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Partnership Transitions among Turkish Immigrants and their Descendants in Western Germany*

Müşerref Erdoğan, Ayşe Abbasoğlu Özgören**

Abstract: Adaptation to host country behaviours encompasses both individual and social change, bringing about rising diversity issues in the host society and societal shifts in the country of origin. This study aims to detect whether Turkish immigrants and their descendants converge towards or diverge from the partnership practices of the native-born population in Western Germany. Specifically, transitions from (1) singlehood to the first partnership, (2) singlehood to the first marriage, (3) singlehood to the first cohabitation, (4) cohabitation to marriage and (5) marriage to divorce are investigated. Data from the Panel Analysis of Intimate Relationships and Family Dynamics (pairfam) survey for the period of 2008-2018 are used, applying Kaplan-Meier survival estimations and Cox proportional hazard models. This is the first study that includes natives, immigrants and their descendants simultaneously in an analysis of extensive partnership transitions covering practices of cohabitation, marriage and divorce and to investigate the proportionality assumption in Cox models. We formulate four research hypotheses based on the hypotheses of socialisation, adaptation and the cultural maintenance and segmented assimilation theory. Supporting our first hypothesis, our findings indicate a difference in partnership patterns between both first- and second-generation immigrants and natives, except for the finding that second-generation immigrants resemble the native pattern in their transition to the first union (including both cohabitation and marriage). Immigrants and their descendants tend to marry directly and have lower divorce hazard ratios than their native counterparts, while consensual unions are uncommon among Turkish immigrants. As suggested by our second hypothesis, the extent of the divergence varies across partnership transitions. Finally, our results provide support for our third hypothesis rather than the fourth in that partnership transition of Turkish immigrants' descendants more closely resembles that of first-generation immigrants compared to natives.

* This article has a Data Appendix with supplementary material URL: http://www.comparativepopulationstudies.de/index.php/CPoS/article/view/447/360.

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1 Introduction

Labour migrants to Western Germany have lived alongside ethnic Germans and their descendants since the Second World War. While migration influxes change the social fabric of cities and neighbourhoods and create diversity, immigrants themselves produce new demographic behaviours and establish a distinct minority culture. Turkish immigrants, together with their descendants, are the most populous immigrant group in Germany (*German Federal Statistical Office* 2020), and their population has been on the rise since a 1961 labour agreement between the Turkish Government and West Germany. First-generation Turkish immigrants and their descendants may find themselves between two different backgrounds: that of the host country and that of their parents' country of origin. This difference is also apparent in partnership dynamics, since partnership transitions differ strongly between Türkiye and Germany. In general, adaptation to host country behaviours illustrates both individual and social change. With Turkish migrants affecting ongoing change in the social fabric in Germany, it is vital to study who adapts to what, to what extent and how (if possible). Additionally, as the descendants of Turkish migrants enter young adulthood, it is important and timely to analyse the intergenerational transmission of their partnership preferences. With this background, this paper focuses on partnership formation and dissolution transitions of first- and second-generation Turkish immigrants compared to natives in Western Germany using event history or survival analysis methods, namely the Cox proportional hazard model and Kaplan-Meier method. This study uses data from the Panel Analysis of Intimate Relationships and Family Dynamics (pairfam) survey covering the period of 2008-2018, which is a relatively extensive panel in Germany. Specifically, transitions from (1) singlehood to the first partnership, (2) singlehood to first marriage, (3) singlehood to first cohabitation, (4) cohabitation to marriage and (5) marriage to divorce in Western Germany, plus their associations with migration status within the categories of Turkish immigrants, their descendants and Western German natives[1] are analysed.

Our theoretical approach and research hypotheses are based on various complementary hypotheses that were originally focused on childbearing among migrants (and their descendants) to describe how migration intervenes with fertility dynamics. In forming our hypotheses, we differentiate between first- and second-generation immigrants, as found in *Rahnu, Puur, Sakkeus* and *Klesment* (2015).

[1] Natives are defined as individuals whose mothers and fathers were both born in Western Germany.

Recently, many studies have reported on family dynamics among immigrants, thanks to available country-specific and cross-national data. These studies tend to focus on immigrants from different origins living in Europe and the US (*Andersson et al.* 2015; *De Valk* 2008; *De Valk/Liefbroer* 2007; *González-Ferrer et al.* 2014; *Hamel et al.* 2012; *Hannemann/Kulu* 2015; *Hannemann et al.* 2020; *Huschek et al.* 2010; *Kuhnt/Krapf* 2020; *Milewski/Hamel* 2010; *Pailhé* 2014; *Rahnu et al.* 2015; *Soehl/Yahirun* 2011). Early papers focus on the timing of marriage and use descriptive tools to compare immigrant generations to natives. Later research emphasises differences in intensity of unions, type of union and, to a certain extent, dissolution practices, using multivariate event history analysis techniques.

This paper aims to contribute to the existing knowledge in the following ways. First, to the authors' knowledge, this is the first study to include both first- and second-generation Turkish immigrants in the Western German context in a single analysis with such an extensive partnership transition framework. The analysis covers not only partnership formation and type of union, but also marriage after cohabitation and divorce practices of immigrants. Second, the data used, pairfam, is a specific data series used to study intimate relationships and family dynamics. Both marriage histories and cohabitation practices of respondents are recorded separately in the data set. Since pairfam is panel data, it provides data on the family practices of single young generations each year and gives up-to-date information on their status. This feature significantly enriches this paper, since most of the studies use cross-sectional data that do not provide information on partnerships for the younger second generation. Finally, although studies in this field use the Cox model or piece-wise constant model, this paper is the first to discuss the proportionality assumption. In this way, the accuracy and reliability of the standard model are improved.

2 The Context: Partnership Dynamics in Germany and Türkiye

Individuals in Germany and Türkiye have significantly different demographic characteristics regarding partnership dynamics and family values. Such variances directly affect the difference of partnership practices between Turkish immigrants and the native population in Germany. This section presents a present-day comparison of selected nuptiality and fertility indicators for Germany and Türkiye, in addition to discussing recent historical trends.

In Germany, marriage was historically an almost universal institution and earlier marriages were typical in the "golden age of marriage" in the 1950s and 1960s. During the 1970s, the former FRG[2] experienced a pronounced retreat from conjugal family formation compared to the rest of Europe. The connection between sex, marriage and reproduction was relaxed by individualisation trends, advancement in women's economic positions, the contraception revolution and changes in gender

[2] Refers to the territory of the former Federal Republic (FRG before reunification).

roles. According to the German Federal Statistical Office, the crude marriage rate, which was 11.0 per thousand in 1950, reached its lowest level in 2007 at 4.5. By 2018, the proportion of never-married between 25-45 was 49.1 percent among women and men (*German Federal Statistical Office* 2020).

While marriage has lost its prevalence among all age groups, it has also been postponed. In 1960, the mean age for women at first marriage was slightly under 24. After 1980, it increased, reaching 31 in 2018 (*German Federal Statistical Office* 2020). This trend is partly because marriage is no longer the primary means of achieving women's financial stability so that their bargaining power over partner choice and future career lead them to delay marriage formation (*Köppen* 2011). The same effect reveals itself in the stability of conjugal families. The improvement of women's economic positions reduces both the benefits of marriage and the cost of its dissolution for women (*Kalmijn* 2007). In 1965, the total divorce rate was around 12 percent, peaking in 2004 with 42 of every 100 marriages on average resulting in divorce. According to the German Federal Statistical Office, in 2019, on average, 32 of every 100 couples divorce after 14.8 years of marriage (*German Federal Statistical Office* 2020).

These substantial changes in living arrangements have been accompanied by the spread of extramarital cohabitation. Although it is not an entirely new form of partnership in Germany, the prevalence of consensual unions, especially at early ages, in the late 20th and early 21st centuries, is apparent. According to the Family and Fertility Survey (FFS), 16 percent of women aged 20-24 and 9 percent of women aged 25-29 were cohabiting in 1996 in Western Germany (*Kiernan* 2002). A relatively recent report on the household structure of Europe found that 83 percent of German women in their twenties were cohabiting in 2007. This proportion decreased to 48.3 percent among women in a union between 30 to 40 years old (*EUROSTAT* 2010), so cohabitation has a well-established place in partnership formation trends.

Regarding fertility, the total fertility rate in Germany settled to nearly steady levels of about 1.5 after the boosting effect of the post-Second World War period had faded (*German Federal Statistical Office* 2020). Typically, a low fertility rate is also accompanied by women giving birth at older ages. In 2020, for both married and unmarried women, the average first birth occurred at age 30.2 (*German Federal Statistical Office* 2020).

Table 1 presents selected indicators of partnership behaviours and family values for Germany and Türkiye, revealing significant differences between the two countries. In Türkiye, immigrant marriages occur on average 7 years earlier than that of their German counterparts. The crude marriage rate is slightly higher in Türkiye and the crude divorce rate is lower than that of Germany. According to birth registers, the total fertility rate in both countries in 2020 was below replacement level, at 1.53 in Germany and 1.76 in Türkiye. Official data on cohabitation in Türkiye is lacking, although the World Values Survey sample suggests a proportion of 0.2 percent. For Germany, this share is much higher at 4.7 percent. Values or attitudes related to partnership also differ between Türkiye and Germany. Unmarried or cohabiting couples are not wanted as neighbours in Türkiye by over half the population, whereas such a situation does not exist in Germany. Sex before marriage is seen

Tab. 1: Selected partnership and fertility indicators, Germany and Türkiye

	Germany	Türkiye
Partnership indicators (year: 2020)		
Mean age at first marriage (male)	34.9	27.9
Mean age at first marriage (female)	32.4	25.1
Crude marriage rate (per thousand)	4.50	5.84
Proportion cohabiting	15.1%	-
Divorce indicator (year: 2020)		
Crude divorce rate (per thousand)	1.70	1.62
Fertility indicator (year: 2020)		
Total fertility rate	1.53	1.76
Selected World Values Survey Indicators (Germany 2017, Türkiye 2018)		
Living together as married (cohabiting)	4.7%	0.2%
Partnership values (Germany 2017, Türkiye 2018)		
Would not like to have unmarried couples living together as neighbours	0.7%	55.4%
Sex before marriage never justifiable	5.7%	61.0%
Divorce never justifiable	5.5%	29.1%

Source: Mean age at first marriage, Germany: *German Federal Statistical Office* 2022a; Mean age at first marriage, Türkiye: *TURKSTAT* 2021a; Crude marriage rate, Germany: *German Federal Statistical Office* 2022b; Crude marriage rate, Türkiye: *TURKSTAT* 2021a; Proportion cohabiting, Germany: *German Federal Statistical Office* 2022c; Crude divorce rate, Germany: *German Federal Statistical Office* 2022b; Crude divorce rate, Türkiye: *TURKSTAT* 2021a; Total fertility rate, Germany: *German Federal Statistical Office* 2020; Total fertility rate, Türkiye: TURKSTAT 2021b; Selected World Values Survey Indicators and partnership values: *WVS* 2022

as totally unjustifiable by 61 percent of the population in Türkiye, while this level is only 5.7 percent in Germany. Moreover, divorce is seen as never justifiable at a proportion five times higher in Türkiye compared to Germany.

Although the indicators for Turkish immigrants in Germany are not recent, it is important to mention some of this data. Cohabitation has been a relatively rare phenomenon among immigrants in both older and younger cohorts. Only 22 percent of Turkish immigrants between the ages of 18-29 cohabited at least once in their lives in 2005, while the share of pre-, post- or non-marital cohabitation dropped to 14 percent among males and females aged 45-59 (*Naderi* 2008). Even among descendants, the conjugal family is the dominant choice; the TIES (The Integration of the European Second Generation) sample showed that 4 out of 5 children of Turkish immigrants in Germany preferred to marry rather than cohabit (*Hamel et al*. 2012). This scenario is at least partly consistent with the current situation in Türkiye, where marriage is the most widespread family formation.

Unlike German endogamous conjugal families, Turkish immigrant marriages are found to be more stable (*Milewski/Kulu* 2014). Related to this, as many studies suggest, both first- and second-generation Turkish immigrants marry either another immigrant from Türkiye or a Turkish descendant and that appears to be a factor

behind more stable relationships (*Constant et al.* 2012; *Hamel et al.* 2012; *Naderi* 2015).

3 Previous Research and Hypotheses

There are various hypotheses used to study immigrant fertility behaviours namely, (childhood) socialisation, adaptation, selection, disruption, interrelation of events and others (*Milewski* 2010; *Tønnessen/Wilson* 2020). The first four of these behaviours are the most widely discussed in demography literature. Since fertility behaviours and partnership dynamics are highly interrelated, these four hypotheses are also found to be useful tools when interpreting the partnership dynamics of immigrants (*Hannemann/Kulu* 2015). Additionally, some phenomena related to these hypotheses may extend beyond first-generation immigrants, so the cultural maintenance hypothesis (*Abbasi-Shavazi/McDonald* 2000, 2002) and segmented assimilation theory (*Portes/Zhou* 1993) have provided useful frameworks to study family behaviours of the descendants of migrants (as in *Rahnu et al.* 2015).

The first hypothesis, socialisation, argues that a person's life-course choices are a product of the prevalent values and norms of their native region (*Kulu/Milewski* 2007). Therefore, this hypothesis assumes that union trajectories of immigrants are similar to those still living in the country of origin if the immigrant spent their childhood in the sending country. It also posits that experience and exposure to values and norms in the country of origin shapes the life choices of immigrants in the long run and that those choices do not resemble the choices of natives in the destination country. If differences regarding family norms and dynamics in origin and host countries are significant (as between Türkiye and Germany), immigrants will persist with the traditional patterns of their origin country. For instance, first-generation Turkish immigrants typically reject cohabitation in favour of direct marriage, a highly preferred and traditional pattern of family formation in Türkiye (*Kuhnt/Krapf* 2020; *Pailhé* 2015). Furthermore, the socialisation hypothesis is not restricted to first-generation immigrants. As mentioned by *Rahnu et al*. (2015), divergence from the patterns of the host society may extend beyond the first generation. This pattern is referred to as "cultural maintenance" by *Abbasi-Shavazi* and *McDonald* (2000, 2002) and it bears similarities to the sub-culture hypothesis. Several studies suggest that Turkish descendants in Europe have diverging partnership patterns from natives wherein they tend to marry earlier and choose direct marriage, rather than cohabitation (*De Valk* 2008; *Hamel et al.* 2012; *Hannemann et al.* 2020; *Milewski/Hamel* 2010; *Pailhé* 2015). *Liu* and *Kulu* (2021) have recently found that migrants with Turkish backgrounds in Germany enter marriage and parenthood earlier and in higher proportions than their native counterparts and extra-marital birth is much lower for Turkish Germans. Even in their adolescent years, Turkish immigrants still have stronger preferences for marriage than other immigrant groups and natives (*De Valk/Liefbroer* 2007).

The adaptation hypothesis predicts that immigrant conformation to the demographic, social and economic behaviour of natives increases alongside the

duration of their residence in the host country (*Hervitz* 1985). This approach argues that the effect of mainstream culture is more dominant than childhood experience. Although this is not a sudden transformation, gradually and in medium-term timeframes, immigrants find and define a place within the existing social structure and lifestyle of their adopted culture. Descendants of immigrants also adapt to the host society while being exposed to their family's past values, norms and behaviours. Meanwhile, the segmented assimilation theory proposed by *Portes* and *Zhou* (1993) addressed the conflict between immigrant families and the social and cultural demands of the host society, as cited in *Rahnu et al*. (2015). According to segmented assimilation theory, migrant descendants can preserve their community's culture and values while being successfully economically integrated (*Rahnu et al.* 2015). Hence, second-generation immigrants exist somewhere between the cultural dynamics of two distinct societies. For instance, in the British case, *Hannemann* and *Kulu* (2015) conclude that the second generations of South Asians and Caribbeans maintain the patterns of their parents while making small deviations towards British native society. In Spain, although country-of-origin social patterns seem dominant among immigrants, these preferences are relaxed among second-generation adolescents (*González-Ferrer et al.* 2014).

In the US, *Arias* (2001) finds that the socio-economic gap between immigrants and natives weakens in each successive cohort, thus suggesting that immigrants mirror the practices prevalent in the US. With each succeeding generation, immigrants living in the US opt for dominant patterns, although the level of convergence differs according to their origin (*Brown et al.* 2008; *Landale et al.* 2010). Apart from decreasing socio-economic variances, native-immigrant relationships in early age increase the probability of convergence. *Huschek, Liefbroer* and *de Valk* (2010) finds that Turkish immigrants' children who have non-coethnic peers will tend to build co-residential unions later than their parents, especially if they have had greater contact with native populations, i.e., if they have a higher proportion of natives in their schools. The adaptation process is also related to the welfare system in the destination country. For instance, in the Swedish case, the state welfare system provides the same opportunity structure and financial support in housing for both immigrants and natives; thus, Turkish immigrants have more freedom to follow the early union formation practices of Swedes or to choose the traditional Turkish practice of marrying early. On the other hand, in Germany, union formation usually occurs after securing access to a paid job and both natives and Turkish second-generation delay partnership formation to later ages (*Hamel et al.* 2012). For union separation, the patterns and dynamics would be different as traditional family values could impose barriers to separation.

The third hypothesis is selectivity, which suggests that migration itself is a selective phenomenon, meaning immigrants are already a selected group with life preferences that may differ from the norm in their country of origin (*Hannemann*/*Kulu* 2015). Their nuptiality preferences, then, are already proximate to the native population in the destination country. This selectivity may originate at the individual level, in their social, cultural and economic capital. Finally, assuming that migration has some psychological, economic and social cost to immigrants, the disruption

hypothesis envisions that immigrant preferences might be different from those of their country of origin only after they move to their destination (*Adserà*/*Ferrer* 2014). In other words, the structure of the marriage market of the receiving country and the available opportunities may not be compatible with those that immigrants are familiar with, or the lack of coethnic partners may result in unplanned deviation from their initial partnership practice preferences. These immigrants may delay the timing of partnership or accelerate the decision to divorce. However, *Carlson* (1985) suggests that migration has only a temporary effect on the timing of marriages. Single immigrants to Australia delayed marriage compared to their country-of-origin peers. Nevertheless, this effect is weak among successive generations. Similarly, *Andersson, Obućina* and *Scott* (2015) find high divorce rates among some people of immigrant origins due to the stressful nature of migration and the changed landscape of the marriage market. This disruption can affect union formation in different ways: while Turkish, Arab, African and Yugoslavian immigrants have elevated risk after migration, some countries have low marriage rates after migration.

Based on this theoretical and empirical background, we formulate four hypotheses (H)[3]:

H1: Partnership transitions of first- and second-generation Turkish migrants differ from natives in Western Germany (but converge to patterns prevalent in Türkiye). This hypothesis has roots in the socialisation and cultural maintenance perspectives. The effect of country of origin (Türkiye) is assumed to extend beyond first-generation immigrants.

H2: The discrepancy between the natives and Turkish migrants in Western Germany vary across partnership transitions, namely transition to first partnership (including both cohabitation and marriage), transition to first marriage, transition to first cohabitation, transition from cohabitation to marriage and transition from marriage to divorce. Specifically, the difference between migrants and natives in transition to first partnership is expected to be small, whereas in transition to cohabitation or marriage, it is expected to be large. These different levels of convergence are due to the fact that first partnership transition may end up in no event occurrence (i.e., remaining single) or an event occurrence that involves either cohabitation or marriage. Any difference of preference of marriage over cohabitation or vice versa between migrant and native groups would cancel each other out in the analysis of transition to first partnership. We also expect high divergence in the transition from cohabitation to marriage and transition from marriage to divorce since family norms in the two contexts (Germany and Türkiye) are quite different from each other.

H3a: Partnership transitions of Turkish immigrants' descendants more closely resemble those of the first generation compared to natives. This proposition has roots in the cultural maintenance hypothesis or segmented assimilation theory. Alternatively:

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3 These hypotheses are similar to the ones in *Rahnu et al.* (2015) for their study in Estonia.

H3b: Partnership transitions of Turkish immigrants' descendants more closely resemble those of natives compared to first generation immigrants. This hypothesis is based on the adaptation hypothesis, since descendants of immigrants are exposed to the host country much longer than their parents.

As we've seen, a single hypothesis is not enough to understand the position of immigrants and their descendants compared to natives. This paper mainly uses the frameworks of socialisation, adaptation, cultural maintenance and segmented assimilation approaches. Considering disruption and selectivity hypotheses are not as relevant for second-generation immigrants, we exclude these two from our formulated hypotheses. Moreover, due to a lack of information regarding the behaviours and characteristics of natives in the country of origin (Türkiye), we cannot directly test for disruption or selectivity hypotheses for even first-generation immigrants. However, we elaborate on all approaches in our interpretation of the results.

4 Data and Methodology

4.1 Data

The analysis in this study is based on the Panel Analysis of Intimate Relationships and Family Dynamics, known as the German Family Panel (pairfam), release 10.0, which is funded by the German Research Foundation (DFG) as a long-term project (*Brüderl et al*. 2019a).[4] We use the first ten waves of pairfam covering the period of 2008 to 2018. This paper uses anchor data of the respondents themselves consisting of three birth cohorts namely those born between 1991-93, 1981-83 and 1971-73. Each birth cohort consists of a nearly equal number of respondents: 4,338 for the youngest, 4,010 for the middle and 4,054 for the oldest cohort (*Brüderl et al.* 2019b).

Our analytical sample includes only those respondents whose parents were both born in Western Germany, i.e., natives and those who have a Turkish background living there. After removing all other origins from the data, the sample size is 7,560. Of this population, 6,950 form the first analysis group in this research, namely *natives*, which is defined as those respondents whose parents were both born in Western Germany. Turkish *second-generation* individuals, meaning those born in Western Germany but with at least one parent born in Türkiye, correspond to 370 respondents. The remaining 240 anchors are *first-generation* Turkish immigrants born in Türkiye with migration experience. Among natives, 2 respondents are dropped since their gender information is missing.

Table 2 shows the percentage distribution of respondents according to migration status and transition types and outcomes. The second generation is the youngest group and the proportion that remain never partnered is high. As expected, this

[4] It was initiated in 2008 and coordinated by *Josef Brüderl, Sonja Drobnič, Karsten Hank, Bernhard Nauck, Franz J. Neyer* and *Sabine Walper*.

Tab. 2: Percent distribution of transition types and outcomes of respondents, pairfam first 10 waves (2008-2018), analysis period: 1985-2018

		First transition type			
Migration status	Remained Single	Single→Cohabitation	Single→Marriage	Total	Number
Native	39.7	56.3	4.0	100.0	6,948
1st Generation	15.8	22.5	61.7	100.0	240
2nd Generation	58.1	18.4	23.5	100.0	370
Total	39.8	53.3	6.8	100.0	7,558

		First cohabitation outcomes			
Migration status	Marriage	Separation	Remained Cohabiting	Death of Partner	Total	Number
Native	47.1	30.6	22.2	0.1	100.0	3,911
1st Generation	74.1	16.7	9.2	0.0	100.0	54
2nd Generation	55.9	30.9	11.8	1.5	100.0	68
Total	47.6	30.5	21.9	0.1	100.0	4,033

		First marriage outcomes			
Migration status	Remained Married	Divorce	Death of a partner	Total	Number
Native	84.2	15.3	0.6	100.0	2,122
1st Generation	86.7	12.8	0.5	100.0	188
2nd Generation	89.6	10.4	0.0	100.0	125
Total	84.6	14.8	0.5	100.0	2,435

Source: Authors' calculations based on pairfam data

proportion is the lowest among first-generation Turkish immigrants, since they are older and are more likely to form a union compared to second generation immigrants.

Cohabitation levels represented in Table 2 do not represent the current status of respondents. Rather, they present the percentage of respondents whose first transition was from singlehood to cohabitation in the data set. In many cases, cohabitation is a first step for couples towards forming a marriage or it may lead to a dissolution of union through separation. Approximately 78 percent of the pairfam sample chose to marry or separate as opposed to maintaining extramarital cohabitation. While 74 percent of cohabiting Turkish first-generation immigrants proceed to marriage, this proportion decreases to 47 percent among German-descendant cohabiting unions. This table may also roughly imply that those still in cohabiting unions also tend to proceed with one of the events in the future, since only 881 out of 4,033 respondents are still cohabiting. Relatively lower shares of marriages end up in divorce among both migrants and natives. The sample compositions of our event history setting are represented for each transition in Table A.1, A.2 and A.3, where the number and percentage distribution of person-months and events are shown. Our event history setting is explained in more detail in the following section.

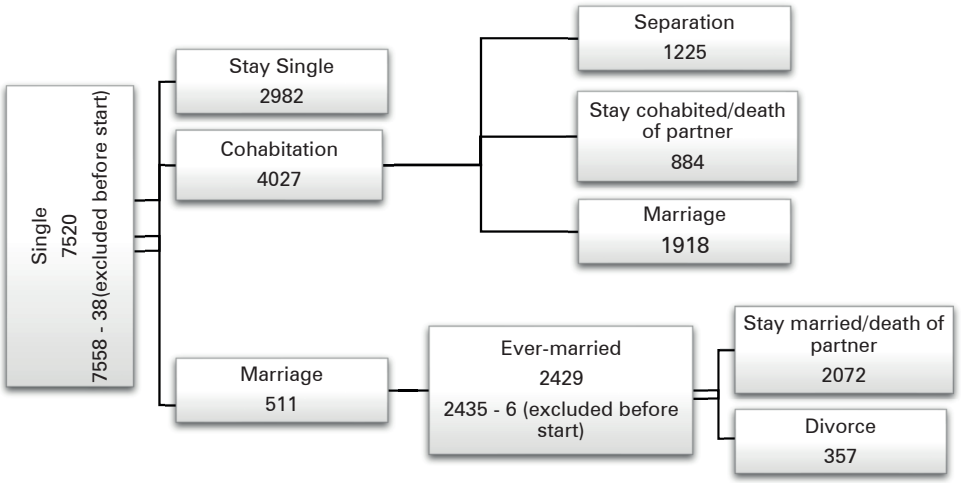
4.2 Method

We analysed five partnerships transitions including the transitions 1) from singlehood to the first union, 2) from singlehood to direct marriage, 3) from singlehood to cohabitation, 4) of dissolution of cohabiting unions through marriage and 5) divorce of ever-married couples by employing Cox proportional hazard models. Figure 1 below shows the number of respondents analysed in each transition.[5] Regardless of the type of partnership, all unions are defined as co-residential unions lasting at least six months. The risk period starts with age 15 for the first and second transitions. Censoring is applied at the last interview date to those respondents who do not form a union. The date of cohabitation and marriage (ever-married respondents) are the onset of the risk period for third and last transition models, respectively. Censored cases are those that have not experienced any dissolution at the last interview they participated in or on the date of the death of a partner. As a modelling strategy, in our Cox proportional hazard models, we first control for sex and birth cohort. Model 2 adds education to Model 1. Finally, the last model controls for pregnancy and parity status of respondents. Cohabitation outcomes and divorce events have additional controls on age at union formation and type of union.

The use of a proportionality assumption that suggests a constant hazard ratio over time is critical for proper implementation of a Cox model and required for accurate results. In this study, we use Schoenfeld residuals to monitor the effects

[5] Excluded cases are those respondents who have their first union before age 15 in the transition to the first partnership formation (38 cases). The other excluded observations in the transition to marriage after cohabitation and divorce are those cases that event occurs at the same time at the beginning of the risk period (36 cases).

Fig. 1: Number of union transitions of pairfam data, 2008-2018



Source: Authors' design based on pairfam data

of covariate changes over time. In the case of variables violating proportionality assumptions in the standard Cox model, the hazard ratios reported should be taken as average hazard ratios. In such instances, we also provide results from the stratified and extended Cox model, which are reported in the Appendix (see Table A.4, A.5, A.6 and A.7).

In addition, we carried out robustness checks for both sexes for each transition using restricted samples. We analysed (1) transition to first union excluding the first generation immigrants who were married or cohabiting before migration, (2) transition to first cohabitation excluding first generation immigrants who were cohabiting before migration, (3) transition to first marriage excluding first generation immigrants who were married before migration, (4) transition to marriage after cohabitation excluding first generation immigrants who experienced the transition before migration and (5) transition to divorce excluding first generation immigrants who divorced before migration. We present them as robustness checks of standard Cox models in the Appendix tables A.9, A.10, A.11, A.12 and A.13.

The multivariate results in the main text are reported without dividing analysis by sex, but separate analyses by males and females can be found in the Appendix (see from Table A.14 to A.23).

In total, we include eight explanatory variables in the models, both time-fixed and time-varying. These include:

Migration Status; migration status of the respondent is a time-fixed categorical variable with three groups: "natives" whose parents were born in Western Germany, "first-generation Turkish immigrants" born in Türkiye and "second-generation Turkish immigrants" born in Western Germany with at least one parent born in Türkiye. Natives are the reference category in our multivariate analysis.

Sex of the respondent: This variable is used to analyse any different patterns related to gender in the formation and/or separation of a partnership. This is a time-fixed covariate having two levels; "male" (reference category) and "female".

Birth Cohort: There are three categories, those born between 1971-1973, 1981-1983 and 1991-1993. This variable is constant over time and aims to reflect the variation of demographic behaviours across birth cohorts since they have completely different social, economic and demographic realities.

*Education of respondent*s: This is a time-varying variable that focuses on the highest level of education completed. It is produced by using years of schooling and operationalised by giving reference to the 1997 International Standard Classification of Education (ISCED-97). There is an assumption that education starts at the age of 6 and continues without any break until reported completion. The first level refers to 6 completed years of schooling and is categorised as "no or primary education". While computing this reference category, those graduating from primary school and no education at all are combined since only 8 cases report no education before the event of interest occurs. "Lower secondary", "upper secondary" and "tertiary" are the other categories used to investigate the effect of education on timing and prevalence of event. Each education level, respectively, refers to completed 10, 13 and 16 or more years of schooling. A similar classification is done in ISCED-11 as presented in Appendix 1.b of *Liu* and *Kulu* (2021). Their classification presents the cut-off points for years of schooling as 10.5, 13.5 and 16, where they also control for age when last observed in school. Our thresholds are close to theirs but we only control for years of schooling.

Parity: This variable is operationalised as time-varying and computed by using the birth history generated dataset provided by pairfam called "biochild". All biological births are those of the respondent. It has three categories: childless (reference category) and 1+ (having 1 or more children). The logic behind this division is that there is a limited number of cases reporting more than two children before forming or dissolving any union (see Table A.1, A.2 and A.3).

Pregnancy: Pregnancy is a time-varying variable that is adjusted as 7 months before the date of birth of the children and refers to two categories, not pregnant (reference category) and pregnant. For males, it is the pregnancy status of the partner.

Age at union formation: This is a categorical variable grouped under five levels among those forming a partnership with the age of 15. Age at union can take following values; 15-18, 19-22, 23-26, 27-30, 31+. Those respondents who formed their union between age 19-22 is taken as the reference category. For the transition to marriage after cohabitation, this variable refers to the age at first cohabitation. For the divorce model, age at union formation refers to the age at first union, regardless of type of partnership.

Type of union: Type of union is included in the divorce of ever-married couples to shed light on whether the type of first partnership explains the divorce patterns of respondents. Direct marriage and pre-marital cohabitation (reference category) are the two defined levels for this variable.

5 Results

5.1 Median Age and Duration for Partnership Trajectories

Below, Table 3 provides descriptive results, namely median age and duration for partnership trajectories from Kaplan-Meier survival estimates. At the age of 25, half of the respondents have formed their first partnership in pairfam data. Earlier union formation is more evident among first-generation immigrants compared to descendants and natives. On the other hand, the timing of first partnership is similar for natives and second-generation immigrants. This pattern persists across the three groups when the analysis is divided into female and male. In line with previous studies, women tend to form any type of union earlier than men.

The patterns of immigrant generations resemble each other once the type of union is considered. This harmony is highly prominent in the transition to first cohabitation, whereas descendants show an obvious preference for direct marriage compared to their first-generation counterparts. Since less than half of

Tab. 3: Median Age and Duration for Partnership Trajectories

	Both	Men	Women
First Union			
Native	25.25	26.83	23.66
1st Generation	21.66	23.00	20.25
2nd Generation	24.50	26.75	22.66
Total	25.08	26.75	23.50
Direct Marriage			
Native	-	-	-
1st Generation	22.83	25.00	21.00
2nd Generation	28.58	28.58	26.66
Total	-	-	-
Cohabitation			
Native	25.58	27.16	23.92
1st Generation	32.00	30.67	34.25
2nd Generation	30.00	33.00	29.83
Total	25.75	27.33	24.08
Marriage after cohabitation	Duration since cohabitation (year)		
Native	4.42	4.42	4.42
1st Generation	0.75	2.17	0.58
2nd Generation	3.08	2.25	3.83
Total	4.42	4.42	4.33

Note: The event of divorce is not shown in the table. Since less than half of the risk population get divorced, no median age can be calculated for this transition for any of the sub-groups.

Source: Authors' calculations based on pairfam data

the risk population chooses direct marriage, no median age can be calculated for this transition for the total population. It should be noted that the median age at first cohabitation is about 5 years higher among Turkish immigrants compared to natives. This is an interesting finding and may be related to the selectivity of this migrant group who prefer to cohabit. It is a finding that invites analysis in future studies.

Half of the cohabiting partners get married sooner than 4.4 years after cohabitation. The first-generation Turkish immigrants are the fastest group to advance their relationship into marriage, with an average of 50 percent getting married within 9 months. On the other hand, while male descendants more or less follow the patterns of first-generation immigrants, female second-generation Turkish immigrants prolong their period of cohabitation before getting married. Natives, regardless of gender, seem to keep the duration of cohabitation at about 4.4 years before they form a conjugal family.

5.2 Union Formation

Timing and type of first partnerships are profoundly correlated with the type of economic, social and demographic factors that an individual was born into. This section presents multivariate analyses (Cox proportional hazard models) to investigate the position of first- and second-generation Turkish immigrants compared to natives. The analysis is based on respondents' entry into their first partnership, regardless of the type of union. Respondents are at risk at the beginning of age 15 and followed until they form the first union or until censoring occurs at the last interview they participated in before forming a partnership.

Table 4 shows the results from the Cox proportional hazard model for the transition to first union formations of direct marriage or cohabitation. In general, comparisons of immigrant generations and natives reveal compelling differences between the two groups. While first-generation Turkish immigrants have a 79 percent higher risk to form a union than the native population, descendants and natives are almost alike. These patterns persist when we control for respondent's educational level. Even though, in general, those pursuing higher education delay union formation longer than those respondents having a lower level of educational attainment, in our model, education does not explain differences among immigrants and natives. First-generation immigrants still have a higher hazard ratio than their children when compared to natives. In the full model, hazard ratios stay almost the same.

The following regression models investigate whether and in which direction natives and immigrant generations differ in terms of their preferences for the type of first entry into a union. The results assert systemic differences between immigrant generations and natives. The most important finding of this model is that the type of union is the primary force that generates and reinforces the contrast between German natives and Turkish immigrants. Table 5, the hazard of cohabitation for both sexes, illustrates dramatically different behaviours of migrant groups and natives specifically when controlled for sex and birth, education, and parity and pregnancy. As seen on the standard model, among cohabiting unions,

Tab. 4: Relative hazard of first union formation

	M 1				M 2				M 3			
Variable	Beta	p-value	CI		Beta	p-value	CI		Beta	p-value	CI	
Native	1.00	.	.	.	1.00	.	.	.	1.00	.	.	.
1st Generation	1.79	0.00	1.57	2.09	1.65	0.00	1.44	1.94	1.63	0.00	1.40	1.90
2nd Generation	1.11	0.21	0.94	1.30	1.06	0.49	0.90	1.25	1.06	0.45	0.90	1.25

Note: Model 1 controlled for sex and birth cohort. Model 2 additionally controlled for educational level. Model 3 additionally controlled for parity and pregnancy.

Source: Authors' calculations based on pairfam data

Tab. 5: Relative hazard of first cohabitation

	M 1				M 2				M 3			
Variable	Beta	p-value	CI		Beta	p-value	CI		Beta	p-value	CI	
Native	1.00	.	.	.	1.00	.	.	.	1.00	.	.	.
1st Generation	0.54	0.00	0.41	0.71	0.50	0.00	0.38	0.66	0.50	0.00	0.38	0.65
2nd Generation	0.51	0.00	0.40	0.65	0.49	0.00	0.38	0.62	0.49	0.00	0.38	0.62

Note: Model 1 controlled for sex and birth cohort. Model 2 additionally controlled for educational level. Model 3 additionally controlled for parity and pregnancy.

Source: Authors' calculations based on pairfam data

the patterns of descendants largely resemble those of first-generation immigrants. The risk level predicts that all Turkish immigrant generations produce, adapt and sustain compatible behavioural trends. Controlling for educational level, parity and pregnancy does not change hazard ratios significantly. According to the third model, the first and second generation have 50 percent and 49 percent lower risk of cohabitation than natives, respectively. This is not surprising since most native respondents prefer cohabiting with their partners, while only one-fifth of Turkish immigrants form cohabiting unions as their first partnership (see Table 2).

The marriage model stands out as the most distinctive in the analyses, since this is rarely preferred by natives in the analysed age groups. Additionally, first partnership formation highly coincides with marriage among first-generation Turkish immigrants (see Table 2). Table 6 shows that while immigrant generations have a higher intensity of direct marriage, their preferences are not as consistent once they are in cohabitation. Turkish immigrants have a 16.1 times higher hazard of marrying than that of natives. This risk level decreases to 11.6 times among descendants. When educational level, parity and pregnancy status of respondents are controlled, the intensity of direct marriage decreases among immigrants. In the final model, first-generation Turkish immigrants have 13.7 times higher and second generation have 11.0 times higher marriage intensity compared to natives.

When we look at other covariates (Appendix Table A.4, A.5 and A.6), the analysis shows that women enter into the first union earlier and have a significantly higher risk of direct marriage or cohabitation than their male counterparts. In line with the gradual retreat from marriage and increasing popularity of cohabiting unions over time, pathways to partnership formation vary across birth cohorts. The intensity of direct marriage is evident among older generations, whereas the younger generation prefers cohabiting unions as their first partnership. Pregnancy is another important variable increasing the hazard of direct marriage.

5.3 Marriage after Cohabitation

Until this point in the study, the results indicate that cohabitation is a highly preferred practice among native respondents but still rare across Turkish immigrant generations in Western Germany. However, there are further questions to be answered about those respondents who cohabit in the first place, such as "what comes after cohabitation?" Once a cohabiting partnership is formed, couples may prefer either to proceed to marriage or to end the relationship through separation. Secondly, duration of cohabitation indicates whether cohabitation is perceived as a long-term form of relationship or a waiting room for couples still indecisive about their future together. In this respect, natives and Turkish immigrant generations may opt for a different path on what to do with the cohabiting union.

Table 7 presents the intensity of marriage after cohabitation. First-generation Turkish immigrants have 2.10 times higher risk of marriage than their native counterparts on average. Although the risk level is slightly lower among descendants, the intensity of marriage is 2.02 times higher than that of natives. Including education in the model does not change risk levels much in the transition

Tab. 6: Relative hazard of first marriage

	M 1				M 2				M 3			
Variable	Beta	p-value	CI		Beta	p-value	CI		Beta	p-value	CI	
Native	1.00	.	.	.	1.00	.	.	.	1.00	.	.	.
1st Generation	16.10	0.00	13.13	19.77	13.97	0.00	11.11	17.57	13.74	0.00	10.91	17.31
2nd Generation	11.56	0.00	9.04	14.87	10.82	0.00	8.43	13.90	10.95	0.00	8.53	14.06

Note: Model 1 controlled for sex and birth cohort. Model 2 additionally controlled for educational level. Model 3 additionally controlled for parity and pregnancy.

Source: Authors' calculations based on pairfam data

Tab. 7: Relative hazard of marriage after cohabitation

	M 1				M 2				M 3			
Variable	Beta	p-value	CI		Beta	p-value	CI		Beta	p-value	CI	
Native	1.00	.	.	.	1.00	.	.	.	1.00	.	.	.
1st Generation	2.10	0.00	1.53	2.90	2.05	0.00	1.47	2.86	1.82	0.00	1.31	2.54
2nd Generation	2.02	0.00	1.46	2.80	1.93	0.00	1.39	2.68	1.65	0.00	1.19	2.29

Note: Model 1 controlled for sex, birth cohort and age at union formation. Model 2 additionally controlled for educational level. Model 3 additionally controlled for parity and pregnancy.

Source: Authors' calculations based on pairfam data

to marriage after cohabitation. The last model, which additionally controls for parity and pregnancy, indicates that marriage intensity is 1.8 times higher among first generation Turkish immigrants compared to natives, while this relative ratio is 1.65 among descendants. Controlling for pregnancy is important as almost 20 percent of cohabited respondents are pregnant before marrying (see Appendix Table A.7 for results related to covariates).

5.4 Divorce

Divorce is the final transition examined in our analyses. Respondents are followed from the time of marriage – either directly or after a cohabitation period – until a divorce event. Censoring occurs at the date of a partner's death or interview date for ongoing marriages. Before that, it may be good to remember that natives in Western Germany prefer to delay marriage to later ages and, in most cases, they prefer a period of cohabitation. In addition, first-generation Turkish immigrants are less prone to practice divorce and descendants are still too young to proceed to higher-order unions, since the share of divorced individuals are lower among ever-married Turkish immigrants (Table 2).

Table 8 presents the estimates for the divorce of ever-married partnerships. The results show significant differences among natives and Turkish immigrants. The hazard of divorce among the first generation is lower than their native counterparts where descendants follow a similar pattern with the first-generation immigrants. The intensity of divorce slightly decreases when the educational composition of respondents is considered. In the last model, the hazard of divorce reaches approximately one third of the natives for both first- and second-generation Turkish immigrants. The hazard of divorce among the first generation is 66 percent lower than their native counterparts. Descendants follow a similar pattern, wherein the intensity of divorce is 0.36 of that of natives.

With regard to the association of explanatory covariates; increasing levels of education do not seem to be highly correlated with a decreasing risk of union formation including all transitions (as in *Hannemann/Kulu* 2015; *Pailhé* 2015). Instead, regardless of the type of union, educational attainment may explain the relative delay in partnership formation. That is, highly educated people do not necessarily reject marriage or cohabitation, but because they spend longer periods in education, union formation occurs later in life than lesser-educated respondents (*Kalmijn* 2007). Thus, the aforementioned differences in partnership trajectories are not influenced by the human capital that education provides.

Pregnancy in all transitions except divorce increases the intensity of partnership formation. The effect of pregnancy and parity are consistent with the findings of dissolution literature: Couples are less likely to end a marriage with the existence of children (*Choi et al.* 2020; *Dribe/Lundh* 2012; *Kaplan//Herbst-Debby* 2017; *Milewski/Kulu* 2014).

Of particular note, direct marriage is found to have an increased risk of divorce compared to previously cohabiting couples. This finding contrasts many studies in the literature and invites further investigation (see Appendix Table A.8).

Tab. 8: Relative hazard of divorce of ever-married

	M 1				M 2				M 3			
Variable	Beta	p-value	CI		Beta	p-value	CI		Beta	p-value	CI	
Native	1.00	.	.	.	1.00	.	.	.	1.00	.	.	.
1st Generation	0.51	0.00	0.33	0.78	0.43	0.00	0.27	0.68	0.34	0.00	0.21	0.56
2nd Generation	0.50	0.02	0.28	0.90	0.45	0.01	0.25	0.81	0.36	0.00	0.19	0.67

Note: Model 1 controlled for sex, birth cohort and age at union formation. Model 2 additionally controlled for educational level. Model 3 additionally controlled for parity, pregnancy and type of union.

Source: Authors' calculations based on pairfam data

5.5 Robustness Checks

Our robustness check results are presented in Appendix Tables A.9, A.10, A.11, A.12 and A.13. According to these results, our findings are robust to sample restrictions, i.e., exclusion of first-generation immigrants who experienced the event of interest before migration. One difference observed is the decline in hazard ratios of first-generation immigrants related to overall union formation, transition to cohabitation and transition to marriage. A decline in the hazard ratio of divorce also takes place with the restricted sample, although the difference is smaller. These findings can be explained by the fact that marriage or cohabitation can take place as a reason for migration due to the need for family unification. Some individuals may tend to enter a union earlier to migrate to Western Germany afterwards. Hence, excluding these cases may have lowered the hazard ratios of first immigrants. However, the main conclusions derived do not change when analyses are applied to the restricted samples.

6 Discussion and Conclusion

This study has investigated union formation and dissolution practices of first- and second-generation Turkish immigrants compared to natives in Western Germany. It addressed how first-generation Turkish immigrants and their descendants respond to the native patterns and it analysed the extent of convergence or divergence between generations. We also formulated four hypotheses, with two being alternatives to each other, based on established theoretical approaches.

Our findings indicate that both the timing and incidence of union formation comply among descendants of Turkish immigrants and natives in Western Germany, while first-generation immigrants pursue a traditional early union formation pattern. First-generation immigrants also have a significantly higher risk of a partnership than both natives and their descendants. Descendants mostly share practices of the first generation when it comes to cohabitation, but neither first- nor second-generation groups prefer cohabiting unions or postponing marriage to their early 30s. On the other hand, marriage practices of descendants indicate a relative divergence from first-generation immigrants. Traditional early direct marriage ceases, Turkish descendants significantly delay the decision to form a conjugal family and they have slightly less risk than first-generation Turkish immigrants. Despite these findings, however, the data cannot be interpreted as cohabitation replacing marriage preference for Turkish immigrants in Western Germany.

The dominance of the marriage institution is partly related to the partner choice of Turkish immigrants. Studies show that national homogamy is highly typical among Turkish minorities in Europe (*Constant et al.* 2012; *Hannemann et al.* 2018; *Milewski/Hamel* 2010; *Soehl/Yahirun* 2011). Choosing a Turkish partner may intensify the risk of marriage and reproduce the traditional pattern. However, children of Turkish immigrants are exposed to mainstream structure and culture from childhood onwards. Contact with non-coethnic peers may postpone entry into the first union

among second-generation Turkish immigrants in Germany (*Huschek et al.* 2010). Furthermore, these immigrants mostly form a conjugal family with another Turkish descendant in Germany rather than with a spouse from Türkiye (*Gonzalez-Ferrer* 2006; *Hamel et al.* 2012). Overall, these results suggest that children of immigrants socialise into their family's norms and values instead of mirroring native patterns in their transitions to first marriage and cohabitation. As opposed to natives, marriage is still dominant over cohabitation as a first choice among Turkish immigrants in Germany.

One of the aims of this paper was to examine cohabitation outcomes among natives and immigrants. As descriptive results show, cohabitation is rare among Turkish immigrants, while natives prefer it over direct marriage. This behaviour is not surprising since consensual union is a culturally disapproved phenomenon among Turkish people. Even though adolescent Turkish immigrants see cohabitation as an alternative partnership formation, in reality, they abstain from consensual unions due to strong parental influence and low social acceptance (*De Valk/Liefbroer* 2007). Therefore, Turkish descendants still mostly reject the premarital sexual activity of females in the European context (*Hamel et al.* 2012), as also suggested by the indicators in Section 2.

At first glance, the findings predict that immigrants and natives are two distinct groups in their preferences for type of cohabiting union. Based on the ideal types of cohabitation conceptualised by *Heuveline* and *Timberlake* (2004), natives treat this type of partnership as "must-have stage" or "trial marriage". On average, German-descendant respondents decide to form a conjugal family within 4.42 years after cohabitation. By contrast, and in line with *Naderi's* (2008) finding, among Turkish immigrants, the first generation tends to formalise their union within less than a year. The critical point here is that while three-fourths of first-generation people marry their first cohabiting partners, less than half of their descendants formalise their first cohabiting union. Second-generation Turkish immigrants also prefer separating from a cohabiting partner more than natives (see Table 2). In addition, female descendants stay in cohabiting unions significantly longer than their parents and male counterparts. This may hint at a transformation regarding cohabitation among second-generation immigrants. In other words, the marginality of cohabiting unions seems to erode gradually for the female second generation. Another possible explanation for this might be that, as *Pailhé* (2015) suggests in the context of France, Turkish second-generation female immigrants are a selected group that have individual characteristics that distinguish them from their male descendants and the first generation. Note that this study is unable to control for the origin of the partner. This characteristic might also be the motive behind longer cohabitation of female descendants.

Another aim of this study was to analyse the divorce practices of Turkish immigrants as opposed to natives. As the second demographic transition indicates, divorce has an upward trend and marriage is weaker among the youngest generation who also have higher intensity than older generations in deciding to end a marriage. In line with other studies (*Milewski/Kulu* 2014), both female and male Turkish immigrants have significantly more stable marriages than natives. An explanation

for this practice may again be found in the partner choice of Turkish immigrants and in the low divorce rate within the Turkish population. Native-immigrant marriages are found to be most fragile in any context due to socio-cultural distance between partners (*Choi et al.* 2020; *Kaplan/Herbst-Debby* 2017; *Milewski/Kulu* 2014; *Zhang/Van Hook* 2009). Since the first and second-generation immigrants form a union with a coethnic partner, contradicting social factors that can weaken the marriage are not common. Thus, first-generation Turkish immigrants also transmit their preferences regarding the dissolution, which justifies the socialisation hypothesis. It should be noted that in our analytical sample, the number of divorce events among first- and second-generation Turkish immigrants were low and the results should be interpreted considering this situation.

Regarding our four hypotheses, our first hypothesis, which expects difference in partnership patterns between migrants and natives, mostly holds true, except for the finding that second-generation immigrants resemble the native pattern in transition to the first union (including both cohabitation and marriage). In other words, the socialisation hypothesis for first-generation immigrants appears to hold, whereas it is not extended towards second generation immigrants in terms of first union formation (including both marriage and cohabitation). Nevertheless, the type of union reveals the actual distinction between natives and immigrants. When type of union is considered, our first hypothesis holds for descendants of immigrants, too, supporting the cultural maintenance perspective.

As suggested by our second hypothesis, the extent of the difference varies across partnership transitions. First- and second-generation immigrants have an about 50 percent lower hazard of cohabitation compared to natives, whereas the hazard of getting married is 13.7 and 11.0 times higher among first- and second-generation immigrants compared to natives, respectively. Marriage intensity following cohabitation is also higher among Turkish immigrants, where the difference is greater for first-generation immigrants. Finally, the divorce hazard is 66 percent and 64 percent lower among first- and second-generation immigrants compared to natives.

Overall, our results provide support for our third hypothesis (H3a) rather than the fourth related to second-generation immigrants, in that partnership transition of Turkish immigrants' descendants more closely resembles those of first-generation immigrants compared to natives. This provides support for the cultural maintenance hypothesis or segmented assimilation theory. Hence, the adaptation hypothesis for descendants of immigrants (hypothesis H3b) does not appear to hold, except in the transition to first union (covering both cohabitation and marriage).

The study at hand is not free of limitations. First, this investigation was unable to control for the selection and disruption hypotheses or their effects on immigrants' union trajectories. Addressing whether first-generation immigrants are selected groups that have different characteristics than the Turkish population requires comparable data that belongs to the society of origin. Available data sources on Turkish partnership practices lack cohabitation histories, which preclude comparing type of first union. With some imagination, however, it is relatively fair to say that first-generation Turkish immigrants are not selected groups. In pairfam data,

90 percent of Turkish first-generation immigrant respondents were born between 1971-1983, corresponding to the 35-47 age group at the last wave of pairfam in 2018. The descriptive results show that the median age at first marriage is 21 for the first-generation Turkish female immigrants. According to the 2018 Turkey Demographic and Health Survey (2018 TDHS), the average median age at first marriage is 21 among women aged between 35-49 (*Hacettepe University Institute of Population Studies* 2019). Therefore, it seems that Turkish society and Turkish immigrants have similar patterns in terms of the timing of first marriage.

A further limitation of this study is that the disruption hypothesis is not controlled in the multivariate analysis. Therefore, there is a question of whether immigrants might be affected by the immigration process and, as a result, struggle to adapt to the new partnership market in Western Germany. Hence, the disruption stemming from immigration itself results in a decision to postpone union formation. However, when the median age at first union is compared, the age gap between those starting a co-residential union before and after migration is minimal, respectively 21 and 21.33 (see Appendix Table A.24). These descriptive results roughly suggest almost no disruption.

Additionally, the data had some limitations when controlling for other socio-economic or demographic factors that may contribute to the convergence process of immigrants. The employment history of immigrants, the religious affiliation of respondents, partner choice and educational attainment of father and mother are examples of factors that could not be included in our analysis. A high proportion of missing data and a lack of retrospective information on these covariates have led the authors to renounce using them as an explanatory variable in multivariate models in order to keep the analyses as accurate as possible. Furthermore, parental influence, especially the impact on partner choice, should be considered extensively in analyses of future Turkish generations. Most surveys do not ask about "religious partnerships", which may be observed among first-generation Turkish migrants. The meaning and social acceptance of unregistered religious unions and cohabitation are different. Therefore, future studies may shed light on transformations across generations by illuminating the details of unofficial co-residential unions.

Another issue for further study is the moderating effect of education. As *Krapf* and *Wolf* (2015) find, highly educated Turkish women of the second generation do not differ significantly in their first birth risks from natives. This could also apply to partnership transitions. Finally, our findings of the delayed cohabitation among Turkish immigrants in pairfam data and direct marriage increasing risk of divorce compared to previously cohabiting couples stand out as issues to be analysed further.

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Müşerref Erdoğan (✉). Groningen, Netherlands. E-mail: erdoganmuserref93@gmail.com

Dr. Ayşe Abbasoğlu Özgören. Hacettepe University Institute of Population Studies. Ankara, Türkiye. E-mail: ayse.ozgoren@hacettepe.edu.tr
URL: https://avesis.hacettepe.edu.tr/ayse.ozgoren

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