Rethinking Couples' Fertility in Spain:

Do Partners' Relative Education, Employment and Job Stability Matter?

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Introduction

In the last century, we have witnessed an unprecedented worldwide expansion of higher education (Schofer and Meyer, 2005) that has been especially relevant for women. A decisive structural change that flipped the relationship between education and gender, and today, a reversal of the gender gap in education is apparent in many countries (Van Bavel et al., 2018; Esteve et al., 2016b; Esteve et al., 2012; Klesment and Van Bavel, 2017). Consequently, we have observed new arrangements for partners' participation in the labor market (Ruggles 2015) and new patterns of assortative mating (Van Bavel et al., 2018). One of the most-studied changes related to women's educational expansion has been the postponement of fertility, which in many contexts has resulted in low fertility (Billari and Kohler 2004, Kohler et al. 2002, Trimarchi and Van Bavel 2019, Van Bavel 2012). This new landscape is expected to result in more egalitarian couples and a small but increasing number of hypogamous couples (i.e., couples in which the woman has higher status than the man) as opposed to hypergamous couples (i.e., couples in which the man has higher status than the woman). However, a paradox arises in the persistence of gender inequality. On the one hand, females' educational advantage does not always directly relate to an employment and occupational advantage (Klesment and Van Bavel, 2017; Van Bavel, 2012). In this sense, previous literature has shown how often women select a field of study that results in certain occupational sex segregation and facilitates or postpones fertility decisions, depending on the field (Begall and Mills, 2013; Martín-García, 2010). On the other hand, men's and women's respective jobs do not carry the same weight in fertility decisions,

since men's jobs are often prioritized over women's jobs when making adjustments in paid and unpaid work after the transition to parenthood (Bueno and Grau-Grau 2020, Kühhirt 2012). This trend is often explained by the persistence of the gender wage gap (Bergsvik et al. 2019; England, 1984). Nevertheless, empirical evidence from several countries has confirmed a reversal of the traditional negative relationship between education and fertility (Adserà 2017, Andersson et al., 2009; Kravdal and Rindfuss, 2008). How does this trend based on education vary when we also consider both partners' relative labor-market characteristics in a context such as Spain, where high economic uncertainty in recent times has affected everyone, even the highly educated? In this work, we explore how Spanish couples' relative characteristics – education, employment and job stability – interact with fertility decisions. We analyze heterogamic couples (in which partners present different characteristics) and compare them to homogamous couples of low and high status or resources.

This approach is innovative because the link between the labor market and fertility has traditionally examined women's characteristics and, more recently, both partners' characteristics (Andersson and Scott 2007, Jalovaara and Miettinen 2013, Inanc 2015), but it has less often explored the interaction of both partners' characteristics in terms of homogamy and heterogamy. Studies that have applied such a perspective have done so for educational homogamy, earnings, or religion (Bergsvik et al. 2019; Matysiak et al., 2018; Nitsche et al., 2018; Osiewalska 2018, Trimarchi and Van Bavel 2019). This work adds to the current understanding of the interplay of partners' job stability. In applying this approach, we build on the literature on gender, the labor market, and fertility and on Neyer et al.'s (2013) claim that new, specific measures for studying the link between gender equality and fertility are necessary. In this sense, attention must be paid to couple-level indicators rather than examining couples' fertility through women's and men's

socioeconomic resources independently. Applying this perspective allows us to better understand how the interaction between gender inequality and the labor market operates for fertility decisions. Thus, our contribution also relies on bringing the gender inequality perspective into the analysis.

Spain is a highly suitable case for analyzing such patterns. Since the 1980s, Spain has been one of the 'lowest-low' fertility regions in the world (Billari and Kohler, 2004; Kohler et al., 2002). The country's economic uncertainty in combination with the progression of more gender-egalitarian norms contributed to making dual-earner couples the most common family economic arrangement by the beginning of the 21st century (García-Román, 2013). Fertility intentions (and decisions) among Spanish couples are often conditioned upon the couple's economic arrangements and financial stability (Bueno, 2020). Spain's high and prolonged levels of unemployment and precarious work are strongly associated with the delay of the transition to parenthood (Vidal-Coso and Miret, 2017) and second births (Adserà, 2011). Economic uncertainty, together with an institutional context that does not facilitate the reconciliation of family and work life (Castro-Martín et al., 2018), reinforces the gap between fertility ideals and intentions in Spain (Brinton et al., 2018). Within this context, making fertility decisions is increasingly the result of a careful evaluation of both partners' employment circumstances and job characteristics.

Theories in the Study of the Labor Market, Gender, and Fertility

For decades, Becker's (1960) new economics of the household approach has been the conventional theory to explain the link between gender, the labor market, and fertility. Becker's microeconomic neoclassical model argues that women's advantage in education and in the labor

market implies a higher opportunity cost of having children and is one of the main factors contributing to fertility decline, as opposed to the gender-specialized roles of the male-breadwinner/female-caregiver model. Conversely, Oppenheimer (1997) takes into account the changes in women's role in the labor market and theorizes that dual-earner couples are better positioned to assume the costs and challenges of childbearing. However, McDonald's gender equity theory (McDonald, 2000a, 2000b) argues that while women's increasing participation in the public sphere has occurred rapidly, men's increasing participation in the private sphere (housework and childcare) has advanced at a slower pace. Unequal progress toward greater gender-egalitarian behaviors occurs in contexts characterized by a lack of gender equity in public institutions (social policy and the labor market), as is the case in the context of this study. Together, these factors generate a greater burden of work for women (Hochschild, 1989) and, consequently, greater levels of unmet fertility in postindustrial societies (McDonald, 2000a, 2000b). Subsequent literature has emphasized the important role of gender egalitarianism in fertility recovery in low-fertility countries, theorizing that as men become more involved in the private sphere, fertility will recover (Esping-Andersen and Billari, 2015; Goldscheider, Bernhardt, and Lappegård, 2015).

While the influence of the labor market's intersection with gender roles on fertility decisions has been widely studied, more research is needed on the impact of microlevel (in)equalities between partners (Osiewalska 2018). Indeed, women have not entered the labor market on equal footing with men. The existing sex segregation and gender wage gap in the labor market limit women's career paths (England, 1984; Padavic and Reskin, 2002). At the same time, it is plausible that partners' gender-egalitarian attitudes and behaviors may be trumped by financial impositions in a context of economic uncertainty (Bueno and Brinton, 2019). Hence, to better understand how

gender and work influence fertility, it is necessary to pay attention to the interaction of both partners' labor force characteristics. From the theory of relative resources (Blood and Wolfe, 1960; Lundberg and Pollak, 1996), we borrow the idea of considering couples' bargaining power in the labor market based on men's and women's characteristics. In the context of economic uncertainty, do greater resources promote childbearing among well-positioned couples compared with those who are worse positioned? When women have greater resources than their partner, does this situation favor fertility decisions compared to male-breadwinning couples? We seek new insights in the following three dimensions: education, employment and occupation.

Education

The debate about a reversal of the traditional negative relationship between females' education and fertility is occurring in many Western countries (Adserà, 2017; Andersson et al., 2009; Kravdal and Rindfuss, 2008). However, previous studies have found mixed results in different country settings. Nitsche et al. (2018) find across different European countries that highly educated homogamous couples tend to postpone childbearing but show the highest second and third birth rates, contrasting with lower transitions to second births among hypergamous couples in which women are less educated than men. Conversely, Osiewalska (2018) finds support for Becker's model by identifying a positive relationship between educational hypergamy and fertility when considering the age difference between partners and partners' housework distribution in several European contexts. However, Trimarchi and Van Bavel (2019) note the complex heterogeneity across Europe after finding support for both Becker's specialization model among Eastern and Central European countries and the dual-earner model in Belgium. It has been argued that higher education is positively related to higher gender egalitarianism.

Previous research has shown that couples in which the woman is highly educated have a more egalitarian distribution of domestic work, especially when the man is also highly educated (Bianchi et al. 2006). Likewise, higher education is correlated with higher income, thus increasing the possibility of outsourcing domestic work and favoring more egalitarian dynamics in the private sphere (González and Jurado 2009).

We present a twofold hypothesis based on the interaction between partners' education and based on the premise that, according to the most recent literature and trends, Oppenheimer's pooling of resources model prevails over the gender-specialization model.

H1a (Homogamy): We hypothesize that homogamous couples with high education will have greater resources (and presumably a more equal division of paid and unpaid work), favoring the transition to childbearing compared to homogamous couples with a low educational level. Greater resources have more importance than the opportunity cost of having children, the basis of Becker's specialization model, which implies the postponement of parenthood and, consequently, lower fertility among more highly educated couples.

H1b (Heterogamy): We expect that hypogamous couples have higher fertility than hypergamous couples based on two assumptions. First, if we assume that women's educational advantage compared to their partners locates them in better occupational positions, we expect that the pooling of resources for hypogamous couples would be larger than for hypergamous couples, thus favoring fertility transitions for the former. This expectation relies on the assumption that 1) women in hypergamous couples are more likely to be inactive (i.e., not earning) and 2) due to the persistence of the gender

wage gap, the less-educated partner would earn more in dual-earner couples; thus, the man in a hypogamous union would earn more than the woman in a hypergamous union. Second, we know that higher education is associated with a more equal division of labor and more egalitarian gender-role attitudes. We expect that such an association will be stronger when the woman is more educated than the man and weaker when the reverse holds since hypogamous couples counter traditional gender-role expectations (Van Bavel 2012). Again, these two assumptions will prevail over the higher opportunity cost of having a child for couples in which the woman has higher education than the man (hypogamous couples).

Employment

In contexts characterized by structural employment uncertainty such as Spain (Adserà 2011), the relationship between education and employment is not necessarily positive (Kreyenfeld 2010, Özcan et al. 2010). Considering this, we take into account couples' employment arrangements. Fertility decisions are closely linked to financial stability and, consequently, to partners' employment conditions. Some studies have shown that regardless of partners' job circumstances, the macroeconomic context influences perceived economic insecurity in relation to a couple's decision to have a child (Adserà 2011, Kravdal 2002). In the Spanish context, it has been shown that perceived economic uncertainty depresses fertility intentions, especially among more egalitarian couples for whom securing women's employment represents a precondition to childbearing (Bueno and Brinton, 2019). However, previous research has revealed that men's employment stability and women's employment stability do not play equal roles in fertility decisions. Studies across different countries have shown that men's unemployment typically has

a greater negative effect on fertility than women's unemployment (Kravdal, 2002; Vignoli et al., 2012; Vidal-Coso and Miret, 2017). Conversely, women's unemployment has two possible effects. Based on microeconomic models of fertility, female unemployment would favor fertility because the opportunity cost is lower (Becker 1960). However, when the expected reduction in income is significant, it might generate the opposite effect (Adserà 2011). Indeed, empirical evidence also shows mixed results in this regard. For Finland, Jalovaara and Miettinen (2013) find a higher transition to parenthood among dual-earner couples and evidence that women's employment is equally or even more influential for fertility than men's employment. Inanc (2015) finds in the U.K. that couples in which the woman is employed have a lower probability of becoming parents irrespective of the man's employment; however, when the woman is unemployed, the couple tends to postpone parenthood compared to couples in which the woman is inactive. For Spain, Vidal-Coso and Miret (2017) also find a higher probability of having the first child among inactive women.

Confronting the new household economics theory, for several decades, studies from Northern Europe have shown the compatibility between women's work and childbearing (Duvander and Andersson 2006). Educational expansion among women may result in their holding better labor-market positions and in the emergence of female-breadwinner couples (Drago et al. 2005, Vitali and Mendola 2014).

In this regard, the role of education in mediating the impact of unemployment and temporary contracts on fertility must be acknowledged. Highly educated men and women search for jobs in a different segment of the labor market than less-educated individuals (Adserà 2011). In addition, being highly educated might smooth the impact of economic uncertainty because these individuals have more savings and are more likely to be in a union with a highly educated

partner (Adserà 2011). This is especially true among highly educated women because patterns of assortative mating also differ by gender (De Hauw et al., 2017). Highly educated couples might, therefore, be more confident that they have better future career prospects; consequently, they might also be confident that they have fewer economic constraints that prevent them from meeting their fertility aspirations (Bueno and Brinton, 2019).

Given the central role of economics in fertility decisions, particularly in a context of high economic uncertainty such as Spain, our second set of hypotheses predicts the following:

> H2a (Homogamy): When both partners are employed, it ensures better economic resources and, consequently, encourages fertility, contrary to the experience of couples in which both partners are unemployed. This effect is stronger among dual-earner, homogamous, highly educated couples than among dual-earner, homogamous, less-educated couples.
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> H2b (Heterogamy): For couples in which only the woman is employed, the probability of having a child is lower than it is among couples in which only the man is employed due to the opportunity cost for the woman as the female breadwinner. Thus, male-breadwinner couples will have higher fertility than female-breadwinner couples. However, for couples in which only the man is employed, the probability of having a child will be lower when the woman is unemployed than when the woman is inactive since couples with an unemployed woman may postpone and lower their childbearing intentions until the woman achieves employment.

Job Stability

The literature that examines both partners' relative characteristics has mainly focused on their

educational or employment circumstances but has less often examined the partners' relative position in terms of job stability. Among dual-earner couples, partners postpone childbearing until they achieve what they perceive to be an appropriate income level for having a child. Hence, couples in which both partners have job stability transition to childbearing earlier (and are more confident in doing so) than couples who do not have such stability. Similarly, among heterogamic couples, those in which the woman has job stability are expected to be less affected by the gender wage gap than hypergamous couples and, therefore, are more likely to have a child. Some studies of partners' income levels show that the woman's economic resources have a stronger positive effect on fertility than those of the male partner (Jalovaara and Miettinen 2013). In addition, given the segregation of the labor market, the symmetrical relationship between an individual's educational level and occupational status is much less straightforward among women than among men (Klesment and Van Bavel, 2017).

Although highly educated women were the forerunners of fertility postponement in Spain, women with lower educational attainment followed them (De la Rica and Iza, 2005). This phenomenon suggests that the effect of education on fertility is weaker than the effect of economic uncertainty and job precariousness for both highly educated and less-educated individuals. In a more specific attempt to disentangle the effect of partners' relative resources on fertility, it is necessary to focus only on dual-earner couples and the interaction of each partner's job characteristics. In doing so, we present a third set of hypotheses:

> H3a (Homogamy): Dual-earner homogamous couples in which both partners have job stability and presumably greater financial resources are expected to have a higher probability of having a child than couples in which both partners experience economic insecurity.

H3b (Heterogamy): In a context of greater gender egalitarianism in which women, like men, might search for job stability before having children, hypogamous couples in which the woman presumably has achieved job stability and good job conditions have a higher probability of having children than hypergamous couples in which the woman has a lower job position than the man. This could be explained by a greater pooling of resources and egalitarianism in hypogamous unions, as argued in H1b.

Data and Methodology

We use data collected between 2002 and 2018 from the Spanish Labor Force Survey (SLFS). The design of the survey implies that a sixth of the sample is renewed every trimester. This means that each respondent participates in the survey during 6 consecutive waves. Its large sample size and the fact that it collects information from all members in the household make the SLFS a suitable data source for studying fertility. We first combined all the observations for each respondent (98,864 cases) and determined whether any birth occurred between the 4th and 6th waves (4,988 births occurred). Because couples' characteristics, especially employment, might have changed at the time of birth, we identified the births in waves 4 through 6 to be able to select the parents' characteristics from three waves earlier, approximately at the time of conception, as in Andersson and Scott (2007). If the couple did not have a child during the period of observation, we assigned the characteristics observed in the third wave. Births were identified as new household members under one year of age. We considered all birth orders[1]. Among observed births, 40.1% represented first births, 49% represented second births, and 10.9% represented third or later births.

To identify gender patterns, we selected heterosexual couples, both married and cohabiting, in

which the woman was between 20 and 44 years of age (see Table 1 for a description of the sample). Births are marginal before age 20 and represent only 0.3% of the total number of births in our sample; hence, the left-censoring bias is minimal.

The three dimensions – education, employment and job stability – were analyzed in terms of homogamy or heterogamy. To build these variables, partners' characteristics were grouped as follows.

- *Education*: 1) less than secondary; 2) basic secondary; 3) basic or superior vocational graduate and upper secondary; and 4) university graduate (3 to 5 years), postgraduate or master's level, and Ph.D. Our variable contains four categories: homogamy low (both low), hypergamy (man more than woman), hypogamy (woman more than man), and homogamy high (both high). The category 'homogamy high' includes the two highest categories of education (3 and 4). College education in Spain is highly affordable, thus narrowing the difference between those with university degrees and those with degrees from professional programs. For the heterogamic categories – hypergamy and hypogamy – we considered all combinations for which one of the partners had at least one level higher or lower than the other.
- *Employment*: Employment was measured in terms of the partners' labor force participation. We differentiated five categories: 1) neither partner works, 2) he works and she is inactive, 3) he works and she is unemployed, 4) she works and he is unemployed or, less often, inactive, and 5) both partners work.
- *Job stability*: The 'stable' category comprises employees in the public sector (including civil servants and temporary contractors) and employees in the private sector with permanent contracts. The 'unstable' category comprises self-employed[2] individuals and

employees in the private sector with temporary contracts. Thus, our variable considers whether neither partner has job stability, only he has job stability, only she has job stability, or both partners have job stability.

First, we contextualize couples' relative characteristics over time followed by patterns in fertility timing and intensity. We calculate age-specific fertility rates for each type of couple, dividing the number of births observed by the total number of women in each age group and each couple category. We then calculate total fertility rates.

Second, we estimate logistic regression models to explore the effect of couples' education, employment, and job stability on the likelihood of having a child. We show four multivariate logistic models (Tables 2 and 3). To interpret our findings, we present average marginal effects instead of odds ratios because odds ratios should not be interpreted across different models (Mood, 2010). The first set (Table 2) includes two models for all couples. Model I includes education as the explanatory variable plus controls, and Model II adds employment status to determine whether the association between educational pairings and fertility changes after controlling for employment. In the second set of models (Table 3), we consider only dual-earner couples, and we follow a similar strategy. Model III includes education and partners' job stability plus controls. In Model IV, we add two other job characteristics, working hours and occupational prestige, as proxies for partners' gender roles and income, respectively.

In addition to the main explanatory variables, all models are controlled by the following variables: *economic cycle* in three periods: expansion (2002-2007), recession (2008-2013), and recovery (2014-2018); *woman's age*: 5-year age group; and *previous children* in the household.

The models in Table 3 (for dual-earner couples only) also control for partners' *working hours,* full time (30+ hours/week) and part time (less than 30 hours/week), and partners' *occupational prestige*[3], 1) elementary occupations, unskilled employees, 2) clerks, skilled employees, 3) technicians and associated professionals, employees, 4) managers and professionals. In this case, the category 'homogamy low' includes the lowest category (1). For heterogamic couples, we follow the same criteria as in education.

The Spanish Context: Couples' Relative Characteristics Over Time

The combination of educational expansion for women in particular and a changing economic cycle has created a relatively new landscape for Spanish couples' socioeconomic characteristics. Figure 1a shows the decline over time of the proportion of couples in which both partners have a low education level. A similar decline occurs for hypergamous couples. Hypogamous couples have progressively increased from 25.4% to 36.4%, as have couples in which both members have a high education level. In recent years, in 7 out of 10 couples, women have either the same or a higher educational level than their partners.

--Figure 1 about here --

This structural change in education has implications for couples' employment arrangements and occupations. The most significant implication is that the 'traditional model' in which the woman was inactive diminished from 30.6% to half this amount, 15% (Figure 1b), between 2002 and 2018, confirming the steep decline in the male-breadwinning model. Conversely, hypergamous couples in which the male partner works and the female partner is unemployed increased from 6% to 14% during the economic crisis, indicating the increasing relevance of female employment, especially during the recession, as the theory of the added

worker effect predicts (Mattingly and Smith, 2010). While dual-earner couples remain the dominant model, couples in which only the woman is employed increased from 3.5% to 5.5% and reached 10.5% at the peak of the crisis due to major male unemployment in those years. For the same reason, the number of couples in which neither of the partners is employed has followed the same trend.

The distribution of dual-earner couples according to partners' job stability also reflects women's educational advantage. In more than half of the couples in our sample, both partners have a 'stable' position in the labor market. For the rest, Figure 1c shows how couples with no stability and couples in which only the man is stable have dropped similarly over the years. In turn, hypogamous couples increased over time, especially during the recovery period, when they reached 21.4%.

Couples' relative educational, employment and job stability characteristics have experienced significant structural changes, all in the direction of a better position of women in the educational scale and in the labor market. How is this related to fertility?

Couples' Relative Characteristics and Fertility: Timing and Intensity

In this section, we explore how partners' relative characteristics are linked to the timing and intensity of fertility among couples in which the woman is between 20 and 44 years old. Higher education, especially for women, often results in fertility postponement. Figure 2a shows that the furthest fertility postponement occurs in couples in which the woman (hypogamy) or both partners (homogamy high) have a high education level. Couples in which the woman has less education than the man have children earlier than the previous groups, as do couples with low education levels, who begin bearing children earliest.

If we consider partners' employment status (Figure 2b), important differences arise. Couples in which the man is employed and the woman is inactive show the earliest timing. These couples have the highest fertility rates before age 25, which resembles Becker's specialization model. In contrast, women's participation in the labor market as the sole economic provider significantly reduces and postpones their fertility, and differences by age in this group are less intense. Conversely, the fertility levels of dual-earner couples are consistently higher at all ages after 25 than those of couples affected by unemployment, indicating the importance of securing resources before deciding to have a child.

Employment arrangements explain how gender differences in labor force participation affect fertility behavior. In Figure 2c, we focus only on dual-earner couples. The fertility curves by partners' job stability suggest that couples in which the woman or both partners have job stability have higher fertility than couples in which the woman or both partners have employment instability at almost all ages.

--Figure 2 about here --

There are evident differences in the timing of fertility by partners' characteristics. Do these characteristics also have an effect on fertility intensity? Figure 3 shows the fertility levels for each category calculated as the sum of the age-specific fertility rates of all couples[4]. It is important to recall that these figures are not comparable to the usual total fertility rates because they are calculated only for partnered women instead of the total female population. Aside from unobserved births before age 20 (0.3% of births in our sample), less-educated couples would have the lowest fertility (1.6 children), and highly educated couples would have the highest fertility (2.2 children), but there is no difference between the heterogamous categories (1.9 children), as seen in Figure 3a. The employment panel (Figure 3b) shows that the two-child norm

would be achieved among dual-earner couples, but it would also be achieved by the declining male-breadwinner model (inactive woman). Couples in which only the woman works show the lowest level of fertility (1.4 children) due to the high opportunity cost of having children for such couples. The economic costs similarly affect couples in which neither partner works. These groups, however, represent a minor proportion; each represents only 6% of the sample. Figure 3c presents dual-earner couples' fertility by partners' job stability, showing how the two-child norm would be achieved not only among couples where both partners hold stable jobs but also among hypogamous couples.

--Figure 3 about here --

The descriptive results suggest two main ideas. First, women's advantage in education and the labor market is, as expected, associated with fertility postponement but not necessarily with fewer children than other couples. Second, low education levels and job precariousness seem to lower fertility against what it was traditionally observed. Economic and job uncertainty play key roles in fertility decisions. Consequently, being a dual-earner couple becomes paramount regardless of education, especially for couples in which the woman has job stability. While the analysis of the timing and intensity of fertility shows enlightening results, it is necessary to account for other variables to draw conclusions. Next, we use logistic regression models to shed light on the validity of these observations.

How Do Relative Resources Explain Couples' Probability of Having a Child?

The Roles of Education and Employment

Following the insights obtained from the descriptive results, the multivariate analysis allows us

to control for other characteristics. All models control for women's age, economic period, and the presence of previous children in the household (a proxy for parity). Figure 4a shows the predicted probabilities of having a child by partners' education computed from Model I (Table 2). The first important finding is a positive relationship between education and fertility, suggesting that the reversal of the negative education-fertility relationship is also occurring in Spain. The probability of having a child is significantly higher for couples in which both partners have a high educational level and is lower for couples in which both partners have a low education level. However, there are no differences between hypogamous and hypergamous couples in the likelihood of having a child. This model provides support for the pooling of resources perspective within Hypothesis 1a, which assumes that highly educated couples collect greater socioeconomic resources together and, presumably, hold more gender-egalitarian values, resulting in a higher probability of having a child. However, we cannot confirm the prediction of Hypothesis 1b that, based on educational homogamy, hypogamous couples have a higher probability of having a child than hypergamous couples.

--Figure 4 about here --

We further explore these differences by including couples' employment arrangements in the model (Figure 4b from Model II). First, we observe that dual-earner couples' probability of having a child is as high as that of hypergamous couples with an inactive woman. This finding suggests that both arrangements coexist as likely settings in which to have a child; however, the dual-earner model is hegemonic, while the male-breadwinner/female-caregiver model is less frequently represented in Spanish society, as seen in Figure 1. Second, compared to these two models, all other types of couples in which one or both partners are unemployed have a significantly lower probability of becoming parents for all educational pairings. Hence, we must

partially reject Hypothesis 2b, which predicted higher fertility among male-breadwinner couples compared to female-breadwinner couples. This is only true when the woman is inactive but not when she is unemployed, thus suggesting the importance of female employment for fertility.

Considering employment characteristics, the results in Figure 4b also confirm that highly educated couples are more likely to have a child than couples with a low education level. Among heterogamous couples, the probability of having a child remains higher, but it is not significant for hypogamous couples compared to hypergamous couples.

The Role of Job Stability among Dual-Earner Couples

The results for couples' employment arrangement (Figure 4b) confirm the important role of both partners' employment in fertility. For a more nuanced understanding of the role of education on fertility decision-making among dual-earner couples, we focus now on the (dis)similarity between men's and women's occupational positions by looking at their relative job stability. Model III is a basic model controlling, as before, for women's age, economic period, and the presence of previous children in the household. The model shows an important finding. We find a significantly higher probability of having a child not only for couples in which both partners have job stability but also for couples in which the woman has job stability but the man does not (hypogamy). As in previous models, the reverse of the negative education-fertility gradient remains when we consider only dual-earner couples. It is important to note that while we do not find significant differences between heterogamous pairs by education, we observe significant differences when we compare couples by partners' job stability, with a fertility advantage for hypogamous couples, that is, couples in which the woman has job stability. As seen in Figure 4c, the same patterns hold in Model IV after introducing partners' relative working hours and

occupational prestige as control variables.

This result supports the pooling of resources hypothesis (H3a), diminishing the importance of the counteracting factor that suggests a higher opportunity cost of childbearing for well-positioned couples. These results reinforce the increasing importance of women's employment in explaining fertility decisions among dual-earner couples, as we anticipated in Hypothesis 3b.

Conclusions

In this work, we explore recent trends in couples' fertility in Spain through a gender lens by examining the relationship between partners' relative education levels, employment arrangements, and job stability. This approach allows us to explore, on the one hand, partners' low or high resources (homogamous couples) and, on the other hand, partners' divergent relative resources (heterogamous couples). Two main conclusions are drawn from this analysis.

First, our results suggest that the reversal of the negative fertility-education gradient observed in other European contexts is also observed among young couples in contemporary Spain. We find that beyond fertility postponement, highly educated couples are more likely to have a child than less-educated couples. In a context of quasi-structural economic uncertainty such as that of Spain, highly educated couples are presumed to have better jobs and, accordingly, greater income and financial stability, which is considered a stepping stone for fertility decisions. The results for homogamous educational pairings persist when we introduce employment arrangements and occupational characteristics, thus confirming the robustness of this finding. This is important because it confirms the transition from a gender-specialization model to an (egalitarian) pooling of resources model, as suggested in our hypotheses based on homogamy (H1a, H2a and H3a). The lower likelihood of having a child for less-educated couples calls into question whether the long-

held belief that individuals with low socioeconomic status have higher fertility will persist in the Spanish context.

Second, partners' relative occupational characteristics – particularly job stability – determine fertility decisions to a greater extent than partners' educational attainment. In this study, we confirmed that men's or women's educational advantage relative to their partner (heterogamous couples) shows similar probabilities of having a child. Although hypogamous couples show a slightly higher probability, the difference from hypergamous unions is not statistically significant. However, among dual-earner couples, those in which only the woman has job stability (hypogamy) have a higher probability of becoming parents than when the opposite is true (hypergamy). This finding is important because it shows that women's employment is paramount for fertility decisions.

However, we also find an exception to this pattern that represents a reminiscence of the past. We see how traditional couples in which the woman is inactive are as likely as dual-earner couples to have a child. However, we also see how over the years, the male-breadwinner/female-caregiver model is no longer a preferred economic arrangement for young couples, as it was in the past. Although couples who adopt this model might have as many children as dual-earner couples, this model is in decline and does not seem to have a presence in a future in which an increasing number of women have high human capital.

Overall, our findings imply that the employment stability of partners, especially women, has a stronger explanatory value than labor force participation itself or partners' educational attainment in understanding fertility transitions and the role that gender (measured as partners' relative characteristics) plays in such decisions. Our findings cover both the individual and the institutional levels and have important implications for the development of employment and family

policies. In a low-fertility society characterized by a relatively weak welfare state and structural economic uncertainty such as Spain, these implications include stronger measures to secure effective gender equality inside and outside homes. For example, the promotion of gender egalitarianism by public institutions is important for eradicating gender inequality in the labor market and the home and could reduce the gap between couples' desired and achieved fertility (unmet fertility). Thus, providing dual-earner couples with the necessary institutional support and measures for family-work balance will allow them to minimize the opportunity cost of having children for both partners and promote co-responsibility in the private sphere. In this sense, our results signal a step forward in the transition to a more gender-egalitarian regime in Spain.

Studying partners' economic arrangements in terms of homogamy and heterogamy is important to advance our knowledge about the link between gender roles, the labor market and fertility because while childbearing and employment have been seen as competing interests for women, this has not been the case among men (Andersson and Scott 2007).

In considering these results, it is important to recall that we are observing *period* rather than *completed* fertility and *couples'* fertility rather than *total* population fertility[5]. Overall, less-educated individuals still have more children than more highly educated individuals, and highly educated individuals still show larger proportions of childlessness in Spain (Esteve et al. 2016a). Our results suggest the reversal of the educational gradient of couples' period fertility. In light of these results, we might anticipate that in the long run, completed fertility will transition to flattening toward the same reversal process.

Other limitations of the analysis should be mentioned. First, the SLFS does not contain fertility histories; thus, nonresident children remain unobserved. While this limitation does not affect period fertility calculations (timing and intensity), it creates a flaw when calculating the

probabilities of having a child when controlling for the presence of previous children in the household. These might include, for example, children from previous relationships who do not live in the maternal home and children who have already left the parental home in the case of older couples who were young parents[6]. In the first case, 2011 census data show no significant differences between divorce rates among the lowest- or highest-educated populations. In the second case, we know that the transition to adulthood occurs earlier for the lowest-educated populations than for the highest-educated populations in Spain; however, compared to other developed countries, it occurs at later ages for all educational levels. This phenomenon is related to cultural familism in the Spanish context coupled with the lack of support from the state to favor such transitions (Moreno 2012). Second, it can be assumed that the older the partners are at the time that the relationship starts, the weaker the relative resources argument will be given the pressure of the biological clock. Unfortunately, we do not know partnership histories or age at union.

In sum, this study provides evidence that in the Spanish context, the negative consequences for fertility of the reversal of the gender gap in education that some authors anticipated (Van Bavel, 2012) are not occurring. Indeed, women's education and labor-market advantages, especially in combination with those of men, encourage fertility. Thus, theoretical explanations based on the pooling of resources and gender egalitarianism seem to continue to gain ground over gender specialization theories.

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Table 1: Sample description

		Do not have a child		Have a child		All women	
N		93,876		4,988		98,864	
Partners' education	Homogamy low	19,406	20.7%	705	14.1%	20111	20.3%
	Hypergamy	16,576	17.7%	767	15.4%	17343	17.5%
	Hypogamy	29,615	31.5%	1652	33.1%	31267	31.6%
	Homogamy high	28,279	30.1%	1864	37.4%	30143	30.5%
Partners' employment	Neither work	5157	5.5%	197	3.9%	5354	5.4%
	Only he works, she is inactive	19890	21.2%	913	18.3%	20803	21.0%
	Only he works, she is unemployed	9935	10.6%	426	8.5%	10361	10.5%
	Only she works	6112	6.5%	266	5.3%	6378	6.5%
	Both work	52782	56.2%	3186	63.9%	55968	56.6%
Partners' job stability	Neither stable	7,590	14.4%	344	10.8%	7,934	14.2%
	Only she is stable	10,078	19.1%	601	18.9%	10,679	19.1%
	Only he is stable	7,949	15.1%	418	13.1%	8,367	14.9%
	Both stable	27,131	51.4%	1,820	57.1%	28,951	51.7%
Period	Expansion (2002-2007)	34,109	36.3%	1,979	39.7%	36,088	36.5%
	Recession (2008-2013)	31,162	33.2%	1,683	33.7%	32,845	33.2%
	Recovery (2014-2018)	28,605	30.5%	1,326	26.6%	29,931	30.3%
Woman's age	20-24	1,516	1.6%	187	3.7%	1,703	1.7%
	25-29	7,512	8.0%	988	19.8%	8,500	8.6%
	30-34	18,162	19.3%	2,203	44.2%	20,365	20.6%
	35-39	30,221	32.2%	1,385	27.8%	31,606	32.0%
	40-44	36,465	38.8%	225	4.5%	36,690	37.1%
Previous children In household	No	15,821	16.9%	2,002	40.1%	17,823	18.0%
	Yes	78,055	83.1%	2,986	59.9%	81,041	82.0%
Partners' occupational prestige	Homogamy low	3,429	6.5%	116	3.6%	3,545	6.3%
	Hypergamy	13,697	26.0%	718	22.5%	14,415	25.8%
	Hypogamy	15,552	29.5%	1,071	33.6%	16,623	29.7%
	Homogamy high	20,104	38.1%	1,281	40.2%	21,385	38.2%
Partners' working hours	Both full time	38,077	72.1%	2,463	77.3%	40,540	72.4%
	He works part time	1,031	2.0%	58	1.8%	1,089	1.9%
	She works part time	13,165	24.9%	645	20.2%	13,810	24.7%
	Both part time	509	1.0%	20	0.6%	529	0.9%

Source: SLFS, 2002-2018.

Table 2: Average marginal effects logistic regressions. Likelihood of having a child for partnered women between 20 and 44 years old. All couples.

		All couples 20-44	
		Model I	Model II
VARIABLES	VARIABLES	Education	Education+Employment
Partners' education (Ref: Hypergamy)	Homogamy low	-0.009***	-0.008***
		(0.002)	(0.002)
	Hypogamy	0.001	0.001
		(0.002)	(0.002)
	Homogamy high	0.012***	0.011***
		(0.002)	(0.002)
Partners' employment (Ref: Only he works, she is inactive)	Neither work		-0.012***
			(0.003)
	He works, she is unemployed		-0.013***
			(0.003)
	Only she works		-0.012***
			(0.003)
	Both work		0.001
			(0.002)
Period (Ref: 2002-07)	Recession (2008-12)	-0.003*	-0.002
		(0.002)	(0.002)
	Recovery (2013-18)	-0.006***	-0.004*
		(0.002)	(0.002)
Woman's age (Ref: 20-24)	25-29	0.004	0.002
		(0.007)	(0.007)
	30-34	0.009	0.006
		(0.007)	(0.007)
	35-39	-0.046***	-0.050***
		(0.007)	(0.007)
	40-44	-0.085***	-0.088***
		(0.007)	(0.007)
Previous children (Ref: No)	Yes	-0.031***	-0.030***
		(0.002)	(0.002)
Observations	Observations	98,864	98,864

SE in parentheses
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1

Source: SLFS, 2002-2018.

Table 3: Average marginal effects logistic regressions. Likelihood of having a child for partnered women between 20 and 44 years old. Dual-earner couples.

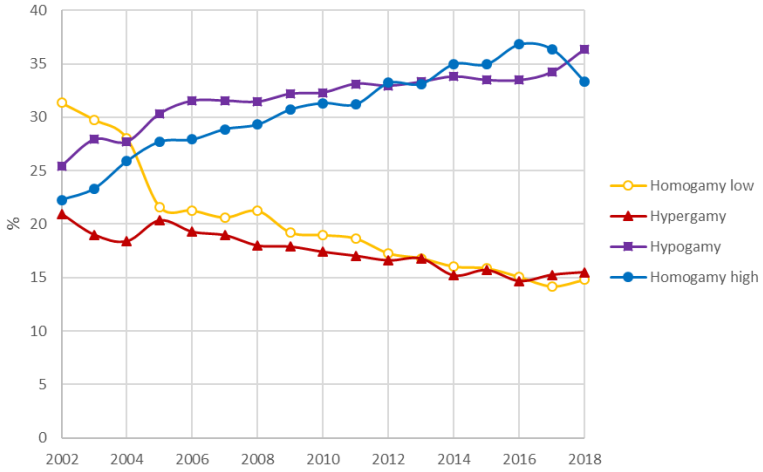
		Dual-earner 20-44	
VARIABLES	VARIABLES	Model III	Model IV
Couples' education	Homogamy low	-0.012***	-0.012**
(Ref: Hypergamy)		(0.003)	(0.004)
	Hypogamy	0.003	0.001
		(0.003)	(0.003)
	Homogamy high	0.012***	0.010**
		(0.003)	(0.003)
Employment stability	Neither stable	-0.001	-0.000
(Ref: only he is stable)		(0.003)	(0.003)
	Only she is stable	0.008**	0.008**
		(0.003)	(0.003)
	Both stable	0.017***	0.016***
		(0.003)	(0.003)
Period	Recession (2008-12)	-0.000	-0.000
(Ref: 2002-07)		(0.002)	(0.002)
	Recovery (2013-18)	-0.004+	-0.004+
		(0.002)	(0.002)
Female partners' age	25-29	0.015	0.015
(ref: 20-24)		(0.011)	(0.011)
	30-34	0.025*	0.024*
		(0.010)	(0.010)
	35-39	-0.035***	-0.036***
		(0.010)	(0.010)
	40-44	-0.081***	-0.082***
		(0.010)	(0.010)
Previous children	Yes	-0.031***	-0.029***
(Ref: No)		(0.002)	(0.002)
Working hours	Both part time		-0.017*
(Ref: she is part time)			(0.008)
	He is part time		-0.004
			(0.007)
	Both full time		0.004+
			(0.002)
Couples' Occupation	Homogamy low		-0.014***
(Ref: Hypergamy)			(0.004)
	Hypogamy		0.005+
			(0.003)
	Homogamy high		0.004
			(0.003)
Observations	Observations	55,931	55,931

SE in parentheses; *** p<0.001, ** p<0.01, * p<0.05, + p<0.1

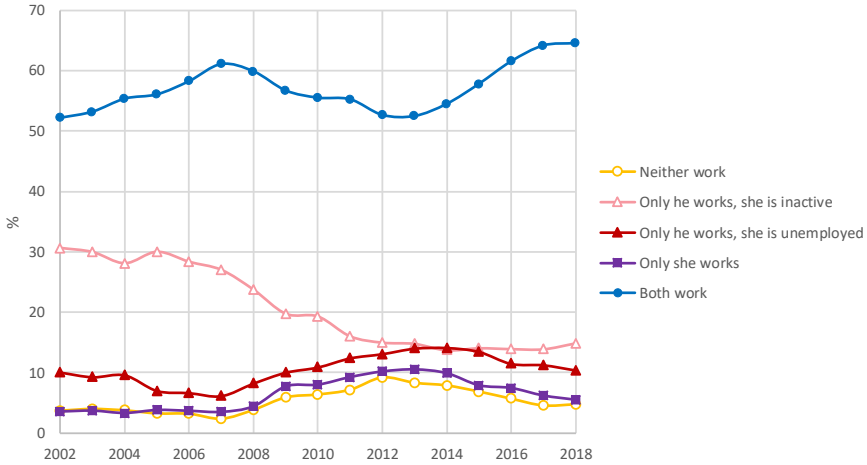
Source: SLFS, 2002-2018.

Figure 1: Distribution of couples by the education, employment status, and job stability of both partners. Couples in which women are between 20 and 44 years old. Spain, 2002-2018.

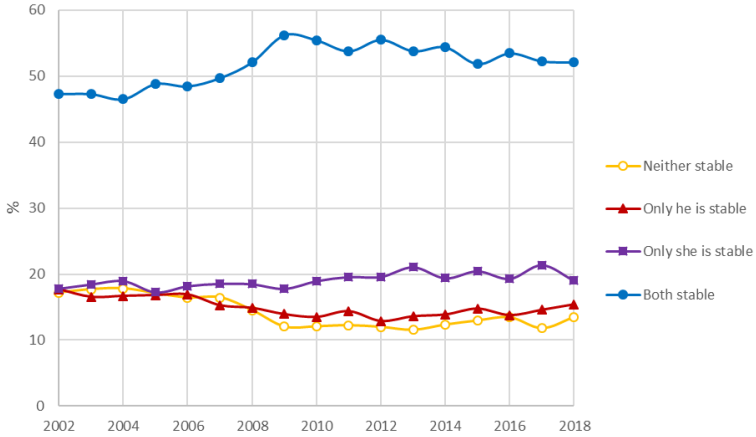
1a) Education*



1b) Employment status*



1c) Job stability**

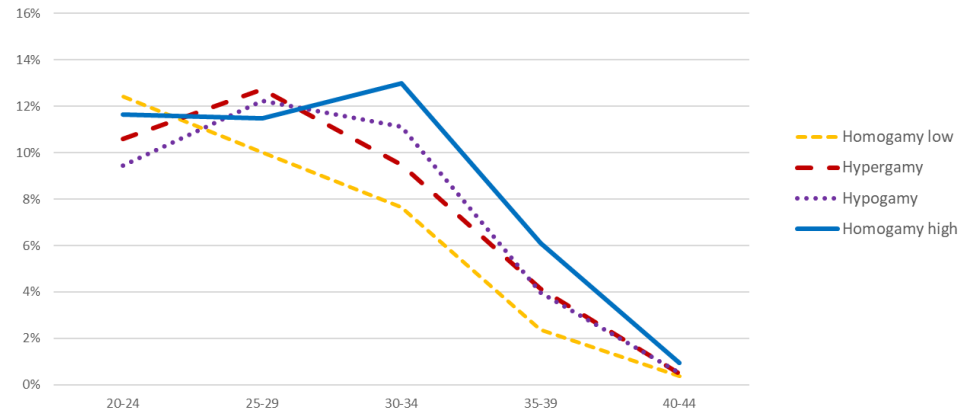


Note: * all couples; ** dual-earner couples

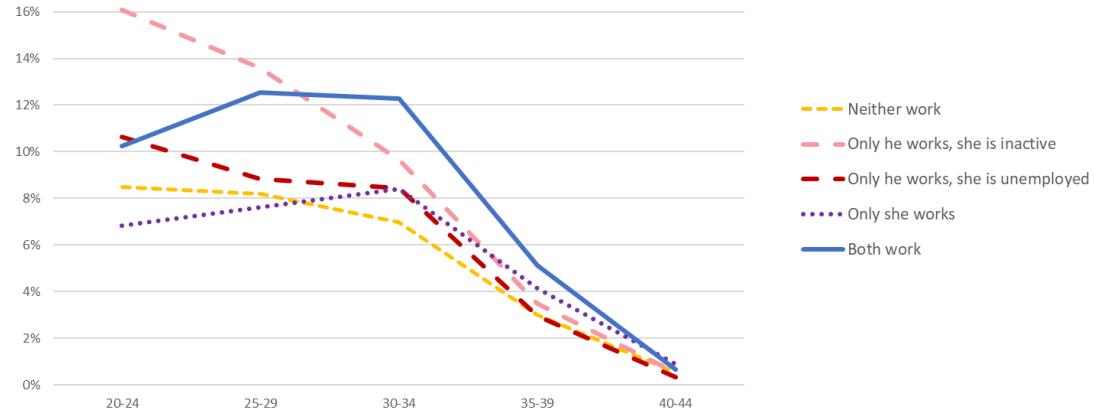
Source: SLFS, 2002-2018.

Figure 2: Age fertility patterns of partnered women between 20 and 44 years old by education, employment status, and job stability. Spain, 2002-2018.

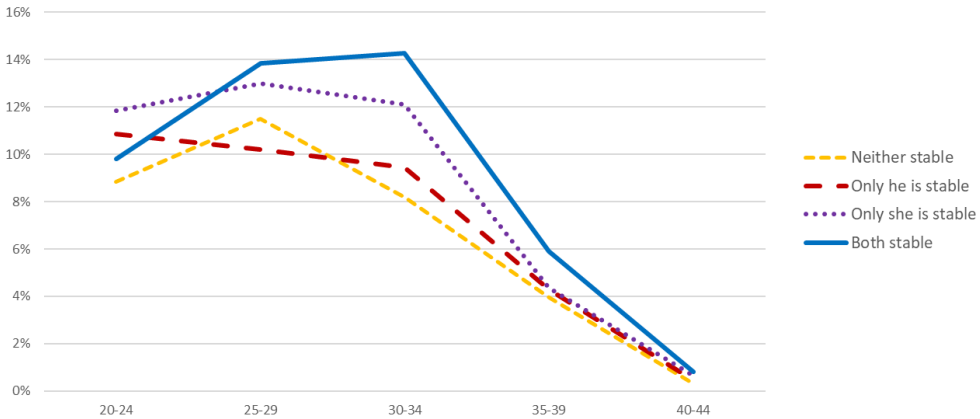
2a) Education *



2b) Employment status*

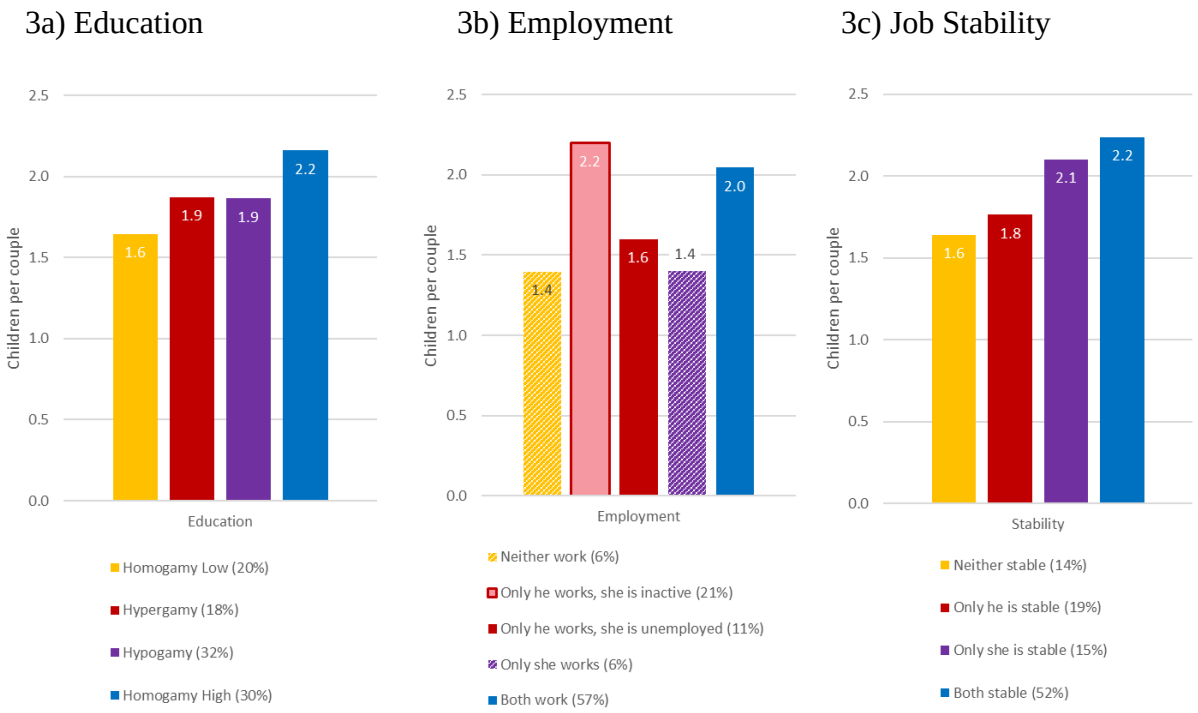


2c) Job stability**



Note: * all couples; ** dual-earner couples
Source: SLFS, 2002-2018.

Figure 3: Fertility intensity of partnered women between 20 and 44 years old by educational homogamy, employment status, and job stability. Spain, 2002-2018.

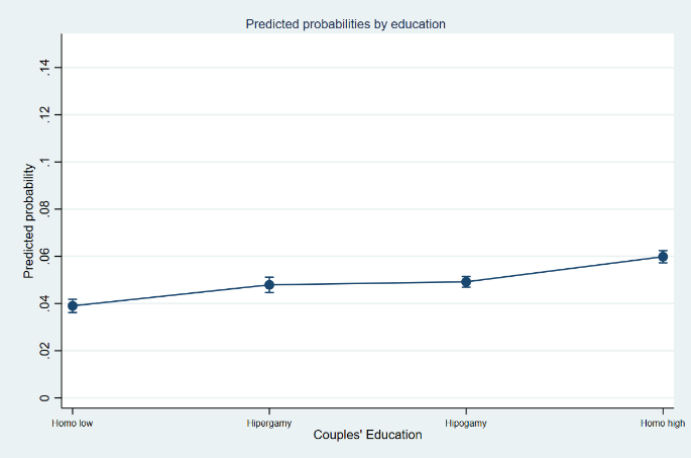


Notes:
1 Patterns indicate low representation of the group.
2 Percentages within the legend indicate the structure of the sample.

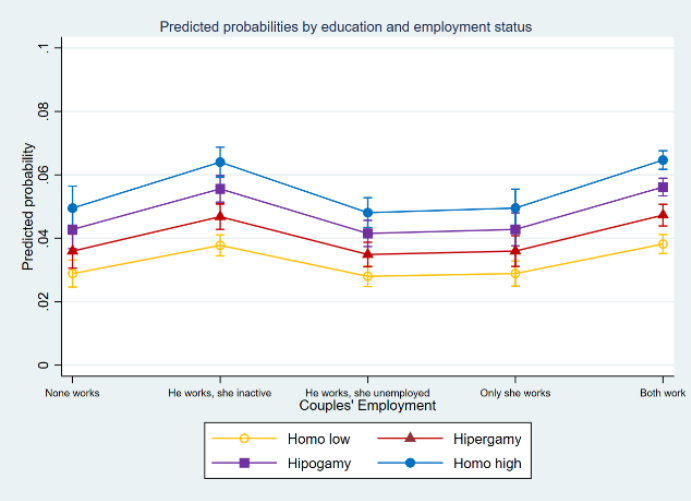
Source: SLFS, 2002-2018.

Figure 4: Predicted probabilities of the likelihood of having a child. Spain, 2002-2018.

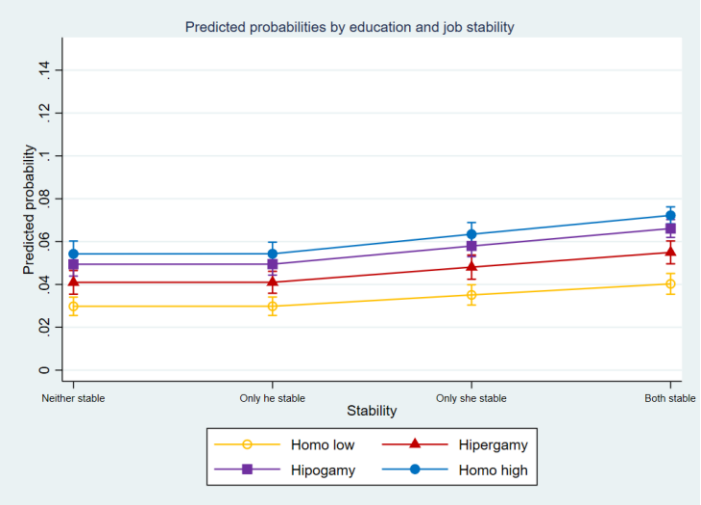
4a) Education



4b) Education + Employment



4c) Education + Job Stability



Source: SLFS, 2002-2018.

[1] As a robustness check, we calculated separate models by birth order (first or subsequent birth), and no significant differences were observed. The results confirm 1) the reversal of the negative relationship between fertility and education even after incorporating occupational characteristics among dual-earner couples (although this is only statistically significant for higher birth orders) and 2) the lack of significant differences between hypogamous and hypergamous couples for all parities. The results are available from the authors upon request.

[2] We classify self-employment as nonstable given the minimal recourse to basic employment rights, such as paid sick leave, holidays or parental leave, which means greater risk of financial instability and vulnerability. The self-employed are also less likely to have paid into a private pension, and work can be irregular and insecure (Williams and Lapeyre, 2017).

[3] The classification of occupational prestige follows the ESSnet classification for the harmonization and implementation of a European socioeconomic classification: European socioeconomic groups (ESeG) (ESSnet, 2014).

[4] The fertility of the 15-19 age group is not considered in the analysis. The proportion of births occurring among 15- to 19-year-olds in the low-education group is 1.5%, while for the other educational groups, it is less than 1%.

[5] Although births without a co-resident parent have increased in recent times, in part due to parenthood by choice, during the 2007-2016 period, they represent only approximately 10% of total births (Castro-Martín et al. 2018).

[6] Our calculations show that children living in a household with a mother but not a father represent only 1.9% of the total number of children in the sample, while households in which a child lives with a father and not a mother represent 0.3% of births in our sample.