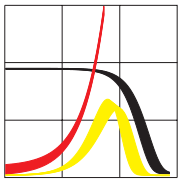

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Childbearing dynamics of couples in a universalistic welfare state: the role of labor-market status, country of origin, and gender

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Childbearing Dynamics of Couples in a Universalistic Welfare State: The Role of Labor-market Status, Country of Origin, and Gender

Gunnar Andersson[1] and Kirk Scott[2]

Abstract
In this paper, we provide a study of childbearing dynamics by the labor-market status of co-residing one- and two-child parents in Sweden. We apply event-history techniques to longitudinal register data on life histories of foreign-born mothers from ten different countries and the partners to these women as well as a sample of Swedish-born mothers and their partners. Our context is a universalistic welfare state geared towards gender and social equality where formal social rights largely are independent of a person's civil status, citizenship, and country of origin. We investigate to what extent the associations of parents' labor-market status with childbearing in Sweden differ between women and men and by country of origin. We find that patterns of association are fairly similar on both these personal dimensions. As measured by the way labor-market activity of parents is related to their subsequent childbearing behavior, we find striking evidence of equality by gender as well as some evidence of integration of immigrants into the dynamics of Swedish society.

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1. Introduction

In family-demographic research, Sweden and the Nordic countries frequently serve as a point of reference. This stems from the fact that Scandinavia has often been a forerunner in the development of new trends in family-demographic behavior, and that in many aspects it has very reliable demographic data to detect and analyze such behavior. In addition, the experience of Sweden and its Nordic neighbors is of interest because they have been innovative in terms of policy development that enhances the reconciliation of work and family life. In research on childbearing dynamics, it is very common to relate the relatively high fertility of the Nordic countries to the setup of their policies and the characteristics of the Nordic welfare regime. Policies aimed at strengthening women's labor-market attachment and at promoting gender equality have made it easier for women to combine work and family life (see, for example, B. Hoem 1993; Bernhard 1993). Previous research on childbearing dynamics in the Nordic countries indicates a high degree of compatibility between individual labor-market activity and family building as women and men both tend to get established in the labor market before having children, and as they remain there after becoming parents. Demographic studies from these countries reveal a positive association between women's labor-market attachment and childbearing (Kravdal 1994, Andersson 2000, Vikat 2004) and this is commonly seen in the light of the existing welfare-state setup.

Sweden is a universalistic welfare state where social rights largely are granted to individuals independently of their civil and family status. It is explicitly geared towards the promotion of gender equality. To a large extent, formal rights are also independent of citizenship and country of origin as most rights simply are tied to legal residence in the country. In this paper we aim at gaining insight into the gendered dynamics of the childbearing behavior of parents living in a context of that kind, and the extent to which the possibly equalizing impact of the universalistic welfare state on social behavior also extends to the childbearing dynamics of immigrants. For that purpose, we study the propensity of different groups of foreign-born mothers to have a second or third child, in order to detect differences in behavior between different immigrant groups, and what differences may exist towards the Swedish-born population. In particular, we use information from administrative registers on both a mother's and father's experience in the Swedish labor market to investigate to what

extent such experiences affect the propensity to have another child and to what extent the characteristics of women and men have a differential impact on childbearing behavior. A study of the gendered nature of fertility dynamics of parents stemming from many different countries of origin is likely to provide deeper insight into childbearing dynamics in Sweden in general, and into the various patterns of fertility adaptation of immigrants. The study is a continuation of our previous study on the labor-market status and first-time parenthood of immigrant women in Sweden (Andersson and Scott 2005).

2. Background: migration, labor-force participation, and fertility in Sweden

Sweden has been a country of immigration for more than half a century. Initially, labor-force migration dominated and up to the 1970s a majority of migrants came from neighboring Finland. From the mid-1980s, immigration has instead been dominated by refugee migration and family reunification. Immigrants now come from a much wider range of countries than before, from all over the world. The latest period of high immigration to Sweden during the twentieth century, with peaks in migration during the late 1980s to early 1990s, coincided with a negative turnaround in the Swedish labor market. Unemployment rose in the early 1990s and remained high until the end of the same decade. The newly arrived population subgroups faced difficulties establishing themselves in the Swedish labor market, triggering a debate about the causes of their poor integration into Swedish society. At the beginning of the new century, immigration to Sweden has increased again, but this time the new residents of Sweden face a much better labor-market situation than did the preceding cohorts of newcomers. In the present study we provide information on the labor-market experience of foreign-born parents in Sweden during the 1980s and 1990s. We do not aim at explaining their patterns of labor-market activity (for such insight, see instead Aguilar and Gustavsson 1994; Scott 1999; Rooth 1999; Bevelander 2000; Bevelander and Skyt Nielsen 2001; Rosholm et al. 2001; le Grand and Szulkin 2002), but will rather use that information to see how immigrants' labor-market status is associated with their childbearing dynamics.

The 1980s and 1990s were also a period of fluctuating, "roller-coaster" fertility in Sweden, with increases observed during the 1980s and decreases during the 1990s (Hoem and Hoem 1996, 1999; Andersson 1999, 2000), followed by new

increases during the early 2000s (Andersson 2004a, 2005). On average during the past couple of decades, Sweden has experienced a "highest-low fertility": total fertility has been below the replacement level but still relatively high as compared to many other countries in Europe while fluctuating around the average level of its neighboring Nordic countries (with a recent TFR around 1.8). The relatively high fertility of Sweden and the other Nordic countries has attracted considerable attention, and links have often been made to their systems of social policies directed towards working parents and the increasing emphasis on gender equality in Nordic society. Such factors are assumed to facilitate the combination of work and family life for women (Bernhardt 1993; B. Hoem 1993; Brewster and Rindfuss 2000; McDonald 2000a,b; Neyer 2003; Andersson 2005). Several empirical studies indicate that the incompatibility between female labor-market activity and childbearing indeed appears weak in present-day Sweden: the labor-force participation of Swedish women is positively related to their propensity to become a mother (Hoem 2000; Andersson 2000) and, to a lesser extent, to have another child (Andersson 2000; Duvander and Andersson 2003; Andersson et al. 2005). These studies provide some support for the notion that various institutional and policy factors are indeed important in shaping childbearing behavior. Sweden's generous parental-leave system, for example, where benefits are based on prior earnings, is likely to strengthen the positive relationship between women's labor-market participation and their fertility. In this context, a basic level of female earnings is considered a prerequisite for having children rather than as some kind of hindrance to it (Andersson 2000).

Our previous study on first-birth dynamics of foreign-born women in Sweden (Andersson and Scott 2005) revealed that the positive relationship between labor-market participation and the propensity to become a mother in Sweden holds for a large number of immigrant groups as well. The interesting aspect of this study is that women coming from widely different cultural backgrounds tend to exhibit remarkably similar associations of their childbearing behavior with their labor-market status, which suggests that fertility patterns are influenced by the Swedish institutional context. A study on period effects in childbearing dynamics of Swedish and foreign-born women in Sweden gives additional support to the notion that the macro-level context of Swedish society is indeed important in shaping childbearing dynamics in that country (Andersson 2004b).

3. Research question

In the present paper, we extend previous empirical research on fertility dynamics in Sweden by looking at the childbearing behavior of parents with Swedish and non-Swedish origin. In particular, we study the extent to which the associations of various economic and demographic characteristics of parents with their childbearing dynamics differ by the sex and country of origin of a parent. In short, we aim at detecting to what extent the context of a universalistic welfare state indeed produces the similarity in patterns of childbearing across different categories of parents as much previous empirical research from Sweden would suggest (see previous section), or if we rather find the pronounced differentials in patterns by gender and cultural background as is predicted by much general social science theory (see below).

A review of such theory is beyond the scope of this paper, but there is no lack of literature that predict both some gendered patterns in family dynamics and that cultural factors should be important in shaping the family dynamics of immigrants. Childbearing and labor-force participation are often viewed as competing careers in women's lives but not in men's. This is particularly true for economic theory predicting that women and men in couples tend to specialize in different kinds of production activity, so that women typically disinvest in their labor-market career in order to increase their productivity in household-related activities, such as childrearing (see Becker 1991).

For immigrant women, there might be additional conflicts between family building and labor market activity that is not entirely linked to gender. There is a notion that the minority group status (Goldscheider and Uhlenberg 1969) might depress the fertility of an immigrant group in order to focus attention on enhancing its position in society by actively improving its position in the labor market. In some cases, the impact of other cultural norms, perhaps being related to less equal gender roles, could produce more 'conservative' patterns of behavior, where women who are more oriented towards family responsibilities are less active in the labor market. In addition, in a situation where immigrants have severe problems in getting themselves established in the labor market, alternative patterns of family formation might appear. In an uncertain economic situation, family building could serve as a replacement for active labor market participation (cf. Friedman et al. 1994). While other similar lines of reasoning also exist, these arguments all support the plausibility of a negative

association between the labor market activity and childbearing of foreign-born mothers.

4. Data, method, variables, and study population

Sweden is well suited to studies of demographic behavior due to the availability of high-quality individual-level population-register data (SCB 2003) covering all individuals who contributed to the population census of 1960, or were born in the country or entered the system as an immigrant since that time. The register contains records of all vital events to these individuals such as birth, death, any change in civil status, registered international migration, and change of address in Sweden. Each birth record contains the identification number of the child's mother and father, allowing the linkage of available information on parents residing in Sweden. In addition, it has been possible to link children born abroad, but at some time living in Sweden, to their mother and father in Sweden. This results in largely complete childbearing histories of native and foreign-born women and allows for a distinction between births occurring before a migration to Sweden and births occurring after such a migration[1].

Swedish registry data do not contain information on the cohabitation status of individuals. This limitation excluded the use of partner data in our previous study on the first-birth dynamics of foreign-born women in Sweden (Andersson and Scott 2005). The registry data do, however allow us to link partners with common children, a feature which we exploit in the present study on higher-order childbearing. From address changes following the birth of a common child one can reconstruct which unions were subsequently dissolved.

The present study uses a data set derived at Statistics Sweden from such registers and linked to additional data from various administrative registers. Our study population is defined to include the entire populations of co-residing one- and two-child parents where the mother had legal residence in Sweden at any time during 1981-1997, was born in 1945 or later, and belongs to one of ten foreign-born

[1] We have no information on children who have never lived in Sweden, such as those who might have died before their mother entered or were left behind in the country of origin. We limit the problem of such omission of children by restricting our data to women who immigrated to Sweden at age 35 years or less. This should guarantee that the vast majority of children to these women show up in Sweden and in our data, which will give a proper picture of the 'social' parenthood of foreign-born women.

populations in Sweden.[2] We investigate the fertility patterns of couples where the mother is born in Finland, Germany, Poland, Greece, Iran, Turkey, Somalia, Thailand, Vietnam, or Chile, and compare these patterns to those of a five-percent sample of the Swedish-born population. In all cases, we include information on both the mother and her co-residing partner from the time of becoming a parent (or of immigrating to Sweden if this happened after becoming parent), regardless of the father's country of origin. The country groups are chosen so that they represent ten of the largest foreign-born groups in Sweden while at the same time representing a broad variation in national origins. For the 1980s and the 1990s, we have been able to add information on registered income of all these parents, and on various public transfers to them, being derived from the tax registers. We use this information to investigate the associations of various types of labor-market attachment of parents in Sweden with their continued childbearing.

The study provides an event-history analysis of these parents' propensity to have a second or third child using the demographic and labor-market characteristics of both parents as covariates of their continued childbearing. A couple is censored at the end of the year of any union dissolution, at the end of 1997, when a mother turns 45, at the first emigration or death of any of the parents, and otherwise stopped at a third or twin birth.

We present relative risks of giving birth to a second or third child for different categories of one- and two-child parents living in Sweden. We calculate relative risks for each category of our variables, which include age of previous child or, more correctly, time since previous birth, age and labor-market activity of both parents, time since immigration to Sweden of the mother, calendar period, the local labor market characteristics in a given year, and country of origin of the mother and her partner. Estimation is done in STATA, using the STPIECE module for piecewise constant hazard rate models (Sorensen 1999).

Since our dependent variable is birth of a child we create variables defining labor-market activity in such a manner as to indicate the main economic activity of a

[2] The immigrant parents are defined by their own birth-country, and this status remains regardless of any subsequent change to Swedish citizenship. The recorded date of immigration to Sweden is the date when an immigrant received a permanent residence permit. For the group of refugee migrants in the 1980s and the 1990s, there is often a considerable waiting time between the actual move to Sweden and the time of approved and registered immigration. Our data contain information on childbearing also of women who have emigrated from Sweden again – up to the date when an emigration is recorded.

parent during the year prior to observation[3], based on the recorded annual earned income, including any income replacement during periods of sickness and parental leave, as well as income derived from transfers related to unemployment, study activity, and social welfare, respectively. For parents whose main income is derived from earnings, we indicate the strength of his or her labor-force activity by a categorization of the absolute level of these earnings, as represented by the annual earnings before tax but after the deduction of social insurances in Swedish kronor (SEK)[4] converted into 1995 prices. We define eight mutually exclusive labor-market states related to being student, unemployed, on welfare, non-participant, or having a low, medium, high, or top-level earning. Our definitions are as follows:

- Enrolled *student* – having public student assistance (loans and grants) as the primary source of non-earned income during the year, and not earning more than 71,400 SEK[5] from work. Practically all students in Sweden receive public financial support.
- *Unemployed* – having unemployment assistance or allowances from labor-market retraining programs as the primary source of non-earned income during the year, and not earning more than 71,400 SEK from work. A parent with unemployment benefits above that amount is counted as unemployed regardless of his or her level of earned income.
- *Welfare* recipient – having social-welfare transfers as the primary source of non-earned income during the year, and not earning more than 71,400 SEK from work. Social welfare is being paid to persons who cannot support themselves by other means and includes, for example, an introductory allowance for refugees who have got a residence permit in Sweden.
- In the labor force and earning a *low income* – earning between 35,700 and 107,100 SEK in a year from work, and not being a student, unemployed, or a welfare recipient according to the definitions above.

[3] In this manner we approximate conditions at the time of conception, which would in reality be relevant to the childbearing decision.
[4] The value of a SEK was approximately 11 Euro cents in 2006.
[5] 71,400 SEK is the value of two Swedish 'basbelopp' (base amounts). The 'basbelopp' is a purely administrative measure, but since most public transfers in Sweden are related to that amount, we choose to use it also as the basis for the construction of our income categories. Our income brackets for the various categories of women with earnings, for example, are 1, 3, 5, and 7.5 times that amount. For further information on our data and definitions, see Andersson and Scott (2005) where we apply a similar setup of variables in our study on labor-market status and first-time parenthood.

- Earning a *medium income* – earning between 107,100 and 178,500 SEK from work.
- Earning a *high income* – earning between 178,500 and 267,750 SEK from work.
- Earning a *top income* from work – more than 267,750 SEK in a year. Very few women but not so few men earn that much and those who do are entitled to relatively less generous income replacement during periods of unemployment, sickness or parental leave.
- *Non-participant* – not falling into any of the categories mentioned above.

Since the local business cycle may matter for childbearing behavior (cf. Hoem 2000) we utilize information on the characteristics of the local labor market of the municipality where a couple lived during the year prior to the observation time. We use this information to distinguish between contexts where job vacancies exceed the number of individuals reported as unemployed and vice versa. An excess of vacancies in the municipality in a given year is defined as a "good" labor market while an excess of unemployed is regarded as a "bad" labor market situation. We use the information on these regional characteristics and on the labor-market attachment of both partners in a given calendar year as determinants of their propensity to have another child in the following year. With our data, we are able to study second and third births during the period 1982-1997.

5. Foreign-born parents in Sweden

Table 1 shows the number of mothers included in our study, by country of birth, and the number of second and third births in Sweden to these women. Note that any woman can appear both as a one- and two-child mother[6] and that as a comparison the data also comprise a five-percent random sample of Swedish-born mothers. Table 2 provides additional information on immigration period to Sweden for our study populations of foreign-born mothers, and Table 3 reports on the country background of the fathers in the couples we cover. As already mentioned, our study comprises mothers stemming from ten different countries. The immigration histories of these various population sub-groups in Sweden are briefly described below.

[6] A woman can appear in our study just as a two-child mother if she entered our study population already as a mother of two at the beginning of 1982 or at a later immigration to Sweden.

Table 1: Study population of mothers living in a union in Sweden, 1982–97, by country of origin, and births in Sweden to these women

	One-child mothers	Second births	Two-child mothers	Third births
Sweden[1]	27496	19352	33438	9506
Finland	21685	13314	23953	6320
Germany	1873	1119	1799	469
Poland	6593	3331	5079	927
Greece	1197	840	1659	329
Iran	4531	2461	3963	701
Turkey	4560	3544	4319	2435
Somalia	765	625	640	440
Thailand	1640	830	1025	273
Vietnam	1251	912	1042	520
Chile	2672	1701	2981	1031

[1] Five-per-cent sample of Swedish-born women
Notes: Cohorts 1945 and later
Source: Swedish population registers, authors' calculations

Table 2 Percentage distribution of study populations of immigrant one- and two-child mothers living in Sweden, 1982–97, by immigration period to Sweden

	Pre 1970	1970–79	1980–89	1990–97
Finland	43	42	12	2
Germany	36	21	28	15
Poland	4	34	46	16
Greece	21	51	22	5
Iran	0	3	68	30
Turkey	3	35	43	20
Somalia	0	0	9	91
Thailand	0	14	42	44
Vietnam	0	12	46	42
Chile	0	24	67	9

Source: Swedish population registers, authors' calculations

Table 3: Percentage distribution of study populations of immigrant one- and two-child mothers living in Sweden, 1982–97, by country of origin of co-residing partner

	Partner born in same country	Partner born in Sweden	Partner born in third country
Sweden	95	--	5
Finland	40	52	8
Germany	11	74	15
Poland	36	46	18
Greece	82	13	5
Iran	94	3	3
Turkey	88	3	9
Somalia	82	1	17
Thailand	8	83	10
Vietnam	83	6	11
Chile	73	17	10

Source: Swedish population registers, authors' calculations

Immigrants from *Finland* comprise by far the largest single foreign-born population in Sweden. The reasons for this are partially historical, partially geographical, and partially economic. Due to a shared national history up to the early nineteenth century, a significant portion, roughly six percent, of the Finnish population is Swedish-speaking and Swedish is an official language in Finland. Finland is also Sweden's nearest neighbor to the east, and it lagged behind Sweden economically before eventually catching up during the 1980s. These facts, plus the existence of a free Nordic labor market, led to a large flow of labor migrants from Finland to Sweden, which slowed down only during the late 1970s to early 1980s due to the equalization in living standards between the two countries. This migration history is noticeable in the fact that 85 percent of the Finnish women in our study arrived in Sweden prior to 1980. Due to the long intertwined migration history, many Finnish-born women have settled down with Swedish-born men, with just over half of co-residing mothers in a union with a native-born.

This study treats immigrants from East and West *Germany* as members of the same country, although most immigrants came before reunification (and from West Germany). Germany had an early tradition as a labor exporting country immediately following the Second World War, and has consistently sent economic migrants to Sweden since then. Very high fractions of German women and men have migrated to Sweden in order to marry or cohabit with a Swede, a fact visible in our study by

German-born women having the second-highest share in unions with Swedish-born men (74 percent).

Polish immigrants in Sweden arrived for a variety of reasons. Some came as refugees from the communist regime, either for political reasons or as members of the persecuted Jewish minority, while others came as tied movers, either to previously migrated Poles or, more commonly, to Swedes: roughly 50 percent of the Polish mothers in our sample are in unions with Swedish men. As with Finland, geographic proximity to Poland simplified migration, while in many ways the existence of a communist regime until the late 1980s worked against it. Migration from Poland was most intense during the 1980s, when successive liberalizations eased possibilities for exit.

Immigrants from *Greece* came largely as labor migrants during the late 1960s, and then later as family members following these early migrants, but there were also a number of refugees who came after the 1967 military coup. These refugees tended to return to Greece, however, leaving the majority of the remaining population as labor immigrants. Migration from Greece has trailed off since the early 1980s, and Greek women show very strong tendencies towards co-residential homogamy, with 82 percent of mothers being in a union with a fellow Greek.

The few *Iranian* immigrants that came to Sweden prior to the 1979 Islamic revolution arrived as students. The real surge in numbers of Iranians came with the waves of refugees arriving during the mid- to late 1980s (with 68 percent of mothers having arrived in this decade). It was during this time that Iranians proceeded to become one of Sweden's largest immigrant nationalities. Iran is also the group in our study with the highest homogamy rates, with 94 percent of Iranian mothers being in a union with an Iranian-born man.

Turkey has a varied history of migration to Sweden. During the 1960s, Turks arrived as labor migrants, but later there was a shift in character towards refugee immigration – largely dominated by ethnic Kurds. During the entire period we can also identify large-scale tied immigration: Most Turkish-born women came to Sweden as wives to previously immigrated Turkish men, as is also reflected in the 88 percent couple homogamy of the Turkish mothers in our sample.

Immigration from *Somalia* to Sweden was basically non-existent prior to the civil unrest of Somalia during the 1990s. Almost all Somalis living in Sweden arrived during this very recent period as either refugees or tied movers with familial

relationships with refugees. Of all immigrant nationalities, Somali women have the lowest proportion of childbearing with a Swede; less than one percent of the mothers in our data lived together with a Swede.

Thailand has not been a major sending country for refugee or labor migrants. On the other hand, a large number of Thai women have come to Sweden due to relationships with Swedes, and Thais have the highest level of couple heterogamy of all immigrant groups in our study. Only 8 percent of the Thai mothers in our data are in a union with a Thai-born man, while 83 percent are in a union with a Swedish-born man.

Following the fall of Saigon in 1975, and stretching through the 1980s and 1990s, *Vietnamese* immigrants have been arriving in Sweden as both refugees and as tied movers related to refugees. The refugees are largely ethnic Chinese who felt persecuted by the Vietnamese government. Vietnamese mothers in Sweden have a very high rate of couple homogamy (83 percent) and a low share in a union with a Swedish-born male (6 percent).

Chilean immigration to Sweden started on a fairly large scale following the overthrow of the Allende government in 1973. The mid- to late 1970s saw a large number of Chileans entering Sweden as refugees. These refugee flows soon switched to tied movers during the 1980s, as relatives of the early refugees arrived. There was a renewed increase in the numbers of refugees arriving in the late 1980s, just prior to democratization. Three quarters of Chilean-born mothers in a union in Sweden co-reside with a man from their own country.

In Table 4, we provide an overview of the labor-market status of our study populations of foreign-born and native mothers during the period we cover. What is noticeable is that the immigrant groups who have lived longest in Sweden have the highest levels of labor-market integration while more recently arrived groups have more tenuous links to the labor market. The extremes are given by women born in Finland who have the same strong labor-market attachment as the Swedish-born and the group of Somali mothers who are virtually absent from any kind of labor-force activity. In between, we find women from Germany, Greece, and Poland, with around two thirds of mothers established in the labor market, and mothers from Turkey, Thailand, Vietnam, and Chile with around half of them with own earnings. Iranian women have a weak attachment as well, with just a quarter of mothers being active in

the labor force, but a relatively high tendency to being enrolled as full-time students, with sixteen percent of Iranian mothers falling into this category.

Table 4: Percentage distribution of study populations of one- and two-child mothers living in Sweden, 1982–97, by labor-market status for different birth countries

	Sweden	Finland	Germany	Poland	Greece	Iran
Earnings < 107,100	29	23	26	20	22	11
Earnings 107,100–178,500	46	48	33	33	36	12
Earnings 178,500–267,750	10	12	10	9	11	2
Earnings > 267,750	1	1	2	2	1	0
Enrolled student	2	2	3	5	2	16
Welfare recipient	0	1	1	3	1	10
Unemployed	4	5	6	10	6	21
Non-participant	7	7	21	18	21	27

	Turkey	Somalia	Thailand	Vietnam	Chile
Earnings < 107,100	23	4	21	12	20
Earnings 107,100–178,500	25	3	25	27	31
Earnings 178,500–267,750	2	0	3	5	5
Earnings > 267,750	0	0	0	0	0
Enrolled student	4	3	6	4	7
Welfare recipient	6	37	2	6	8
Unemployed	13	4	10	15	11
Non-participant	25	48	33	30	19

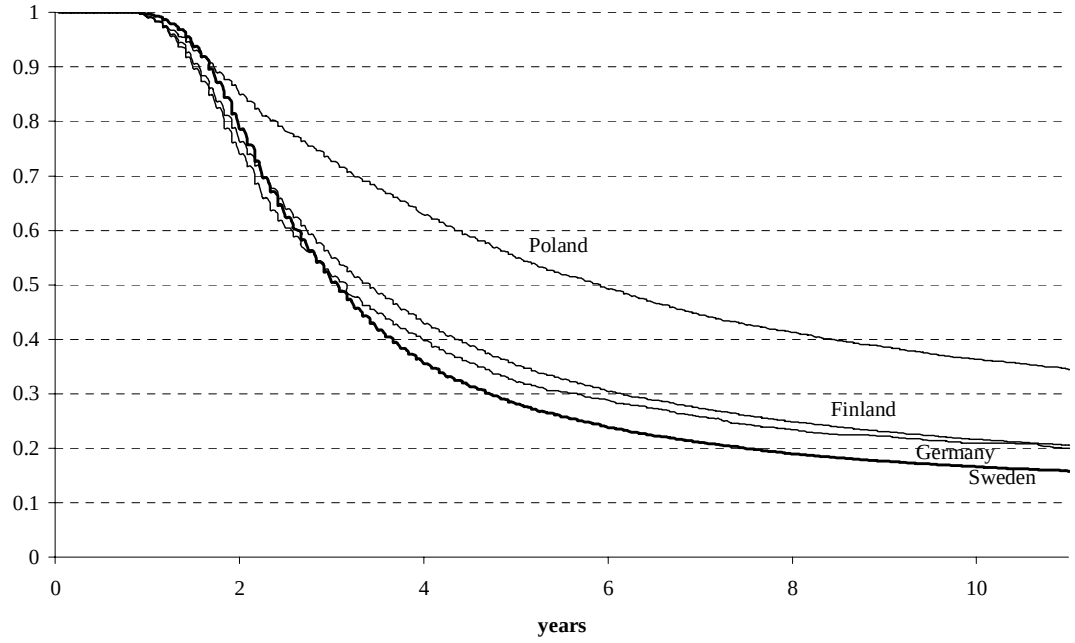
Source: Swedish population registers, authors' calculations

Tables A1 and A2 in the Appendix provide complementary information on period developments in the labor-market status of Swedish-born and the combined group of foreign-born mothers in Sweden, as well as the corresponding information regarding the partners to these mothers. Swedish-born mothers demonstrate an increasing degree of labor-market attachment during the study period, in combination with a noticeable increase in unemployment during the mid-1990s. The heterogeneous group of foreign-born mothers is exposed to elevated levels of unemployment and study activity during the 1990s. As regards gender differences in labor-market activity, we find that fathers somewhat more often than mothers are established in the labor market and that while a majority of mothers have either low- or medium-level earnings fathers very often belong to one of the two higher-earnings categories we have defined. In sum, we find large differences in the way mothers and fathers as well as foreign-born and Swedish-born parents are connected to the labor market. Next, we will turn to the study of the fertility dynamics of these parents, and how their actual status on the labor market interacts with their childbearing dynamics.

6. Childbearing of Swedish- and foreign-born mothers

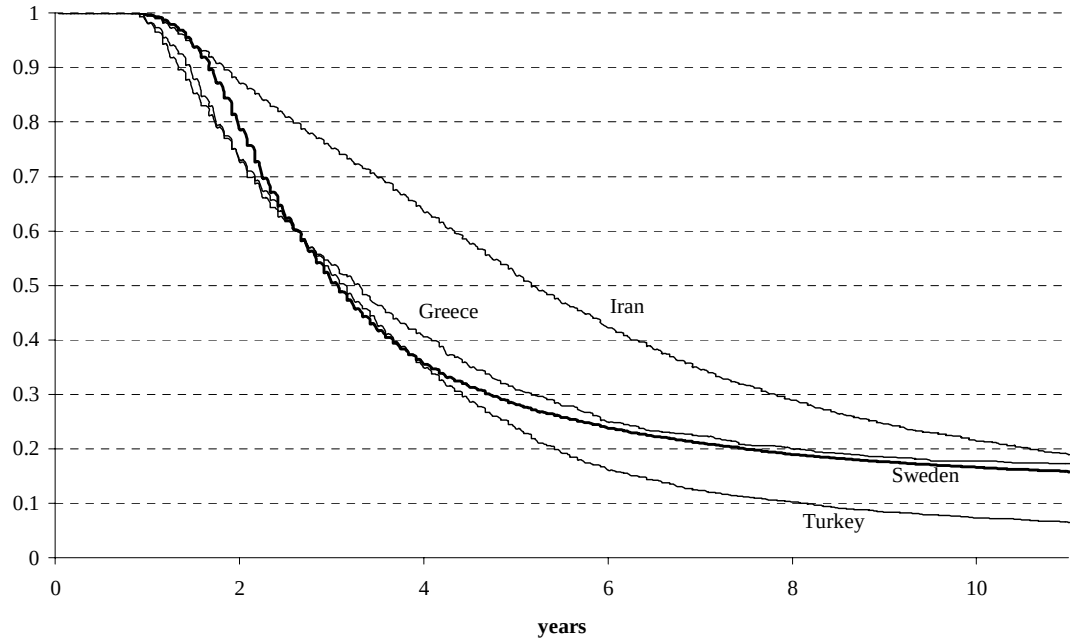
As an introduction to our fertility study, we present crude patterns of the progression to a second and third child, by time since previous birth, as they appear in a simplistic 'survival analysis' of one- and two-child mothers living in Sweden. Figures 1a-c display Kaplan-Meier survivor plots for the different country subgroups of one-child mothers, and Figures 2a-c for the different country subgroups of two-child mothers in our study. These estimates are based on the duration-specific probabilities of mothers having another child while living in Sweden calculated from all observations during the period 1982–1997, but without censoring for any union dissolution of the woman and her partner. The curves thus give a lucid overview of the total second- and third-birth fertility of women in Sweden, both as concerns the final level of mothers who have another child and how fast they have such a child. For a related description of first-birth patterns, see Andersson and Scott (2005: Figure1).

Figure 1a: Proportion of one-child mothers not having had a second child by time since first birth. Women from Finland, Poland, Germany, and Sweden living in Sweden, 1982–97 (Kaplan-Meier survival functions)



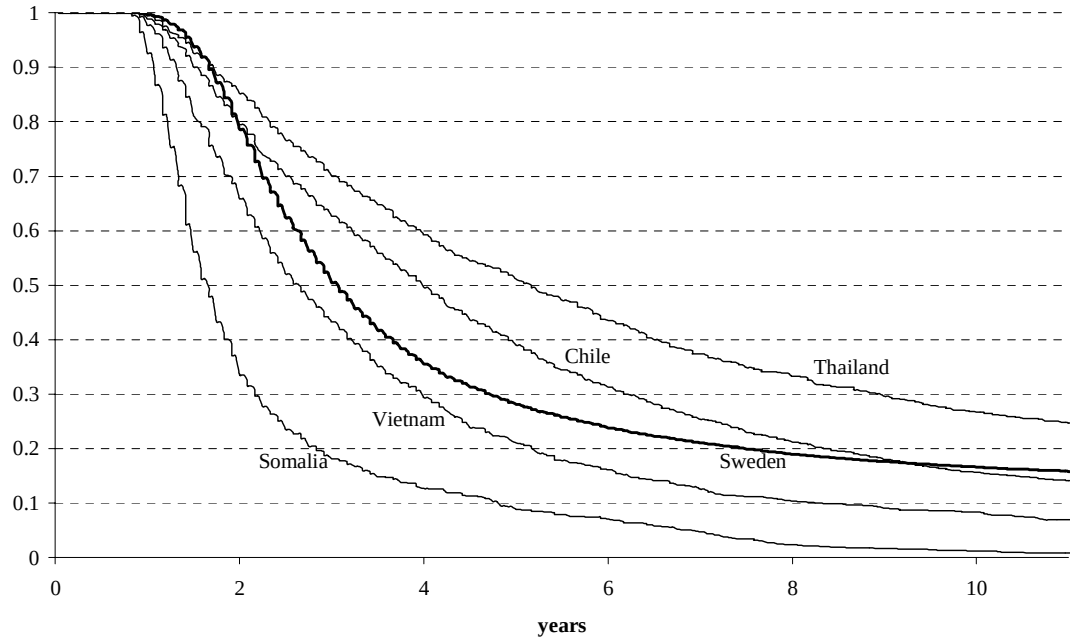
Source: Swedish population registers, authors' calculations

Figure 1b: Proportion of one-child mothers not having had a second child by time since first birth. Women from Greece, Turkey, Iran, and Sweden living in Sweden, 1982–97 (Kaplan-Meier survival functions)



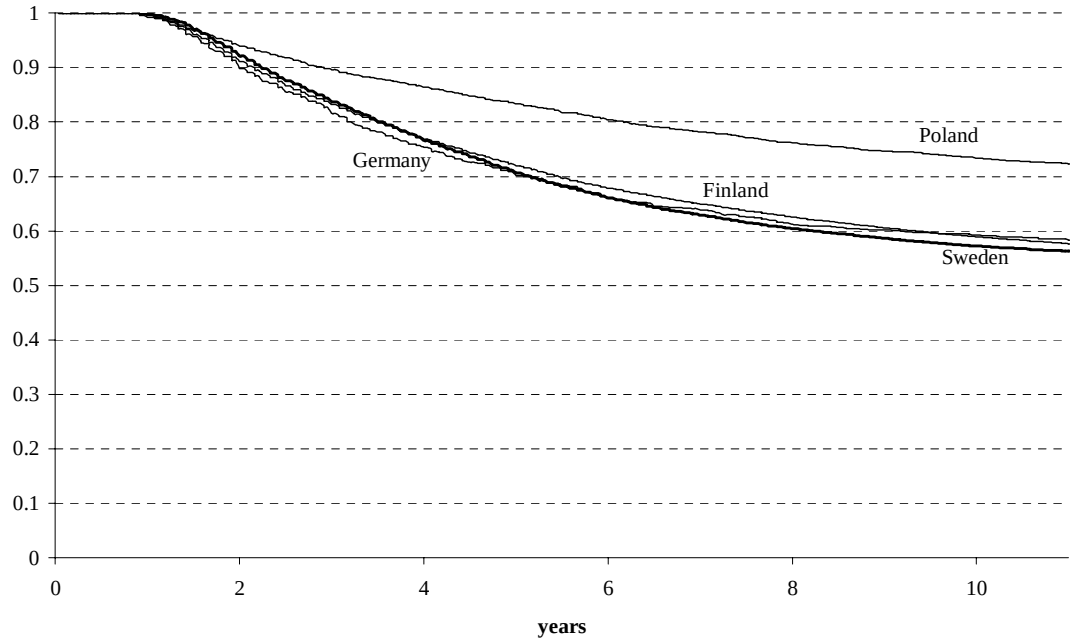
Source: Swedish population registers, authors' calculations

Figure 1c: Proportion of one-child mothers not having had a second child by time since first birth. Women from Chile, Somalia, Vietnam, Thailand, and Sweden living in Sweden, 1982–97 (Kaplan-Meier survival functions)



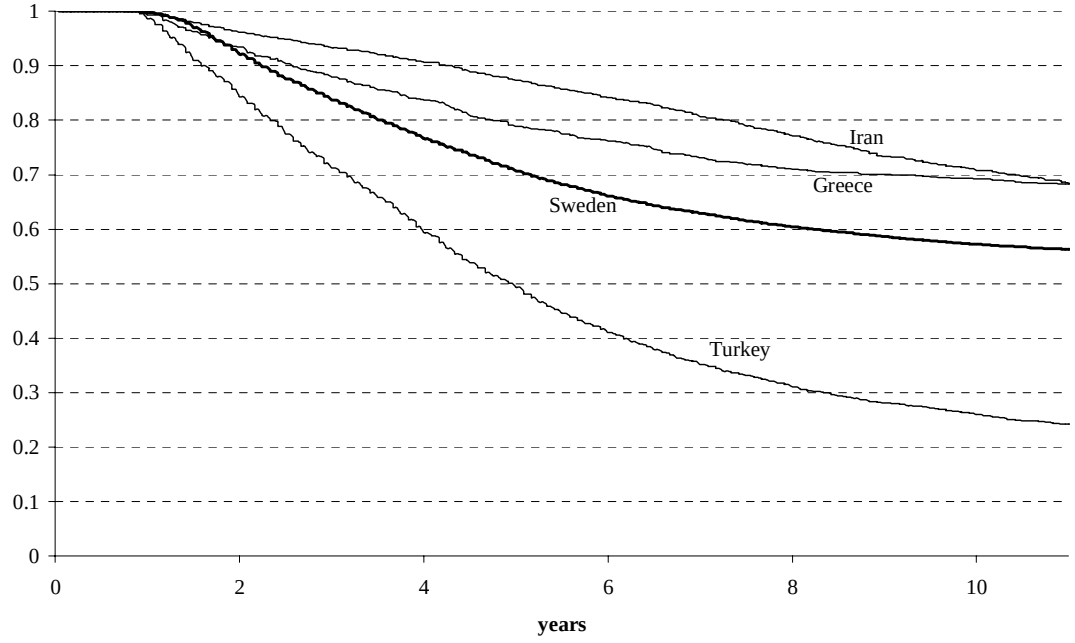
Source: Swedish population registers, authors' calculations

Figure 2a: Proportion of two-child mothers not having had a third child by time since second birth. Women from Finland, Poland, Germany, and Sweden living in Sweden, 1982–97 (Kaplan-Meier survival functions)



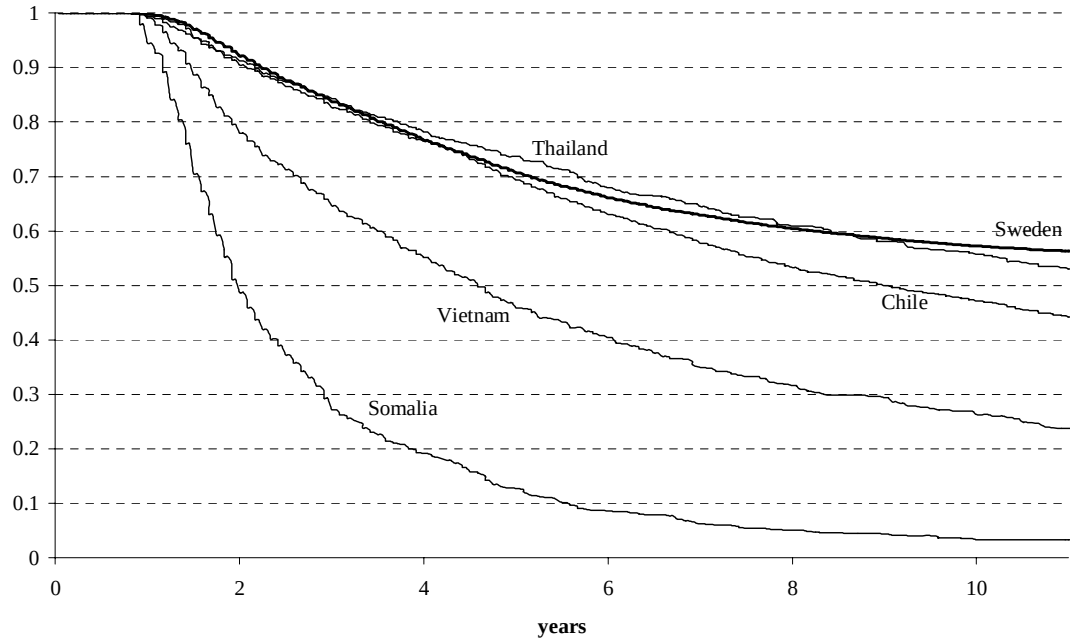
Source: Swedish population registers, authors' calculations

Figure 2b: Proportion of two-child mothers not having had a third child by time since second birth. Women from Greece, Turkey, Iran, and Sweden living in Sweden, 1982–97 (Kaplan-Meier survival functions)



Source: Swedish population registers, authors' calculations

Figure 2c: Proportion of two-child mothers not having had a third child by time since second birth. Women from Chile, Somalia, Vietnam, Thailand, and Sweden living in Sweden, 1982–97 (Kaplan-Meier survival functions)



Source: Swedish population registers, authors' calculations

In sum, the curves demonstrate the existence of foreign-born groups with lower as well as higher second and third-birth fertility than that of Swedish-born mothers. In particular, mothers from Poland and Iran, and to some extent Thailand, impress with relatively low progressions to a second or third child, and women from Turkey and Vietnam, and in particular from Somalia with relatively high parity progressions. Somali women exhibit very fast and almost universal progressions to another child regardless of birth order.

7. Labor-market status, socio-demographic characteristics, and childbearing dynamics

In this section, we proceed to present the results of our multivariate event-history analyses of the childbearing behavior of co-residing parents in Sweden. In Table 5, we present the relative risks of our main models of second- and third-birth behavior of parents in Sweden. These regression results give insight into the dynamics that produce the type of outcomes observed in Figures 1 and 2 and how different individual and macro-level factors are associated with continued childbearing. They are based on our pooled data of parents where observations for Swedish-born mothers

have been weighted so that calculations represent the entire resident population of Sweden. These variable estimates are thus mainly influenced by the behavior of the Swedish-born. A more detailed account of country-specific models for each foreign-born group is provided in Tables A3 and A4 of the Appendix for second and third births, respectively.

An examination of the associations of parents' labor-market status with their childbearing behavior reveals that there is a mostly positive relation between being well established in the labor market and the propensity to expand one's family. For second births this holds for women and men alike, and is in line with previously observed patterns for entry into parenthood. Parents exhibit higher second-birth risks with higher levels of income and decreased risks if belonging to any of the non-employed categories. While the directions of results for mothers are similar as for first births (Andersson and Scott 2005), we note that several crucial effects are much smaller at the higher parities, indicating that labor-market status appears less important for family building once childbearing well has begun.

For third births, patterns are slightly different. Women exhibit a clearly positive relation between their level of earnings and continued childbearing, but this does not hold for men. While families where the father has a top earning indeed also have elevated third-birth risks we also find that couples where the father has a very tenuous link to the labor-market, being a low-income earner, student, welfare recipient, or non-participant, are the ones with the highest propensity to have a third child.

In Table 6, we provide further evidence on the gendered associations of parents' labor-market status with childbearing behavior by presenting summary output from models that are based on only the mother's and father's characteristics, respectively. This serves the purpose to demonstrate that the effects of male and female labor-market status largely work independently of each other. Evidently, in a situation like in Sweden, a simpler model specification with information on only one of the two parents produces results that are accurate enough to correctly depict the role of either the mother's or father's labor-market attachment in childbearing dynamics. Nevertheless, for insight into the gender-specific pathways to family building that we have presented here, we certainly need data on both women and men.

Table 5: Relative risk of second and third birth by age, labor-market status, and country of birth of woman and her partner, status of the local labor market, calendar period, and time since woman's migration to Sweden. One- and two-child couples in Sweden, 1982-97. Also absolute risks (per year) by time since previous birth.

	2nd birth	3rd birth
Child aged 0	0.01	0.01
Child aged 1	0.33	0.12
Child aged 2	0.70	0.17
Child aged 3	0.68	0.17
Child aged 4	0.54	0.18
Child aged 5	0.42	0.17
Child aged 6	0.33	0.13
Child aged 7	0.29	0.12
Child aged 8	0.20	0.10
Child aged 9	0.18	0.09
Child aged 10	0.10	0.05
Wmn aged <20	1.23*	2.30*
W: 21-23	1.11*	1.98*
W: 24-26	1.09*	1.41*
W: 27-29 (ref)	1	1
W: 30-32	0.87*	0.73*
W: 33-35	0.72*	0.57*
W: 36-38	0.45*	0.34*
W: 39-41	0.19*	0.13*
W: 42-44	0.04*	0.03*
Man aged < 27	0.83*	1.01
M: 27-35 (ref)	1	1
M: 36 +	0.77*	0.89*
1982-84	0.71*	0.66*
1985-87	0.81*	0.81*
1988-91 (ref)	1	1
1992-94	1.00	0.89*
1995-97	0.85*	0.63*

	2nd birth	3rd birth
Labor market good (ref)	1	1
Labor market poor	0.96	0.91*
Woman: low earnings	0.98	0.94*
W: medium (ref)	1	1
W: high earnings	1.01	1.15*
W: top earnings	1.21*	1.50*
W: student	0.53*	0.65*
W: welfare	0.64*	1.00
W: unemployed	0.79*	0.98
W: non-participant	0.78*	1.05
Man: low earnings	0.95*	1.22*
M: medium (ref)	1	1
M: high earnings	1.06*	0.93*
M: top earnings	1.21*	1.17*
M: student	1.04	1.25*
M: welfare	0.76*	1.24*
M: unemployed	0.84*	1.06
M: non-participant	0.85*	1.27*
Mother & partner's country of origin	See sub-table below	
Childhood in Sweden	1	1
2nd year in Sweden	1.45*	1.26*
3rd year in Sweden	1.20*	1.24*
4-5th year	0.94*	1.27*
6-8th year	1.03	1.26*
9th + year	1.04*	1.17*

	2nd birth			3rd birth		
	Country of father			Country of father		
Country of mother	Same	Swedish	Other	Same	Swedish	Other
Sweden	1 (ref)	1	0.87*	1 (ref)	1	1.07
Finland	0.82*	0.94*	0.87*	0.78*	0.94*	0.89*
Germany	0.98	1.01	0.86	0.71*	1.00	0.81
Poland	0.60*	0.71*	0.65*	0.46*	0.63*	0.48*
Greece	0.88*	1.02	0.83	0.37*	0.62*	0.39*
Iran	0.75*	1.04	0.75*	0.43*	0.99	0.50*
Turkey	1.07*	0.91	1.33*	1.15*	0.53*	1.46*
Somalia	4.57*	1.95	3.83*	5.03*	2.48	4.34*
Thailand	0.84	0.73*	0.76*	1.18	0.86	1.34
Vietnam	1.38*	0.81	1.32*	1.77*	0.98	1.90*
Chile	1.01	0.96	0.78*	0.89*	1.30*	0.90

Notes: *Significant at the 5 percent level; Observations for the Swedish-born are weighted so that calculations represent the entire resident population of Sweden.
Source: Swedish population registers, authors' calculations

Table 6: Relative risk of second and third birth, controlling for labor-market status of only the mother, only the father, and both parents. Standardized for age and birth-country of the two parents, status of the local labor market, calendar period, and time since the previous birth and any migration of the mother. Couples in Sweden, 1982-97.

	2nd birth			3rd birth		
Controlling for labor-market status of:	Mother only	Father only	Both	Mother only	Father only	Both
Wmn: low earnings	0.97		0.98	0.95*		0.94*
W: medium (ref)	1		1	1		1
W: high earnings	1.04		1.01	1.16*		1.15*
W: top earnings	1.26*		1.21*	1.67*		1.50*
W: student	0.53*		0.53*	0.66*		0.65*
W: welfare	0.59*		0.64*	1.07		1.00
W: unemployed	0.77*		0.79*	0.99		0.98
W: non-participant	0.76*		0.78*	1.08*		1.05
Man: low earnings		0.92*	0.95*		1.21*	1.22*
M: medium (ref)		1	1		1	1
M: high earnings		1.06*	1.06*		0.91*	0.93*
M: top earnings		1.22*	1.21*		1.20*	1.17*
M: student		0.96	1.04		1.20	1.25*
M: welfare		0.70*	0.76*		1.23*	1.24*
M: unemployed		0.81*	0.84*		1.04	1.06
M: non-participant		0.82*	0.85*		1.27*	1.27*

Notes: *Significant at the 5 percent level; Observations for the Swedish-born are weighted so that calculations represent the entire resident population of Sweden.
Source: Swedish population registers, authors' calculations

Turning to the issue of whether patterns of associations are similar across the various country-groups of foreign-born parents, and whether these patterns deviate from those of the Swedish-born population, we have to make a closer inspection of the results from the country-specific models of Tables A3 and A4. In the case of associations of labor-market status with the propensity to become a parent (Andersson and Scott, 2005), we found a remarkable similarity in patterns across our country groups of women. In the case of second and third births, patterns are more irregular but the main impression is that the directions of associations are largely similar here as well. In particular, if we compare the childbearing propensities of mothers with medium-level earnings to those of mothers with low earnings or of mothers who are classified as non-participants, we find that women with a stronger attachment to the labor-market generally have higher second-birth risks, and we find little evidence of extremely gendered patterns of associations with childbearing dynamics.

In addition, our models provide information on the role of several further covariates of second- and third-birth dynamics in Sweden. We do not comment on

them here, except for the patterns we find for the variable on different combinations of a mother's and father's country of origin. Such information is provided at the bottom of Table 5 as well as in Table 7, which contains a summary of results from the country-specific regressions of Tables A3 and A4 of the Appendix. Table 7 demonstrates that the impact of a Swedish-born partner largely goes in the direction of modifying childbearing propensities towards those of the Swedish-born population. The populations of foreign-born mothers that in Figures 1 and 2 exhibited higher second- and third-birth transitions than Swedish-born women appear to have reduced birth propensities if they live with a Swedish man. Women of populations with lower second- and third-birth rates instead appear to exhibit elevated birth risks when living with a Swedish-born partner.

Table 7: Second- and third-birth risk of a woman with a Swedish-born partner relative to that of a woman with a partner from her own country of origin. Standardized for age and labor-market status of the two parents, status of the local labor market, calendar period, and time since migration and previous birth. Foreign-born one- and two-child mothers in Sweden, 1982-97.

Woman's country of origin	Second-birth risk	Third-birth risk
Finland	1.18*	1.21*
Germany	1.00	1.16
Poland	1.23*	1.39*
Greece	1.34*	1.59*
Iran	1.43*	2.23*
Turkey	0.92	0.46*
Somalia	0.57	NA
Thailand	0.76*	0.56*
Vietnam	0.58*	0.64
Chile	1.08	1.71*

Notes: *Significant at the 5 percent level; NA = not available due to too few observations.
Source: Swedish population registers, authors' calculations

8. Summary and conclusions

The purpose of this study was to gain further insight into how the labor-market status of parents in Sweden interacts with their continued childbearing. This is of general interest since associations of the kind we study here tell something about the extent to which work and family life are compatible life careers in a country that has made

considerable efforts in supporting the role of working mothers. In particular, we focused on the differential impact of gender and birth country in such associations to see whether patterns of behavior are different for women and men and for parents from different cultural backgrounds. This provides further indications of the extent to which the influence of a welfare state that is geared towards gender and social equality may counteract various forces that support a differentiation in behavior related to family dynamics. We implemented our study by estimating parity progression rates by different labor-market status of parents in Sweden during the 1980s and 1990s. Note that we do not regard our model results as reflections of any causal effects of, for example, earnings potentials on childbearing, but are interested instead in which labor-market activities appear compatible or incompatible with family building. We consider a positive association of a certain labor-market status with childbearing as evidence that these two life-course domains cannot really be seen as competing activities by the members of the population subgroup under investigation.

In short, we are impressed by the similarity we find in the impact of the labor-market characteristics of the mother and the father on a couple's childbearing behavior. For the categories where most parents belong, we mostly find a positive association of labor-market activity with family building as well as a positive role of the level of annual earnings in fertility dynamics. This holds both for fathers and mothers, irrespective of whether we control for the characteristics of the other partner. The main exception to this pattern is somewhat unexpected: two-child families where the father has a very marginal attachment to the labor market also have elevated propensities to have a third child. With the data we have at hand, it is impossible to tell if this pattern may reflect some positive role of couple-level gender equality in childbearing dynamics, in that couples where the father can devote more time to childrearing tasks would be more inclined to have a bigger family, or if such patterns rather reflect some more casual approaches to family building in certain marginalized groups of families.

As regards foreign-born parents in Sweden, we note that they often have a very tenuous link to the labor market. This certainly holds for the groups of immigrants who arrived in Sweden during the late 1980s and 1990s and who faced the labor-market restructuring and elevated unemployment of the 1990s. Evidently, many immigrants faced severe difficulties in getting established in the labor market during

this period. Nevertheless, in terms of observed associations of the actual labor-market status with childbearing behavior, we mainly find a similarity in the directions of associations across the different groups of foreign-born parents in Sweden and as compared to the patterns of the Swedish-born. Seen together with the very pronounced similarity across country groups that we earlier have found in the associations of labor-market status with the propensity to become a mother (Andersson and Scott 2005), we regard our findings as evidence of at least some equalizing effects on social behavior of the way social rights in Sweden are granted to its residents.

Finally, we had a look at the way the presence of a Swedish-born partner may affect the childbearing dynamics of foreign-born mothers in Sweden. We found that a native partner tends to move the level of second- and third-birth rates of cross-national couples towards that of the Swedish-born population. This holds equally well for country groups of mothers with a lower and a higher fertility than that of the Swedish-born. These findings suggests that even in the Nordic welfare states there is also some room for cultural factors in shaping the childbearing dynamics of couples (for further examples, see Andersson et al. 2007).

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APPENDIX

Table A1a: Percentage distribution of *Swedish-born* one- and two-child mothers in Sweden, by time in different labor-market status for different calendar periods

	1981–83	1984–86	1987–90	1991–93	1994–96	Entire period
Earnings < 107,100	42	36	28	23	19	29
Earnings 107,100–178,500	33	43	50	51	49	46
Earnings 178,500–267,750	4	6	12	13	15	10
Earnings > 267,750	0	1	1	2	2	1
Enrolled student	1	2	2	2	3	2
Welfare recipient	0	1	0	0	0	0
Unemployed	3	3	2	5	9	4
Non-participant	16	9	5	3	3	7

Table A1b: Percentage distribution of *foreign-born* one- and two-child mothers in Sweden, by time in different labor-market status for different calendar periods

	1981–83	1984–86	1987–90	1991–93	1994–96	Entire period
Earnings < 107,100	33	25	20	17	13	21
Earnings 107,100–178,500	39	42	42	37	30	39
Earnings 178,500–267,750	4	7	12	11	11	9
Earnings > 267,750	0	1	1	1	2	1
Enrolled student	1	4	4	5	8	4
Welfare recipient	1	3	3	3	4	3
Unemployed	5	5	3	13	18	8
Non-participant	17	14	14	13	14	14

Notes: Cohorts 1945 and later; earnings are in SEK converted into 1995 prices; for 1981 and 1982, our data contain no information on received study allowances and welfare benefits. In these years, women who actually were students or on welfare are instead classified as non-participants or as having work with low earnings.
Source: Swedish population registers, authors' calculations

Table A2a: Percentage distribution of partners to *Swedish-born* one- and two-child mothers in Sweden, by time in different labor-market status for different calendar periods

	1981–83	1984–86	1987–90	1991–93	1994–96	Entire period
Earnings < 107,100	7	5	5	5	5	5
Earnings 107,100–178,500	41	33	21	19	16	25
Earnings 178,500–267,750	37	43	49	45	44	44
Earnings > 267,750	8	12	19	20	22	17
Enrolled student	0	1	1	1	1	1
Welfare recipient	0	0	0	0	0	0
Unemployed	1	1	1	5	7	3
Non-participant	4	3	3	3	3	3

Table A2b: Percentage distribution of partners to *foreign-born* one- and two-child mothers in Sweden, by time in different labor-market status for different calendar periods

	1981–83	1984–86	1987–90	1991–93	1994–96	Entire period
Earnings < 107,100	10	8	8	8	8	8
Earnings 107,100–178,500	42	30	21	18	15	25
Earnings 178,500–267,750	31	39	40	33	30	35
Earnings > 267,750	5	8	13	12	13	11
Enrolled student	1	2	2	2	3	2
Welfare recipient	1	4	7	5	6	5
Unemployed	2	2	2	12	16	7
Non-participant	8	7	8	9	9	8

Notes: Partners to mothers born in 1945 and later; earnings are in SEK converted into 1995 prices; for 1981 and 1982, our data contain no information on received study allowances and welfare benefits. In these years, partners who actually were students or on welfare are instead classified as non-participants or as having work with low earnings.
Source: Swedish population registers, authors' calculations

Table A3: Relative risk of having a second child by age of woman and her partner, country of birth of partner, labor-market status of woman and her partner, status of the local labor market, calendar period, and time since woman's migration to Sweden. One-child couples in Sweden, 1982-1997, by country of origin of the woman. Also absolute risks (per year) by age of first child.

	Sweden	Finland	Germany	Poland	Greece	Iran	Turkey	Somalia	Thailand	Vietnam	Chile
Child aged 0	0.01	0.02	0.02	0.03	0.04	0.02	0.04	0.18	0.02	0.04	0.04
Child aged 1	0.33	0.30	0.42	0.27	0.29	0.25	0.30	1.26	0.34	0.39	0.35
Child aged 2	0.71	0.45	0.63	0.34	0.34	0.32	0.37	0.96	0.54	0.46	0.43
Child aged 3	0.7	0.39	0.51	0.35	0.36	0.39	0.45	0.78	0.56	0.46	0.46
Child aged 4	0.54	0.36	0.48	0.37	0.40	0.51	0.47	0.99	0.59	0.47	0.53
Child aged 5	0.42	0.28	0.23	0.31	0.33	0.53	0.53	0.73	0.73	0.38	0.50
Child aged 6	0.33	0.21	0.36	0.31	0.22	0.58	0.41	0.71	0.82	0.38	0.49
Child aged 7	0.28	0.19	0.29	0.27	0.28	0.52	0.33	1.09	0.72	0.37	0.49
Child aged 8	0.19	0.16	0.14	0.26	0.20	0.51	0.38	0.80	0.88	0.22	0.45
Child aged 9	0.17	0.14	0.28	0.23	0.09	0.41	0.28	0.65	0.79	0.13	0.42
Child aged 10	0.09	0.08	0.13	0.21	0.09	0.28	0.16	1.20	0.98	0.15	0.27
Woman aged < 21	1.09	1.88*	1.57*	2.33*	1.95*	1.27	1.70*	1.52*	1.76*	1.73*	1.36*
W: 21–23	1.10*	1.41*	1.31*	1.15	1.46*	1.06	1.25*	1.12	0.93	1.23	1.20*
W: 24–26	1.09*	1.20*	1.16	1.17*	1.20	0.90	1.13*	1.17	1.08	1.24*	1.10
W: 27–29 (ref)	1	1	1	1	1	1	1	1	1	1	1
W: 30–32	0.87*	0.87*	0.81*	0.95	0.88	0.95	0.81*	0.82	0.96	0.92	0.99
W: 33–35	0.73*	0.65*	0.75*	0.72*	0.52*	0.79*	0.73*	0.70	0.76*	0.85	0.83*
W: 36–38	0.46*	0.43*	0.42*	0.46*	0.42*	0.65*	0.45*	0.57	0.51*	0.56*	0.62*
W: 39–41	0.20*	0.18*	0.15*	0.16*	0.14*	0.37*	0.17*	0.00	0.29*	0.36*	0.18*
W: 42–44	0.04*	0.03*	0.03*	0.05*	0.00	0.04*	0.05*	NA	0.07*	0.06*	0.06*
Man aged < 27	0.82*	0.85*	0.76*	0.77*	0.78*	0.71*	0.93	0.79	1.16	0.92	0.95
M: 27–35 (ref)	1	1	1	1	1	1	1	1	1	1	1
M: 36+	0.76*	0.77*	0.70*	0.86*	0.78*	1.05	0.90	0.99	0.69*	1.14	0.88*
Partner same (ref)	1	1	1	1	1	1	1	1	1	1	1
M: Swedish		1.18*	1.00	1.23*	1.34*	1.43*	0.92	0.57	0.76*	0.58*	1.08
M: other	0.87*	1.06	0.81	1.11*	1.07	1.09	1.27*	0.84	0.82	1.07	0.85*

Table A3 continued…

	Sweden	Finland	Germany	Poland	Greece	Iran	Turkey	Somalia	Thailand	Vietnam	Chile
Woman: low earnings	0.98	0.96*	1.03	0.82*	0.66*	0.78*	0.83*	0.64	0.92	0.81	0.85*
W: medium earnings (ref)	1	1	1	1	1	1	1	1	1	1	1
W: high or top earnings	1.03	0.98	1.10	1.37*	1.14	0.68*	1.23	NA	1.34	1.20	1.13
Student	0.53*	0.53*	0.65*	0.62*	0.74	0.39*	0.58*	0.30*	0.61*	0.79	0.50*
Welfare	0.64*	0.64*	0.67	0.67*	0.58	0.58*	0.60*	0.67	0.68	0.75	0.67*
Unemployed	0.79*	0.80*	0.98	0.74*	0.70*	0.68*	0.85*	0.70	0.85	0.73*	0.79*
Non-participant	0.79*	0.78*	0.90	0.78*	0.47*	0.62*	0.72*	0.73	0.87	0.81	0.74*
Man: low earnings	0.94*	0.98	1.00	1.07	1.03	1.00	1.07	0.76	0.81	1.01	0.83*
M: medium earnings (ref)	1	1	1	1	1	1	1	1	1	1	1
M: high earnings	1.05*	1.10*	1.11	1.07	0.96	0.98	1.00	0.75	1.03	1.16	0.90
M: top earnings	1.22*	1.21*	1.26*	1.18*	1.32	1.10	0.87	0.89	1.03	0.61	0.88
M: Student	1.05	1.32*	0.81	0.79	0.86	0.85	0.69*	0.69	1.03	1.09	0.87
M: Welfare	0.66*	0.81*	0.93	0.88	1.23	0.99	1.02	0.75	0.86	1.28*	0.86
M: Unemployed	0.82*	0.88*	0.91	1.04	0.63*	0.98	1.14*	0.86	0.79	0.98	0.85
M: Non-participant	0.85*	0.96	0.82	0.77*	0.74*	0.84*	0.95	0.68	0.84	0.83	0.83*
Labor market good (ref)	1	1	1	1	1	1	1	1	1	1	1
Poor market	0.96	0.98	0.90	0.98	1.03	1.11	1.13*	0.99	0.98	1.38*	0.94
1982–84	0.70*	0.74*	0.76*	0.94	1.06	1.05	0.95	0.73	0.92	1.03	0.79*
1985–87	0.80*	0.82*	0.89	0.96	1.18	1.05	1.01	0.62	0.97	1.15	0.99
1988–91 (ref)	1	1	1	1	1	1	1	1	1	1	1
1992–94	1	1.03	1.03	1.02	1.14	1.07	0.88*	1.23	1.21	0.82	0.98
1995–97	0.85*	0.93	0.99	0.85*	1.45*	1.07	0.83*	1.20	1.03	0.80	0.82
Immigrated as child (ref)	1	1	1	1	1	1	1	1	1	1	1
2nd calendar year	NA	1.36*	1.27	1.17	1.04	0.91	1.46*	1.43	1.17	1.38	1.30*
3rd year in Sweden	NA	1.24*	0.78	0.78*	1.25	0.79	1.03	1.56	0.92	1.21	1.08
4th – 5th year	NA	1.04	0.87	0.64*	1.24*	0.78	1.04	1.46	0.70*	1.04	1.12
6th – 8th year	NA	1.10*	0.93	0.66*	1.07	0.84	1.22*	1.23	0.69*	0.91	1.03
9th + year	NA	1.14*	0.97	0.63*	1.12	0.71	1.19*	1.29	0.42*	0.98	0.96

Notes: *Significant at the 5 percent level; NA = Not Applicable; parameters are estimated in STATA, using the stpiece module for piecewise constant hazard rate estimation written by Jesper Sorensen. *Source:* Swedish population registers, authors' calculations

Table A4: Relative risk of having a third child by age of woman and her partner, country of birth of partner, labor-market status of woman and her partner, status of the local labor market, calendar period, and time since woman's migration to Sweden. Two-child couples in Sweden, 1982-1997, by country of origin of the woman. Also absolute risks (per year) by age of second child.

	Sweden	Finland	Germany	Poland	Greece	Iran	Turkey	Thailand	Vietnam	Chile
Child aged 0	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.03	0.01	0.01
Child aged 1	0.12	0.11	0.14	0.08	0.05	0.06	0.13	0.24	0.19	0.09
Child aged 2	0.17	0.13	0.15	0.07	0.05	0.05	0.15	0.25	0.17	0.09
Child aged 3	0.18	0.13	0.15	0.06	0.05	0.05	0.18	0.29	0.17	0.09
Child aged 4	0.18	0.12	0.14	0.07	0.07	0.07	0.21	0.27	0.22	0.13
Child aged 5	0.17	0.11	0.13	0.07	0.04	0.07	0.24	0.38	0.14	0.13
Child aged 6	0.13	0.09	0.06	0.06	0.06	0.10	0.22	0.32	0.18	0.13
Child aged 7	0.12	0.08	0.12	0.05	0.05	0.11	0.19	0.44	0.15	0.13
Child aged 8	0.1	0.08	0.05	0.04	0.02	0.14	0.17	0.45	0.13	0.10
Child aged 9	0.08	0.07	0.04	0.04	0.02	0.09	0.16	0.60	0.16	0.09
Child aged 10	0.05	0.05	0.04	0.04	0.02	0.11	0.11	0.56	0.15	0.11
Woman aged < 24	2.07*	1.96*	1.28	1.31	1.97*	1.51	1.37*	0.59	0.97	1.70*
W: 24–26	1.44*	1.23*	1.27	1.07	1.34	1.07	1.09	1.02	1.13	1.34*
W: 27–29 (ref)	1	1	1	1	1	1	1	1	1	1
W: 30–32	0.72*	0.73*	0.87	0.86	0.79	0.63*	0.91	0.87	0.83	0.86*
W: 33–35	0.57*	0.54*	0.70*	0.65*	0.67*	0.60*	0.66*	0.69	0.73*	0.73*
W: 36–38	0.34*	0.31*	0.39*	0.49*	0.34*	0.42*	0.42*	0.34*	0.49*	0.47*
W: 39–41	0.13*	0.12*	0.20*	0.26*	0.19*	0.20*	0.21*	0.31*	0.16*	0.19*
W: 42–44	0.03*	0.02*	0.03*	0.05*	0.00	0.03*	0.03*	0.04*	0.15*	0.01*
Man aged < 27	1.01	1.00	1.19	0.67	1.00	0.58	1.01	0.39*	1.30	0.71*
M: 27–35 (ref)	1	1	1	1	1	1	1	1	1	1
M: 36+	0.89*	0.92*	0.97	0.72*	1.04	0.96	0.70*	0.70*	1.03	0.92
Partner same (ref)	1	1	1	1	1	1	1	1	1	1
M: Swedish		1.21*	1.16	1.39*	1.59*	2.23*	0.46*	0.56*	0.64	1.71*
M: other	1.07	1.15*	1.10	1.13	1.00	1.25	1.33*	0.89	1.17	1.23

Table A4 continued…

	Sweden	Finland	Germany	Poland	Greece	Iran	Turkey	Thailand	Vietnam	Chile
Woman: low earnings	0.94*	0.98	0.89	0.81*	1.12	0.87	0.95	0.98	1.25	0.86
W: medium earnings (ref)	1	1	1	1	1	1	1	1	1	1
W: high or top earnings	1.20*	1.06	0.70	1.12	1.48*	1.13	0.98	1.08	0.90	0.85
Student	0.65*	0.52*	0.86	0.86	1.10	0.58*	0.71*	0.46*	0.83	0.63*
Welfare	0.99	1.38*	0.88	1.40	1.03	0.84	0.84	1.24	1.11	0.99
Unemployed	0.97	1.14*	0.77	0.92	0.97	0.78	1.01	1.20	1.00	0.90
Non-participant	1.06	1.10*	0.94	0.98	0.85	0.76	0.90	0.85	1.14	0.98
Man: low earnings	1.23*	1.19*	1.21	1.02	0.74	1.08	1.01	0.89	0.97	1.04
M: medium earnings (ref)	1	1	1	1	1	1	1	1	1	1
M: high earnings	0.92*	0.91*	0.95	1.13	0.84	0.84	0.80*	0.89	0.88	0.91
M: top earnings	1.19*	1.20*	1.00	1.08	0.83	1.62	0.67	0.71	0.51	0.79
M: Student	1.27*	1.41*	0.51	0.68	1.85	0.68	0.95	1.24	0.79	0.87
M: Welfare	1.31*	1.18	1.20	1.21	0.98	1.06	1.07	0.87	1.18	0.93
M: Unemployed	1.03	1.12	1.39	0.97	1.05	1.14	1.12	0.60	0.94	0.88
M: Non-participant	1.31*	1.11	0.65	1.28*	0.62*	0.98	1.00	0.89	1.10	0.88
Labor market good (ref)	1	1	1	1	1	1	1	1	1	1
Poor market	0.90*	0.90*	0.98	1.06	1.19	1.06	1.00	1.28	0.93	1.23*
1982–84	0.65*	0.70*	0.86	0.79*	0.92	1.38	1.07	1.19	1.36	0.70*
1985–87	0.81*	0.80*	0.80	0.81*	0.85	1.33	1.05	1.04	1.05	0.79*
1988–91 (ref)	1	1	1	1	1	1	1	1	1	1
1992–94	0.88*	1.00	0.90	0.99	0.62*	1.03	0.96	0.93	1.20	0.98
1995–97	0.62*	0.70*	0.84	0.74*	0.77	0.80	0.80*	0.76	0.83	0.63*
Immigrated as child (ref)	1	1	1	1	1	1	1	1	1	1
2^{nd} calendar year	NA	1.70*	1.27	1.55*	8.85*	1.25	1.84*	2.03	2.36*	1.55*
3^{rd} year in Sweden	NA	1.76*	0.75	1.31	1.56	1.21	1.48*	1.92	1.42	1.45*
4^{th} – 5^{th} year	NA	1.53*	1.11	1.13	1.67	1.13	1.30*	1.14	1.31	1.61*
6^{th} – 8^{th} year	NA	1.25*	1.03	0.93	1.68*	1.04	1.40*	0.98	1.17	1.62*
9^{th} + year	NA	1.13*	0.83	0.97	1.12	0.95	1.22*	0.59	0.97	1.11

Notes: *Significant at the 5 percent level; NA = Not Applicable; parameters are estimated in STATA, using the stpiece module for piecewise constant hazard rate estimation written by Jesper Sorensen. *Source:* Swedish population registers, authors' calculations