

Partner Choice and the Transition to Parenthood for Second-Generation Women of Turkish and Moroccan Origin in Belgium

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Abstract Studies on fertility among second-generation migrant women across Europe have mainly treated the second generation as a rather homogenous group, not linking and distinguishing fertility patterns by type of partner. This study investigates how and to what extent the origin and generation of the partner (endogamous or exogamous as well as diversity in endogamy) of Turkish and Moroccan second-generation women in Belgium is related to first-birth rates. We distinguish three types of partnerships: those in an endogamous union with a first-generation partner, those in an endogamous union with a second-generation partner, and those in an exogenous union where the partner is of native Belgian origin. We use linked Census-Register data for the period 2001–2006. Applying event history models, our findings reveal clear differences between the endogamous and exogamous unions with respect to the timing of first births. Second-generation women of both origin groups have the lowest parenthood rates when the partner is of native

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Belgian origin. However, no variation is found within endogamous unions. For endogamous unions with a first-generation partner, the parenthood rates are approximately the same (and not higher, as was expected) compared to when the partner is also of second generation.

Keywords Second-generation women · Endogamy/Exogamy · Transition to parenthood · Event history methods · Belgium

1 Introduction

Research on the transition to adulthood emphasises the importance of partner choice and the transition to parenthood in young adults' lives. Although the literature has covered migrants and their descendants when studying these two events, both in the USA and Europe (e.g. Alba and Nee 2003; Kahn 1994; Kalmijn 1998; Kalmijn and Tubergen 2006; Lucassen and Laarman 2009; Milewski 2011; Milewski and Hamel 2010; Scott and Stanfors 2011), little is known on their interrelatedness. So far, fertility patterns have been studied over migrant generations as well as by comparing migrants and non-migrants (e.g. Chabé-Ferret and Melindi-Ghidi 2013; Goldscheider and Uhlenberg 1969; Kulu et al. 2017). However, the children of immigrants (i.e. the second generation) are in a special position with regard to continuity and change of demographic behaviour. Earlier studies have aimed to explain fertility behaviour of the second generation mainly by looking at social, economic and demographic characteristics of the individual (e.g. Kulu et al. 2017). Although the interrelatedness of events has recently been acknowledged more in the literature, few studies have focused on the couple and the link between the origin of both partners and their childbearing behaviour (e.g. Beaujot et al. 1982; Fu 2008).

This is unfortunate, as a growing share of children of immigrants, in the USA and Europe alike, are at the age of choosing their partner, be it from the same (i.e. endogamy) or different (i.e. exogamy) origin (e.g. de Valk and Milewski 2011). Moreover, given the growing numbers of children of immigrants in society, the commonly applied distinction between endogamous versus exogamous unions is no longer sufficient. More attention needs to be paid to partner choice diversity among the second generation. Even if children of immigrants form a union with a partner of the same ethnic origin, the partner can either be of first or of second generation (e.g. Huschek et al. 2012; Kulu and González-Ferrer 2014).

Intermarriage literature has claimed that partner choice is an indicator of whether or not ethnic groups retain boundaries between the groups (e.g. Kalmijn 1998). It is argued that marrying someone from another ethnic group breaks down the boundaries between both groups, while marrying within the own ethnic group is interpreted as a way to maintain the group boundaries (Alba and Nee 2003; Kalmijn 1998; Lucassen and Laarman 2009; Qian and Lichter 2007; Schwartz 2013). As a result, ethnic intermarriage is seen as a measure of integration (Coleman 1994; Gordon 1964), whereas marrying endogamously, and especially with a transnational partner, is (often) interpreted as the opposite and therefore considered as a factor

hampering integration into the host society (González-Ferrer 2006; Hooghiemstra 2001; Lucassen and Laarman 2009). Likewise, scholars analysing migrants' fertility often study whether migrants retain the fertility behaviour of their country of origin, or whether they converge to the childbearing patterns (both in timing, and quantum) of the host society (Andersson 2004; Ford 1990; Goldstein and Goldstein 1981; Kahn 1988; Kulu 2005; Kulu et al. 2017; Mayer and Riphahn 2000; Milewski 2011; Scott and Stanfors 2011).

So far, however, these strands of the literature have mainly been studied separately and the interplay between partner and fertility choices has hardly been explored for the second generation. In this study, we analyse the inter-linkage between the two demographic events for the second generation by examining how the timing of having a first child differs between endogamous and exogamous unions. In order to do so, one needs longitudinal data that follow the choices in the two domains over time. Belgium offers a unique opportunity for studying this with the linked Census and Population Register data. In this paper, we focus on two of the largest non-western second-generation groups, namely Turkish and Moroccan origin women in Belgium (Timmerman et al. 2003). We focus on women, as the underlying mechanisms of partnering with someone of the same or a different ethnic origin differ between men and women for both origin groups (Callaerts 1997; Hooghiemstra 2001, 2003; Kalmijn and Tubergen 2006; Milewski and Hamel 2010). For instance, second-generation women of Turkish or Moroccan origin partner less often outside their own origin group compared to their male counterparts, as the children born within a union with a non-Muslim man are "lost" for Islam (e.g. Kulczycki and Lobo 2002). Consequently, this study analyses for second-generation women one aspect of within-group heterogeneity in fertility, by linking the ethnic origin of the male partner (endogamy versus exogamy) to the timing of having a first child. We further distinguish between those with a first- or a second-generation same-origin partner and those with a native Belgian partner.

We apply, in addition to descriptive explorative analyses, discrete-time event history models to data of the 2001 Belgian Census linked with data of the 2006 National Population Register, covering both married and unmarried unions. These data cover all residents legally residing in the country and include individual as well as partner and household characteristics.

2 Study Context and Population

Analogous to other Northern and Western European countries, the Belgian government recruited migrants from Turkey and Morocco to compensate for labour shortages in especially the coal mining and metal industries during the 1960s (Castles 1986; Van Mol and de Valk 2016). These predominantly male labour immigrants came mainly from rural areas and had low socio-economic and cultural capital (Reniers 1999; Timmerman et al. 2003). These so-called guest workers were expected to stay in Belgium only temporarily and to return to their country of origin once the labour shortages were resolved. Nevertheless, the majority stayed permanently and, although the Belgium government tried to limit new immigration

due to the decreased need for labour force after the oil crisis in 1974, they were joined by their relatives (Castles 1986; Reniers 1999; Van Mol and de Valk 2016). In an attempt to restrict further immigration during the 1980s–1990s, the Belgian government incorporated new immigration laws restricting the options to enter the country from Turkey or Morocco. Consequently, marriage migration became for both migrant groups one of the few remaining pathways to enter Belgium (Castles 1986; Lievens 2000; Timmerman et al. 2009; Van Mol and de Valk 2016).

Following the permanent settlement of migrants of Turkish and Moroccan origin, their numerical importance in the total Belgian population increased both through new immigration and natural growth. For instance, in 2001, there were in total 75,412 and 141,257 second-generation migrants of, respectively, Turkish and Moroccan origin, equally divided by gender (Belgian Census 2001, authors' calculations). Although studies reported slightly better socio-economic and educational positions of the second generation of Turkish and Moroccan origin than the first generation, they are still in a disadvantaged position compared to the majority population (e.g. Heath et al. 2008; Timmerman et al. 2003).

In terms of demographic behaviour, the second generation of Turkish and Moroccan origin still has a relatively low rate of intermarriages and many find their partner within their own origin group (Corijn and Lodewijckx 2009; Hartung et al. 2011; Lievens 1999; Lodewijckx 2010; Lucassen and Laarman 2009; Timmerman et al. 2009; Van Kerckem et al. 2013). Moreover, a large share of the second generation still chooses a first-generation endogamous partner, which is noteworthy, as there is no longer a numeric shortage of potential same-origin partners in Belgium (Huschek et al. 2012; Van Kerckem et al. 2013). Research into the background of endogamous union formation and in particular marriages with a first-generation partner has pointed to the importance of religion, (gender-specific) partner preferences, interest in one's own ethnic community, constraints of the marriage market and the desire to reinforce group boundaries and traditional patterns of family life (González-Ferrer 2006; Hooghiemstra 2001; Huschek et al. 2012; Kalmijn 1998; Lievens 1999; Lodewijckx 2010; Lucassen and Laarman 2009; Timmerman et al. 2009). Also, due to the restrictive immigration laws, the second generation might feel socially obliged to marry someone born in their country of origin in order to allow people to migrate (Callaerts 1997; Koelet and de Valk 2013; Lucassen and Laarman 2009).

Research into fertility of women of Turkish and Moroccan origin in Belgium reveals a fertility decline among these groups since the 1960s (Gadeyne et al. 2009). While women of Moroccan or Turkish origin had on average six children at the beginning of the 1970s, this number is halved by the end of the century for Moroccan women. The decline is even more pronounced for Turkish women, who were having on average 2.3 children by the end of the 1990s (Gadeyne et al. 2009). The fertility decrease is even more prominent over generations (Schoenmaeckers et al. 1999). In 2000, the total fertility rate (TFR) of first-generation women of Moroccan origin was 3.6 children, whereas the TFR of the second generation equalled 2.1. The TFRs for Turkish women were, respectively, 2.7 and 1.8 (Gadeyne et al. 2009). These trends can partially reflect fertility convergence with the Belgian population (TFR of 1.6 in 2000) but might also capture the worldwide

fertility transition taking place in Morocco and Turkey as well (Bongaarts 2008; Gadeyne et al. 2009; Rashad 2000; Schoenmaeckers et al. 1999). Moreover, research by Van Landschoot et al. (2014) showed that the recent revival of fertility in some parts of Belgium is not the result of higher fertility of women of foreign origin, but merely an effect of fertility recuperation of the native Belgian women. Nonetheless, Kulu et al. (2017) found higher fertility levels among the second-generation women of Turkish or Moroccan origin compared to the native Belgian population.

3 Theoretical Perspectives

3.1 Determinants of Fertility Choices Among Migrants

Research on migrant fertility and the factors of influence has been mainly conducted in the North American context (e.g. Bean and Marcum 1987; Gordon 1964; Johnson and Nishida 1980; Ritchey 1975; Roberts and Lee 1974; Ryder 1973). Already in 1969, Goldscheider and Uhlenberg formulated the *minority status hypothesis*, suggesting that the minority status as such has an influence on fertility behaviour, independent of the social, demographic and economic factors. It is precisely the insecurity and marginality associated with the minority status that either depress or increase the fertility of minority groups. A minority group will have a lower fertility when the members have a degree of (and a desire for) acculturation, a desire for social and economic mobility (as well as having the opportunity to be socially mobile), and when there is neither a pronatalist ideology associated with the minority group nor norms discouraging effective contraceptive use. However, if the members of a minority group want to reinforce the group boundaries and the traditional patterns of family life, if they experience discrimination impeding social mobility (see also Kennedy 1973), and have a commitment to a religious ideology or socio-cultural norms encouraging larger families, their fertility will be higher (Goldscheider and Uhlenberg 1969).

In line with the latter approach, Beaujot et al. (1982) formulated the *ideology hypothesis*, suggesting that the specific values and norms of a minority group should be taken into account in order to explain their different fertility patterns. According to the authors, one should focus on the less assimilated members of the minority group to recognise the influence of the norms and values on fertility, as these individuals are expected to identify themselves more strongly with their ethnic group. Consequently, the less assimilated members of the minority group are expected to incorporate the fertility norms of their origin group to a greater extent. For instance, if a specific minority group is characterised by high fertility, then the fertility of those who are poorly assimilated is expected to be even higher. The authors used intermarriage as a measure for assimilation, as intermarriage is seen as the most salient indicator (Gordon 1964). Whereas marrying within one's own ethnic group is interpreted as a reinforcement of group boundaries and consequently as a way to impede complete assimilation, intermarriage is seen as a manner to transcend group boundaries (Alba and Nee 2003; Gordon 1964; Kalmijn 1998;

Lucassen and Laarman 2009; Qian and Lichter 2007; Schwartz 2013). If intermarriage is indeed the final stage of assimilation, then those who do not intermarry (and thus are less assimilated) are, according to the ideology hypothesis, the most likely to have the fertility patterns typical of the minority group (Beaujot et al. 1982).

So far, most studies on fertility decisions have not taken into consideration the influence of the partners' origin. The few studies that have looked at the interrelation between partner choice and childbearing have mainly focused on first-generation migrants in the USA, Canada or India (e.g. Axelrod 1990; Beaujot et al. 1982; Fu 2008; Shroff and Castro 2011). Generally, these authors found fertility variation between endogamous and exogamous unions. For instance, the fertility differences in the USA between members of a minority group in an endogamous union or in an exogamous union could, according to Fu (2008), be understood in the light of the approval of the union by the minority group. The author argued that if children are perceived to be social capital to the group (see also Schoen et al. 1997), exogamous unions will have lower fertility levels than endogamous unions. If children are, in contrast, seen as an uncertainty reduction strategy, i.e. an attempt to reinforce the solidarity and bonding between the partners (see also Friedman et al. 1994), exogamous unions will have higher fertility than endogamous unions.

Nevertheless, most of the countries under study in this earlier work differ with respect to their migration history and migrant populations from European countries (e.g. Heath et al. 2008), which impede us from applying their observed patterns to Europe. Moreover, to our knowledge, only a study of Zavattaro et al. (1997) and a more recent study of Van Landschoot et al. (2017) focussed on family size variation among the children of immigrants by taking into account the origin of the partner. While Zavattaro et al. (1997) found smaller family sizes for second-generation Italians in a union with a native Belgian partner, the study by Van Landschoot et al. (2017) indicated that the origin of the partner mattered for second- and higher-order births of descendants of Turkish and Moroccan immigrants only. Irrespective of the generation of the endogamous partner, women of Turkish and Moroccan descent experienced higher second and subsequent birth rates compared to their counterparts who were in a union with a native Belgian partner (Van Landschoot et al. 2017). These previous studies thus concentrate on family size and not on making the transition to parenthood as such. In this paper, the latter is the main focus and we analyse the influence of the origin of the partner on the transition to a first birth.

3.2 Fertility and Partner Choice Among the Second Generation

So far, research has mainly addressed second generation's partner choice and fertility separately. However, given that union formation choices may indicate the extent to which group boundaries are crossed or blurred, one might also find different childbearing behaviour among second-generation women in different types of unions. Studies on ethnic intermarriage among migrant populations and their descendants in (Western) Europe (Coleman 1994; Hooghiemstra 2001; Huschek et al. 2012; Kalmijn and Tubergen 2006; Kulu and González-Ferrer 2014) show that ethnic intermarriages are higher among immigrants' offspring compared to their

parents (Kalmijn and Tubergen 2006; Lievens 1998, 1999; Van Kerckem et al. 2013). Nevertheless, unions with someone from the native European population remain limited also among the second generation of the former labour migrants, of whom many partner with someone from their own origin group (Corijn and Lodewijckx 2009; Hooghiemstra 2001, 2003; Huschek et al. 2012; Kalmijn and Tubergen 2006; Lievens 1999; Lodewijckx 2010; Timmerman et al. 2009; Van Kerckem et al. 2013). Moreover, partner choice is, especially for the second generation, no longer just a matter of choosing a partner of the same or of a different origin. In the light of the growing numbers of second-generation young adults, the second generation can either choose an endogamous partner who is of first or of second generation (Huschek et al. 2012).

The first aim of our study therefore is to analyse how the transition to parenthood differs between second-generation women who are either in an endogamous or in an exogamous union in Belgium, shedding new light on this issue for a European country with substantial numbers of children of immigrants of diverse origins. In line with the theories mentioned above, we expect to find differences between the two types of unions. Irrespective of whether we follow the reasoning of the ideology hypothesis of Beaujot et al. (1982) or the approval theory of Fu (2008), second-generation women of Turkish or Moroccan origin in an endogamous union can be expected to experience higher first-birth rates than women in an exogamous union (Hypothesis 1). Second, we zoom in on the diversity within endogamous unions by considering the migrant generation of the partner. If the less assimilated members of a minority group do indeed identify themselves more strongly with their origin group, then those who are in an endogamous union with a first-generation partner are expected to incorporate the fertility norms of their group to a higher extent (Beaujot et al. 1982). Moreover, given the limited possibilities to enter Belgium from Turkey and Morocco, many first-generation endogamous partners migrate for the very reason of starting a family, and earlier studies already found higher first-birth rates among those who migrated for the purpose of a marriage (Andersson 2004; Mulder and Wagner 1993). Therefore, we expect that the transition to parenthood is higher for women with a first-generation migrant partner, compared to those with a second-generation partner (Hypothesis 2).

4 Data and Method

We used anonymised individual data from the 2001 Belgian Census (October 1, 2001) linked by Statistics Belgium to information from the National Population Register, including events until 1 January 2006. The Belgian Census covers all residents legally residing in Belgium and provides a wide range of individual-level characteristics including current nationality as well as nationality at birth, several socio-economic indicators and household composition (the latter allowing to distinguish those in a marriage from those in a non-marital cohabitation). By linking the Census to the Register, we are able to determine the transition to parenthood in heterosexual unions between 2001 and 2006. However, we were unable to assess union duration, as the starting date of non-married cohabiting unions is not recorded

in the Census. In order to check the effect of union duration and type of union, we separately analysed the transition to parenthood for married women only. A comparison between the models with and without those in unmarried cohabitation revealed very similar findings (results available upon request). Moreover, as second-generation women of both origin groups in a union with a native Belgian man are more often in a non-marital union than their counterparts in an endogamous union (approximately 70% of the cohabiting women is in an exogamous union), the inclusion of non-married cohabiting unions is expected to be a better reflection of the population under study. We therefore took into account all unions, but our models are controlled for type of union.

We focussed on second-generation women of Turkish or Moroccan origin. To define the *origin of women*, we used a stepwise approach. We started from the nationality at birth of the father (or mother, if the nationality of the father was unknown or Belgian) for those who were living in the parental household at the time of the 2001 Belgian Census. For those who had left the parental home before 2001, we took the nationality at birth of the father (or mother) as was specified in the 1991 Belgian Census if the woman was a member of their household in 1991. In both cases, we used the fathers' (or mothers') nationality at birth as a proxy for her origin. If, however, the nationality of both parents was unknown, we looked at her nationality at birth. Again, if her nationality at birth was unknown, we took the nationality at the time of the 2001 Census as a proxy for her origin. To determine *second-generation women*, we selected those of Turkish or Moroccan origin who were either born in Belgium or migrated to Belgium before age one. As a robustness check, we also used the start of compulsory education in Belgium (i.e. 7 years) as a cut-off point to determine the generation of the woman. However, our findings remained the same irrespective of whether we included women who arrived in Belgium between the ages one and six to the second generation or not. Results of the sensitivity analyses are provided in Table 4 in the [Appendix](#).

We selected second-generation women who were between the ages of 15 and 35 years at the time of the Census ($N_{\text{TURKISH}} = 15,291$; $N_{\text{MOROCCAN}} = 29,908$). We want to examine the relation between the origin and generation of the male partner and the transition to parenthood and thus excluded single women ($N_{\text{T}} = 10,199$; $N_{\text{M}} = 21,505$) and women who were in a union but already had at least one child born prior to the Census ($N_{\text{T}} = 3884$; $N_{\text{M}} = 5826$). Since we take a longitudinal perspective in our study, both the woman and her partner had to be registered in Belgium in 2001 and 2006; thus, persons who died or emigrated before 2006 were removed ($N_{\text{T}} = 22$; $N_{\text{M}} = 76$). Women who were in a partnership with someone who was neither of the same nor of Belgian origin were also omitted ($N_{\text{T}} = 49$; $N_{\text{M}} = 195$). In addition, when information on one of the key variables in our analyses was unknown, these cases were dropped as well. This meant that we excluded in total 265 second-generation women of Turkish origin and 644 women of Moroccan origin, for whom educational level of the woman ($N_{\text{T}} = 52$; $N_{\text{M}} = 145$), education of the partner ($N_{\text{T}} = 66$; $N_{\text{M}} = 174$), home ownership ($N_{\text{T}} = 108$, $N_{\text{M}} = 204$) or comfort level of the dwelling ($N_{\text{T}} = 39$; $N_{\text{T}} = 121$) was unknown. These selections resulted in a study population of 872 second-generation women of Turkish origin and 1662 second-generation women of Moroccan origin. Of these,

657 (75.3%) Turkish and 1228 (73.9%) Moroccan origin women experienced the transition to motherhood between 2001 and 2006. We performed a robustness check by taking into account the individuals with unknown information on at least one of the key variables in our analyses. More specifically, for the variables his and her education, home ownership and comfort of the dwelling we created a separate dummy category ‘unknown’, so those with unknown information could be included in the models. Consequently, the study population of our sensitivity analyses increased with 265 Turkish and 644 Moroccan women (i.e. $N_T = 1137$; $N_M = 2306$). Nevertheless, as the inclusion of these unknown cases did not change our main findings, we included the results of the sensitivity analyses in Table 5 in the [Appendix](#).

In order to correctly sequence the events, we modelled the approximate timing of conception rather than the timing of the first (live) birth. Hence, the starting time for our hazard models was 9 months prior to the Census (corresponding with a birth exactly at the time of the Census) and the ending time was 1 April 2005 (i.e. 9 months before the end of our observation period). If no conception occurred by 1 April 2005 or if the couple broke up between 2001 and 2006, we considered the case to be right censored.

We fitted logit hazard models in discrete time, with monthly time units and with the following outline:

$$\text{Logit}(h_{ij}(t)) = \alpha_0 + \alpha_1(\text{age}_{it}) + \alpha_2(\text{age}_{it})^2 + \beta_1 X_i$$

where $h_{ij}(t)$ represents the hazard of having a first conception for individual i at time t . The sum of the first three terms ($\alpha_0 + \alpha_1(\text{age}_{it}) + \alpha_2(\text{age}_{it})^2$) denotes the baseline hazard, constructed by the age of the woman as well as her age squared. The time (t) for the transition to a first conception is the time since the Census and ends at the time of first conception, union separation, or (if no conception or separation occurred) the end of the observation period. The term $\beta_1 X_i$ represents effects of time-constant variables.

We carried out event history analyses in two steps. In our first models, we analysed the transition to a first birth for second-generation women of Turkish or Moroccan origin who were either in an endogamous or in an exogamous union. In the second set of models, we distinguished the endogamous unions by the generation of the male partner and studied how the first-birth rates varied between the different unions. Both models were built up stepwise by first looking at the gross relationships and then at the net relation after accounting for a range of control variables. Our tables report odds ratios with their confidence intervals to index the precision of our estimates.

5 Measures

The variables used in our models are divided into two different groups: the variable indicating partner choice and the control variables. Table 1 gives descriptive statistics for all these parameters. The key variable in our analyses is

Table 1 Descriptive statistics for second-generation, childless women of Turkish or Moroccan origin, aged 15–35 years and living in a union at the time of the Census

	Turkish origin ($N = 872$)		Moroccan origin ($N = 1662$)	
	N	%	N	%
Generation and origin of the partner				
Native Belgian	83	9.5	234	14.1
1st generation	589	67.5	1101	66.2
2nd generation	200	22.9	327	19.7
First birth between 2001 and 2006				
No	215	24.7	434	26.1
Yes	657	75.3	1228	73.9
Type of union				
Married	809	92.8	1441	86.7
Cohabitation	63	7.2	221	13.3
Education of woman				
Low	215	24.7	358	21.5
Medium	522	59.9	941	56.6
High	135	15.5	363	21.8
Education of partner				
Low	393	45.1	635	38.2
Medium	376	43.1	620	37.3
High	103	11.8	407	24.5
Home ownership				
Owner	288	33.0	253	15.2
Tenant	584	67.0	1409	84.8
Quality of housing				
Deficient	109	12.5	213	12.8
Basic	351	40.3	678	40.8
Good	244	28.0	556	33.5
Very good	168	19.3	215	12.9
Proportion minority in municipality				
Mean		6.7		12.4
Range		25.7		34.4

Source: Belgian Census (2001) and National Population Register (2006)

the *origin and generation of the partner*. To determine this, we followed the same procedure as described for our study population of women in the previous section.¹

¹ We also tested the distinction between first-, 1.5-, and second-generation endogamous partners. First-generation partners migrated to Belgium after the age of 18; 1.5-generation partners arrived between the ages 1 and 18; and second-generation partners were either born in Belgium or migrated before age 1. Given the limited endogamous unions with a 1.5-generation man ($N_T = 62$ and $N_M = 103$) and the substantive similar findings, we grouped the 1.5- and first-generation partners into one category (first-generation) and opted for the distinction between first- and second-generation endogamous partners.

We included a range of control variables in our models whose relevance has already been proven for partner and fertility choices. For *type of union*, we distinguished between married (reference category) and (non-marital) cohabitation. For both origin groups, approximately 90% of second-generation women were married at the time of the Census (Table 1). We included the level of *educational attainment* of both the woman and her partner (as registered in the Census). We employed a threefold distinction between low (reference category), medium and higher education following the International Standard Classification of Education (ISCED) (UNESCO 2012). Low education included categories up to lower secondary education plus everyone with no formal education. Medium education included everyone with a higher-secondary or post-secondary degree, and high education is those with tertiary education. The majority of Turkish or Moroccan women belonged to the middle category (medium education) and were most often in a union with a partner holding either a low or a medium educational degree (Table 1).

Since the Belgian Census lacks individual-level information on income, and also since occupational status was only available at the time of the Census and is thus not a good indicator for socio-economic status [given that earlier studies showed that especially women are inclined to change their occupational status in anticipation of family formation (e.g. Fouarge et al. 2010)], we turned to two other indicators. We used *home ownership* and (self-assessed) *quality of housing* as two proxy indicators for the woman's socio-economic position (both measured at the time of the Census). Home ownership status was defined as either being an owner (reference category) or a tenant of the dwelling. Second-generation women of Turkish origin more often owned the place they lived in (33%) compared to their Moroccan counterparts (15%) (Table 1). The variable quality of housing distinguished properties of deficient, basic (reference category) and good quality, from very good quality (Vanneste et al. 2007). Women of Turkish or Moroccan origin were most likely to live in either a property of basic or of good quality (Table 1). Finally, the *proportion of the Turkish or Moroccan population* in each of the 589 Belgian municipalities was included as a contextual variable (measured at the time of the Census). We used this measure as an indicator of the ethnic heterogeneity of a municipality's population. Women of Turkish origin lived in a municipality where on average 6.7% was of Turkish origin (maximum was 25.7%). The average for Moroccan women was 12.4% and a maximum of approximately 34% (Table 1). To simplify the interpretation of the odds ratios in our multivariate models, we expressed this indicator by ten percentage points. So, the odds ratio represents the effect of a 10% increase in the variable. Moreover, to test whether this variable had a nonlinear relationship with the dependent variable, we also included the squared term in the models. The effect and significance of the quadratic term indicated the absence of a nonlinear effect, however, and was therefore not included in the final models.

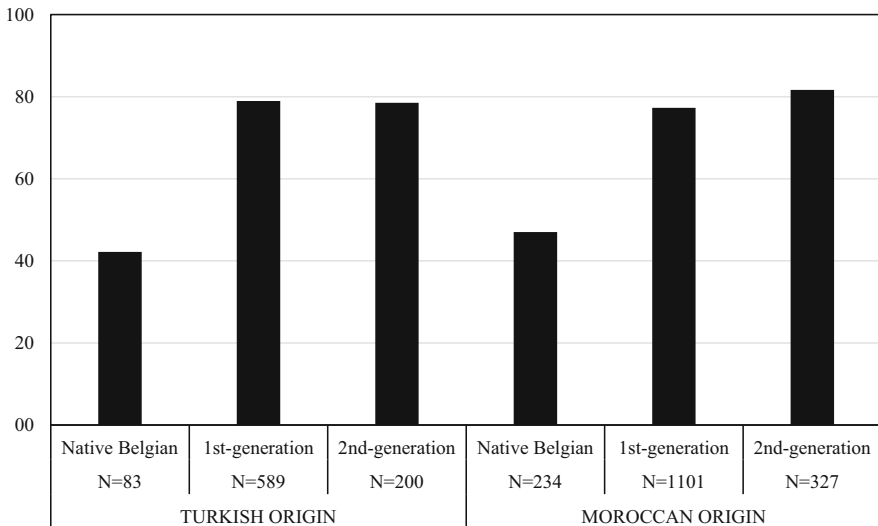


Fig. 1 Relative number of first births by origin and generation of the male partner. *Source:* Belgian Census (2001) and National Population Register (2006)

6 Results

Out of the 872 women of Turkish origin in our study, approximately 90% are in an endogamous union at the time of the Census, while this is the case for 86% of the 1662 Moroccan second-generation women. Moreover, when distinguishing the endogamous unions by the generation of the male partner, approximately 65% of Turkish or Moroccan women are in a union with a first-generation man, suggesting the continuing importance of marriage migration for both origin groups (Table 1).

Figure 1 displays for the different types of unions the percentages of having a first birth in the observation period. For both origin groups, women with a partner of the same origin (irrespective of his generation) experience the transition to parenthood more often (80%) compared to their counterparts with a native Belgian partner (approximately 45%).

The estimates from the discrete-time hazard models of the transition to a first birth for second-generation women of Turkish or Moroccan origin who are between the ages of 15 and 35 years and who are either in an endogamous or in an exogamous union are shown in Table 2 (left pane Turkish, right pane Moroccan origin). Models 1a and 2a examine the relationship of the origin of the male partner with the transition to a first birth. In Models 1b and 2b, the control variables are added. To address the issue of possible selection, we also performed the same analyses for second-generation women who were maximum 25 years at the time of the Census. We did so as earlier studies already found that second-generation women of Moroccan and particularly Turkish origin experience the transition to a first birth at a relatively young age (Gadeyne et al. 2009). Moreover, the majority in

Table 2 Odds ratios (Exp(B)) for the transition to a first birth with 95% confidence intervals between brackets, endogamy versus exogamy

	Turkish origin (<i>N</i> = 872)		Moroccan origin (<i>N</i> = 1662)	
	Model 1a	Model 1b	Model 2a	Model 2b
Exposure time TV				
Age in years ^a	0.98 (0.95–1.00)	0.97 (0.95–1.00)	0.98 (0.96–1.00)	0.98 (0.96–1.00)
Age ² in years ^a	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)
Origin of the partner				
Exogamy	1.00	1.00	1.00	1.00
Endogamy	2.41 (1.70–3.42)	2.18 (1.43–3.31)	2.25 (1.83–2.77)	1.95 (1.49–2.55)
Type of union				
Married		1.00		1.00
Cohabitation		0.82 (0.54–1.24)		0.78 (0.60–1.00)
Education of woman				
Low		1.00		1.00
Medium		1.03 (0.85–1.24)		0.92 (0.79–1.07)
High		1.47 (1.11–1.95)		0.99 (0.82–1.19)
Education of partner				
Low		1.00		1.00
Medium		1.03 (0.87–1.22)		1.16 (1.01–1.32)
High		0.65 (0.49–0.87)		0.99 (0.85–1.16)
Home ownership				
Owner		1.00		1.00
Tenant		0.94 (0.79–1.12)		0.91 (0.76–1.08)
Quality of housing				
Deficient		1.06 (0.83–1.35)		1.14 (0.95–1.36)
Basic		1.00		1.00

Table 2 continued

	Turkish origin ($N = 872$)		Moroccan origin ($N = 1662$)	
	Model 1a	Model 1b	Model 2a	Model 2b
Good		0.93 (0.77–1.13)		0.97 (0.84–1.11)
Very good		0.91 (0.73–1.14)		0.93 (0.77–1.13)
Proportion minority in municipality	1.00 (1.00–1.00)		1.00 (1.00–1.00)	
Constant	0.02	0.02	0.02	0.02
–2LL	5796.29	5777.65	10,679.39	10,663.76

Source: Belgian Census (2001) and National Population Register (2006)

TV time-varying variable

^a Age has been rescaled, so that 0 represents 25 years of age

Table 3 Odds ratios (Exp(B)) for the transition to a first birth with 95% confidence intervals between brackets, distinction by origin and generation of the partner

	Turkish origin (<i>N</i> = 872)		Moroccan origin (<i>N</i> = 1662)	
	Model 3a	Model 3b	Model 4a	Model 4b
Exposure time TV				
Age in years ^a	0.98 (0.95–1.00)	0.97 (0.94–1.00)	0.98 (0.96–1.00)	0.98 (0.96–1.00)
Age ² in years ^a	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)
Origin and generation of the partner				
Native Belgian	1.00	1.00	1.00	1.00
1st generation	2.47 (1.74–3.52)	2.29 (1.49–3.51)	2.22 (1.80–2.74)	1.91 (1.46–2.51)
2nd generation	2.21 (1.52–3.23)	2.04 (1.32–3.16)	2.36 (1.87–2.97)	2.01 (1.52–2.66)
Type of union				
Married		1.00		1.00
Cohabitation		0.85 (0.56–1.30)		0.77 (0.59–0.99)
Education of woman				
Low		1.00		1.00
Medium		1.03 (0.85–1.25)		0.92 (0.79–1.07)
High		1.49 (1.12–2.00)		0.98 (0.81–1.19)
Education of partner				
Low		1.00		1.00
Medium		1.04 (0.88–1.24)		1.15 (1.00–1.31)
High		0.66 (0.49–0.88)		0.99 (0.85–1.16)
Home ownership				
Owner		1.00		1.00
Tenant		0.93 (0.78–1.11)		0.91 (0.77–1.09)
Quality of housing				
Deficient		1.06 (0.83–1.36)		1.14 (0.95–1.36)

Table 3 continued

	Turkish origin ($N = 872$)		Moroccan origin ($N = 1662$)	
	Model 3a	Model 3b	Model 4a	Model 4b
Basic		1.00		1.00
Good		0.93 (0.77–1.13)		0.96 (0.84–1.10)
Very good		0.92 (0.74–1.16)		0.93 (0.77–1.13)
Proportion minority in municipality	1.00 (1.00–1.00)		1.00 (1.00–1.00)	
Constant	0.02	0.02	0.02	0.02
–2LL	5794.89	5776.33	10,678.72	10,663.36

Source: Belgian Census (2001) and National Population Register (2006)

TV time-varying variable

^a Age has been rescaled, so that 0 represents 25 years of age

both origin groups forms a union in their early twenties (Corijn and Lodewijckx 2009), and union formation is generally soon followed by a first birth, although Moroccan women tend to postpone their first birth within a relationship to a somewhat higher extent than Turkish women (Lodewijckx 2010; Schoenmaeckers et al. 1999). A comparison between the models including the women between the ages of 15 and 35 years with the more restrictive models (≤ 25 years) revealed, however, very similar findings. The results of the sensitivity analyses distinguishing endogamous from exogamous unions are provided in Table 6 in the Appendix.

Models 1a and 2a show higher first-birth rates for second-generation women who are in an endogamous union compared to women in an exogamous union (Table 2). The results reveal for Turkish and Moroccan women in an endogamous union odds ratios of 2.41 and 2.25, respectively. Although the magnitude of the exponentiated coefficients decreases when the control variables are included in Models 1b and 2b (Table 2), second-generation women in an endogamous union still have a higher probability of entering parenthood compared to those in an exogamous partnership (odds ratios of 2.18 and 1.95 for women of, respectively, Turkish or Moroccan origin). These findings are in line with our first hypothesis.

Overall, the control variables are in accordance with those reported in earlier studies on the transition to a first child. Second-generation women who are in a non-marital cohabitation experience lower first-birth rates than their married peers. For education, we find a clear gradient for Turkish women with those who are higher educated having the largest likelihood of having a first child. For Moroccan women, education does not seem to be related to having a first child. Also the effect of education of the partner differs between women of Turkish and Moroccan origin. While Turkish women with a high educated partner have lower first-birth rates than those whose partner is either low or medium educated, women of Moroccan origin in a union with a medium educated partner experience higher first-birth rates compared to the unions where the partner is low or high educated. The effect of home ownership is, in contrast, found to be similar for both origin groups: homeowners are more likely to enter parenthood than tenants. In addition, there is a clear gradient for housing quality where women living in dwellings of deficient quality have the highest first-birth rates, while those who live in a dwelling of very good quality experience the lowest parenthood rates. Finally, the share of the co-ethnics in the municipality does not affect the first-birth rates for either group.

In order to test our second hypothesis, we further distinguish endogamous unions by the generation of the male partner (Table 3). Again, we start with models that just include the origin and generation of the male partner (Models 3a and 4a). Our findings indicate for both origin groups higher first-birth rates for those in an endogamous union compared to those in an exogamous union. Nevertheless, we do not find variation within the endogamous unions by the generation of the male partner. Whether second-generation women of Turkish or Moroccan are either in a union with a first- or a second-generation partner, the first-birth rates are rather similar. We find odds ratios of, respectively, 2.47 and 2.21 for the Turkish women (Model 3a) and odds ratios of 2.22 and 2.36 for the Moroccan women (Model 4a).

Again, the inclusion of the control variables did not change the observed patterns. After including the controls, we find odds ratios of 2.29 and 2.04 when the partner is

either a first- or a second-generation man of Turkish origin, respectively; and odds ratios of 1.91 and 2.01 when the partner is a first- or a second-generation man of Moroccan origin (Models 3b and 4b). Consequently, our results do not support our second hypothesis. The overlapping confidence intervals associated with the endogamous unions prevent us from concluding that there is a difference between the endogamous unions by generation of the partner.

7 Conclusion and Discussion

In this study, we addressed the question whether second-generation women of Turkish or Moroccan origin either in an endogamous or exogamous union experienced different first-birth rates. We compared women in endogamous unions to women in exogamous unions and further distinguished those in an endogamous union by the generation of the male partner. Only recently, the children of Turkish and Moroccan labour migrants came of age and are now starting to form their own families. Although earlier studies showed that these second-generation groups have higher fertility levels, so far studies have not looked into the relationship with the origin and generation of the partner and the existing diversity within the second generation on this point. This is unfortunate, as the second generation can hardly be interpreted as a homogenous group and the origin of the partner sheds light on their fertility heterogeneity. Partnering outside of the own group can be seen as an indicator for integration and thus potential adaptation also in the field of fertility. We focused on Belgium, a good case study because the migration history of Belgium is similar to that of many other Western European countries (Castles 1986), as are the changes in union formation and fertility (Lesthaeghe and van de Kaa 1986).

We expected to find higher parenthood rates for those in endogamous unions as compared to those in exogamous unions (Hypothesis 1). Based on the analyses on the linked Census and Population Register data for Belgium (2001–2006), we indeed found that second-generation women of Turkish or Moroccan origin in an endogamous union have higher first-birth rates than those in an exogamous union. Several, but not necessarily exclusive interpretations can be provided for this finding. Firstly, this finding is in line with the ideology theory formulated by Beaujot et al. (1982), who expected that especially those in a union with a partner of the same origin are inclined to reinforce group-specific fertility values and norms. Given the fact that early childbearing and higher birth rates are found among the Turkish and Moroccan groups, our findings can indeed suggest a continuation of strong group-specific norms. Moreover, due to their relatively high levels of endogamy, this may continue to be important also for the future childbearing behaviour of these groups. Secondly, the lower first-birth rates among the exogamous unions may be in line with this reasoning and thus be related to different childbirth norms these women face due to partnering exogamously. At the same time, it can also be interpreted in terms of the opposition these unions face from their social network (Fu 2008). Within the Turkish and Moroccan community, especially women may experience resistance, as they are in general perceived as the

kin keepers of the family (e.g. Hooghiemstra 2003). It would therefore be interesting to replicate our study for men, as both partnering and childbearing processes are supposedly different—especially for these study groups. If the theory holds, the effects should be less apparent for men than we find for women in our study. On a similar note, a comparison with the mechanisms at work for men would be interesting given the role religion may play. Lucassen and Laarman (2009) found for instance that migrant groups who differ from the destination country in terms of their religion are less likely to partner exogamously. This is especially true for migrants coming from Islamic countries and in particular for Muslim women, as children of exogamous unions with a non-Muslim man are considered to be ‘lost’ for religious Muslims (Kulczycki and Lobo 2002). Since these religious aspects play a different role for men, already reflected in overall higher exogamous marriages among men (e.g. Corijn and Lodewijckx 2009; Lievens 1999), this may equally influence the relationship between partnering and childbearing.

In the second step of our analyses, we distinguished the endogamous unions by generation (first or second) of the male partner. Although we expected the highest first-birth rates for the unions with a first-generation partner (Hypothesis 2), this was not supported by our empirical analyses. The fact that we did not find differences by generation of the partner can first of all be explained by the fact that fertility norms as well as behaviour have also changed in Turkey and Morocco and that both countries experienced a substantial fertility decline (e.g. Baykara-Krumme and Milewski 2017; Bongaarts 2008; Rashad 2000). This may result in no big differences between the norms of first- and second-generation partners. Secondly, and in line with this, even though one could expect that given the growing proportion of potential same-origin partners in Belgium (e.g. Van Kerckem et al. 2013), second-generation women would prefer second-generation rather than first-generation partners, we found a higher propensity of endogamous unions with a first-generation partner than endogamous unions where the partner was also of second generation. The reason may be that the preference for a first-generation partner is actually not a sign of holding on to traditional behaviour but rather in line with the findings of Lievens (1999) and Timmerman et al. (2009). These authors emphasised that second-generation women may perceive their male counterparts in Belgium as too traditional and conservative and that their choice for a first-generation partner is driven by more ‘modern’ aspirations. Consequently, in contrast to what is often thought, partnering with a first-generation immigrant does not necessarily signify more traditional partnering preferences. Marrying an immigrant partner may open up the opportunity to avoid having to move in with the in-laws, hence creating or maintaining one’s own household. Marrying an immigrant may also enhance women’s power within their relationships. Consequently, if the choice for a first-generation man is indeed driven by these aspirations, the similar first-birth rates between the endogamous unions could be interpreted in this regard.

Along with the above-mentioned cultural-related explanations, our observed findings are most likely also affected by some structural-related factors. Although the differences between endogamous and exogamous unions remained after controlling for education and the factors accounting for the woman’s socio-economic position, the disadvantaged socio-economic position of the second

generation compared to the native Belgian population (e.g. Heath et al. 2008) may play a role in explaining their fertility behaviour. For instance, one could expect that the difficulties the second generation experiences within the educational field and consequently within the labour market may reinforce the boundaries between groups in society and promote a stronger focus on the parental group of origin. Moreover, the lack of good educational and labour market prospects may direct second-generation women to the 'motherhood track'. Earlier studies already emphasised that if the ability to study and returns of education into better job prospects are limited, second-generation women may turn to focus on other domains of life and focus on the role within the family as a wife and mother (e.g. Kulu and González-Ferrer 2014). Consequently, the factors hampering structural integration into society could also explain why second-generation women who are in an endogamous union have higher first-birth rates than those in an exogamous union, while the generation of the endogamous partner has no additional influence on their fertility behaviour.

Although our study focussing on the within-group heterogeneity in terms of partnering helps in understanding fertility of these second-generation women, our analyses were hampered by some data limitations. A first limitation is related to the set-up of our analytical sample. We only included second-generation women who were in a childless union at the time of the Census. Since the partner characteristics were only available at that time, this was the only possible design that allowed us to answer our research question. This approach implies that those who were no longer in a relationship at the time of the Census were omitted from our analyses. Given that ethnic exogamous unions generally have a higher risk of separation (Kalmijn et al. 2005), those exogamous unions that have survived until the start of our observation period may be a selective group (i.e. in terms of duration, stability and characteristics of the partners). Consequently, longitudinal data covering both partnership and reproductive histories would be of great value for additional analyses and to overcome the limitations in our data. Another implication of our data is related to the timing of union formation and childbirth. Earlier studies already emphasised that both origin groups start union formation at a relative young age, which is generally soon followed by a first birth (e.g. Lodewijckx 2010). Consequently, as we only included those women who were in a union but had not yet experienced the transition to parenthood, the lack of a clear and consistent difference between women with a first- or a second-generation partner could merely be a selection effect. To account for this selectivity, we also modelled the first-birth analyses for the women who were between the ages 15–25 at the time of the Census. This revealed, however, no substantive differences compared to the discussed findings. Nevertheless, to fully understand whether endogamous unions with a first- or a second-generation partner have different fertility patterns and levels, further research should look into the transition to second and particularly higher-order

births. Moreover, following age cohorts of women over the years would shed even more light on the matter, something which is only possible with detailed individual population registers.

Second, our data do not allow us to test the above-mentioned interpretations of the findings. To understand why the first-birth rates differ between endogamous and exogamous unions, but not within the two types of endogamous unions, direct measures about norms, values, the role of the social network, religion, partner preferences, discrimination, etc., are needed. We encourage future work to extend our findings by including and testing these mechanisms.

A final limitation is related to causality. We could not determine whether second-generation women had a higher first-birth rate because they were in an endogamous union, or whether these women decided to partner with a man of the same origin because they wanted to have a child.

In our study, we focused on women of Turkish and Moroccan origin. Future studies should pay ample attention to men of these and other origins to understand the differential dynamics and interplay between partner choices and childbearing. Preferably, a true couple perspective should be applied. Finally, our study about Belgium has revealed insights that are also relevant for other north-western European countries. Still, to see whether our findings are dependent on this particular context, future studies both in different countries and for different origin groups are needed to better disentangle general and specific mechanisms that are relevant for understanding ethnic fertility differentials. Nevertheless, our findings clearly point to the fact that studying fertility patterns among the second generation should pay attention to the interrelatedness with other choices in life. Lives are linked, as are choices in the life course.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Appendix

Tables 4, 5 and 6.

Table 4 Odds ratios (Exp(B)) for the transition to a first birth with 95% confidence intervals between brackets, endogamy versus exogamy, second generation ≤ 6 years
 Source: Belgian Census (2001) and National Population Register (2006)

	Turkish origin ($N = 946$)		Moroccan origin ($N = 1837$)	
	Model 4.1	Model 4.2	Model 4.3	Model 4.4
Exposure time TV				
Age in years ^a	0.98 (0.95–1.00)	0.97 (0.94–0.99)	0.98 (0.97–1.00)	0.98 (0.97–1.00)
Age ² in years ^a	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)
Origin of the partner				
Exogamy	1.00	1.00	1.00	1.00
Endogamy	2.28 (1.65–3.16)	1.95 (1.33–2.87)	2.21 (1.82–2.70)	1.98 (1.53–2.55)
Type of union				
Married	1.00	1.00	1.00	1.00
Cohabitation				
Education of woman				
Low		0.70 (0.47–1.06)		0.80 (0.63–1.02)
Medium		1.00		1.00
High		1.08 (0.90–1.31)		0.93 (0.81–1.08)
Education of partner				
Low		1.00		1.00
Medium		1.01 (0.86–1.19)		1.14 (1.01–1.30)
High		0.69 (0.52–0.91)		0.98 (0.85–1.14)
Home ownership				
Owner		1.00		1.00
Tenant		0.97 (0.82–1.14)		0.92 (0.78–1.08)
Quality of housing				
Deficient		1.05 (0.83–1.33)		1.09 (0.92–1.30)
Basic		1.00		1.00

Table 4 continued

	Turkish origin (<i>N</i> = 946)		Moroccan origin (<i>N</i> = 1837)	
	Model 4.1	Model 4.2	Model 4.3	Model 4.4
Good		0.95 (0.79–1.14)		0.98 (0.86–1.11)
Very good		0.93 (0.75–1.15)		0.94 (0.79–1.13)
Proportion minority in municipality	1.00 (0.99–1.00)		1.00 (0.99–1.00)	
Constant	0.02	0.02	0.02	0.02
–2LL	6270.06	6251.20	11,826.85	11,813.77

TV time-varying variable

^a Age has been rescaled, so that 0 represents 25 years of age

Table 5 Odds ratios (Exp(B)) for the transition to a first birth with 95% confidence intervals between brackets, endogamy versus exogamy, with unknown information
Source: Belgian Census (2001) and National Population Register (2006)

	Turkish origin ($N = 1137$)		Moroccan origin ($N = 2306$)	
	Model 5.1	Model 5.2	Model 5.3	Model 5.4
Exposure time TV				
Age in years ^a	0.97 (0.95–0.99)	0.96 (0.94–0.99)	0.98 (0.97–1.00)	0.98 (0.97–1.00)
Age ² in years ^a	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)	1.00 (0.99–1.00)
Origin of the partner				
Exogamy	1.00	1.00	1.00	1.00
Endogamy	2.40 (1.73–3.32)	2.33 (1.57–3.45)	2.22 (1.85–2.67)	1.84 (1.46–2.32)
Type of union				
Married	1.00	1.00	1.00	1.00
Cohabitation	0.89 (0.62–1.27)	0.89 (0.62–1.27)	0.72 (0.58–0.89)	0.72 (0.58–0.89)
Education of woman				
Low	1.00	1.00	1.00	1.00
Medium	1.03 (0.87–1.22)	1.03 (0.87–1.22)	0.91 (0.80–1.03)	0.91 (0.80–1.03)
High	1.47 (1.14–1.90)	1.47 (1.14–1.90)	0.95 (0.80–1.12)	0.95 (0.80–1.12)
Unknown	1.13 (0.76–1.68)	1.13 (0.76–1.68)	0.80 (0.62–1.05)	0.80 (0.62–1.05)
Education of partner				
Low	1.00	1.00	1.00	1.00
Medium	1.06 (0.91–1.24)	1.06 (0.91–1.24)	1.12 (0.99–1.26)	1.12 (0.99–1.26)
High	0.76 (0.58–0.99)	0.76 (0.58–0.99)	1.01 (0.88–1.16)	1.01 (0.88–1.16)
Unknown	1.04 (0.78–1.39)	1.04 (0.78–1.39)	0.93 (0.77–1.12)	0.93 (0.77–1.12)
Home ownership				
Owner	1.00	1.00	1.00	1.00
Tenant	0.95 (0.81–1.12)	0.95 (0.81–1.12)	0.91 (0.77–1.08)	0.91 (0.77–1.08)
Unknown	0.86 (0.66–1.11)	0.86 (0.66–1.11)	1.09 (0.87–1.37)	1.09 (0.87–1.37)

Table 5 continued

	Turkish origin (<i>N</i> = 1137)		Moroccan origin (<i>N</i> = 2306)	
	Model 5.1	Model 5.2	Model 5.3	Model 5.4
Quality of housing				
Deficient		1.00 (0.80–1.25)		1.03 (0.88–1.22)
Basic		1.00		1.00
Good		0.99 (0.83–1.19)		0.99 (0.87–1.12)
Very good		0.95 (0.77–1.18)		0.96 (0.81–1.15)
Unknown		0.92 (0.70–1.21)		0.90 (0.75–1.07)
Proportion minority in municipality	1.00 (1.00–1.00)		1.00 (1.00–1.00)	
Constant	0.02	0.02	0.02	0.03
–2LL	7603.15	7586.13	14,675.52	14,650.09

TV time-varying variable

^a Age has been rescaled, so that 0 represents 25 years of age

Table 6 Odds ratios (Exp(B)) for the transition to a first birth with 95% confidence intervals between brackets, endogamy versus exogamy, 15–25 years *Source: Belgian Census (2001) and National Population Register (2006)*

	Turkish origin (<i>N</i> = 690)		Moroccan origin (<i>N</i> = 1121)	
	Model 6.1	Model 6.2	Model 6.3	Model 6.4
Exposure time TV				
Age in years ^a	0.94 (0.87–1.03)	0.94 (0.86–1.02)	0.98 (0.92–1.05)	1.00 (0.94–1.06)
Age ² in years ^a	0.99 (0.97–1.00)	0.99 (0.97–1.00)	1.00 (0.98–1.01)	1.00 (0.98–1.01)
Origin of the partner				
Exogamy	1.00	1.00	1.00	1.00
Endogamy	2.84 (1.72–4.69)	3.07 (1.74–5.43)	2.29 (1.70–3.10)	1.93 (1.31–2.86)
Type of union				
Married	1.00	1.00	1.00	1.00
Cohabitation	1.04 (0.66–1.64)	1.04 (0.66–1.64)	0.79 (0.55–1.12)	0.79 (0.55–1.12)
Education of woman				
Low	1.00	1.00	1.00	1.00
Medium	0.93 (0.76–1.15)	0.93 (0.76–1.15)	0.84 (0.71–0.99)	0.84 (0.71–0.99)
High	1.32 (0.94–1.86)	1.32 (0.94–1.86)	0.80 (0.62–1.02)	0.80 (0.62–1.02)
Education of partner				
Low	1.00	1.00	1.00	1.00
Medium	1.00 (0.83–1.20)	1.00 (0.83–1.20)	1.17 (1.00–1.36)	1.17 (1.00–1.36)
High	0.63 (0.45–0.89)	0.63 (0.45–0.89)	0.98 (0.81–1.19)	0.98 (0.81–1.19)
Home ownership				
Owner	1.00	1.00	1.00	1.00
Tenant	0.87 (0.72–1.06)	0.87 (0.72–1.06)	1.05 (0.82–1.34)	1.05 (0.82–1.34)
Quality of housing				
Deficient	1.06 (0.81–1.39)	1.06 (0.81–1.39)	1.12 (0.91–1.38)	1.12 (0.91–1.38)
Basic	1.00	1.00	1.00	1.00

Table 6 continued

	Turkish origin (<i>N</i> = 690)		Moroccan origin (<i>N</i> = 1121)	
	Model 6.1	Model 6.2	Model 6.3	Model 6.4
Good		0.93 (0.75–1.15)		1.04 (0.89–1.22)
Very good		0.91 (0.70–1.17)		0.92 (0.71–1.18)
Proportion minority in municipality	1.00 (1.00–1.00)		1.00 (1.00–1.00)	
Constant	0.01	0.01	0.02	0.02
–2LL	4677.75	4662.18	7430.89	7416.57

TV time-varying variable

^a Age has been rescaled, so that 0 represents 25 years of age

References

- Alba, R. D., & Nee, V. (2003). *Remaking the American mainstream: Assimilation and contemporary immigration*. Cambridge: Harvard University Press.
- Andersson, G. (2004). Childbearing after migration: Fertility patterns of foreign-born women in Sweden. *International Migration Review*, 38(2), 747–775.
- Axelrod, P. (1990). Cultural and historical factors in the population decline of the Parsis of India. *Population Studies*, 44(3), 401–419.
- Baykara-Krumme, H., & Milewski, N. (2017). Fertility patterns among Turkish women in Turkey and abroad: The effects of international mobility, migrant generation, and family background. *European Journal of Population*, 33(3), 409–436.
- Bean, F. D., & Marcum, J. P. (1987). Differential fertility and the minority group status hypothesis: An assessment and review. In F. D. Bean & W. P. Frisbie (Eds.), *The demography of racial and ethnic groups* (pp. 189–211). New York: Academic Press.
- Beaujot, R. P., Krotki, K. J., & Krishnan, P. (1982). Analysis of ethnic fertility differentials through the consideration of assimilation. *International Journal of Comparative Sociology*, 23, 62–70.
- Bongaarts, J. (2008). Fertility transitions in developing countries: Progress or stagnation? *Studies in Family Planning*, 39(2), 105–110.
- Callaerts, T. (1997). “Import” huwelijken bij Jonge Turkse Migranten in Vlaanderen en Brussel: een Kwalitatieve Benadering. Brussel: Etnische Minderheden in België.
- Castles, S. (1986). The guest-worker in western Europe: An obituary. *International Migration Review*, 20(4), 761–778.
- Chabé-Ferret, B., & Melindi-Ghidi, P. (2013). Differences in fertility behavior and uncertainty: An economic theory of the minority status hypothesis. *Journal of Population Economics*, 26(3), 887–905.
- Coleman, D. A. (1994). Trends in fertility and intermarriage among immigrant populations in Western Europe as measures of integration. *Journal of Biosocial Science*, 26, 107–136.
- Corijn, M., & Lodewijckx, E. (2009). *De start van de gezinsvorming bij de Turkse en Marokkaanse tweede generatie in het Vlaamse Gewest. Een analyse op basis van Rijksregistergegevens*. Brussel: Studiedienst van de Vlaamse Regering.
- de Valk, H. A. G., & Milewski, N. (2011). Family life transitions among children of immigrants: An introduction. *Advances in Life Course Research*, 16(4), 145–151.
- Ford, K. (1990). Duration of Residence in the United States and the Fertility of U.S. Immigrants. *International Migration Review*, 24(1), 34–68.
- Fouarge, D. J. A. G., Manzoni, A., Muffels, R. J. A., & Luijkx, R. (2010). Childbirth and cohort effects on mothers’ labour supply: A comparative study using life history data for Germany, the Netherlands and Great Britain. *Work, Employment and Society*, 24(3), 487–507.
- Friedman, D., Hechter, M., & Kanazawa, S. (1994). A theory of the value of children. *Demography*, 31(3), 375–401.
- Fu, V. K. (2008). Interracial-interethnic unions and fertility in the United States. *Journal of Marriage and Family*, 70, 783–795.
- Gadeyne, S., Neels, K., & De Wachter, D. (2009). *Monografie 5: Nuptialiteit en vruchtbaarheid*. FOD Economie, K.M.O., Middenstand en Energie Algemene Directie Statistiek en Economische Informatie, Brussel.
- Goldscheider, C., & Uhlenberg, P. R. (1969). Minority group status and fertility. *American Journal of Sociology*, 74(4), 361–372.
- Goldstein, S., & Goldstein, A. (1981). The impact of migration on fertility: An “Own Children” analysis for Thailand. *Population Studies*, 35(2), 265–284.
- González-Ferrer, A. (2006). Who do immigrants marry? Partner choice among single immigrants in Germany. *European Sociological Review*, 22(2), 171–185.
- Gordon, M. M. (1964). *Assimilation in American life*. New York: Oxford University Press.
- Hartung, A., Vandezande, V., Phalet, K., & Swyngedouw, M. (2011). Partnership preferences of the Belgian second generation: Who lives with whom? *Advances in Life Course Research*, 16(4), 152–163.
- Heath, A. F., Rother, C., & Kilpi, E. (2008). The second generation in Western Europe: Education, unemployment, and occupational attainment. *Annual Review of Sociology*, 34, 211–235.

- Hooghiemstra, E. (2001). Migrants, partner selection and integration: Crossing Borders? *Journal of Comparative Family Studies*, 32(4), 601–626.
- Hooghiemstra, E. (2003). *Trouwen over de grens: Achtergronden van partnerkeuze van Turken en Marokkanen in Nederland*. Den Haag: Sociaal en Cultureel Planbureau.
- Huschek, D., de Valk, H. A. G., & Liefbroer, A. C. (2012). Partner choice patterns among the descendants of Turkish immigrants in Europe. *European Journal of Population*, 28(3), 241–268.
- Johnson, N. E., & Nishida, R. (1980). Minority-group status and fertility: A study of Japanese and Chinese in Hawaii and California. *The University of Chicago Press*, 86(3), 496–511.
- Kahn, J. R. (1988). Immigrant selectivity and fertility adaptation in the United States. *Social Forces*, 67(1), 108–128.
- Kahn, J. R. (1994). Immigrant and native fertility during the 1980s: Adaptation and expectations for the future. *International Migration Review*, 28(3), 501–519.
- Kalmijn, M. (1998). Intermarriage and homogamy: Causes, patterns, trends. *Annual Review of Sociology*, 24, 395–421.
- Kalmijn, M., de Graaf, P., & Janssen, J. (2005). Intermarriage and the risk of divorce in the Netherlands: The effects of differences in religion and in nationality, 1974–94. *Population Studies*, 59(1), 71–85.
- Kalmijn, M., & Tubergen, F. (2006). Ethnic intermarriage in the Netherlands: Confirmations and refutations of accepted insights. *European Journal of Population*, 22(4), 371–397.
- Kennedy, R. E. J. (1973). Minority group status and fertility: The Irish. *American Sociological Review*, 38(1), 85–96.
- Koelet, S., & de Valk, H. A. G. (2013). *Mixing and matching on the marriage market* (Interface Demography Working Paper No. 2013–2). Brussel.
- Kulczycki, A., & Lobo, A. P. (2002). Patterns, determinants, and implications of intermarriage among Arab Americans. *Journal of Marriage and Family*, 64(1), 202–210.
- Kulu, H. (2005). Migration and fertility: Competing hypotheses re-examined. *European Journal of Population*, 21(1), 51–87.
- Kulu, H., & González-Ferrer, A. (2014). Family dynamics among immigrants and their descendants in Europe: Current research and opportunities. *European Journal of Population*, 30, 411–435.
- Kulu, H., Hannemann, T., Pailhé, A., Neels, K., Krapf, S., González-Ferrer, A., et al. (2017). Fertility by birth order among the descendants of immigrants in selected European Countries. *Population and Development Review*, 43(1), 31–60.
- Lesthaeghe, R., & van de Kaa, D. J. (1986). Twee demografische transitie's? In D. J. Van De Kaa & R. Lesthaeghe (Eds.), *Bevolking: groei en krimp* (pp. 9–24). Deventer: Van Loghum Slaterus.
- Lievens, J. (1998). Interethnic marriage: Bringing in the context through multilevel modelling. *European Journal of Population*, 14(2), 117–155.
- Lievens, J. (1999). Family-forming migration from Turkey and Morocco to Belgium: The demand for marriage partners from the countries of origin. *International Migration Review*, 33(3), 717–744.
- Lievens, J. (2000). The third wave of immigration from Turkey and Morocco: Determinants and characteristics. In R. Lesthaeghe (Ed.), *Communities and generations: Turkish and Moroccan populations in Belgium* (pp. 95–128). Brussels: VUB University Press.
- Lodewijckx, E. (2010). *Gezinsvorming bij tweede generatie Turken en Marokkanen. Een verschillende start al naargelang ze huwen met een huwelijksmigrant of met iemand van de tweede generatie?*, No. 22. *Studiedienst van de Vlaamse Regering*, Brussel.
- Lucassen, L., & Laarman, C. (2009). Immigration, intermarriage and the changing face of Europe in the post war period. *The History of the Family*, 14(1), 52–68.
- Mayer, J., & Riphahn, R. T. (2000). Fertility assimilation of immigrants: Evidence from count data models. *Journal of Population Economics*, 13(2), 241–261.
- Milewski, N. (2011). Transition to a first birth among Turkish second-generation migrants in Western Europe. *Advances in Life Course Research*, 16(4), 178–189.
- Milewski, N., & Hamel, C. (2010). Union formation and partner choice in a transnational context: The case of descendants of Turkish immigrants in France. *International Migration Review*, 44(3), 615–658.
- Mulder, C. H., & Wagner, M. (1993). Migration and marriage in the life course: A method for studying synchronized events. *European Journal of Population*, 9, 55–76.
- Qian, Z., & Lichter, D. T. (2007). Social boundaries and marital assimilation: Interpreting trends in racial and ethnic intermarriage. *American Sociological Review*, 72, 68–94.
- Rashad, H. (2000). Demographic transition in Arab countries: A new perspective. *Journal of Population Research*, 17, 83–101.

- Reniers, G. (1999). On the history and selectivity of Turkish and Moroccan migration to Belgium. *International Migration*, 37(4), 679–713.
- Ritchey, P. N. (1975). The effect of minority group status on fertility: A re-examination of concepts. *Population Studies*, 29(2), 249–257.
- Roberts, R. E., & Lee, E. S. (1974). Minority groups status and fertility revisited. *American Journal of Sociology*, 80(2), 503–523.
- Ryder, N. B. (1973). Recent trends and group differences in fertility. In C. F. Westoff (Ed.), *Toward the end of growth: Population in America* (pp. 57–68). Englewood Cliffs: Prentice Hall.
- Schoen, R., Kim, Y. J., Nathanson, C. A., Fields, J., & Astone, N. M. (1997). Why do Americans want children? *Population and Development Review*, 23(2), 333–358.
- Schoenmaeckers, R. C., Lodewijckx, E., & Gadeyne, S. (1999). Marriages and fertility among Turkish and Moroccan women in Belgium: Results from census data. *International Migration Review*, 33(4), 901–928.
- Schwartz, C. R. (2013). Trends and variation in assortative mating: Causes and consequences. *Annual Review of Sociology*, 39(1), 451–470.
- Scott, K., & Stanfors, M. (2011). The transition to parenthood among the second generation: Evidence from Sweden, 1990–2005. *Advances in Life Course Research*, 16, 190–204.
- Shroff, Z. C., & Castro, M. C. (2011). The potential impact of intermarriage on the population decline of the Parsis of Mumbai, India. *Demographic Research*, 25(17), 545–564.
- Timmerman, C., Lodewyckx, I., & Wets, J. (2009). Marriage at the intersection between tradition and globalization. Turkish marriage migration between Emirdag and Belgium from 1989 to present. *The History of the Family*, 14, 232–244.
- Timmerman, C., Vanderwaeren, E., & Crul, M. (2003). The second generation in Belgium. *International Migration*, 37(4), 1065–1090.
- UNESCO. (2012). *International standard classification of education ISCED 2011*. Montreal.
- Van Kerckem, K., Van der Bracht, K., Stevens, P. A. J., & Van de Putte, B. (2013). Transnational marriages on the decline: Explaining changing trends in partner choice among Turkish Belgians. *International Migration Review*, 47(4), 1006–1038.
- Van Landschoot, L., de Valk, H., & Van Bavel, J. (2017). Fertility among descendants of immigrants in Belgium: The role of the partner. *Demographic Research*, 36(60), 1827–1858.
- Van Landschoot, L., Van Bavel, J., & de Valk, H. A. G. (2014). Estimating the contribution of mothers of foreign origin to total fertility: The recent recovery of period fertility in the Belgian region of Flanders. *Demographic Research*, 30(12), 361–376.
- Van Mol, C., & de Valk, H. A. G. (2016). Migration and immigrants in Europe: A historical and demographic perspective. In B. Garcés-Masareñas & R. Penninx (Eds.), *Integration processes and policies in Europe. Contexts, levels and actors* (pp. 31–55). Berlin: Springer.
- Vanneste, D., Thomas, I., & Goossens, L. (2007). *Woning en woonomgeving in België* (Monografieën van de Sociaal-Economische Enquête 2001, No. 2). Brussel.
- Zavattaro, M., Susanne, C., & Vercauteren, M. (1997). International migration and biodemographical behaviour: A study of Italians in Belgium. *Journal of Biosocial Science*, 29, 345–354.