First union formation among the children of immigrants in Norway:

Timing and choice of union type

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Abstract

Using Norwegian register data on all individuals born 1985 to 2000 who were either native-born or who immigrated as children or teens (*N*=1,013,734), the current study investigated timing of first co-residential union and choice of union type in the period 2005 through 2018. Descriptive results showed that 64% of the second generation (Norwegian-born children of immigrants) and 75% of the 1.5 generation (immigrated prior to age 18) chose cohabitation as first union, compared with 94% of those without a migration background. Results from competing risk event history models confirmed that second-generation immigrants, and particularly women, were more likely to marry directly and less likely to cohabit than those belonging to the 1.5 generation and Norwegians without a migration background. Second-generation individuals originating from Turkey, Pakistan, Morocco, Kosovo, Sri-Lanka, and India were more prone to marry directly than the native-born children of immigrants from other non-Western countries. Conversely, second-generation Iranians were less likely to marry, whereas those originating from Vietnam and Bosnia and Herzegovina were most likely to cohabit. The chance of marrying directly decreased across the study period among immigrant-background and majority individuals alike.

Introduction

Across Europe, new groups of young individuals with a migrant background are currently entering adulthood. The children of immigrants were either born in their countries of residence (the second generation) or they immigrated as children (the 1.5 generation). They have thus been socialized within their countries of residence and share institutional contexts with majority populations. Whether these individuals cross the barriers that separate many of their immigrant parents from the majority populations is therefore of increasing importance for the long-term social cohesion of European societies.

Investigating the family behaviors of immigrant-background individuals may improve our understanding of the degree to which these population subgroups can progress economically or integrate into mainstream culture. In the literature on immigrant-background populations' family behavior, intermarriage between natives and immigrants has been considered particularly relevant (Kalmijn, 1998), but also other aspects of family behavior like timing of first union formation, nonmarital family formation and fertility are indicators of societal integration (Andersson, Persson, & Obućina, 2017; Kulu & Gonzales-Ferrer, 2014). Comparing such behaviors across migrant generations, or between immigrants with different durations of residence, may shed light on changes in socioeconomic adaptation over time.

The current study investigates differences in timing of the first co-residential union and choice of first union type (marriage or cohabitation) across migrant generations as well as countries of origin. The timing of family formation plays an important role in the unfolding of life courses with potential implications for individuals' future educational and working careers as well as their family lives (Billari, 2005; Elder, 1985). For instance, persons who enter unions at an early age run a higher risk of experiencing a breaking up of the union (Lyngstad & Jalovaara, 2010). There is also evidence that early marriage is associated with lower education and labor market participation, particularly among immigrant-background

women originating from lesser developed countries and regions (Dale, Lindley, & Dex, 2006; Heath, Rothon, & Kilpi, 2008). Also, differences in timing of first union formation between majority and immigrant-background populations can influence the degree to which intermarriage and mixed union formation is possible (Kalmijn & van Tubergen, 2010; Wiik & Holland, 2018).

In most affluent countries, the diversity in family forms has increased in recent decades, making it harder to establish a single and unidirectional relationship between immigrant family dynamics and societal integration. Notably, marriage has lost its significance as a destination after leaving the parental home and cohabitation has increased both as a form of intimate partnership and as a context for parenthood (Buchman & Kriesi, 2011; Perelli-Harris et al., 2012). In the Nordic countries, cohabitation before marriage is nearly universal, and most women are living in a cohabiting union when they get their first child (Holland, 2013; Noack; Bernhardt, & Wiik, 2014). Over 90% of majority background Norwegians currently choose cohabitation as their first partnership (Wiik, 2009), as much as 60% of all co-residential partnerships in the age group 25–34 are cohabitations, and 52% of first births are to cohabiting couples (Statistics Norway, 2019a, 2019b). Although direct marriage is relatively rare and married and cohabiting couples gradually have been given many of the same rights and obligations (Noack et al., 2014), most persons still end up getting married: according to official statistics, 55% of men and women in the age group 45-49 years are married (Statistics Norway, 2019c). If immigrant-background individuals choose cohabitation as first union and marry at later ages in such a context, this could signal adaptation of the receiving country's family formation patterns and norms (DeValk & Liefbroer, 2007).

Using Norwegian register data on all men and women born 1985 to 2000 who were either native born or who immigrated as children or teens (*N*=1,013,734), this study investigates differences in timing of first co-residential union formation and choice of first union type in

the period 2005 through 2018. These all-encompassing data allow for fine-grained analyses of the union formation behavior of immigrant-background subgroups. I am particularly interested in the native-born children of immigrants (i.e. the second generation) and compare their behavior with that of individuals who immigrated as children or teens (i.e., the 1.5 generation) as well as majority-background individuals. In addition to assess differences across immigrant status and sex, individuals with a migration background are disaggregated by seven global regions of origin. I also run separate analyses on the second generation focusing on those originating from the ten largest countries of origin represented in Norway.

Background and prior research

Although immigrants and their children born in Norway comprised nearly 18% of the total population at the onset of 2019 (Statistics Norway 2019d), the country is characterized by a relatively short history of non-Nordic migration. The first major wave of non-Nordic immigration started around 1970, with the arrival of labor migrants, mainly from Pakistan, Turkey, Morocco, and India (Brochmann & Kjeldstadli, 2008: 192-198). Thus, until now, studies of the immigrant population's family formation behavior have mostly considered first-generation immigrants, as is also the situation elsewhere in Northwestern Europe (De Valk & Milewski, 2011; Kulu & Gonzales-Ferrer, 2014). Second-generation immigrants, on the other hand, have been so young that only a vague impression of their patterns of family formation has been gained so far. However, this is changing rapidly as more descendants of immigrants reach typical family formation ages. As of January 2019, there were around 180,000 second-generation immigrants in Norway, of which one-third were aged 16 and above (Statistics Norway, 2019d). In comparison, in 2000 the second generation comprised 44,025 persons, of which 8,192 (18.6%) were 16 years or older. Then as now, the largest global region of origin was Asia (including Turkey) and Africa, who made up 70% of the second generation in 2017,

with Pakistan, Vietnam and Turkey as the three largest single origin countries.

In addition to the restrictions posed by the rather young age structure of the second generation, European studies on family formation among the second generation have focused mostly on descendants of Turkish, and to some extent Moroccan, immigrants (e.g., Huschek, De Valk, & Liefbroer, 2010; Kulu & González-Ferrer 2014; Milewski & Hamel, 2010). Descendants of immigrants from other countries have been less studied, mainly because groups are often too small to be captured in nationally representative survey data (De Valk & Milewski, 2011).

Also, prior studies on family formation among second-generation immigrants have focused on the transition to parenthood or first marriage (e.g., Andersson, Obućina, & Scott, 2015; Kulu, Milewski, Hannemann, & Mikolai, 2019). Although these are central events in the transition to adulthood, most international research on union formation among immigrants and their children misses out on unmarried cohabitation. The modern form of cohabitation, dating back to the late 1960s in Norway (Noack et al., 2014), is partly a result of secularization and other long-term cultural trends during the 20th century, including an emphasis on emotional satisfaction, and romantic love in partnerships (Cherlin 2004; Lesthaeghe, 2010). Investigating whether the children of immigrants choose to cohabit or marry may imply that these individuals, often originating from countries with traditional family values and norms, adapt to ongoing changes in the "standard" Western family life course.

There is recent evidence that Dutch second-generation immigrants of Turkish and Moroccan origin hold less favorable attitudes to cohabitation than natives (Kalmijn & Kraaykamp, 2018). Similarly, in Sweden, Bernhardt and colleagues (2007) found that Turkish-origin young adults generally disapproved of living together without being married and that very few chose cohabitation as first union. Polish second-generation immigrants, on

the other hand, had to a larger degree adapted to the Swedish attitudinal pattern, though they were less likely to cohabit than majority Swedes (Bernhardt, Goldscheider, Goldscheider, & Bjerén, 2007). In the UK, second-generation Bangladeshis, Pakistanis, and Indians displayed higher marriage expectations and lower expectations for cohabitation than those who self-identified as "white British" (Berrington, 2018). Second-generation women were, however, less likely to expect to cohabit than men, and second-generation Bangladeshis and Pakistanis had higher marriage expectations than Indians. Further, studying attitudes to first union formation in The Netherlands, De Valk & Liefbroer (2007) found that second-generation immigrants, particularly those originating from Turkey, preferred younger ages at marriage than their native Dutch counterparts. Also, in France, 11% of women and 21% of men of Turkish descent chose cohabitation as first union, compared with 98% of French majority-background men and women (Milewski & Hamel, 2010).

Using urban samples from Germany and United States, Soehl and Yahirum (2011) found that more than half of the Turkish second-generation immigrants were married by their mid-20s, compared to 10% of majority Germans. However, there were few differences in the timing of first co-residential unions, due to a high prevalence of pre-marital cohabitation among native Germans. In the United States, the Mexican second-generation and non-Hispanic whites married for the first time at comparable ages.

Generational adaptation

As argued in socialization theory, individuals internalize expectations and attitudes from their social environment through childhood socialization. Individuals' own preferences of when to form the first union and what type of union to choose, and eventually their actual behavior, is thus indirectly a product of their parents' and other significant third parties' preferences and behavior. In line with these assumptions, Keijer, Liefbroer, & Nagel (2015) showed that

parents' behavior as well as their expectations predicted adolescents' own expectations about the timing of cohabitation, marriage, and parenthood. The transmission of preferences from parent to child might also be direct, particularly with respect to issues that parents find important, like timing of first marriage (Barber & Axinn, 1998; De Valk and Liefbroer, 2007; Thornton, 1991), first birth (Barber, 2001; Riise, Dommermuth & Lyngstad, 2016), and partner choice (van Zantvliet, Kalmijn, & Verbakel, 2014).

In a similar manner, family systems dominant in the country of origin at the time of immigration may continue to shape preferences and expectations of immigrants after the arrival in their countries of destination. Preferences may, however, shift across generations and with duration of residence. Structural assimilation may lead immigrants to adopt patterns of family formation more like those of the majority population over time (Gordon, 1964). Adaptation to the family formation regime in the host country may be a result of active strategies for optimizing socioeconomic success (Adserà & Ferrer, 2016) or of institutional contexts shared with majority populations, such as educational systems, political institutions and cultural outlets (Huschek et al., 2010; Bernhardt et al., 2007; DeValk & Milewski, 2011). The norms and behaviors of countries of origin may be most salient for immigrants arriving in Norway as (young) adults, but also among those who immigrated as children or teens. Most of those comprising this latter group arrived in their destination countries with their parents, who will also have had an equally short duration of residence. With longer duration of residence, the influence of Norwegian family formation norms and Norwegian society more broadly, transmitted via majority peers, the media and institutions, such as the education system and labor market, may increase the likelihood of choosing cohabitation as first union and deferral of first marriage.

Second-generation individuals, who were born and raised in their countries of residence, and whose parents often have spent many years in the receiving country before their children

"came of age", may to a larger degree than their immigrant counterparts be influenced by the dominant family behaviors in society (Kulu, Milewski, Hannemann, & Mikolai, 2019). Even so, norms, practices and behaviors of their parents' countries of origin may continue to be transmitted and maintained through links to family and friends in countries of origin as well as first-generation migrants in countries of residence (DeValk & Liefbroer, 2007; Nauck, 2001). In such a way, the children of immigrants, and particularly the native-born children of immigrants, occupy a "sociocultural middle ground" between their countries of origin and residence (Holland & DeValk, 2013; Foner, 1997).

Studies confirm that immigrant women's fertility converges towards non-immigrant levels with length of stay (Andersson, 2004; Sobotka, 2008). Similarly, immigrants with longer durations of residence and second-generation immigrants adopt marital timing preferences (Holland & DeValk, 2013) and actual marital behavior (Abbasi-Shavazi, Sadeghi, Mahmoudian, & Jamshidia, 2012; Sassler & Qian, 2003) that are more similar to majority populations. Correspondingly, in Sweden, immigrants with longer duration were more likely to intermarry than their recently arriving counterparts (Dribe & Lundh, 2008), though Swedish second-generation women as well as women who immigrated as children married for the first time at younger ages than those who immigrated as adults and majority women (Andersson et al., 2015). In Norway and Sweden, second-generation immigrants who married endogamously deferred first marriage longer than their first-generation counterparts (Wiik & Holland, 2018). Also, in a recent study of young adults' attitudes towards issues such as sex equality and homosexuality, Friberg (2016) found that the children of immigrants born in Norway displayed more liberal attitudes compared with those who immigrated as children or teens as well as their peers living in their countries of origin. These findings imply that there is a gradual value assimilation in the Norwegian society.

Taken together, I expect to find that second-generation individuals are more likely to follow the dominant union timing pattern and to be more prone to cohabit than those who immigrated as children or teens (i.e., the 1.5 generation), net of differences in global regions of origin and socioeconomic characteristics (Hypothesis 1).

Differences across countries of origin and sex

Immigrant-background populations are highly heterogeneous and adaptation across migrant generations and duration of residence is contingent upon social distance between countries of origin and residence (Dribe & Lundh, 2008; Portes & Zhou, 1993; Scott & Stanfors, 2011). In line with the cultural perspective on union formation and partner choice (Kalmijn, 2012), research confirms that immigrants' family behavior is influenced by the norms of their countries of origin (Adserà & Ferrer, 2016; Dribe & Lundh, 2011; Tønnessen, 2019). This finding also applies to the descendants of immigrants, and in Spain, second-generation immigrants originating from countries with a low mean age at marriage were less likely to reside outside the parental home without marrying than those originating from countries with higher marital ages (Vitali & Arpino, 2015).

As of January 2019, 48% of the Norwegian migrant-background population originated from countries in Asia, the Middle East, and Africa (Statistics Norway, 2019d). Many countries in these global regions have a predominantly Islamic cultural heritage (Dribe & Lundh, 2011; Elgvin & Tronstad, 2013), characterized by traditional family formation patterns centered on early and universal marriage, high fertility (DeValk & Milewski, 2011; Jones & Yeung, 2014), and patriarchal family patterns (Goldscheider et al., 2007: 1). This contrasts with dominant Scandinavian family formation systems, characterized by high rates of cohabitation, deferral of first marriage, and fertility just below replacement level (Sobotka & Toulemon, 2008). Correspondingly, in Sweden, Andersson, Obucina and Scott (2015)

found that female immigrants and their native-born daughters from North Africa, the Arab Middle East, Turkey, and South Asia displayed elevated risks of first marriage relative to those with Swedish-born parents.

In general, religiosity is positively related to conservative family formation behavior, like marrying without prior cohabitation (Berrington, 2018; Wiik, 2009). Cohabitation, on the other hand, is associated with increased individualization and secularization (Lesthaeghe, 2010). A recent survey of the twelve largest immigrant groups in Norway (Poland, Bosnia and Herzegovina, Kosovo, Turkey, Iraq, Iran, Afghanistan, Pakistan, Sri Lanka, Vietnam, Eritrea, and Somalia) confirmed that 42% identified themselves as Muslims, 34% as Christians, 7% as Hindus or Buddhists, and 17% as secular (Barstad, 2019). Overall, four in ten immigrants were highly religious, compared with 4% of the Norwegian majority (Barstad, 2019). Among those from Pakistan, Somalia, and Eritrea, as much as 75% replied that religion was a very important part of their everyday lives, whereas Iranian immigrants were mostly secular.

To be sure, cohabitation and other forms of non-formal partnering is widespread and accepted in some parts of the global South, most notably in South and Middle America (Esteve, Lesthaeghe, & López-Gay, 2012). Little is known about the spread of cohabitation in Asia, a region in which marriage is universal, but cohabitation is increasingly popular in some East and South-East Asian countries, such as Japan, China, and the Philippines (Jones & Yeung, 2014; Yu & Xie, 2015). In Sub-Saharan Africa, on the other hand, marriage and cohabitation are often not easily distinguishable and it is not uncommon to live together for years prior to marriage (Hattori & Dodoo, 2007). Correspondingly, findings from Sweden confirm that native-born women whose parents immigrated from countries in South and Middle America, Sub-Saharan Africa, East and South-East Asia, as well as Iran, married for the first time at later ages than their counterparts with Swedish-born parents (Andersson et al., 2015). This study did not include data on unmarried cohabitation, however, so it remains

unknown whether Swedish immigrants from these countries and regions chose to cohabit.

The children of immigrants originating from countries characterized by more conservative family values than what is predominant in their countries of residence may be particularly prone to experience "competing pressures." That is, in their everyday lives they may often encounter liberal values at schools and from their peers and the media, but at the same time be influenced by the conservative values they have been socialized into by their parents and in their ethnic community (Kalmijn & Kraaykamp 2018). Also, when there is large sociocultural distance between countries of origin and residence, socioeconomic integration may progress slower. Correspondingly, Norwegian immigrant-background individuals originating from non-Western countries (i.e., Asia, Africa, non-EU Eastern European countries, as well as South and Middle America) more often experience residential segregation and socioeconomic marginalization than their Western counterparts (Bratsberg, Raaum, & Røed, 2014; Rogne, Andersson, Malmberg, & Lyngstad, 2019). Further, the children of non-Western immigrants, and particularly Muslims, harbor more conservative social attitudes than their peers originating from Western countries (Friberg, 2016). So, whereas some second-generation immigrants are socialized into mainstream culture, others may be more influenced by a minority subculture. According to the "subculture hypothesis" (Kulu et al., 2019), some groups of second-generation immigrants preserve the values, norms, and behaviors that are prevalent in their countries of origin. Therefore, individuals belonging to these groups may exhibit more traditional family behaviors than their counterparts from other countries of origin and majority background individuals.

Regarding differences across countries of origin, I expect to find that immigrant-background individuals who themselves or their parents immigrated to Norway from countries in Asia, the Middle East and North Africa, or Eastern Europe to be more prone to marry directly at early ages, and less likely to cohabit, than majority individuals and those

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originating from other countries and global regions (Hypothesis 2).

To be sure, there is some evidence that those who marry at younger ages exert less autonomy over the timing of their marriages and their choice of partner than those who defer first marriage (Elgvin & Grødem 2011; Kalmijn, 1998). The same may apply to the choice of union type, and those immigrant-background individuals who form their first unions early may be more susceptible to a social pressure to marry. There is also evidence that the level of parental involvement in children's marriage is greater for immigrant women than men (van Zantvliet et al., 2014). This may be due to gender socialization teaching women to prioritize family over career (Furstenberg, 2019; Xiao, 2000). This is true for majority and immigrant women alike, though some studies have shown that women with a migration background originating from lesser developed countries with traditional and patriarchal family systems have a central role in transmitting ethnic traditions to the next generation (Kalmijn & van Tubergen, 2010; Liversage, 2012). Based on these arguments, I expect to find that 1.5 and second-generation women, particularly those of non-Western origin, are more likely to marry directly and less likely to cohabit, than their male counterparts (Hypothesis 3).

Method

Data and Sample

Data for the current study come from Norwegian population registers. Besides vital demographics such as age, dates of immigration and emigration, sex and (parents') country of birth, these data contain information on all marriages and, from 2005 onwards, cohabitation. In addition, I supplemented the population data with longitudinal register data on education (level and activity), annual total income, and place of residence. Such linking of data is facilitated through a system of universal ID numbers. These high-quality data allow for the exploration of union formation across migrant subpopulations, groups that are often too small

to be captured in nationally representative survey data and often hard-to-reach due to social exclusion, a lack of trust, or language difficulties (Stoop, Billiet, Koch, & Fitzgerald, 2010).

The introduction of a unique address for all dwellings made it possible to identify cohabiting unions from 2005 onwards. A cohabiting couple is defined as a man and a woman aged 18 years or older registered as residing in the same dwelling, who are not relatives or married and whose age difference is no more than 15 years (Falnes-Dalheim, 2009).[1] Correspondingly, I focus on all first unions formed 2005 through 2018, among the total Norwegian population born 1985 to 2000 residing in the country at age 18 ($N = 1,013,734$), of which 37,248 (3.7%) were second-generation immigrants, defined as being born in Norway by two immigrant parents. The total populations of immigrants who arrived prior to age 18, i.e. generation 1.5 ($n = 78,843$, i.e. 7.8%) as well as the majority population (i.e. those born in Norway by at least one Norwegian born parent ($n = 897,643$, i.e. 88.5%) were treated as comparison groups.[2]

Immigrants who arrived at ages 18 or older were excluded from the analytic sample. This was done to ensure that only first unions formed in Norway were considered, as the population registers contain no information about immigrants' possible previous cohabitations or marriages contracted abroad. Such unions are also embedded in different demographic and socioeconomic contexts, and they are probably affected by other factors than those formed in Norway. Prior research confirms that a significant number of immigrants who arrived as adults were already married prior to arrival (Lappegård, 2006).

Dependent variable and analytic procedure

To analyze the timing of first union formation, I used discrete-time event-history analysis. Each individual was followed from the year he or she turned 18 to the year of any registration of marriage or cohabitation or censoring due to death, emigration or the end of the

observation period (i.e., December 2018), whichever came first. As the data on cohabitation first became available from 2005 onwards, the cohorts born in 1985 and 1986 were followed from ages 20 and 19, respectively. The data set consists of 6,444,814 person-year observations. The number of events was 445,427, of which 413,663 (92.9%) were cohabitations and 31,764 (7.1%) were direct marriages. As this dependent variable is nominal with three values (i.e., first cohabitation or first marriage versus no union formation) I used multinomial logistic regression analyses to model the transition from being single to first marriage or cohabitation in year t, given no union formation in t-1. Given that competing risks are present, cumulative incidence functions (CIFs) are used to describe transitions from being single to a first marriage or cohabitation (Gooley, Leisenring, Crowley, & Storer, 1999).

To assess within-region of origin differences, I also ran separate models for second-generation immigrants originating from the ten largest countries of origin represented in Norway (n=25,993, 69.8% of the second-generation sample), ranging from 1,205 (Bosnia and Hercegovina) to 7,535 (Pakistan). To uphold an adequate sample size, a dummy separating those originating from other 1) Western (i.e., Western Europe and EU member states in Eastern Europe, as well as North America, New-Zeeland, Australia) and 2) non-Western countries (i.e., non-EU Eastern Europe, Asia, Africa, and South America) was included in this second-generation subsample.

Independent variables

Individuals were grouped into three *migrant generations* based on country of (parents') birth: 1) the 1.5 generation (i.e., foreign-born, migrated prior to age 18), 2) the second generation (i.e., native-born with two foreign-born parents), and 3) majority individuals (i.e., native-born with at least one native-born parent). I further disaggregated individuals by seven *regions of (parents') origin*: 1) Nordic countries, 2) Western Europe, North America, Australia, and

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New Zealand, 3) Eastern Europe, 4) Asia and rest of Oceania, 5) Sub-Saharan Africa, 6) Middle East and North Africa, including Turkey (MENA); and 7) South and Middle America. In multivariate analyses of the full sample, the majority population was grouped with immigrants and descendants of Nordic origin. If parents of second-generation individuals were from different countries, information on mother's country of birth was used.

I also included a range of variables to control for potential confounders in the association between immigrant status, country/region of origin and first union formation. Prior studies show that these variables are associated with timing of first union formations as well as choice of union type (Andersson et al., 2015; Huschek et al., 2010; Mooyaart & Liefbroer, 2016; Wiik, 2009). First, in pooled models I controlled for *sex* with values 0 for men and 1 for women. Second, I control for *education* using yearly updated information on educational level achieved as of October the previous year. Originally, this variable has values ranging from 0 (none) to 8 (PhD). It was recoded into four categories: 1) primary education (<11 years); 2) secondary education (11-13 years); 3) tertiary education (14+ years); 4) missing. Next, I made a variable measuring whether the respondents were *enrolled in full-time education* (1) or not (0) at time t-1. I also control for *total income* before taxes in year t-1. Total income is the sum of labour income and income from self-employment, and transfers, such as parental benefit, sickness benefits and benefits for occupational rehabilitation. The income estimates were adjusted for inflation, and given in whole 10,000s of 2015-Norwegian Kroner. Another potential confounder is size of place of residence. For instance, social control may be larger in small communities. Respondents living in the municipalities of one of Norway's three most populated cities (Oslo, Bergen, and Trondheim) at time t-1were defined as urbanites and coded 1. Otherwise, the urbanite indicator was set to 0.

The models also include a continuous time-varying variable for respondent's age reported in years above 18. This variable captures the duration dependence of the estimated hazard of

first union formation. To allow for non-linearity, a quadratic term for age was added to the equation in addition to the linear. Also, a variable for calendar year of observation was incorporated, and this covariate captures temporal trends in the chance of a first union formation, as well as the development in the choice between marriage and cohabitation as a first union. This item was measured continuously in years.

Results

Descriptive results

Descriptive statistics for the variables used in the analyses are presented in Table 1. As can be seen from this table, around two-thirds of immigrant-background individuals were single in year t, compared with 54% of majority individuals, partly reflecting the different age compositions of the three population subgroups (mean ages were 23.6 (majority), 22.8 (the 1.5 generation), and 23.1 years (the second generation)). Nonetheless, 44% of majority individuals were cohabiting compared with 20% of those who immigrated to Norway as children or teens and 15% of the second generation. Marriage, on the other hand, was most prevalent among second-generation individuals (9%), followed by the 1.5 generation (7%) and the majority (3%).

[Table 1 about here]

As shown in Table 1, there were notable differences across migrant generations with respect to their global regions of origin. First, whereas Asia (48%) and the Middle East and North Africa (MENA, 22%) were the two largest regions of origin among second-generation individuals, 1.5-generation individuals were more heterogeneous with respect to their geographical origin. Notably, a larger share of this latter group had immigrated from countries in Eastern Europe (25%), Sub-Saharan Africa (18%), as well as Western Europe (8%). The distributions of the largest countries of origin in Norway by migrant generations are shown in

Appendix Table A1.

Regarding socioeconomic characteristics, Table 1 confirms that second-generation immigrants were better educated, more often enrolled in education, and had higher annual income compared with their 1.5 generation counterparts. Although second-generation immigrants more often were enrolled in education than majority individuals, the descriptive statistics presented in Table 1 confirm that both groups of immigrant-background individuals had lower annual income and education than their majority counterparts. Last, whereas 28% of the 1.5 generation and 22% of majority individuals resided in urban areas in the year preceding union formation or censoring, second-generation immigrants were overrepresented in urban areas.

Table 2 presents the type of first unions among partnered second- and 1.5-generation immigrants across their countries (the second generation) and global regions of origin. First, we note from this table that two-thirds of the second generation and three-fourths of the 1.5 generation chose cohabitation as first union. Direct marriage, on the other hand, was the preferred first union type for 36% of second-generation individuals and one in four of those who immigrated as children or teens. Among majority individuals who had formed a first union by the end of 2018, over 94% chose cohabitation whereas just below 6% married directly (not shown in tables).

[Table 2 about here]

There were, however, considerable differences in the incidence of cohabitation and marriage across regions of origin, and direct marriage was most common among those originating from countries in Eastern Europe, Asia, and MENA. Notably, 51% of second-generation immigrants whose parents had immigrated from MENA married directly. Among second-generation individuals originating from an Asian country, 43% married directly. Direct marriage was also most common among those who themselves immigrated from

countries in Eastern Europe, Asia, and MENA, though direct marriage was less common among 1.5-generation immigrants from Asia and MENA than their second-generation counterparts originating from these two global regions. Cohabitation, on the other hand, was most often chosen by immigrants and descendants from Nordic and Western European countries, as well as those originating from countries in South and Middle America and Sub-Saharan Africa. For instance, nearly 90% of second-generation immigrants from Sub-Saharan Africa and South and Middle America cohabited the first time they lived with a partner.

Further, the results in Table 2 confirm that among second-generation individuals who had entered a first union by the end of 2018, those originating from Pakistan (72%), Turkey (66%), and Morocco (56%) most often chose to marry directly. Cohabitation, on the other hand, was most prevalent among those whose parents had immigrated from Bosnia and Herzegovina, Iran (both 93%), Vietnam, Somalia (both 89%), Sri Lanka (78%), and Kosovo (71%), and India (63%). Although the shares of immigrant-background individuals choosing to cohabit rather than marrying directly are lower than among majority individuals (94%), these findings confirm that for most groups, cohabitation is the modal pathway to a partnership, even among many Norwegians with a non-Western migrant background.

[Figure 1 about here]

Transitions from being single to a first cohabiting union (left panel) or direct marriage (right panel) by migrant generations and sex are illustrated in Figure 1. From this figure, we note that majority individuals displayed the highest cohabitation rates, followed by 1.5- and second-generation immigrants. Precisely, 94% and 95% of majority women and men had formed a first cohabiting union by the end of our observation period (December 31,2018), compared with three-quarters of 1.5-generation individuals, 66% of second-generation men and 62% of second-generation women. Majority-background women displayed the highest cohabitation rates at younger ages, and 59% of majority women had

started to cohabit for the first time by age 24. Intriguingly, 1.5-generation women who chose to cohabit did so at relatively young ages: 50% of women who immigrated as children or teens had entered a first cohabiting union by age 24. Second-generation individuals, on the other hand, were more likely to marry directly, and 38% of women and 34% of men with such backgrounds had done so by the end of the observation period. From the right panel of Figure 1 we also note that second- and 1.5-generation women were particularly prone to marry directly at younger ages. For instance, by age 24, as many as 18% and 15% of women belonging to the second and 1.5 generations were married.

Multivariate results

Differences across migrant generations

Results from two discrete-time multinomial models of first union formation are presented as odds ratios with their 95% confidence intervals in Table 3. The model of the full sample (left side of Table 3) compares the union formation of 1.5- and second-generation individuals with that of their counterparts without a migrant background. In the model of the immigrant-background sample (right side of Table 3), the 1.5-generation serves as the reference group. From the model of the full sample of individuals born 1985 to 2000, we first note that both 1.5- and second-generation individuals were 2.7 times as likely to marry directly relative to remaining unpartnered in any given year than their majority counterparts, net of differences in regions of origin, age, sex, education, school enrolment, annual income, period and place of residence. Next, the results from the full model of Table 3 confirm that immigrant-background individuals were significantly less likely to form a cohabiting union in any given year compared with those of a majority background. More precisely, 1.5- and second-generation individuals were respectively 30% and 56% less likely to start cohabiting relative to remaining unpartnered in any given year than majority individuals, net of the other

included variables. As seen from the non-overlapping confidence intervals, individuals belonging to the second generation were significantly less prone to form a first cohabiting union than their 1.5-generation counterparts.

Separate models for the full data set of men and women are presented in Appendix Table A2. Overall, these models confirm the results from the sex pooled model of the full sample. Among men, however, we see that controlling for socioeconomic variables in addition to regions of origin those belonging to the second generation displayed lower odds of marrying compared with immigrants. This difference was, however, not statistically significant. Also, male students were more prone to cohabit relative to remaining single.

[Table 3 about here]

Regarding region of origin, the full model of Table 3 confirms that those originating from Western European countries as well as countries in Sub-Saharan Africa displayed significantly lower odds of entering into any type of first union than their counterparts originating from another Nordic country and majority Norwegians. Immigrants and descendants originating from countries in Eastern Europe, Asia and MENA, on the other hand, were significantly more prone to marry directly, and less likely to start cohabiting, relative to remaining unpartnered, than individuals of Nordic descent. Notably, individuals who themselves or whose parents had immigrated from a country in MENA were 78% more likely to marry directly and 31% less likely to cohabit in a given year than their Nordic counterparts and majority individuals. Last, we see from the full model of Table 3 that 1.5- and second-generation individuals originating from South and Middle America were 30% less likely to marry directly relative to remaining unpartnered in any given year than those of Nordic origin. South American immigrants and descendants were, however, as likely as their Nordic counterparts to form a first cohabiting union relative to remaining unpartnered in any given yearly observation.

In line with prior research on union timing, the results in Table 3 confirm that the annual odds of forming a first union first increased but then decreased with age and that women were more likely to marry or start cohabiting than men. Educational level and annual income as of the previous year were positively associated with a first union formation in year t, whereas missing education and school enrolment were negatively associated with forming a first union, particularly a direct marriage. Further, urbanites were significantly more likely to form a first union, and particularly to cohabit, compared with those living elsewhere in Norway. Last, we see from the model of the full sample in Table 3 that the chance of marrying decreased across the study period, whereas cohabitation became more likely.

Appendix Figure A1 presents results from an alternative model including interaction terms between calendar year and migrant generation. From this figure it is evident that the probability of choosing cohabitation as a first union increased across the study period for all three groups. Still, whereas the difference in the annual cohabitation probability between second and 1.5 generation individuals remained constant, majority individuals became increasingly cohabitation prone. The annual likelihood of marrying directly, on the other hand, decreased across the study period for all three groups, but more so among immigrant-background than majority individuals. This convergence was particularly evident among 1.5 generation individuals, and at the end of the study period they were significantly less likely ($p < 0.05$) to marry than their second-generation counterparts (see Appendix Figure A1).

In the second model of Table 3, only immigrant-background individuals are included as the association between the included background characteristics and first union formation might be different compared to majority individuals. Overall, this model corroborates the results from the model of the full sample and thus results are not only driven by the large sample of majority individuals. However, there were a few exceptions. First, we note that second-generation individuals were 8% more likely to marry directly and 30% less likely to cohabit,

relative to remaining unpartnered compared with their 1.5 generation counterparts. In additional analyses, I tested whether there were differences between 1.5-generation immigrants according to whether they immigrated during school age (i.e., above five years) or younger. These analyses revealed that there were no statistically significant differences across these two groups of immigrants (results available on request).

Further, when compared to immigrants and descendants from Nordic countries, Western European and Sub-Saharan African immigrant-background individuals were more likely to marry directly. Next, though barely failing to reach statistical significance at the chosen 5 per cent level, we further see from the model of the immigrant-background subsample that there was a negative association between being tertiary educated and direct marriage among immigrant-background individuals. Interestingly, being enrolled in education in year t-1 was positively associated with forming a first cohabiting union among individuals with a migration background.

[Figure 2 about here]

Results from separate models for immigrant-background men and women, as well as a a sex pooled model including interaction terms between region of origin and sex, are presented in Appendix Table A3 and confirm that there were some sex differences in the association between regions of origin and first union formation. Notably, 1.5 and second-generation women originating from Eastern Europe, MENA and Sub-Saharan Africa were significantly more prone to marry directly than men originating from the same world regions. Men originating from countries in MENA were, however, significantly more likely to cohabit than their female counterparts.

To further assess the association between timing and choice of first union type by generation and sex, I included interaction terms between age and age squared and migrant generation in separate models for men and women. The results from these interaction models

are presented as predicted probabilities in Figure 2 (full model results available upon request). From this figure it is evident that among men and women alike, those of majority background were most likely to form a first cohabiting union, followed by 1.5-generation individuals. Second-generation men and women were least likely to cohabit, but whereas second-generation men were most likely to cohabit at similar ages as their majority and 1.5 generation counterparts, second-generation women displayed a higher cohabitation propensity later in life than other women.

Turning to the competing event, Figure 2 shows that women of the second generation were significantly more likely to marry directly in their late twenties and early thirties than 1.5-generation women. Among men, there were no statistically significant differences in the marriage probability between the second and 1.5 generations. Nonetheless, among men and women alike these marriages tended to occur at somewhat later ages among the second generation than among the 1.5 generation.

Differences across countries of origin

To investigate differences across countries of origin, Table 4 presents results from a separate model of the second-generation subsample, focusing on those originating from the ten largest countries of origin represented in Norway. To uphold sample size, a dummy separating those originating from other Western (i.e., Western Europe and EU member states in Eastern Europe, as well as North America, New Zeeland, Australia) or non-Western countries (i.e., non-EU Eastern Europe, Asia, Africa, and South America) was added.

[Table 4 about here]

First, we see from the model in Table 4 that second-generation immigrants of Turkish origin were 4.5 times more likely to marry directly in any given year than those from other non-Western countries (reference group), controlling for their socioeconomic and

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demographic characteristics. Next, the odds ratios that Norwegian-born men and women with two immigrant parents from Pakistan or Morocco would marry directly in any year were respectively 3.8 and 3.1 times that of their counterparts originating from other non-Western countries. Further, second-generation individuals originating from Kosovo, Sri-Lanka, and India were roughly two times as likely to marry directly relative to remaining single in any given year than second-generation immigrants originating from other non-Western countries. Conversely, second-generation immigrants originating from Vietnam, Iran, as well as other Western countries, were significantly less likely to enter a direct marriage than their counterparts from other non-Western countries.

Regarding the competing event, the overall pattern was the opposite. More specifically, second-generation Pakistanis were least likely to cohabit, followed by their counterparts of Turkish, Moroccan, Indian, and Sri Lankan descent, net of the other included variables. Native-born individuals whose parents immigrated from Vietnam and Bosnia and Herzegovina, on the other hand, were respectively 13% and 28% more likely to start cohabiting in a given year relative to remaining unpartnered, compared with second-generation individuals originating from other non-Western countries. We further note from model of Table 4 that second generation Somalis displayed lower odds of cohabitation compared with second-generation immigrants originating from other non-Western countries, whereas Iranian and Kosovan second generation individuals did not differ significantly from the reference group. Last, second-generation immigrants originating from Western European countries, were 47% more likely to form a first cohabiting union relative to reaming unpartnered than those of non-Western origin.

[Table 5 about here]

Separate models for second-generation men and women are presented in Table 5. Splitting up the sample by sex, we first note that several of the estimates for the male subsample

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became statistically insignificant. This was particularly so for cohabitation, reflecting at least partly that men on average enter their first unions later than women (i.e., fewer events). Nonetheless, except for the cohabitation estimates for second-generation Vietnamese, Iranians and Kosovans, the estimates were in the same direction for men and women.

Results from a pooled model for men and women including interaction terms between sex and country of origin revealed that there were some statistically significant sex differences (p <0.05, reported with superscripts [x] and [y] in Table 5). First, though displaying low odds of cohabitation, the Norwegian-born sons of Pakistani immigrants were more likely to cohabit in a given yearly observation than second-generation Pakistani women. Among the children of Vietnamese, Iranian as well as Bosnian immigrants, on the other hand, women were significantly more likely to cohabit than men. Last, we note from Table 5 that the Norwegian-born daughters of immigrants from EU/EEC countries or the US, Canada, Australia, and New Zealand were significantly less prone to marry directly than their male counterparts.

Summary and discussion

Using Norwegian register data covering the period 2005 through 2018 on the total population of individuals born in the years 1985 to 2000 who were either native born or who immigrated prior to age 18 (N=1,013,734), this study investigated differences in timing of first co-residential union formation and choice of first union type across migrant generations as well as countries and global regions of origin. These data allowed for detailed analyses of the union formation behavior of immigrants and their descendants from many countries of origin, who are currently entering family formation ages. A major contribution of the current study was the inclusion of unmarried cohabitation. Very few studies on first union formation among immigrants and their descendants have so far considered marriage and cohabitation as competing risks (Kulu & Gonzales-Ferrer, 2014). Cohabitation before an eventual marriage is

almost universal behavior among majority individuals in Norway and studying the transition to both marital and non-marital co-residential unions in such a context provided additional insights into immigrant adaptation processes. Notably, choosing cohabitation instead of marriage and deferral of first union formation may signal adaptation to the Norwegian family formation pattern and norms, as well as increase the chances of partnering a majority individual (Wiik & Holland, 2018). Correspondingly, there is evidence that cohabiting unions more often than marriages are exogamous (Wiik, Dommermuth & Holland, 2018). Prior studies also confirm that there is a negative relationship between early marriage and socioeconomic outcomes, particularly among immigrant-background women originating from less developed countries (Dale et al., 2006; Heath et al., 2008).

Given that second-generation individuals were born and raised in Norway, I expected to find that they would be more likely to follow the "standard" Norwegian family life course and delay first marriage and to choose cohabitation as first union than individuals who immigrated as children or teens (Hypothesis 1). Contrary to these expectations, the results showed few signs of a clear generational gradient in first union formation in Norway. Regarding choice of union type, descriptive results confirmed that for most groups, cohabitation is currently the modal pathway to partnerships, though it is most common among majority background individuals: 64% of second-generation individuals chose cohabitation as their first union, compared with 75% of those belonging to the 1.5 generation and 94% of the majority. These results were corroborated in multivariate models showing that second-generation individuals were more likely to marry directly and less likely to cohabit than individuals who immigrated as children or teens, even after controlling for differences in global regions of origin and other demographic and socioeconomic characteristics. Also, 1.5- and second-generation individuals alike were significantly more likely to marry directly and less likely to cohabit compared with their majority counterparts.

One possible explanation for these results could be compositional differences across migrant generations. As shown in the descriptive statistics, the Norwegian second generation is more homogamous than the 1.5 generation in terms of countries and regions of origin. Nearly 70% of second-generation individuals comprising the cohorts studied here have parents who immigrated from countries in Asia and MENA, compared with 42% of the 1.5 generation. Pakistan constitutes the single largest country of origin (20% of the second generation), followed by Vietnam (11%), Turkey (8%), and Sri Lanka (7%). Among those who immigrated prior to age 18, on the other hand, larger shares were born in Eastern European (25%), Sub-Saharan African (18%), as well as Western European (8%) countries. Further, whereas the second generation were born and raised in Norway, the 1.5 generation is heterogeneous with respect to reason for migration. Although the majority of those who immigrated as children or teens arrived with their parents, many were minor refugees. In the period 1996 to 2017, 9,200 minor refugees were granted permanent residence in Norway, of whom 84% were boys and 46% were from Afghanistan (Statistics Norway, 2019e). As they arrived in Norway without their parents or other close relatives, this subgroup of the immigrant-background population may be less influenced by the (conservative) family formation values of their parents and ethnic community. Also, among the second generation, parents' reason for migrating to Norway could be of importance for their own behavior. Future studies on the family behavior of immigrants and their children ought to include the reason for migration to assess differences between for instance (the children of) labor migrants and refugees.

Results confirmed that there was considerable heterogeneity within the immigrant-background population according to countries and global regions of origin. First, individuals who themselves or their parents had immigrated to Norway from countries in Asia, MENA, and Eastern Europe were more prone to marry directly at early ages, and less likely to cohabit,

than majority individuals and immigrant-background individuals originating from other global regions. Those originating from Western European countries as well as countries in Sub-Saharan Africa, on the other hand, deferred any type of first union formation compared with their counterparts originating from another Nordic country and majority Norwegians. Also, individuals originating from countries in South and Middle America were less likely to marry directly than those of Nordic origin. South American immigrants and descendants were, however, as likely as their Nordic counterparts to form a first cohabiting union.

As these broad categories of regions of origin may conceal important within-region differences, I also conducted separate analyses on second-generation individuals focusing on those originating from the ten largest countries of origin. These analyses showed that second-generation immigrants originating from Turkey, Pakistan, Morocco, Kosovo, Sri-Lanka, and India were more prone to marry directly than the native-born children of immigrants from other non-Western countries (i.e., Asia, Oceania (excluding Australia and New Zealand), Africa, South and Middle America, as well as non-EU Eastern European countries). Those whose parents immigrated from Vietnam and Bosnia and Herzegovina, on the other hand, were most likely to cohabit.

Overall, these results confirmed Hypothesis 2 claiming that immigrant-background individuals who themselves or their parents immigrated to Norway from countries in Asia, the Middle East and North Africa, and Eastern Europe would be more prone to marry directly at earlier ages, and less likely to cohabit, than majority individuals and those originating from other countries and global regions. This is in in line with findings on the marital behavior of Swedish immigrant-background women showing that the daughters of immigrants from North Africa, the Arab Middle East, Turkey, and South Asia married for the first time at younger ages than those with Swedish-born parents (Andersson et al., 2015). It also corroborates findings from the UK, where second-generation Bangladeshis, Pakistanis, and Indians

displayed higher marriage expectations and lower cohabitation expectations than the British majority (Berrington, 2018). In the Netherlands, De Valk & Liefbroer (2007) found that second-generation Turks preferred younger marital ages than their native Dutch counterparts. Also, in France, Turkish second-generation individuals less often chose cohabitation as first union than those of majority-background (Milewski & Hamel, 2010).

Higher levels of religiosity may be one important mechanism explaining why many immigrants and their native born-children are more likely to marry for the first time at younger ages, and less likely to cohabit (Wiik, 2009). In line with this assumption, a recent study showed that Muslim women in France had higher ideal family sizes than non-Muslim women, and these differences were mainly explained by higher religiosity and family norms favoring larger families among Muslims (Behrman & Erman, 2019). A large share of the Norwegian second generation originates from Muslim countries, characterized by traditional family formation patterns (DeValk & Milewski, 2011; Jones & Yeung, 2014). Forty-two per cent of the largest immigrant groups in Norway identify themselves as Muslims, 34% as Christians, 7% as Hindus or Buddhists, and 17% as secular (Barstad, 2019). Overall, four in ten immigrants were highly religious, and among those from Pakistan, Somalia, and Eritrea, as much as three in four replied that religion was a very important part of their everyday lives, whereas Iranian immigrants were mostly secular. Regrettably, the data used here do not contain information on religiosity and other attitudinal variables known to be associated with cohabitation. Neither do they inform us on social pressure or family norms. These issues should be addressed in future research on the union formation behavior of the descendants of immigrants.

I further expected to find that 1.5 and second-generation women would be more likely to marry directly, and less likely to cohabit, than their male counterparts, and that this sex difference would be most pronounced for those originating from non-Western countries and

regions. Taken together, results provided mixed support for this hypothesis. First, 1.5 and second-generation women originating from Eastern Europe, MENA and Sub-Saharan Africa were significantly more prone to marry directly than men originating from the same world regions. Men originating from countries in MENA were, however, more likely to cohabit than their female counterparts. Next, separate models for second-generation men and women revealed that the Norwegian-born sons of Pakistani immigrants were more likely to cohabit than second-generation Pakistani women. To be sure, second-generation Pakistani men and women alike displayed a significantly lower odds of cohabiting relative to second-generation immigrants originating from other non-Western countries. Conversely, among the children of Vietnamese, Iranian as well as Bosnian immigrants, women were more likely to cohabit than men. Last, the Norwegian-born daughters of immigrants from non-Nordic Western countries were less prone to marry directly than their male counterparts.

Results from separate models for men and women including interaction terms between age and migrant generations confirmed that there were some sex differences in the age profiles of first union formation. First, whereas second-generation men who chose to cohabit did so at similar ages as their majority and 1.5 generation counterparts, second-generation women displayed a higher propensity to enter a first cohabitating union later in life than other women. Second-generation women were also more prone to marry directly in their late twenties and early thirties than 1.5-generation women. Among men who married directly, there were no statistically significant differences between the 1.5 and second generations.

Taken together, these results imply that second-generation individuals, and particularly women, choosing to cohabit before eventually marrying constitute a particularly select group. As this difference persisted after controlling for available socioeconomic characteristics (i.e., level of education, student status, and income), this group of second-generation women may be selective of the most secular and individualized. These results corroborate findings from

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the UK and France where second-generation women overall were less likely to (expect to) cohabit than their male counterparts (Berrington, 2018; Milewski & Hamel, 2010). One reason for this sex difference could be that women are more susceptible than men to follow the prevailing family norms of their country of origin. This could be due to social pressure from families, friends, and the co-ethnic community in general, or gender socialization teaching women to be relational (Sassler & Miller, 2010) and prioritize family over education and labor market participation (Furstenberg, 2019; Xiao, 2000). Also, there is some evidence that immigrant-background women originating from lesser developed countries with traditional and patriarchal family systems have a central role in transmitting ethnic traditions to the next generation (Kalmijn & van Tubergen, 2010). Similarly, results from a Danish study using qualitative data showed that immigrant-background women from lesser developed countries and regions often are "guardians of tradition" prioritizing family formation (Liversage, 2012).

Using these data, we were able to investigate the formation of first non-marital unions and focus on the children of immigrants from many countries of origin. Despite these strengths, the data used here contain no information on attitudes and values. And, although most cohabiting unions were captured using these data, the cohabitation estimates are probably downward biased. For instance, those cohabiting without reporting address change (e.g., students) were not counted as cohabiting, neither were cohabiting unions entered at the beginning of one year that were dissolved later that year. Further, some immigrants and descendants originating in predominantly Muslim countries may be registered as cohabiting in our data though actually living in unregistered religious marriages ("Nikah Urfi" (Sunni) / "Mutah" (Shia)). Although it is not known how common this phenomenon is in Norway, a recent qualitative study revealed that these unions are stable and resemble legal marriages (Bredal and Wærstad 2014). This is a matter for further research.

To conclude, the findings from this high-quality nationwide study adds to the knowledge base of family behaviors of immigrant-background individuals. Notably, for most groups, cohabitation is currently the preferred route into family life, and the likelihood of marrying directly decreased across the study period among immigrant-background and majority-background individuals alike. Taken at face value, this finding implies that the children of immigrants adapt to the dominant Norwegian family formation pattern, and prevalent norms and values more broadly. Also, as first cohabiting unions more often than direct marriages are exogamous in terms of partners' migrant backgrounds (Wiik et al., 2018), such a development may promote further social cohesion in Norwegian society. Nonetheless, new groups of young individuals with a migrant background are entering adulthood each year. As the size and composition of this group is changing rapidly, more knowledge is clearly warranted in the years to come.

Notes

1. Note that cohabiting unions entered at the beginning of one year that were dissolved later that year were not captured in our data. Similarly, childless couples with an age difference larger than 15 years are not counted as cohabiting, neither are students or other (young) people cohabiting without reporting address change. Correspondingly, whereas surveys show that there were around 400,000 cohabiting couples in Norway in 2016, the similar estimate from the register-based family statistics was 350,000.

2. In alternative analyses, Norwegian-born individuals with one foreign-born parent were treated as a distinct group. These analyses showed that their pattern of union formation was comparable to that of those with both parents Norwegian-born. In official statistics, both these groups are defined as belonging to the majority population (Statistics Norway, 2019d), and as such underscores the decision on immigrant grouping chosen in this study.

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Table 1. Descriptive statistics by migrant generations. Year of first union formation or censoring. Individuals born 1985 through 2000 who were either native-born or who immigrated prior to age 18.

Variable	2nd generation %/M(SD)	1.5 generation %/M(SD)	Majority %/M(SD)
Union status, year t			
Single	76.4	73.2	53.7
Cohabiting	15.0	20.0	43.7
Married	8.6	6.8	2.6
Region of origin			
Norway/ Nordic	3.1	5.3	100.0
Western Europe [a]	2.8	7.6	
Eastern Europe	11.4	24.5	
Asia [b]	48.2	23.5	
MENA	21.6	18.0	
Sub-Saharan Africa	9.2	18.0	
South America	3.8	3.1	
Sex			
Woman	48.6	45.4	48.7
Man	51.4	54.6	51.3
Educational attainment, year t-1			
Primary	41.7	51.5	34.9
Secondary	32.0	25.2	41.0
Tertiary	22.0	12.0	23.5
Missing	4.3	11.3	0.6
Enrolled in education year t-1			
Yes	52.8	44.3	47.9
No	47.2	55.7	52.1
Urban residence, year t-1			
Yes	51.1	28.1	22.4
No	48.9	71.9	77.6
Annual income, year t-1	16.5 (21.4)	15.8 (17.9)	22.3 (28.7)
Age, year t	23.1 (3.7)	22.8 (3.7)	23.6 (3.6)
Calendar year	2017.1 (2.1)	2016.6 (2.8)	2016.2 (2.8)
N individuals (%)	37,248 (3.7%)	78,843 (7.8%)	897,643 (88.5%)

Note: [a] This category comprises countries in Europe (excluding Nordic and Eastern European countries) as well as the US, Canada, Australia, and New Zealand. [b] This category also comprises countries in the remaining parts of Oceania.

Table 2. Type of first union. By global regions of origin and largest countries of origin. Second- and 1.5-generation immigrants born 1985 through 2000. First unions formed 2005 through 2018.

Variable	Direct marriage		Cohabitation	
	1.5 gen	2nd gen	1.5 gen	2nd gen
Region of origin				
Nordic	9.2	8.3	90.8	91.7
Western Europe [a]	10.6	11.6	89.4	88.4
Eastern Europe	23.2	20.6	76.8	79.4
Asia [b]	34.9	43.4	65.1	56.6
MENA	35.1	51.2	64.9	48.8
Sub-Saharan Africa	16.7	10.4	83.3	89.6
South America	11.2	10.5	88.8	89.5
Countries of origin				
Pakistan		72.1		27.9
Vietnam		11.1		88.9
Turkey		66.3		33.7
Sri-Lanka		21.6		78.4
Somalia		11.4		88.6
Morocco		56.2		43.8
India		36.8		63.2
Iran		7.4		92.6
Kosovo		29.0		71.0
Bosnia & Herzegovina		6.5		93.5
Other non-Western [c]		17.1		82.9
Other Western [d]		10.2		89.8
N (%)	5,337 (25.3)	3,195 (36.3)	15,771 (74.7)	5,599 (63.7)

Note: [a] This category comprises countries in Europe (excluding Nordic and Eastern European countries) as well as the US, Canada, Australia, and New Zealand. [b] This category also comprises countries in the rest of Oceania. [c] Asia, Oceania (excluding Australia and New Zealand), Africa, South and Middle America, as well as non-EU Eastern European countries. [d] Includes EU/EEC member states, the US, Canada, Australia, and New Zealand.

Table 3. Results from two discrete-time multinomial models of direct marriage or cohabitation versus no union formation (base). Odds ratios with 95% confidence intervals. Individuals born 1985 to 2000 who were either native born or who immigrated <18 years. First unions formed 2005 through 2018

	Full sample				Immigrant-background sample			
	Direct marriage		Cohabitation		Direct marriage		Cohabitation	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Generation								
Majority	ref.							
1.5 generation	2.68	2.52 – 2.85	0.70	0.68 – 0.71	ref.			
2nd generation	2.68	2.50 – 2.87	0.44	0.42 – 0.45	1.08	1.02 – 1.13	0.70	0.68 – 0.72
Region of Origin (Nordic=ref.)								
Western Europe [a]	0.81	0.75 – 0.87	0.85	0.84 – 0.87	1.32	1.05 – 1.65	0.90	0.83 – 0.97
Eastern Europe	1.28	1.18 – 1.38	0.92	0.89 – 0.95	2.40	2.02 – 2.85	0.72	0.68 – 0.77
Asia [b]	1.60	1.50 – 1.71	0.70	0.68 – 0.72	2.99	2.53 – 3.54	0.48	0.45 – 0.51
MENA	1.78	1.66 – 1.91	0.69	0.67 – 0.71	3.17	2.68 – 3.76	0.50	0.47 – 0.53
Sub-Saharan Africa	0.71	0.64 – 0.78	0.72	0.70 – 0.75	1.22	1.02 – 1.47	0.58	0.54 – 0.62
South America	0.70	0.61 – 0.81	**1.01**	0.97 – 1.06	**1.04**	0.82 – 1.32	**0.99**	0.91 – 1.08
Age	5.64	5.36 – 5.94	5.18	5.10 – 5.26	4.73	4.30 – 5.20	5.42	5.10 – 5.76
Age^2	0.97	0.97 – 0.97	0.97	0.97 – 0.97	0.97	0.97 – 0.98	0.97	0.97 – 0.97
Woman (1=yes)	1.97	1.92 – 2.01	1.73	1.72 – 1.74	2.24	2.14 – 2.34	1.63	1.58 – 1.68
Education (Primary=ref.)								
Secondary	1.34	1.30 – 1.38	1.35	1.33 – 1.36	1.06	1.01 – 1.12	1.16	1.12 – 1.20
Tertiary	1.69	1.63 – 1.74	1.33	1.32 – 1.35	**0.95**	0.89 – 1.01	1.24	1.19 – 1.30
Missing	0.86	0.78 – 0.94	0.61	0.59 – 0.64	0.81	0.73 – 0.91	0.87	0.81 – 0.93
Enrolled in school (1=yes)	0.66	0.64 – 0.68	0.94	0.94 – 0.95	0.51	0.48 – 0.54	1.23	1.19 – 1.27
Income in whole 10,000 2015-NOKs	1.01	1.01 – 1.01	1.01	1.01 – 1.01	1.02	1.02 – 1.02	1.02	1.02 – 1.02
Period (2010=ref.)	0.92	0.91 – 0.92	1.09	1.09 – 1.09	0.89	0.88 – 0.90	1.06	1.05 – 1.06
Urban residence (1=yes)	1.04	1.01 – 1.06	1.33	1.32 – 1.34	**1.01**	0.96 – 1.05	1.09	1.06 – 1.05
N Events	31,764		413,663		8,532		21,370	
N Person-years	6,444,814				672,320			

Note: Estimates not in bold, p <0.05. [a] This category comprises countries in Europe (excluding Nordic and Eastern European countries) as well as the US, Canada, Australia, and New Zealand. [b] This category also comprises countries in the rest of Oceania.

Table 4. Results from discrete-time multinomial model of direct marriage or cohabitation versus no union formation (base category). Odds ratios with 95% confidence intervals. Second-generation immigrants born 1985-2000. First unions formed 2005 through 2018.

| | Second-generation sample | | | |
| | Direct marriage | | Cohabitation | |
	OR	95% CI	OR	95% CI
Country of origin				
Other non-Western countries [a]	ref.			
Pakistan	3.85	3.39 – 4.37	0.34	0.31 – 0.37
Vietnam	0.68	0.55 – 0.84	1.13	1.04 – 1.23
Turkey	4.47	3.86 – 5.18	0.50	0.44 – 0.57
Sri-Lanka	1.75	1.38 – 2.22	0.87	0.77 – 0.99
Somalia	**0.63**	0.38 – 1.07	0.69	0.57 – 0.84
Morocco	3.11	2.59 – 3.74	0.53	0.45 – 0.63
India	1.71	1.39 – 2.10	0.63	0.55 – 0.72
Iran	0.53	0.33 – 0.84	**1.08**	0.94 – 1.24
Kosovo	2.48	1.87 – 3.28	**0.98**	0.82 – 1.17
Bosnia & Herzegovina	**0.79**	0.43 – 1.44	1.28	1.08 – 1.52
Other Western countries [b]	0.74	0.58 – 0.94	1.47	1.34 – 1.61
Age	5.30	4.48 – 6.27	6.76	5.95 – 7.70
Age^2	0.97	0.97 – 0.98	0.96	0.96 – 0.97
Woman (1=yes)	2.22	2.06 – 2.40	1.48	1.40 – 1.57
Education				
Primary	ref.			
Secondary	1.14	1.04 – 1.26	1.31	1.20 – 1.42
Tertiary	1.12	1.01 – 1.24	1.31	1.20 – 1.42
Missing	0.66	0.52 – 0.82	0.57	0.46 – 0.71
Enrolled in school (1=yes)	0.51	0.46 – 0.56	1.55	1.45 – 1.65
Income in whole 10,000 2015-NOKs	1.02	1.02 – 1.02	1.02	1.01 – 1.02
Period (2010=ref.)	0.93	0.91 – 0.94	1.06	1.05 – 1.07
Urban residence (1=yes)	**0.94**	0.87 – 1.01	**0.97**	0.92 – 1.03
N Events		3,195		5,599
N Person-years			223,045	

Note: Estimates not in bold, $p < 0.05$. [a] Including countries in Asia, Oceania (excluding Australia and New Zealand), Africa, South and Middle America, as well as non-EU Eastern European countries. [b] Includes EU/EEC member states, the US, Canada, Australia, and New Zealand.

Table 5. Results from discrete-time multinomial models of direct marriage or cohabitation versus no union formation (base). Odds ratios with 95% confidence intervals. Second-generation men and women born 1985-2000. First unions formed 2005 through 2018.

	Men				Women			
	Marriage		Cohabitation		Marriage		Cohabitation	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Country of origin								
Non-Western [a]	ref.				ref.			
Pakistan [x]	4.23	3.46–5.26	0.37	0.32–0.42	3.60	3.06–4.22	0.31	0.27–0.36
Vietnam [x]	0.62	0.44–0.89	**0.97**	0.86–1.11	0.69	0.53–0.90	1.25	1.12–1.39
Turkey	4.54	3.57–5.76	0.48	0.39–0.58	4.42	3.67–5.33	0.52	0.43–0.63
Sri-Lanka	**1.51**	0.99–2.30	**0.85**	0.71–1.03	1.85	1.39–2.47	**0.88**	0.75–1.04
Somalia	**0.29**	0.07–1.16	**0.77**	0.58–1.02	**0.78**	0.44–1.38	0.64	0.49–0.84
Morocco	2.44	1.78–3.35	0.60	0.48–0.78	3.48	2.78–4.35	0.46	0.36–0.58
India	1.89	1.38–2.59	0.62	0.51–0.76	1.55	1.18–2.03	0.63	0.52–0.77
Iran [x]	0.31	0.11–0.84	**0.90**	0.71–1.12	**0.64**	0.38–1.09	1.22	1.02–1.47
Kosovo	2.48	1.48–4.13	**1.05**	0.81–1.36	2.39	1.70–3.35	**0.92**	0.73–1.16
Bosnia & Herz. [x]	**0.53**	0.13–2.16	**1.05**	0.78–1.41	**0.85**	0.43–1.66	1.41	1.14–1.75
Western [b, y]	**0.98**	0.69–1.38	1.41	1.23–1.61	0.60	0.43–0.83	1.53	1.35–1.73
N Events	1,290		2,532		1,905		3,067	
N Person-years	117,917				105,128			

Note: Estimates not in bold, $p < 0.05$. Models include the following independent variables: Age, age squared, education, school enrollment, annual income, period, and urban residence. [a] Includes other countries in Asia, Oceania (excluding Australia and New Zealand), Africa, South and Middle America, as well as non-EU Eastern European countries. [b] Includes other countries in EU/EEC member states, the US, Canada, Australia, and New Zealand. [x] Results from pooled interaction model confirmed sex difference in cohabitation, $p < 0.05$. [y] Results from pooled interaction model confirmed sex difference in marriage, $p < 0.05$

Figure 1. Transitions to first unions. Direct marriages versus cohabitation. By migrant generations and sex. Individuals born 1985 through 2000. First unions formed 2005 through 2018. Cumulative incidence functions (CIFs).
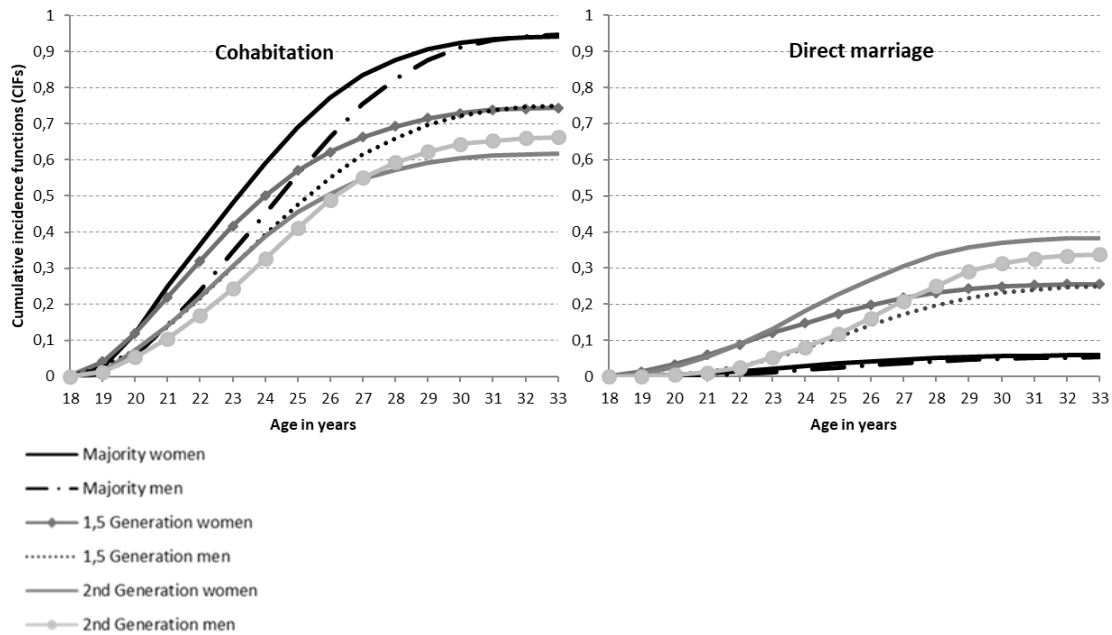
Figure 2. Predicted probabilities with 95% CIs of direct marriage or cohabitation versus no union (base). Men (upper panel) and women (lower panel) born 1985 to 2000. First unions formed 2005 through 2018. Interactions between age (squared) and migrant generation.
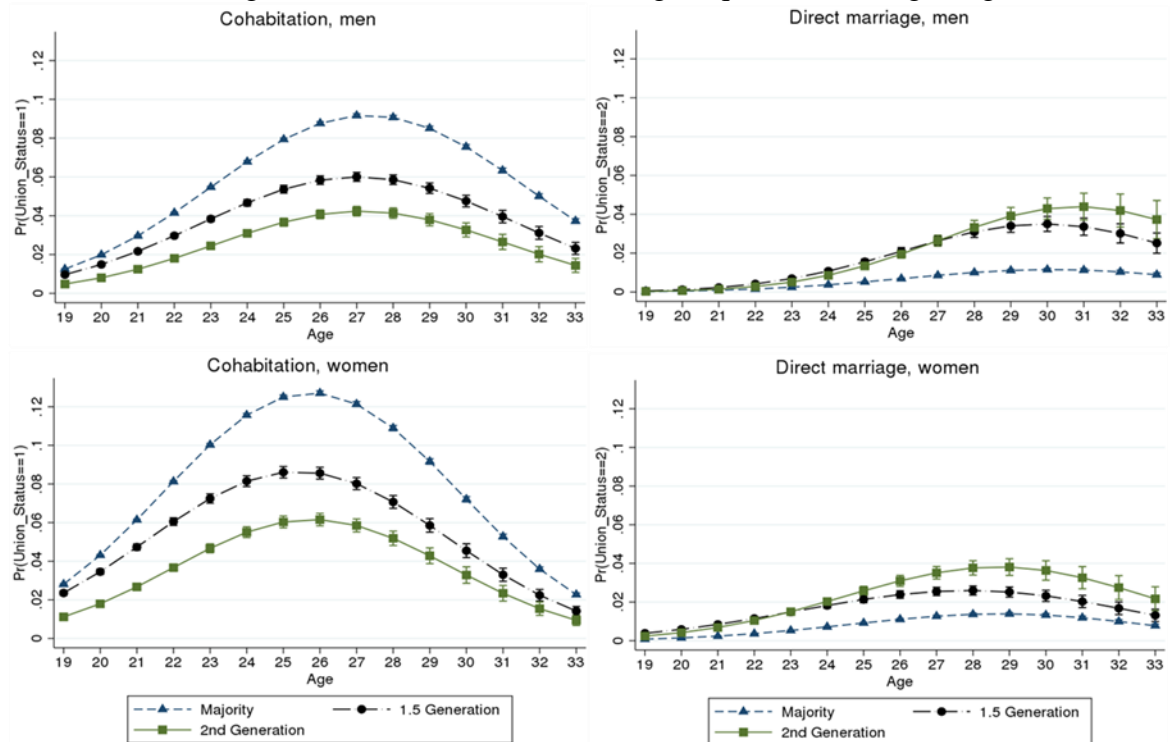
Note: Models controlled for all variables included in full model in Table 3.

Appendix

Table A1. Fifty largest countries of origin (i.e., own or parents' country of birth). Immigrant-background individuals born 1985 to 2000 who were either native-born or who immigrated < age 18.

2nd generation			1.5 generation		
Parents' country of birth [a]	*n*	*%*	Country of birth	*n*	*%*
Pakistan	7,534	20.2	Somalia	7,093	9.0
Vietnam	4,187	11.2	Afghanistan	6,959	8.8
Turkey	2,905	7.8	Iraq	6,364	8.1
Sri Lanka	2,747	7.4	Poland	5,143	6.5
Somalia	1,689	4.5	Thailand	3,367	4.3
Morocco	1,578	4.2	Russia	3,227	4.1
India	1,507	4.1	Germany	2,485	3.1
Iran	1,332	3.6	Kosovo	2,465	3.1
Kosovo	1,308	3.5	Eritrea	2,458	3.1
Bosnia-Herzegovina	1,205	3.2	Iran	2,359	3.0
Chile	1,108	3.0	Bosnia-Herzegovina	2,165	2.7
Iraq	1,060	2.8	Lithuania	2,006	2.5
Philippines	667	1.8	Pakistan	1,924	2.4
China	552	1.5	Sweden	1,621	2.1
Poland	543	1.4	Syria	1,559	2.0
Macedonia	486	1.3	Philippines	1,439	1.8
Eritrea	459	1.2	Iceland	1,201	1.5
Denmark	424	1.1	Ethiopia	1,189	1.5
Lebanon	399	1.1	Turkey	1,073	1.4
Sweden	363	1.0	Vietnam	914	1.2
United Kingdom	258	0.7	Denmark	888	1.1
Syria	255	0.7	Netherlands	886	1.1
Ghana	253	0.7	Sri Lanka	859	1.1
Ethiopia	239	0.6	China	746	0.9
Netherlands	230	0.6	Palestine	746	0.9
Germany	225	0.6	Congo	727	0.9
Iceland	221	0.6	Myanmar	654	0.8
Gambia	197	0.5	Chile	641	0.8
Serbia	165	0.4	Croatia	616	0.8
Algeria	161	0.4	Latvia	553	0.7
Croatia	158	0.4	Brazil	526	0.7
Afghanistan	153	0.4	United Kingdom	524	0.7
Thailand	147	0.4	United States	523	0.7
Hong Kong	143	0.4	Romania	503	0.6
Finland	129	0.3	Serbia	469	0.6
Bangladesh	102	0.3	Ukraine	464	0.6
Nigeria	98	0.3	Sudan	430	0.5

Tunisia	92	0.2	Morocco	417	0.5
United States	92	0.2	Bulgaria	371	0.5
Russia	82	0.2	India	368	0.5
Kenya	81	0.2	Finland	361	0.5
Cambodia	67	0.2	Italy	352	0.4
France	61	0.2	Kenya	338	0.4
Cape Verde	59	0.2	Estonia	294	0.4
Romania	51	0.1	Macedonia	293	0.4
Congo	50	0.1	Burundi	286	0.4
Hungary	49	0.1	Ghana	268	0.3
Peru	47	0.1	Saudi Arabia	266	0.3
Tanzania	45	0.1	Lebanon	264	0.3
Egypt	41	0.1	France	246	0.3
Other countries	1,243	3,3	Other countries	6,660	8.4
N	37,248	100.0	*N*	78,843	100.0

Note: [a] If parents were from different countries, information on mother's country of birth was used

Table A2. Odds ratios from discrete-time multinomial models of direct marriage (M) or cohabitation (C) versus no union formation (base). Separate models for men and women born 1985 through 2000 who were either native-born or who immigrated < age 18. First unions formed 2005 through 2018.

	Men						Women					
	Model 1		**Model 2**		**Model 3**		**Model 1**		**Model 2**		**Model 3**	
	M	**C**	**M**	**C**	**M**	**C**	**M**	**C**	**M**	**C**	**M**	**C**
Generation (Majority=ref.)												
1.5 generation	3.22	0.50	2.66	0.62	2.92	0.68	3.09	0.52	2.41	0.67	2.55	0.71
2nd generation	3.82	0.36	2.73	0.47	2.68	0.43	3.73	0.32	2.69	0.44	2.72	0.44
Region of Origin (Nordic=ref.)												
Western Europe [a]			0.85	0.90	0.87	0.90			0.72	0.77	0.76	0.82
Eastern Europe			1.17	0.90	1.19	0.91			1.34	0.92	1.33	0.93
Asia [b]			1.63	0.71	1.70	0.70			1.45	0.69	1.51	0.70
MENA			1.40	0.74	1.52	0.74			1.87	0.62	1.98	0.64
Sub-Saharan Africa			0.58	0.79	0.67	0.80			0.67	0.64	0.73	0.67
South America			0.58	1.06	0.66	1.09			0.67	0.90	0.72	**0.95**
Education (Primary=ref.)												
Secondary					1.47	1.42					1.21	1.25
Tertiary					1.86	1.44					1.57	1.25
Missing					**0.92**	0.75					0.82	0.51
Enrolled in school (1=yes)					0.77	1.03					0.60	0.88
Income in whole 10,000s					1.01	1.01					1.01	1.01
Urban residence (1=yes)					1.11	1.59					**0.98**	1.14
x^2(*df*)	197453.88(10)		198288.27(22)		217239.64(34)		180879.63(10)		182579.86(22)		195717.42(34)	
N Person-years			3,499,752						2,945,062			
N Events		13,649 marriages / 187,176 cohabitations						18,115 marriages / 226,487 cohabitations				

Note: Estimates not in bold, p <0.05. All models controlled for age and age squared as well as period. [a] This category comprises countries in Europe (excluding Nordic and Eastern European countries) as well as the US, Canada, Australia, and New Zealand. [b] This category also comprises countries in rest of Oceania.

Table A3. Results from two discrete-time multinomial models of direct marriage or cohabitation versus no union formation (base). Odds ratios with 95% confidence intervals. 1.5- and second-generation men and women born 1985 to 2000. First unions formed 2005 through 2018.

	Men				Women			
	Direct marriage		**Cohabitation**		**Direct marriage**		**Cohabitation**	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Generation								
1.5 generation	ref.				ref.			
2nd generation [x]	**1.03**	0.95 – 1.11	0.72	0.69 – 0.76	1.11	1.04 – 1.18	0.68	0.65 – 0.71
Region of origin								
Nordic	ref.				ref.			
Western Europe [a]	**1.08**	0.76 – 1.52	**0.96**	0.85 – 1.08	1.55	1.15 – 2.09	0.86	0.77 – 0.95
Eastern Europe [y]	1.93	1.50 – 2.48	0.72	0.66 – 0.79	2.77	2.19 – 3.50	0.72	0.67 – 0.78
Asia [b]	2.77	2.17 – 3.54	0.49	0.45 – 0.54	3.12	2.45 – 3.92	0.47	0.44 – 0.51
MENA [x, y]	2.30	1.79 – 2.94	0.56	0.51 – 0.61	4.01	3.18 – 5.05	0.46	0.42 – 0.50
Sub-Saharan Africa [y]	**1.02**	0.77 – 1.34	0.66	0.60 – 0.73	1.39	1.08 – 1.78	0.52	0.47 – 0.56
South America [x]	**0.78**	0.53 – 1.14	**1.06**	0.94 – 1.20	**1.27**	0.93 – 1.73	**0.93**	0.84 – 1.04
N Events	3,714		9,828		4,818		11,542	
N Person-years	372,179				300,141			

Note: Estimates not in bold, $p < 0.05$. Models include the following independent variables: Age, age squared, education, school enrollment, annual income, period, and urban residence. [a] This category comprises countries in Europe (excluding Nordic and Eastern European countries) as well as the US, Canada, Australia, and New Zealand. [b] This category also comprises countries in rest of Oceania. [x] Results from pooled interaction models confirmed sex difference in cohabitation, $p < 0.05$. [y] Results from pooled interaction models confirmed sex difference in marriage, $p < 0.05$.

Figure A1. Predicted probability of direct marriage or cohabitation versus no union formation (base). Individuals born 1985 through 2000. First unions formed 2005 through 2018. Interactions between calendar year and migrant generations. With 95% CIs.
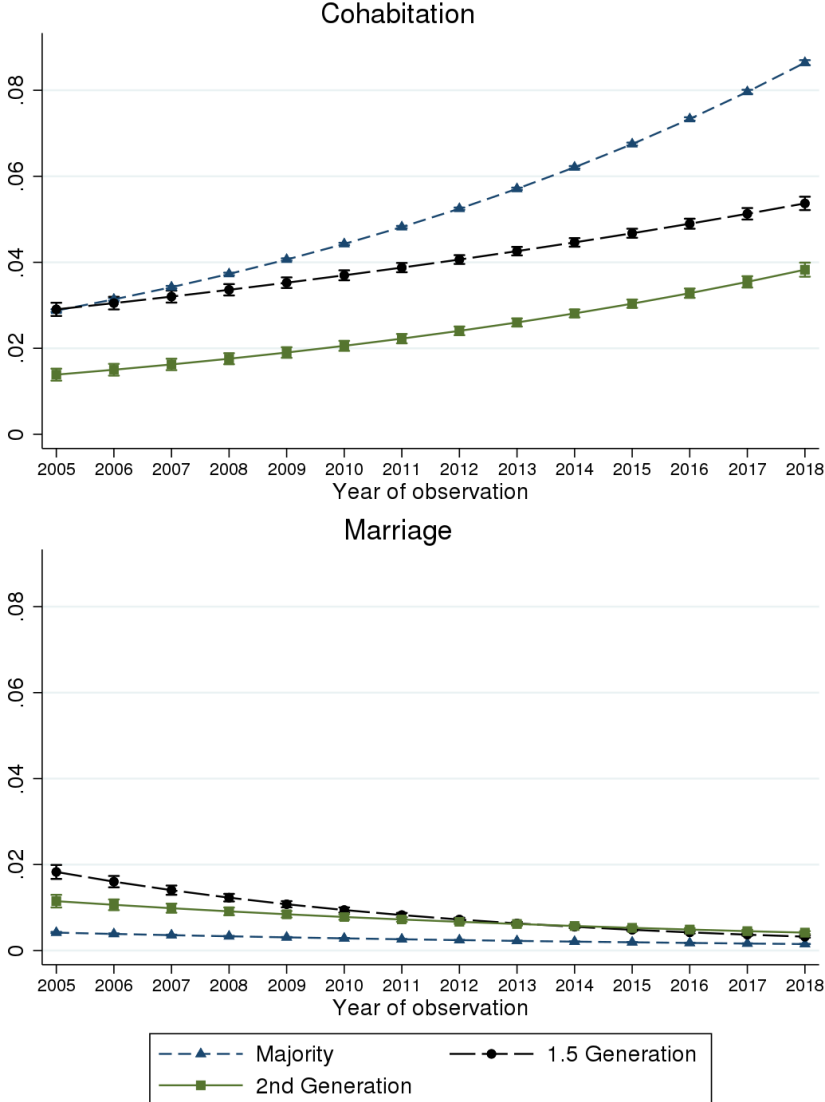
Note: Model controlled for all variables included in Table 3.