

The Contributions of Women with Immigrant Backgrounds to the Low Fertility Regime in Finland

Topic and Focus

Finland has experienced a decline in total fertility rate (TFR) in recent years, placing population momentum well below the replacement rate. Finland's cohort fertility is projected to continue to decline into the future, signaling uncertainty for citizens and institutions that rely on partnership markets, government institutions, and kinship ties (Hellstrand, Nisén, Miranda et al., 2021). Although currently there is no definitive driver of this decline, it is clear that in Finland (one of the countries with the strongest declines in the Nordics) quantum decline in the progression to first births across most age groups accounts for a significant proportion of this trend (Hellstrand, Nisén, & Myrskylä., 2021). Additionally, long-term declines in marriage rates, increasing instability in long-term cohabiting relationships, and more uncertain connections to social institutions have led to clear socioeconomic inequalities in fertility in the Finnish context (Hellstrand, 2023).

Although a large proportion of Finns emigrated to Sweden for work in the late 20th century, and Finland has strong circular migration relationships with Estonia, Sweden, and Russia, global immigration to Finland only began to account for a significant proportion of the adult population in recent decades (Hedberg & Kepsu, 2003). The annual number of people immigrating into Finland increased by over 200% since the 1990's, while the number of women of reproductive age immigrating has increased over 10-fold in the same period and represents increasingly diverse sending country backgrounds over time.

In the context of very low fertility, an aging population, and political polarization in recent elections where successful candidates have campaigned on anti-immigration platforms, understanding how people with any immigrant background(s) contribute to the fertility regime in Finland will be essential to offer scientific and policy guidance on the sustainability of Finland's welfare state. In this paper we address the impact of the changing composition of immigration background status within couples on fertility regimes in Finland to examine the interdependence between immigration and low fertility (Lindström, Mussino, & Oláh Livia., 2022; Loi et al. 2021; Milewski, 2010). Specifically, to provide novel insight into this topic, we use demographic techniques to ask and answer how the age-specific, parity-specific, and total fertility of immigrant women with 1st, 2nd, and 2.5 backgrounds (defined below) contributes to the overall Finnish fertility regime over the thirty years between 1987 and 2018.

Data

We use complete Finnish population register data to establish an index generation of women of reproductive ages (15-49) from 1987-2018. We link these women to 1) both of their biological parents where possible, 2) any partners with whom they have had children, and 3)

their registered births. We then characterize all observations, in both the index and the birth generation, according to their immigrant background status.

To establish immigrant backgrounds, we define Finnish-born individuals as those who are of “Finnish origin” (according to the Statistics Finland official definition), and immigrants as those who were either born in Finland but are of “foreign origin” or those born abroad to foreign parents. The immigrant background typologies include whether both parents are of Finnish origin, whether both parents are first generation immigrants, or whether parents consist of an exogamous couple—i.e., one Finnish-born and one immigrant parent (Loi et al., 2021).

We identify the index group who have two immigrant parents as 2nd generation, and differentiate them from individuals born to exogamous parents, collectively known as the 2.5 generation. Within the 2.5 generation, we distinguish whether the father or mother is Finnish born, as there are distinct regional patterns for sending countries based on parental gender (Loi et al., 2021; Tilastokeskus, 2023). The examination of this 2.5 generation’s fertility characteristics offers significant novelty to the literature, as early work on this group in Finland suggests that they may have different outcomes relative to other groups in areas like health and education in Finland (Loi et al, 2021).

Methods

Completed Analyses: To examine changes in overall fertility, we calculate period TFRs by immigrant background status and then use synthetic age-specific-fertility rates (ASFRs) by immigrant background status and periods to examine quantum and tempo trends over time. We additionally conduct a decomposition exercise to examine how much the compositional change and fertility rates in period TFR for each immigrant background group contributed to changes in TFR during the 1990-2014 period.

Planned analyses: We also plan to examine parity progression ratios (PPR) by immigrant background status, with a particular focus on the transition from zero to first births. Early evidence suggests that this transition is partially responsible for the drastic decline in Finnish fertility, so understanding whether different immigrant groups have different probabilities of this transition, and at what ages, will be important for understanding low fertility dynamics.

Preliminary & Expected Findings

Population: The preliminary findings presented here represent 2,345,656 unique women over a 31-year period, representing 38,303,256 person-years. These women had 1,829,423 unique births during this period (see Table 1 in Appendix for descriptives). Over the registry data period (1987-2018), the proportion of women of reproductive age with any immigrant background grew from 1.3% to 12%. The majority, 92.2% (n=2,162,370) of these observations are native Finnish women, while 6.4% (n=150,122) represent 1st generation immigrants, .35% (n=8,210) represent 2nd generation immigrants, and 1.05% (n=24,629) represent 2.5 generation immigrants. The average age at first birth was 28 years-old for native

Finns, 1st generation immigrant women, and 2.5 generation immigrant women; it was 26 years for 2nd generation women.

Women with any immigrant origin were less likely to be ever married than native Finns and 1st generation immigrant women were more likely to be ever divorced than native Finns and 2nd/2.5 generation immigrant women. Of those women with a 1st generation immigrant background, 56% came from Europe and Central Asia, 16.7% from East Asia, 8.2% from Sub-Saharan Africa, 8% from the Middle East and North Africa, 5.6% from South Asia, 2.4% from Latin America and the Caribbean, and 1.3% from North America.

TFR and ASFR: With the exception of the earliest period examined (1987-1989), the period TFR among 2nd and 2.5 generation immigrant women is systematically lower than the native Finnish TFR and the 1st generation immigrant TFR (see Figure 1 in Appendix). This diverges from potential explanations of assimilation or adaptation, as the TFRs are not in between 1st generation immigrants and native Finns, nor are they attenuated towards one or the other; rather they are below both. This suggests that some social, biological, or other process is driving even lower than fertility in immigrant offspring in this context than the fertility regimes their parents or peers experience. Preliminary exploratory analyses suggest that for the 2nd generation immigrant women, suppressed or postponed fertility may be due to educational assortment. Additionally, women who immigrated at ages less than 7 (i.e., when they were more likely to linguistically and socially blend into Finnish norms and customs) were more likely to have lower TFRs.

Figure 1 shows that 1st generation immigrants consistently have higher period TFRs than native Finns or 2nd or 2.5 generation immigrants, but at varying ratios to the overall TFR, which we hypothesize is related to the changing composition of sending regions for immigrants over the 30-year time period examined. The divergence between native Finnish TFR and the total TFR from 2010 onwards, suggests that around this time the fertility of women with immigrant backgrounds began to affect the overall TFR in a significant way. By the 2015-2018 period, we can see that the native Finn TFR is significantly lower than the overall TFR—this gap is accounted for by both postponement in childbearing among native Finnish women and by the fertility of 1st generation immigrant women. Our subsequent decomposition analysis demonstrates that the composition component of the 1st generation immigrant women almost entirely accounts for this gap, preventing the Finnish period TFR from falling even further over the last 10 years. Homogamy by region of origin (including Finland) strongly increases period TFR—we do see some early evidence of significant regional homogamy among 1st generation immigrants which may contribute to these findings.

Among native Finns there is a tempo and small quantum decline in ASFRs over this period, with peak childbearing shifting from 25-29 years in 1990-1994 to 30-34 years in 2010-2014 (See Figures 2a and 2b in Appendix comparing periods). Similar to native Finns, 2.5 generation immigrant women shift their peak childbearing to 20-34 years by the later period and demonstrate a quantum decrease in earlier childbearing. Second generation immigrant women show an even starker tempo change, with their main childbearing years shifting to 35-39 years old (from 25-29 in 1990-1994) by the 2010-2014 period. Finally, although 1st

generation immigrant women demonstrate both a quantum and tempo decline in fertility, their overall ASFR at each age group remains higher than all other groups by 2010-2014.

Decomposition: To better understand how differences in age distribution versus actual changes in fertility rates account for the patterns we see over time, we conducted a stepwise decomposition. In Figure 3 (see Appendix), we can see that declines in fertility over the 1990-2018 period are almost entirely due to changes in ASFRs among native Finnish women under 32 years of age, with some decrease attributable to changes in the population distribution of native Finnish women and small declines in ASFRs for all immigrant origin groups under age 30. However, Figure 2 also demonstrates that the population distribution of 1st generation immigrants offsets this decline, as does an increase in ASFRs for 1st generation immigrants and native Finnish women over the age of 32, with small contributions made by the 2nd and 2.5 generation women under age 30.

Expected Results PPR 0 → 1: We also plan to examine parity progression ratios (PPR) by immigrant background status; however, register data like what is used here suffer from identification issues when stacking age, periods, and cohorts over time. To deal with this, we plan to use life table methods, with a particular focus on the transition from zero to first births. In doing this, we expect that immigrant groups who have been in Finland longer or were born in the country are more likely to have PPR[0,1] similar to native Finns, while their immigrant peer groups may have transition probabilities closer to immigrant parental groups. However, we may instead see similar patterns of delays in the 0 to 1 transition among all younger cohorts, as they delay childbearing to achieve educational and employment goals—it is possible that reasons for postponing fertility have a stronger influence in the Finnish context than cultural norms or social networks.

Preliminary conclusions

Our preliminary results point to two important findings for Finland's fertility regime: first, that the fertility of 1st generation women below the age of 32 accounts for the majority of the gap between TFR for the total population and TFR for the native Finnish population from 2010 onwards. This suggests that recent immigration counteracted the period TFR of Finland from reaching an even lower low than it has, which would potentially create more sustainable working age populations, schools, and other institutions if immigrants maintain Finland as their home in the future. Second, we find that the period fertility of the 2.5 generation immigrant women, rather than falling between native Finns and 1st generation immigrants, is actually lower than either. This is an unexpected finding, as it does not adhere to traditional theories of assimilation or adaptation, but rather demonstrates an even lower period fertility rate and higher levels of childlessness than native Finnish peers or 1st generation immigrants. This may be due to the age composition of the 2.5 generation—overall, they are somewhat younger than 1st generation immigrants and native Finns—however it could also be due to changing norms, educational and employment expectations, or shifts in the sending countries to Finland.

References

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Appendix

Table 1. Absolute and percentage distributions of individual characteristics of index women by immigrant background (*N* = unique observations)

	Total		Native Population		1 st Generation background	2 nd Generation background	2.5 Generation Background
	N	%	N	%	%	%	%
Total	2,345,656	100	2,162,370	92.2	6.4	.35	1.05
Helsinki and Uusimaa Area	652,582	27.8	564,151	26.1	47.7	60.3	47.9
Language							
Finnish	2,2080,247	88.7	2,052,769	94.9	3.1	32.3	82.1
Swedish	110,890	4.7	107,033	5.0	1.1	2.1	8.0
Other	154,519	6.6	2568	0.1	95.8	65.2	9.8
Education							
Missing	559,318	23.8	479,934	22.2	45.2	48.5	30.3
Secondary	928,854	39.6	876,818	40.6	45.8	37.9	40.9
Tertiary	857,484	36.6	805,618	37.3	29.0	13.7	28.8
Employment							
Unemployed	168,705	7.2	145,425	6.7	14.2	5.9	5.8
Employed	1,718,689	73.3	1,629,287	75.4	47.4	47.9	57.7
Student	215,656	9.2	185,703	8.6	13.8	36.3	25.3
Retired/ Pensioner	101,482	4.3	99,033	4.6	1.2	2.3	2.1
Outside labor force	141,124	6.0	102,922	4.8	23.5	7.6	9.1
Ever married	2,196,519	93.6	2,036,170	94.2	88.5	77.8	84.6
Ever divorced	397,363	16.9	365,267	16.9	19.5	6.1	9.2

	Total		Native Population		1 st Generation background	2 nd Generation background	2.5 Generation background
	N	%	N	%	%	%	%
Age at first childbirth	708,360						
<24	162,656	23.0	152,034	22.9	23.3	46.0	25.6
25-29	281,482	39.7	265,032	39.9	37.3	26.0	36.2
30-34	185,795	26.2	174,146	26.2	26.4	18.5	26.2
35-39	64,259	9.1	59,720	9.0	10.3	8.4	9.6
>40	14,168	2.0	13,001	2.0	2.7	1.2	2.4
Completed Fertility							
0	1,424,481	60.7	1,306,629	60.4	61.6	89.1	72.6
1	223,716	9.5	202,159	9.4	12.6	4.1	9.0
2	387,933	16.5	362,038	16.7	15.2	3.9	11.1
3+	309,526	13.2	291,544	13.5	10.6	2.9	7.3
Completed Fertility for those observed 15 years or more	1,133,049						
0	410,662	32.0	397,355	34.1	30.4	44.9	38.0
1	171,835	14.5	165,278	14.2	16.0	11.5	16.5
2	346,569	29.8	335,000	28.7	28.7	23.3	26.9
3+	278,147	23.8	268,492	23.0	24.9	20.3	18.7
Birth year							
<1960	859,662	36.7	839,597	38.8	10.1	20.6	13.2
1960-1980	720,652	30.7	654,957	30.3	40.3	4.0	19.1
1980-2002	765,342	32.6	667,816	30.9	49.6	75.4	67.7

Figure 1

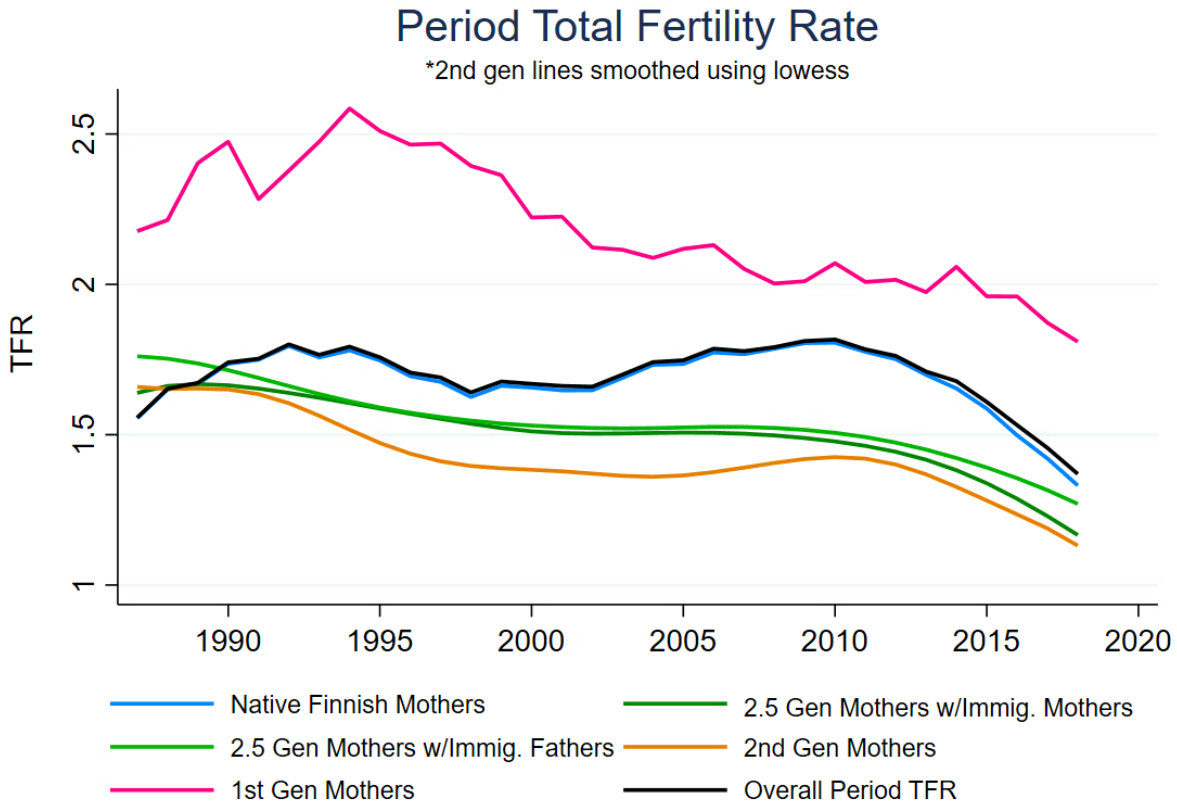


Figure 2a

