent of foreign-born population in region					0.00	0.01	0.604
Mean age at first birth in origin country					0.05	0.10	0.628
Regional unemployment rate					–0.01	0.01	0.181
Constant		27.48	0.04	0.000	22.55	3.03	0.000
Observations			8,157			8,157	
R-squared			0.05			0.19	

Source: 2018 Spanish Fertility Survey.

Table A-6: Linear regession models for the gap between actual and ideal age at first birth among mothers, Spain, 2018 (N = 8,157)

		Model 1			Model 2			Model 3		
		Coeff	SE	p-value	Coeff	SE	p-value	Coeff	SE	p-value
Place of birth (Ref. Spain)	Western Europe	–0.29	0.50	0.563	–4.33	0.73	0.000			
	Eastern Europe	–2.13	0.43	0.000	–4.82	1.15	0.000			
	Africa	–0.37	0.49	0.452	–1.74	1.01	0.083			
	Latin America	–3.06	0.33	0.000	–4.73	1.22	0.000			
Place of birth by child/adult migrants and motherhood status at migration (Ref. Spanish mothers)	Migrants arrived at ages 0–13							0.19	0.52	0.718
	Migrants arrived at age 14+ and childless at migration							2.02	0.59	0.001
	Migrants arrived at age 14+ and mothers at migration							–1.92	0.63	0.002
Age at arrival (Ref. 0–13)	14 years and older				1.64	0.54	0.002			
Motherhood status at migration (Ref. mothers)	Childless at migration				3.82	0.44	0.000			
Age (Ref. 18–24)	25–29 years				1.43	0.69	0.038	1.60	0.68	0.018
	30–34 years				3.46	0.63	0.000	3.48	0.63	0.000
	35–39 years				5.06	0.63	0.000	5.04	0.62	0.000
	40–44 years				5.97	0.63	0.000	5.93	0.62	0.000
	45–49 years				5.66	0.63	0.000	5.60	0.62	0.000
	50–55 years				5.07	0.63	0.000	4.99	0.62	0.000
Educational level (Ref. up to secondary)	Post-secondary				0.70	0.16	0.000	0.66	0.16	0.000
	College or more				2.63	0.15	0.000	2.57	0.15	0.000
Religiosity (Ref. not religious)	None or low religious practicing				0.31	0.14	0.031	0.31	0.14	0.029
	Moderate or high religious practicing				0.71	0.22	0.001	1.11	0.22	0.000
Partnership status (Ref. not partnered)	Partnered				1.15	0.22	0.000	1.13	0.23	0.000
Number of children (Ref. one child)	Two children				–2.26	0.14	0.000	–2.22	0.14	0.000
	Three or more children				–4.07	0.22	0.000	–3.89	0.22	0.000
Employment status (Ref. employed)	Inactive				0.41	0.17	0.014	0.48	0.17	0.004
	Unemployed				0.08	0.19	0.691	0.13	0.20	0.495
Difficulty in making ends meet (Ref. no)	Yes				0.20	0.13	0.126	0.18	0.13	0.164
Percent of foreign-born population in region					0.01	0.01	0.524	0.01	0.01	0.01
Regional unemployment rate					–0.04	0.01	0.003	–0.04	–0.04	0.01
Mean age at first birth in origin country					0.09	0.16	0.597	0.23	0.09	0.014
Constant		1.30	0.07	0	–6.61	4.65	0.156	–10.80	2.68	0.000
Observations					8,157					
R-squared			0.035			0.035			0.222	

Source: 2018 Spanish Fertility Survey.

Table A-7: **Linear regression models of the ideal age at first child, only migrant women, mothers at time of survey, Spain, 2018 (N = 1,079); interaction effect between mean age at first birth in origin and age at arrival**

		Model 1		
		Coef.	SE	p-value
Place of birth (Ref. Western Europe)	Eastern Europe	−1.62	0.72	0.025
	Africa	−1.72	0.68	0.011
	Latin America	−1.62	0.72	0.025
Age at arrival (Ref. 0–13 years)	14+ migrant	−0.30	0.75	0.694
Mean age at first birth in origin country		0.06	0.14	0.662
Age at arrival * mean age at first birth in origin (Ref. 0–13 years)	14+ migrant	−0.02	0.12	0.879
Age (Ref. 18–24)	25–29 years	2.50	0.81	0.002
	30–34 years	2.59	0.81	0.001
	35–39 years	3.04	0.78	0.000
	40–44 years	3.29	0.83	0.000
	45–49 years	3.08	0.82	0.000
	50–55 years	2.27	0.79	0.004
Own mother's age at having her first child (Ref. before 20)	20–24 years	0.40	0.30	0.182
	25–29 years	0.60	0.37	0.107
	30 years or older	0.85	0.63	0.179
	No information	−0.20	0.54	0.714
Educational level (Ref. up to secondary)	Post-secondary	1.04	0.30	0.001
	College	1.90	0.30	0.000
Religiosity (Ref. not religious)	None or low religious practice	−0.37	0.37	0.308
	Moderate or high religious practice	−0.95	0.46	0.038
Partnership status (Ref. not partnered)	Partnered	−0.06	0.36	0.859
Parity (Ref. one child)	Two children	−0.10	0.32	0.757
	Three or more children	−0.80	0.43	0.065
Fertility intentions (Ref. no children)	One child (intended)	−2.14	1.08	0.048
	Two children (intended)	−2.66	1.03	0.010
	Three or more children (intended)	−3.53	1.06	0.001
Employment status (Ref. employed)	Inactive	−0.04	0.33	0.907
	Unemployed	−0.36	0.31	0.246
Difficulty in making ends meet (Ref. no)	Yes	−0.20	0.27	0.453
Percent of foreign-born population in region		0.05	0.03	0.101
Regional unemployment rate		0.06	0.03	0.041
Constant		23.90	3.98	0.000
Observations			1,079	
R-squared			0.23	

Source: 2018 Spanish Fertility Survey.

Table A-8:   Linear regression for the gap among mothers, only migrant women, Spain, 2018 (N = 1,079); interaction effect between mean age at first birth in origin and age at arrival

		Model 1		
		Coef.	SE	p-value
Place of birth (Ref. Western Europe)	Eastern Europe	−0.39	1.13	0.730
	Africa	2.92	1.02	0.004
	Latin America	−0.75	1.25	0.550
Age at arrival (Ref. 0–13)	14+ migrant	−2.37	4.91	0.629
Mean age at first birth in origin country		0.10	0.24	0.685
Age at arrival * mean age at first birth in origin (Ref. 0–13)	14+ migrant	0.09	0.20	0.660
Age (Ref. 18–24)	25–29 years	1.80	1.20	0.133
	30–34 years	4.22	1.15	0.000
	35–39 years	5.63	1.17	0.000
	40–44 years	6.85	1.22	0.000
	45–49 years	5.81	1.23	0.000
	50–55 years	6.71	1.22	0.000
Own mother's age at having her first child (Ref. before 20)	20–24 years	−0.39	0.48	0.408
	25–29 years	0.44	0.56	0.429
	30 years or older	0.58	0.89	0.511
	No information	−0.23	0.96	0.811
Educational level (Ref. up to secondary)	Post-secondary	0.10	0.50	0.839
	College	2.32	0.51	0.000
Religiosity (Ref. not religious)	None or low religious practice	−0.41	0.53	0.438
	Moderate or high religious practice	−0.02	0.68	0.977
Partnership Status (Ref. not partnered)	Partnered	0.93	0.56	0.095
Parity (Ref. one child)	Two children	−3.35	0.54	0.000
	Three or more children	−6.06	0.69	0.000
Fertility intentions (Ref. no children)	One child (intended)	2.90	2.94	0.325
	Two children (intended)	4.37	2.88	0.130
	Three or more children (intended)	5.03	2.90	0.083
Employment status (Ref. employed)	Inactive	0.78	0.48	0.103
	Unemployed	0.22	0.55	0.697
Difficulty in making ends meet (Ref. no)	Yes	−0.40	0.43	0.352
Percent of foreign-born population in region		0.01	0.04	0.843
Regional unemployment rate		−0.01	0.04	0.825
Constant		−10.91	7.09	0.124
Observations			1,079	
R-squared			0.22	

Source: 2018 Spanish Fertility Survey.