## Contribution of a Couple's Immigration Status to Union Formation and Dissolution in Finland

Citlali Trigos-Raczkowski<sup>1,2,4</sup>, Kelsey Q. Wright<sup>1,3,4</sup>, Pekka Martikainen<sup>1,3,4</sup>, Joonas Pitkänen<sup>1,3,4</sup>, Heta Moustgaara<sup>1,5</sup>, Mikko Myrskylä<sup>1,3,4</sup>

- 1. University of Helsinki, Faculty of Social Sciences, Population Research Unit
- 2. University of Helsinki, Department of Computer Science
- 3. Max Planck Institute for Demographic Research
- 4. Max Planck University of Helsinki Center for Social Inequalities in Population Health
- 5. University of Helsinki, Helsinki Institute for Social Sciences and Humanities

#### Introduction

Since 2008, marriage and cohabitation formations in Finland have been declining, with an increasing number of cohabiting unions being dissolved (Hellstrand, 2023; Statistics Finland<sup>1</sup>). Meanwhile, immigration continues to rise, with the number of immigrants entering Finland growing over 300% between 1990 and 2021, and 9.1% of Finland's population being composed of immigrants and their descendants (Statistics Finland<sup>2</sup>). In light of the potential importance of first union dynamics in contexts where it is becoming more urgent to understand the underlying drivers of population change, in this paper we examine the nexus between union dynamics and immigration using complete register data in Finland, a country with a relatively new immigration regime and low cohort fertility projected to continue declining.

In the Finnish context, we currently do not know how dyadic native-immigrant status within registered relationships, in addition to intra-relationship social factors such as age and education, have suppressed or increased union formations and dissolutions. As a social pursuit, marriage or partnering traditions can be influenced by one's country of origin, and migration has been shown to often be influenced by marriage and family reunification (Andersson et al., 2015).

In addition to the unique context of emerging migration and union regimes, the Finnish register data should be considered a relatively new data source as very little work has been done on 21st century global immigration into the country (existing work has primarily focused on Russian, Estonian, and Swedish immigration) (Rahnu, 2022). We offer a novel examination of union formation and dissolution patterns among immigrants and their descendants, by identifying which characteristics, such as age, education level, partner's immigrant background, and region of origin, moderate first union formations and dissolutions across different *types* of immigrant origins, which has implications for understanding how integration (or non-integration) can bolster or suppress sustainable population structures.

## **Data and Methods**

Using complete Finnish register data, we identify an index generation of women aged 18-65 from 1987 to 2020 and examine these individuals' entry into and exit out of first unions for both marriages and cohabitations. Marriage data comes from the Finnish registry and cohabitations are imputed by Statistics Finland on the basis of two spouseless opposite-sex persons over the age of 18 living together, if they are not siblings and do not have an age gap of more than 16 years (Statistics Finland, 2023).

We categorize women into the native Finnish population, 1st, 2nd, or the 2.5 generation, (See Figure 5 for definitions; Loi et al. 2021). We then identify all partnership states for index women, and characterize each couple

<sup>1</sup> https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin\_ssaaty/statfin\_ssaaty\_pxt\_121e.px/chart/chartViewLine/

 $<sup>2\</sup> https://www.stat.fi/tup/maahanmuutto/maahanmuuttajat-vaestossa/ulkomaalaistaustaiset\_en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset-en.html/lineariset$ 

using the same method to define the partner's immigration status. The sixteen possible immigration status categories for these couples are given in Table 1.

The final sample size is 35,341,425 person-years of data contributed by 2,258,019 unique women. A total of 1,847,675 women (81.83%) are in at least one cohabiting or marital relationship with at least one male partner between years 1987 and 2020. The total number of unique heterosexual<sup>3</sup> relationship pairings is 2,467,940 (marriages and cohabitations) with 1,466,417 observed dissolutions, (divorces and cohabitation dissolution).

We use a survival analysis framework, focusing on the association between male partner's immigration status, parental immigration status, and key sociodemographic factors on first union formations and dissolutions. We use Kaplan-Meier curves for visual comparison and Cox models to compare hazard rates based on immigrant background typologies, controlling for variables like education level and country of origin to assess moderation.

#### **Preliminary Findings**

When entering first unions, women in the 2nd and 2.5 generation were less likely to enter a first union compared to native Finnish women. Native Finnish, 1st, and 2nd generation women all entered their first union, on average, at age 30, while 2.5 generation women entered 4 years earlier, at age 26. The average age at first union dissolution for 2nd generation women (37 years) is 4 years older than for native Finnish and 1st generation women, who were also on average 4 years older than 2.5 Gen women at the time of first dissolution.

Couples made of two 1st generation immigrants show the lowest rate of first union dissolution at 44.76%, while couples made up of two 2nd generation immigrants show the highest rate of first union dissolution at 71.40% (see Table 1). We find that native Finnish women who were in a union between 1987 and 2018 were more likely to have dissolved their first union by the end of 2018 if the male partner had any immigrant origins, but especially if the male partner immigrated himself, with 69.0% dissolution (58.9% with 2nd generation partners, and 60.1% with 2.5 generation partners), compared to a native Finn male partner (57.6% dissolved).

The Kaplan-Meier estimator of union survival demonstrates that 1st generation women have similar hazards of union dissolution to native Finnish women for up to 5 years of partnership duration, after which their hazard of dissolution increases at a faster rate than 2nd generation women to create a crossover effect prior to 10 years of partnership. For relationships over 10 years in duration, the hazard of union dissolution for 2nd generation women falls in between native Finnish women and 1st generation women, possibly suggesting adaptation, while 2.5 generation women had the greatest hazard of dissolution up to 25 years of partnership (See Figure 2).

Conditional on entering into a first union in the 1990-1994 period, 44% of native Finns dissolved their first recorded unions (see Figure 4). While women in the 2.5 generation who ultimately dissolved their union by 2020 were more likely to have relationships that lasted less than 5 years, all non-native groups are more likely than native Finns to dissolve their first union within 10 years of formation (see Figure 3). There is a clear gradient for earlier dissolution conditional on entering into the first union.

In comparison with native Finns, immigrants and their descendents who dissolve their first union have a higher probability of doing so earlier than native Finns (see Figure 3), and over a 25 year period they are more likely to dissolve their first union overall (see Figure 2). We plan to repeat this analysis using men as the index as well as further explore couple immigrant origin dynamics.

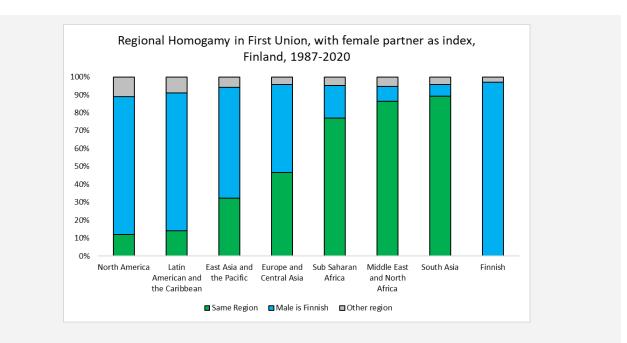
<sup>3</sup> Due to the small numbers of non-heterosexual relationships, we restrict our dataset to heterosexual unions.

# **Tables and Figures**

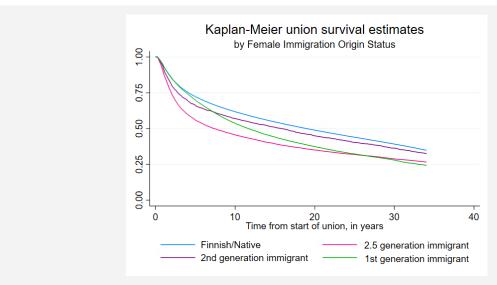
**Table 1. Immigration Status Categories and Distributions** 

Immigration status groupings for couples			Percent of unique couples (out of 2,467,940)	Percent of person years in the data (out of 35,341,425)	Percent of first unions dissolved
1.	Native	Native	90.23%	58.74%	57.66%
2.	Native	1st gen	2.49%	1.00%	69.00%
3.	Native	2nd gen	0.12%	0.07%	58.89%
4.	Native	2.5 gen	0.68%	0.37%	60.9%
5	1st gen	Native	2.36%	1.13%	55.4%
5.	1st gen	1st gen	3.16%	1.39%	44.76%
7.	1st gen	2nd gen	0.01%	0.01%	64.94%
3.	1st gen	2.5 gen	0.05%	0.02%	55.16%
€.	2nd gen	Native	0.10%	0.06%	57.63%
10.	2nd gen	1st gen	0.03%	0.01%	56.01%
11.	2nd gen	2nd gen	<0.01%	<0.01%	71.40%
L2.	2nd gen	2.5 gen	<0.01%	<0.01%	67.92%
13.	2.5 gen	Native	0.66%	0.35%	62.69%
L4.	2.5 gen	1st gen	0.07%	0.02%	68.55%
15.	2.5 gen	2nd gen	<0.01%	<0.01%	62.00%
16.	2.5 gen	2.5 gen	0.02%	0.01%	66.25%

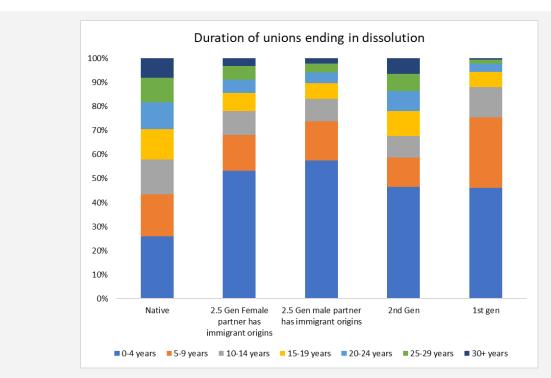
Table 1: Immigration status groupings for heterosexual couples. Column 4 details the percent of unique couples for each couple grouping; Column 5 details the percent of total person years observed in the data for each couple grouping; the final column shows the rate of first union dissolution observed in the data for each couple grouping



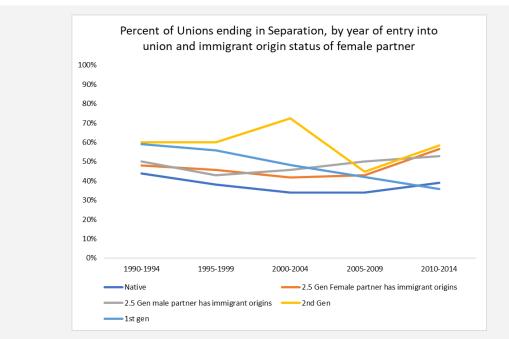
**Figure 1:** Regional Homogamy in First Union. While nearly 80% of North American male partners in our first union sample were partnered to Finnish women, only about 15% of the South Asian male partners partnered with Finnish women.



**Figure 2:** Kaplan Meier Estimates of Partnership Survival. Over a 35 year period, immigrants and their descendents have a higher likelihood of dissolving their first union earlier than Native Finnish women.



**Figure 3:** Duration of First Unions that ended in dissolution by 2020. Women in the 1st generation have the highest rate of dissolution within the first 9 years out in comparison to all other groups, while all immigrant generations are likely to dissolve their first union earlier than native Finnish women.



**Figure 4:** Percent of Unions ending in Separation by year of entry into union and immigrant origin status of male partner. Note, immigrant origin unions tend to have a higher dissolution across entry into partnership cohorts. This may be due to additional conflict due to socio-cultural conflict (Zhang, 2009), or potentially because we observe these groups for less time. The volatility displayed in the 2.5 and 2nd generation proportions are likely due to small sample size. We plan to further explore this.

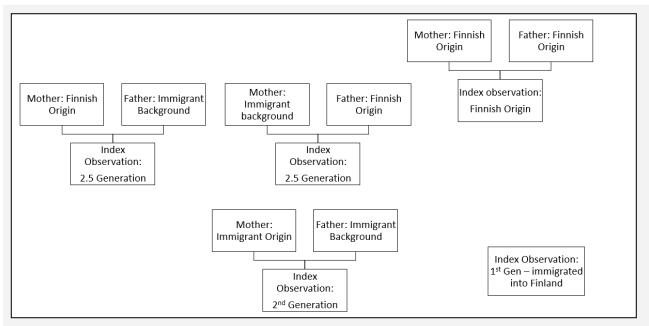


Figure 5. Immigration Background Categories for the 1st generation, 2nd generation, 2.5 generation, and Finnish Origin groups.

### References

- Andersson, G., Obucina, O. & Scott, K. (2015). Marriage and divorce of immigrants and descendants of immigrants in Sweden. *Demographic Research*. 33:31-64
- Hellstrand, J., Nisén, J., & Myrskylä, M. (2023, preprint). Educational field, economic uncertainty, and fertility decline in Finland in 2010-2019. FLUX Working Paper. doi: 10.31235/osf.io/kcq4g
- Loi, S., Pitkänen, J., Moustgaard, H., Myrskylä, M. & Martikainen, P. (2021). Health of immigrant children: the role of immigrant generation, exogamous family setting, and family material and social resources. *Demography*. 58(5):1655-1685.
- Rahnu, L., & Jalovaara, M. (2022). Partnership dynamics and entry into parenthood:

  Comparison of Finnish birth cohorts 1969–2000. https://doi.org/10.31235/osf.io/2djh7
- Tilastokeskus. (2023). "Immigrants in the population." *Tuotteet ja palvelut*. Retrieved from: https://www.stat.fi/tup/maahanmuutto/maahanmuuttajat-vaestossa\_en.html on May 9th, 2023.
- Zhang, Y., & Van Hook, J. (2009). Marital dissolution among interracial couples. *Journal of Marriage and Family*, 71(1), 95–107. https://doi.org/10.1111/j.1741-3737.2008.00582.x

Research is a part of the project Family Formation in Flux – Causes, Consequences, and Possible Futures (FLUX). Research was funded by the Strategic Research Council (SRC) established within the Academy of Finland (decision numbers: 345130 and 345131).