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Abstract
This paper investigates the impact of labour-market attachment on entry into motherhood for foreign-born women in Sweden. The study uses a longitudinal, register-based data set consisting of the entire population of immigrants from ten nations and a five-percent random sample of natives. The effects of earned income are evident, with increased income levels increasing the probability of becoming a mother for all observed nationalities. The effects of various states of participation and non-participation in the labour force do not vary greatly between immigrants and Swedish-born. Among all subgroups, we find a higher propensity to begin childbearing among those who are established in the labour market. Contrary to popular belief welfare recipience clearly reduces the first-birth intensity for immigrants but not for natives. The similarity in patterns across widely different national groups supports the notion that various institutional factors affecting all subgroups are crucial in influencing childbearing behaviour.

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Labour-Market Attachment and Entry into Parenthood

The Experience of Immigrant Women in Sweden

Gunnar Andersson[1] *and Kirk Scott*[2]

1. Introduction

The purpose of the present study is to investigate the childbearing behaviour of a number of groups of immigrants in Sweden during the last two decades of the previous century. We examine the propensity of childless immigrant women to enter motherhood in Sweden, in order to detect differences in patterns between different immigrant groups, and what differences exist towards the Swedish-born population. We use information on women's experience in the Swedish labour market in order to examine to what extent different experiences affect the propensity to become a mother. An examination of the fertility behaviour of several different groups of women during a period of volatile societal change is likely to give us new insights into the context of childbearing in Sweden, and into the various patterns of adaptation that immigrants there participate in.

Sweden has been a country of immigration for more than half a century. During the 1960s, labour-force migration peaked. Most immigrants then came from the neighbouring Nordic countries, predominantly from Finland. In the mid-1980s, immigration to Sweden totally changed in character. The number of refugee migrants then increased strongly and culminated during the late 1980s to early 1990s. Immigrants now came from a much wider range of countries than before, from almost all corners of the world. The latest period of high immigration to Sweden also witnessed a drastic turnaround in the Swedish labour market. After several decades of nearly full

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employment, unemployment suddenly rose in the early 1990s and remained high until the end of the same decade. The newly arrived population subgroups in Sweden faced severe difficulties establishing themselves in the labour market. For many groups, unemployment was extremely high, triggering a debate about the causes of their problems of non-integration into Swedish society. The literature deals with factors such as a mismatch of immigrants' human capital, discrimination by Swedish employers, and various structural changes in the Swedish labour market in explaining the new immigrants' lack of success there (Scott 1999; Bevelander 2000). The goal of the present study is not to determine the causes of immigrants' labour-market experience but instead to use information about such experience, or lack of experience, in order to explain their childbearing behaviour.

The 1980s and the 1990s were also a period of strongly fluctuating fertility in Sweden. In contrast to most other European countries, fertility increased substantially during the second half of the 1980s and reached the replacement level during 1990-1992. Subsequently, it fell back again, at a speed that was even faster than that of the increase of the 1980s. When measured by the Total Fertility Rate, fertility reached an all-time low of 1.5 children per woman during 1997-1999, but it has subsequently started to increase again. (See Hoem and Hoem 1996, 1999 for a general discussion of fertility developments in Sweden, and Andersson 1999 for further detail in childbearing trends. Andersson 2003 provides an update of more recent trends.) The relatively high fertility in Sweden during the early 1990s attracted a lot of attention, and was often seen as a result of generous social policies directed towards parents and an increasing emphasis on gender equality. Such factors are assumed to make it easier for women to combine work and family life. The positive role of an increased compatibility between female employment and parenthood in Sweden, and elsewhere in Scandinavia, has been stressed by Moen (1989), Sundström (1991), Sundström and Stafford (1992), Haas (1992), Pauti (1992), Bernhardt (1993), B. Hoem (1993), Pinnelli (1995), Rindfuss and Brewster (1996), Ellingsæter and Rønsen (1996) and Brewster and Rindfuss (2000). Studies by Hoem (2000) and Andersson (2000) reveal that the subsequent fall in fertility during the 1990s was strongly related to the deteriorating labour-market situation during that decade. They demonstrate that the earned income of Swedish women has a strong positive effect on their propensity to become a mother. A reduction in the labour-force participation during the 1990s, resulting in lower levels of earned income and an increasing fraction of young women being enrolled in studies, explains part of the fall in first-birth rates during

these years. Women's economic characteristics seem to be somewhat less crucial in affecting progressions to higher-order births; continued childbearing is affected more strongly by the various demographic characteristics of mothers. At all birth orders, various macro factors affecting the general mood in society seem to be important in shaping the Swedish pattern of fluctuating fertility (Hoem and Hoem 1996, 1999; Hoem 2000; Andersson 2000). Various institutional factors are probably important in reinforcing the Swedish pattern of a strongly positive relationship between women's labour-market participation and their childbearing. Its generous parental-leave system, for example, where benefits are based on prior earnings, is likely to strengthen such a pattern. A basic level of female earning is now in Sweden considered a prerequisite for having children rather than as some kind of hindrance to it. Nevertheless, such a system might not only be conducive to higher levels of labour-force participation and childbearing, but also to making fertility more sensitive to economic swings and to income developments of women.

Andersson (2004) provides an examination of the impact of the demographic characteristics of immigrants on their childbearing behaviour in Sweden by analysing population-register data from that country. He shows that period trends in childbearing of immigrant and Swedish-born women have been quite similar during the last few decades. For example, decreasing levels of parity-specific fertility during the 1990s seem to be due to decreasing childbearing intensities among Swedish- and foreign-born women alike. This suggests that immigrant women after all have been affected in a way that is quite similar to that of the Swedish-born population by various changes in the general climate of childbearing.

The focus of the present investigation is on the impact of different labour-market experience of immigrant women in Sweden on their childbearing behaviour. Much literature suggests that childbearing and labour-force participation should be viewed as competing careers in women's lives. This is particularly true for theory based on the New Home Economics, following Becker (1981). Such theory predicts that women and men who live together as a couple tend to specialise in different kinds of production activity, so that women typically dis-invest in their labour-market career in order to increase their productivity in household-production activities, such as childrearing. Sociologists rather refer to the existence of an incompatibility between different roles of women when explaining the same type of behaviour. For immigrants, there might be an additional conflict between family building and labour market activity that is not entirely based on gender. There is a notion

that the minority group status (Goldscheider and Uhlenberg 1969) might depress the fertility of an immigrant group that tries to enhance its position in society by actively improving its position in the labour market. For immigrant groups where women are also oriented towards career enhancement, any conflict between childbearing and labour market participation might result in reduced levels of childbearing. Evidently, there is no general pattern of a very pronounced incompatibility between childbearing and labour-force participation for the majority of native-born women in Sweden. In our study, we wish to find out whether such a pattern nevertheless might materialise for any major group of foreign-born women in Sweden. In some cases, the impact of different sub-cultural norms, perhaps being related to less equal gender roles, could produce more 'conservative' patterns of behaviour, where women who are more oriented towards family responsibilities are less active in the labour market. In addition, in a situation where immigrants have severe problems in getting themselves established in the labour market, new patterns of family formation might arise. Family building could then sometimes be seen as an alternative way of pursuing some kind of career and to make a living.

In the present study, we use a data set that has been derived at Statistics Sweden from the population registers of that country. By linking all children ever living in Sweden from the 1960s onwards to their mothers, it has been possible to derive longitudinal histories of childbearing of immigrant women and, consequently, to track the parity-specific birth behaviour of these women. For the 1980s and the 1990s, we have been able to add information on registered income of all women in Sweden, and on various public transfers to women, being derived from the tax registers. We use this information to investigate the impact of various types of labour-market attachment of women in Sweden on their childbearing. Our study population is defined so that it includes immigrants from ten of the largest foreign-born groups in Sweden while at the same time representing a broad variation in national origins. We investigate the fertility patterns of women born in Finland, Germany, Poland, Greece, Iran, Turkey, Somalia, Thailand, Vietnam, and Chile, respectively, and compare these patterns to those of the Swedish-born population. We focus on the impact of labour-market activity on the propensity to become a mother. Earlier analyses of the childbearing of Swedish-born women (Hoem 2000; Andersson 2000), and our preliminary analyses of that of immigrants, suggest that economic factors are particularly important in affecting first-birth intensities but somewhat less so in affecting the propensity to give birth to a next child.

2. Data, method, and study population

Our data are derived from Swedish population registers, collected and processed by Statistics Sweden. We have access to information about all recorded demographic events, such as immigration, emigration, mortality, and childbearing, of women born in 1945 and later who have ever lived in Sweden in any of the years from 1968 onwards. This is the year when the Swedish population-registration system became computerised and from when all individuals can be followed via a unique personal identity code. In addition, we have access to data on the annual income of all women, derived from Swedish tax registers and giving information on earned income and on various public transfers received during each year of 1981-1996.

All births occurring in Sweden have been linked to a mother. In addition, it has been possible to link children born abroad but at some time living in Sweden to their mother in Sweden. This results in largely complete childbearing histories of the foreign-born women and allows for a distinction between births occurring before a migration to Sweden and births occurring after such a migration. Consequently, we are able to single out women who are childless when immigrating to Sweden, in order to study their propensity to become a mother after migration. We have no information on children who have not lived in Sweden, like those who might have died before their mother entered or were left behind in the country of origin. We restrict the problem of such omission of children by only including women who immigrated to Sweden at an age of 35 years or less in our study. This should guarantee that the vast majority of children to these women show up in Sweden and in our data, which then at least give a proper picture of the 'social' parenthood of immigrant women.

A 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 geographical move to Sweden and the time of approved and registered immigration. This time is generally spent in special refugee accommodations. Our data contain information on childbearing also of women who have emigrated from Sweden again – up to the date when an emigration is recorded. This means that our calculations of fertility measures are not subject to any problems of selectivity by virtue of survival/staying in Sweden. Such a selection can otherwise cause bias in fertility estimates if only the

retrospective information from a remaining cross-sectional population can be used in the calculations (Andersson and Sobolev 2001). In our calculations, we censor each woman at any first emigration from Sweden since we do not intend to examine the impact of cycle migration on childbearing behaviour. In addition, we censor observation when a childless woman turns 46, at the occurrence of her death, or at the end of 1997, whichever comes first.

Our demographic data have been merged with information on the registered income of each woman. For the years 1981-1996 we have information on the recorded annual earned income in Swedish Kronor (SEK[3]), including any income replacement during periods of sickness, and income derived from transfers related to unemployment, study activity, and social welfare, respectively. All income is converted into 1995 prices. We use the information on the various types of income in order to get a picture of a woman's attachment to the labour market in a given year. Thus, our data contain information on her main activity in that year but not on any changes in activity within the year. An important restriction of our data is that we have no information on earnings of any partners or husbands of a woman – or even about the possible existence of such persons[4]. Thus, we can only get a picture of a woman's own labour-market attachment and how that affects her propensity to become a mother, but not sort out the additional impact of any partner's activity. Therefore, the true effect of a woman's attachment to the labour market on her first-birth fertility may partially be masked by such unobserved characteristics of the household. On the other hand, we have access to information on the characteristics of the local labour market of the municipality where a woman lived for each year between 1981 and 1996. We use the information on these regional characteristics and on the woman's own labour-market attachment in a given calendar year as determinants of her propensity to become a mother in the following year. With our data, we are able to study first-birth patterns in 1982-1997.

We present relative risks of giving birth to a first child for different categories of childless women aged 16-45 living in Sweden. In order to calculate such risks, we follow any childless foreign-born woman from her recorded immigration or, in the case she arrived to Sweden during childhood, from her exact age 16 until childbearing or censoring. Swedish-born women are included from the month they turn

[3] In 2002-04, the value of a SEK was approximately 11 Euro cents.

[4] For mothers, our data give information on co-residing fathers of their children, but there is no information on partners to childless women, who constitute the risk population of the present study.

16. We calculate relative risks of becoming a mother for each category of the demographic and economic variables that we can derive from our data. These include *age of woman, time since immigration to Sweden, calendar period, labour-market activity*, and the characteristics of the *local labour market*. We refer to our estimation techniques as an improved form of indirect standardisation (see J.M. Hoem 1993, for this terminology). In practice, it amounts to the estimation of proportional-hazards models[5], which are now standard tools for the analysis of time-dependent event sequences. For each immigrant group, we display the relative risk of a first birth by duration in Sweden, standardized for our other variables. In the same fashion, we present relative risks by labour-market activity, also standardized for the other variables in our data.

Table 2.1 shows the number of women included in our study, by country of birth, and the number of first births in Sweden to these women. Our study comprises women stemming from ten different countries. As a reference, we use information on the childbearing histories of a five-percent random sample of Swedish-born women. (A sample of the native-born population was selected to keep the total size of our data within reasonable levels.) The immigration histories of the various population sub-groups are briefly described below. For a more thorough review of immigration histories of all immigrant groups in Sweden until the late 1980s, see Svanberg and Runblom (1988).

Table 2.1 *Number of observations in 1982-1997*

	Number of child-less women	Number of first births
Sweden	69633	29674
Finland	37712	16916
Germany	4413	1520
Poland	10013	4830
Greece	1881	906
Iran	10182	3619
Turkey	7072	4244
Somalia	2390	976
Thailand	3866	1433
Vietnam	2649	1152
Chile	6074	2360

[5] Estimation is done in STATA, using its module for piecewise constant hazard rate models, stpiece.

Immigrants from *Finland* comprise by far the largest single foreign-born group 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 neighbour to the east, and it lagged behind Sweden economically before finally catching up during the 1980s. These facts, plus the existence of a free Nordic labour market, led to a large flow of labour migrants from Finland to Sweden, which slowed down only during the late 1970s to early 1980s due to the equalisation in living standards between the two countries. Due to a long intertwined migration history, many Finnish-born women have settled down with Swedish-born men.

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). While Germany had an early tradition as a labour 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 as tied movers, married to or cohabiting with Swedish-born partners.

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 to Swedes – largely Swedish men – who were their spouses. 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.

Immigrants from *Greece* came largely as labour migrants during the 1960s, and later as family members following these early migrants, but there were also a number of refugees who came after the 1967 military coup. The refugees tended to return to Greece, however, leaving the majority of the remaining population as labour immigrants.

The few *Iranian* immigrants that came to Sweden prior to the 1979 Islamic revolution arrived as students. The real explosion in numbers of Iranians came with the waves of refugees arriving during the mid- to late 1980s. It was during this time that Iranians proceeded to become one of Sweden's largest immigrant nationalities.

Turkey has a varied history of migration to Sweden. During the 1960s, Turks arrived as labour 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 women came to Sweden as wives to previously immigrated Turkish men.

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 first-time mothers in our data lived together with a Swede at childbirth.

Thailand has not been a major sending country for refugee or labour migrants. On the other hand, a large number of Thais have come to Sweden due to relationships with Swedes. Of the groups in this study, Thai women have the highest share of relationships with Swedish men, with around 70 percent of first-time mothers living together with a Swede.

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.

Table 2.2 *Distribution of study population of immigrant childless women by immigration period to Sweden*

	Pre 1970	1970-1979	1980-1989	1990-1997
Finland	24%	40%	26%	9%
Germany	16%	22%	34%	28%
Poland	2%	25%	49%	24%
Greece	16%	44%	26%	14%
Iran	0%	5%	59%	36%
Turkey	2%	27%	44%	27%
Somalia	0%	0%	7%	93%
Thailand	0%	24%	31%	45%
Vietnam	0%	14%	49%	37%
Chile	0%	29%	61%	9%
Total	13%	30%	37%	21%

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 numbers soon switched to tied movers during the 1980s, as relatives to the early refugees arrived. There was a renewed increase in the numbers of refugees arriving in the late 1980s, just prior to democratisation.

3. First births among immigrant women

As an introduction to our fertility study, we present patterns of entry into parenthood, by age, as they appear in a simple 'survival analysis' of childless women living in Sweden. Figure 3.1a-c displays Kaplan-Meier survivor plots for the different subgroups of our study. These estimates are based on the age-specific probabilities of childless women becoming mothers while living in Sweden calculated from all observations during the period 1982–1997.

Figure 3.1a relates patterns in first-birth transitions by age of women born in Finland, Poland, and Germany to that of the Swedish-born population. Figure 3.1b similarly gives the estimated proportions of childless women for women born in Iran, Greece, and Turkey, and Figure 3.1c, finally, for immigrants coming from Somalia, Thailand, Vietnam, and Chile, as compared to those of the Swedes. The diagrams reveal that most immigrant groups would end up with a lower fraction of childless women at age 45 than the Swedish-born population would do, had the age-specific patterns observed in 1982-1997 prevailed. The only exceptions to this rule are (i) women from Germany, who display a slightly higher level of ultimate childlessness, and (ii) women from Greece, who end up at the same level as the Swedes. An additional observation is that all immigrant groups except women from Iran have a substantially higher propensity than the Swedish-born to become a mother at the younger ages, say below age 25. A particularly fast process of entry into motherhood, and a very low level of childlessness at age 45, is observed for women coming from Turkey or Somalia.

Figure 3.1a *Arrival of the first child: survival curves for childless women from Finland, Poland, Germany, and Sweden living in Sweden*

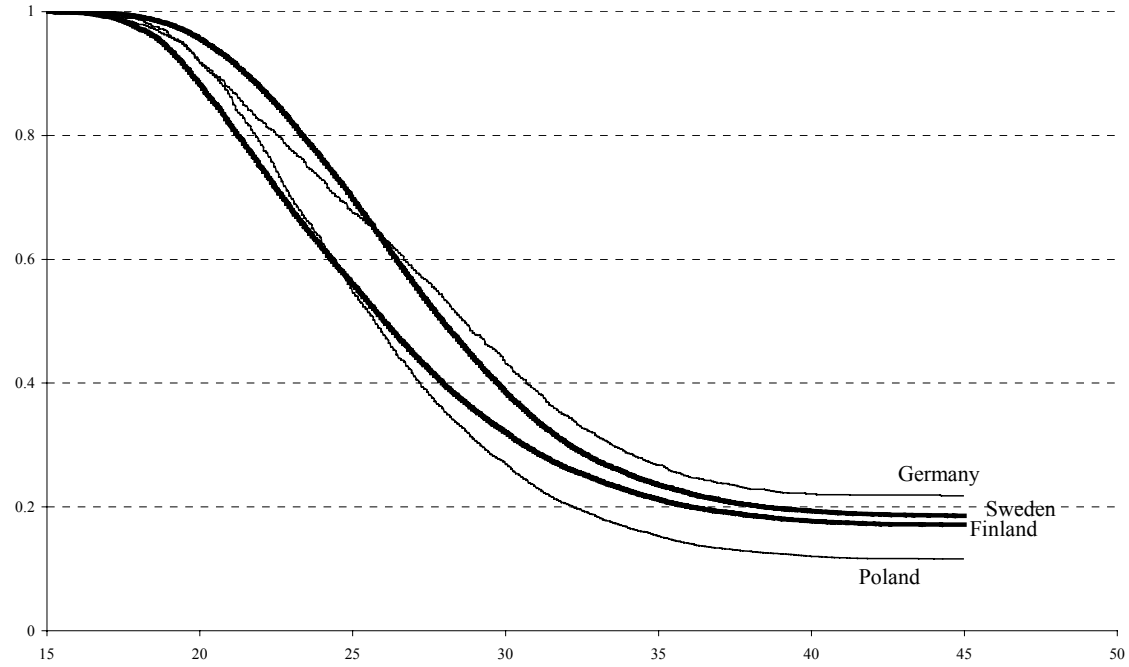


Figure 3.1b *Arrival of the first child: survival curves for childless women from Greece, Iran, Turkey, and Sweden living in Sweden*

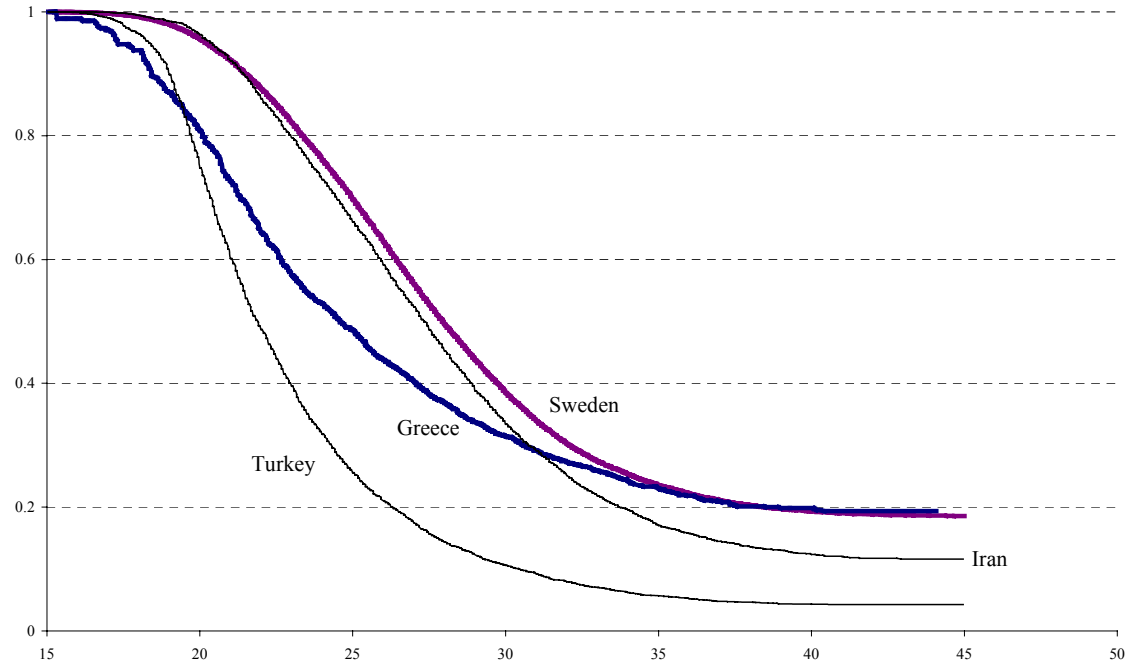
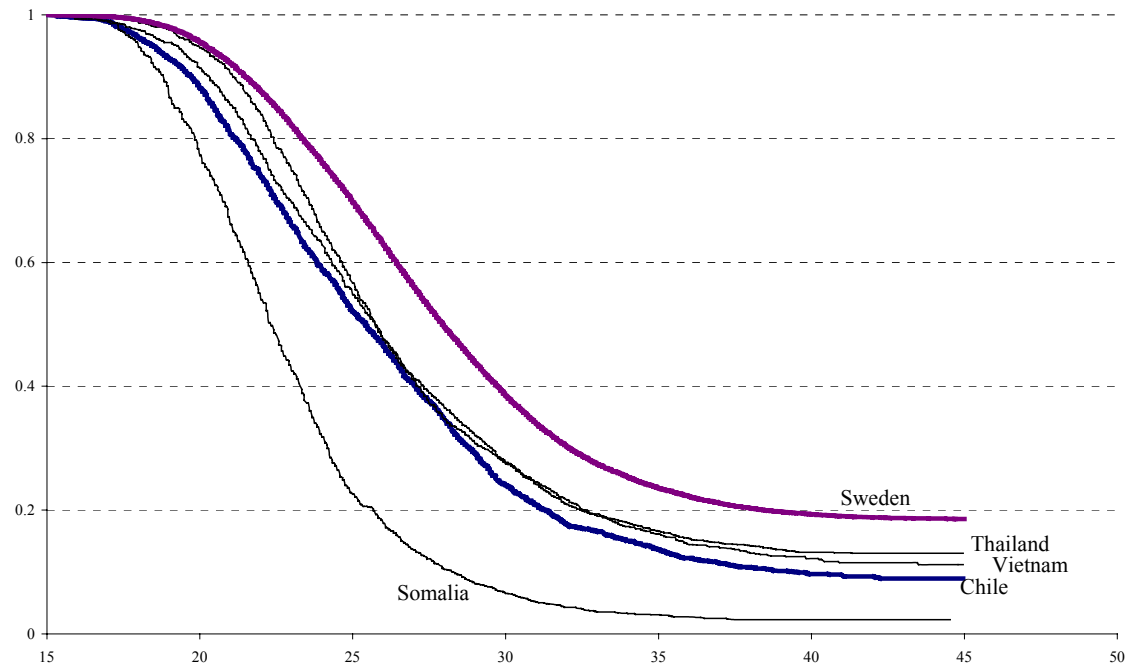


Figure 3.1c *Arrival of the first child: survival curves for childless women from Somalia, Thailand, Vietnam, Chile, and Sweden living in Sweden*



Another important conclusion from our survival analysis is, perhaps, that differences between most groups of immigrants, or between immigrants and Swedish-born, in the ultimate level of childlessness are not that impressive. After all, the vast majority of women become mothers. Consequently, our examination of patterns in first childbearing will provide more information on the timing of entry into parenthood than on who eventually becomes a mother. The patterns reflected in Figure 3.1 depict the impact of age-specific fertility on entry into motherhood, demonstrating the results of a simple univariate model where age is the only factor that explains the timing of that transition. In our subsequent analysis, we will focus on the impact of economic factors on the timing of the transition to motherhood. In addition, we will provide an examination of the role of time since migration in affecting the propensity to become a mother.

We expect the latter variable to be crucial for any examination of patterns in childbearing of migrants. In many cases, a lack of control for such a factor has been found to result in conflicting evidence about the relation between migration and fertility (for examples, see Zarate and Zarate 1975; Goldstein and Goldstein 1981; and Ford 1990). In any study of the fertility behaviour of immigrants, this factor will also be a

main concern of the study itself, since changes in fertility behaviour tell something about migrants' experience in their new country. Depending on the time horizon, various changes in behaviour after migration can be considered as evidence of gradual assimilation, adaptation, or temporary disruption of the fertility behaviour (Stephen and Bean 1992). The strongest impact is often found to show up in various short-term effects immediately following migration (Goldstein and Goldstein 1981; Carlson 1985; Ford 1990; Ng and Nault 1997). In our investigation, we might, for example, suspect that the elevated levels of first-birth fertility at relatively young ages of immigrants in Sweden (Figure 3.1) partly is due to the fact that most migration take place at young ages, and that first-birth fertility is particularly high immediately after a registered migration. Most previous examinations of patterns in fertility of immigrants have been hampered by their lack of access to appropriate longitudinal data on migration and childbearing (Ford 1990; Ng and Nault 1997). With our large-scale data set with information on migration and dates of births of all women in Sweden, we are in a better position to provide an investigation of various aspects of the timing of fertility of immigrants. Before presenting the results of our multivariate analysis, we proceed with a discussion of the labour-market situation of immigrants in Sweden.

4. The labour-market attachment of immigrant women in Sweden

The generally accepted picture of immigrant labour-market assimilation in Sweden is one of great early success, followed by later failure. The worsening position of immigrants in the Swedish labour market has been thoroughly documented over the past decade, for example by Ekberg (1991), Aguilar and Gustavsson (1994), Rooth (1999), Scott (1999), Bevelander (2000), Åslund (2000), Bevelander and Skyt Nielsen (2001), and Rosholm et al. (2001).

Following World War II, Sweden became a net immigration country as the economy expanded along labour intensive lines, and required imported workers to meet demand. At this time, Sweden had full employment and the new immigrants were easily absorbed into the economy. This general situation lasted up until roughly the time of the first oil crisis in 1973. From the mid-1970s the Swedish economy slowed down, with GNP growth falling from approximately four percent per year to around two percent per year. At about the same time, worries

about the effects of inflows of too many workers caused a cessation of non-Nordic labour migration into Sweden. Thus, from the mid-1970s, migration from other countries than those of the common Nordic labour market becomes characterised almost exclusively by refugees and tied movers. During this period, Sweden still maintained full employment, with a rate of open unemployment of between two and three percent for the entire population. The employment situation for immigrants was deteriorating, however, in a less than easily noticeable manner. While the unemployment rate of immigrant men was rather constant, the share of those in the workforce dropped throughout the 1970s and 1980s. For immigrant women, the labour-force participation rate still increased, but at a decreasing rate and slower than for native women, through about 1985, when it began to decline as well.

During the late 1980s and accelerating through the recession of the 1990s, the position of immigrants in the Swedish labour market deteriorated noticeably. Immigrant earnings relative to natives with the same or similar qualifications became lower and, more importantly, the probability of obtaining employment declined. In terms of unemployment rates, immigrants were disproportionately hard hit throughout the 1990s.

In this study, we use the labour-market position of a childless woman as a determinant of her first-birth fertility. To do this, we have defined eight mutually exclusive labour-market states. We use the information about registered annual earned income and about public transfers received during a year in order to classify each woman into one of the following categories:

- 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[6] from work. (A woman with an earned income above that amount is still counted as a student if her student assistance as well is higher than 71,400 SEK.) Practically all students in Sweden receive public financial support.

[6] 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.

- *Unemployed* – having unemployment assistance or allowances from labour-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 woman with unemployment benefits above that amount is counted as unemployed regardless of 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 labour 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.

- Earning a *medium income* – earning 107,100 - 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 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 previous categories.

Tables 4.1 and 4.2 give the distribution of native and immigrant women, respectively, over these labour-market categories. When summed up over the whole study period, differences in these distributions do not appear to be that impressive. Nevertheless, childless immigrant women are substantially less likely to be established in the labour market than are Swedish-born. In addition, important changes occur over time. At the beginning of our study period, we find that immigrant women have almost as high fractions with an earned income from work than what Swedish-born women have. At the end of the period, immigrants instead have considerably lower fractions with an earned income. An important

difference between Swedes and immigrants is found in the higher fraction of non-participants among immigrants. In addition, higher fractions of immigrants receive welfare benefits. In terms of unemployment, the difference is not as glaring, but this is partly due to the structure of the insurance system – receipt of unemployment benefits requires a qualifying period in employment, and Swedish-born are often more likely to have had such a period prior to unemployment.

Table 4.1 *Labour-market status of childless native women in Sweden, ages 21-45*

	1981 - 1983[7]	1984 - 1986	1987 - 1990	1991 - 1993	1994 - 1996	Entire period
Enrolled student	4%	12%	10%	15%	20%	12%
Welfare recipient	0%	2%	1%	1%	2%	1%
Unemployed	5%	5%	3%	10%	13%	6%
Non-participant	10%	6%	5%	5%	5%	6%
Income < 107,100	21%	17%	15%	11%	11%	15%
Income 107,100–178,500	53%	51%	49%	42%	33%	46%
Income 178,500–267,750	6%	8%	15%	14%	14%	12%
Income > 267,750	0%	1%	2%	2%	2%	1%

Table 4.2 *Labour-market status of childless immigrant women in Sweden, ages 21-45*

	1981 – 1983[5]	1984 - 1986	1987 - 1990	1991 - 1993	1994 - 1996	Entire period
Enrolled student	3%	8%	8%	12%	15%	9%
Welfare recipient	1%	6%	6%	6%	8%	5%
Unemployed	4%	5%	4%	13%	16%	8%
Non-participant	15%	13%	14%	16%	18%	15%
Income < 107,100	24%	17%	15%	10%	9%	15%
Income 107,100–178,500	47%	42%	38%	29%	22%	37%
Income 178,500–267,750	5%	8%	14%	12%	10%	10%
Income > 267,750	0%	1%	1%	2%	2%	1%

The discussion so far has concerned aggregate immigrant statistics, but this may be quite misleading, since immigrants from

[7] 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 misclassified as non-participants or as having work with low income.

different countries have had vastly differing labour-market experiences in Sweden over the past decades. Therefore, we give more detail to our picture in an Appendix by displaying country-specific distributions over labour-market states by time spent in Sweden (Tables A1.a – A1.j). Evidently, most groups of immigrants as defined by their country of birth have lower fractions of women with an income from work, and some of the groups who came to Sweden only in the 1980s and the 1990s have extremely low levels of labour-force participation. The aggregate finding of a fairly similar pattern of foreign- and Swedish-born women is due to the very strong labour-market attachment of Finnish women, exceeding that of the native population. These results are completely in line with previous research on the labour-market status of immigrants. What is noticeable about the effects of time in Sweden is that the fraction of women with an earned income increases as time goes by. This is easily understood given the character of immigrant economic assimilation. The share who receive unemployment insurance also goes up, since one must have been employed in the system to qualify for this insurance. Those who are non-participants and welfare recipients become fewer over time, since they slowly move into the labour force. This pattern applies for immigrants from all countries.

We expect that the situation of being in any of these labour-market states has an impact on a woman's propensity to become a mother. Economic and other approaches to fertility prediction give some guidance as to what kind of influences we can expect, and previous investigations on the fertility behaviour of Swedish-born women give additional hints. We now turn to the presentation of our results.

5. Results: Patterns in first childbearing

In this section, we discuss the results of the main explanatory variables of our country-specific event-history models. We provide the relative risks of first birth of the full models in Table A2 of our Appendix. Its first variable, for example, is *age of woman*. The absolute risks of entry into motherhood by age (Table A2) indicate that Swedish women concentrate their first births around ages 27-29, while most groups of immigrant women typically give birth somewhat earlier. This difference in patterns does not appear as accentuated as our survival analysis of Figure 3.1 would suggest, indicating that much of the difference in timing of fertility between immigrants and natives is affected by factors such as *time since migration* and *labour-market attachment*.

A proper account for the former variable turns out to be crucial when one studies the childbearing behaviour of immigrants. In Table 5.1, we display the relative risks of this variable. This gives information on changes in first-birth propensities by time since registered migration. All risks are given relative to a reference category consisting of women who migrated to Sweden before they turned 15. The clearly visible pattern by duration in Sweden is that the first-birth fertility is strongly elevated shortly after migration[8]. As time in Sweden increases, super fertility of a first child diminishes, and finally disappears. These results are consistent with previous findings concerning the 'migration effect' on fertility of foreign-born women in Sweden (Andersson 2004). It is noteworthy that we find a very strong effect of this kind for practically every nationality of immigrants, regardless of the country from which they originate and regardless of whether that country has a lower or a higher fertility level than Sweden. The only group for which this effect is not as dominating is the women from Finland. We take the regularity in patterns of this kind as evidence that migration and family formation in many cases are interrelated events (Mulder and Wagner 1993; Singley and Landale 1998). In the case of marriage migration, for example, we would expect elevated levels of first-birth rates shortly after migration, precisely what we observe here. In addition, our findings can be seen as a reflection of a rather rapid adaptation of the childbearing behaviour to that prevailing in the country of destination.

[8] The first level of this variable pertains to the second calendar year in Sweden. Note that the first calendar year was necessarily removed from our observation in order to use lagged labor-market status as covariates.

Table 5.1 *Relative risk of first birth, by time since migration and country of birth. Childless women in Sweden. Standardized for age of woman, calendar period, and labour-market status.*

		Year after immigration				
	Imm as child (ref)	2nd year	3rd	4-5th	6-8th	9+th
Finland	1	1.20*	1.01	1.02	1.00	0.94
Germany	1	2.33*	1.81*	1.48*	1.05	0.78*
Poland	1	4.07*	2.38*	1.78*	1.47*	1.09
Greece	1	7.20*	4.01*	2.45*	1.05	0.68*
Iran	1	6.18*	5.47*	3.66*	2.04*	1.58*
Turkey	1	5.53*	3.44*	1.92*	1.35*	0.83*
Somalia	1	3.82*	2.61*	1.60*	1.15	0.74
Thailand	1	4.38*	2.37*	1.88*	1.53*	1.07
Vietnam	1	6.41*	3.96*	2.46*	1.59*	1.19
Chile	1	2.30*	1.64*	1.30*	1.27*	1.05

Note: * = significant at the 5 % level

In the present study, our main focus is on the effects of women's labour-market activity on entry into motherhood. The purpose of including time since migration in our model is to get a more appropriate picture of basic relationships than would appear if we were not able to account for the strong timing effects demonstrated in Table 5.1. We display the effects of our economic variables in Table 5.2. They can briefly be summarised as follows. First, we find that patterns in first-birth fertility by labour-market activity for the native group of Swedish-born women conform to those of previous related studies (Andersson 2000; Hoem 2000). Women who are not established in the labour market exhibit very low first-birth risks, while women who earn their income from work show a positive relation between their level of earned income and first-birth fertility. Secondly, we find that the first-birth patterns by labour-market status of immigrants do not deviate from those of the Swedish-born in any systematic manner. On the contrary, immigrants and natives seem to behave in a surprisingly similar way as far as the way their labour-market activity interacts with the timing of their first births is concerned.

Table 5.2 *Relative risk of first birth, by labour-market status and country of birth. Childless women in Sweden. Standardized for age of woman, calendar period, and duration in Sweden.*

	Low Income	Medium Income (ref)	High Income	Top Income	Student	Welfare	Unemployed	Non-participant	Labour-market conditions	
									Good (ref)	Poor
Sweden	0.69*	1	1.00	1.20*	0.23*	1.03	0.81*	0.26*	1	0.93*
Finland	0.71*	1	1.03	1.36*	0.34*	0.90*	0.92*	0.42*	1	1.01
Germany	0.68*	1	1.11	0.95	0.38*	1.06	1.03	0.42*	1	1.01
Poland	0.78*	1	1.10	1.41*	0.40*	0.60*	0.87*	0.71*	1	0.92
Greece	0.61*	1	1.22	1.17	0.27*	0.48*	0.80	0.25*	1	0.87
Iran	0.71*	1	0.75*	1.17	0.33*	0.33*	0.79*	0.65*	1	1.36*
Turkey	0.76*	1	0.79	1.64	0.25*	0.51*	0.83*	0.55*	1	0.99
Somalia	1.00	1	1.44	NA	0.36*	0.70	0.68	1.01	1	1.31*
Thailand	0.72*	1	1.02	3.14*	0.35*	0.95	0.91	0.66*	1	0.93
Vietnam	0.95	1	1.29	1.32	0.30*	0.37*	0.99	0.65*	1	1.07
Chile	0.87*	1	0.90	1.35	0.37*	0.75*	0.88	0.59*	1	0.87*

Note: * = significant at the 5 % level

For practically every country, we find that women with a low level of earned income have a reduced (by some 25 percent) propensity to become a mother compared to the reference category of women with a medium-level earned income. In most cases, the low-income group is likely to consist of women who had worked only part-time or during a fraction of the calendar year. By contrast, women with a high or a top income typically have a higher propensity to become a mother. Rather few immigrant women belong to these groups, but when they do, they exhibit elevated first-birth risks in most cases very similar to the Swedish-born.

Women who are not established in the labour market at all and thus do not earn income typically have a reduced fertility level. This holds for Swedish-born and immigrants alike. Among all groups the propensity to become a mother is reduced by *at least* 60 percent for those who have not yet finished their education. Such a finding seems to be of universal nature in demographic studies of this kind, and here we are able to demonstrate that it holds in Sweden as well for a wide variety of foreign-born populations. First-birth rates are also strongly reduced for women who are classified as non-participants and thus hardly receive any own (registered) income at all. Again, this effect is manifested for Swedish- and foreign-born women alike. Unemployed women also exhibit a reduced propensity to become mothers but the

effect of unemployment is much more moderate, by some 10-20 percent. In some sense, such women are already established at the labour market since they have qualified for unemployment benefits. In many cases, they might qualify for a proper parental-leave benefit as well in case they become a mother. It is remarkable that the effect of unemployment is so similar for the different groups of women living in Sweden.

Finally, there is one category where most immigrant groups actually differ in their behaviour from that of the Swedish-born. Contrary to popular belief, foreign-born women have a strongly reduced propensity to enter motherhood when they are dependent on social assistance benefits. By contrast, there is no decreased first-birth fertility at all among Swedish-born welfare recipients. Most immigrant groups have 30-60 percent lower first-birth risks when they receive welfare benefits. Women coming from Finland, Germany and Thailand are exceptions to this rule. They also happen to be the groups who most often live together with a Swedish man. In this respect they are more integrated into Swedish society than the other groups.

As a complement, we provide estimates of the impact of the local labour-market conditions on first-birth propensities (Table 5.2). Perhaps it is not only an individual's own labour-market status that matters, but the local business climate might have an impact on childbearing decisions as well. For that purpose, we have created a crude indicator based on the number of openly unemployed individuals in a municipality as compared to the number of reported vacancies in the same municipality. We construct a dummy variable by which municipalities with an excess of unemployment are labelled as having a 'poor' labour market and municipalities with an excess of vacancies are labelled as having a 'good' labour market. While this says nothing about the relationship between the skills available in the labour pool and the skills demanded, it can be seen as a rough gauge of the local business climate. To some extent such a variable will capture the impact of period effects related to the business cycle, and it will also serve to capture geographical differences in the strength of the local economies.

For several nationalities, we find that first-birth fertility is increased when the local business climate is good, indicating that childbirth may be seen as more attractive in good times or in municipalities where the labour market is good. For two groups (Iranians and Somalis), however, we rather find a converse relationship, possibly indicating that a childbirth sometimes may be seen as a viable option when the prospects of entering the labour force are particularly dim.

6. Conclusions

We have studied patterns in the timing of entry into motherhood for a number of population subgroups in Sweden, and found that such patterns are remarkably similar for a wide range of populations with very different geographical origins. Practically all country groups of women exhibit a first-birth pattern where women who are not established in the labour market also have a reduced propensity to become a mother. For those who are established we find a positive relation between the level of annual earned income and the propensity to have a child. Such patterns conform very well with previous findings for the native-born populations of Sweden and other Nordic countries (Andersson 2000; Hoem 2000; Vikat 2004). It can be seen as a reflection of a Nordic fertility regime where childbearing and labour-force participation are not incompatible activities of life. Several authors (see introduction) have pointed to the role of various policies designed to facilitate the reconciliation of male and female employment to childrearing in creating the relatively high or 'highest-low' fertility of the Nordic countries. The contribution of the present study is that we have demonstrated that important features of first-birth patterns of Sweden hold for such a variety of population subgroups that they can be considered to be of a more or less universal character in the country.

We are now in a position to relate our findings to predictions from different types of theory on childbearing behaviour. First, we note that our findings of a clearly positive relationship between active labour-force participation and entry into motherhood do not correspond particularly well with the most common predictions stemming from Beckerian economic theory. Most often such theory considers motherhood and market work as competing activities resulting in a negative 'substitution effect' on the childbearing of working women. In a society like Sweden, where subsidised childcare and a generous parental-leave system to a large extent reduce any perceived conflict between parenthood and market work, such predictions might be of less relevance than elsewhere. In such a setting, partners and spouses are more likely to exhibit complementary roles than to conform to the extreme sex-role specialisation implied by conventional economic theory. (For a discussion, see Oppenheimer 1994, 1997; Joshi 1998.) In economic terms one would then perhaps be more likely to observe a positive 'income effect' of labour-force participation on childbearing behaviour, regardless of which sex is under observation (Macunovich 1996, 1998). In Sweden, there are indeed strong incentives for women to

gain an appropriate level of income before considering having a child since the income replacement received during the 12-month period of parental leave is based on earnings before childbirth. This income replacement has a ceiling, though, since the public parental-leave insurance only replaces income (by 90 percent during most years of our study period; at present by 80 percent) up to a yearly level of close to SEK 270,000 but not additional income earned above that ceiling. This led us to introduce our highest income category, since it is mainly women with such a 'top income' that would be exposed to any sizeable income loss when on parental leave. Evidently, this group does not perceive any such costs as a decisive obstacle to childbearing: First-birth risks of women with a top income are higher than for any other labour-market category.

Since our study is based on the childbearing behaviour of a number of groups of foreign-born women, we are also able to evaluate the relative importance of some other common explanations to differences in family dynamics. Studies on the childbearing behaviour of immigrants and ethnic minorities often stress the role of sub-cultural norms in explaining differences in childbearing behaviour. Cultural and ideational factors also play a prominent role in more general explanations to changes in family-related behaviour in developed countries (Lesthaeghe 1995; Surkyn and Lesthaeghe 2004). In our study we find that immigrant groups stemming from entirely different backgrounds in terms of cultural and family systems behave in a strikingly similar way when they live in Sweden concerning the relationship between women's labour-market activity and the timing of first births. This finding suggests that there might be other factors as well that need to be taken into account seriously when one studies childbearing dynamics.

We take the similarity in behaviour across such a wide range of groups of women as a strong indication that various national institutional factors that affect all population subgroups in a society, must be important in determining childbearing behaviour. Findings of Watkins (1990), Decroly and Grasland (1993), and Coleman (1996) suggest that factors such as national policies have become increasingly important in creating a common environment for people's childbearing. They find that national populations in Europe have become increasingly homogenous in their fertility behaviour and that regional differences have been reduced. Demographers have recently come to acknowledge the need to pay more attention to political and institutional factors in research on family dynamics, though it has often proved hard to derive any conclusive support for any specific impact on fertility behaviour

(Neyer 2004). Nevertheless, in studies of family behaviour in Europe it is nowadays common to interpret findings in the light of the contextual framework given by the different welfare-state regimes of Europe (Esping-Andersen 1990).

In a universalistic welfare state like Sweden (see Esping-Andersen 1990 for this terminology), population subgroups might behave more similar than they would do elsewhere. In Sweden, social rights are almost entirely linked to the individual and are relatively independent of family status. Immigrants are basically granted the same formal rights as any native born individual once they have acquired a permanent residence permit in Sweden (without which they would not be counted as immigrants living in Sweden). By contrast, in a welfare state where non-citizens do not have the same social rights as citizens, and where citizenship is hard to acquire, like, for example, in Germany, we would not expect to find the same striking similarity in patterns in childbearing behaviour between natives and foreign-born. In addition, the institutional settings of a conservative welfare state like Germany are not at all geared towards any degree of reconciliation of childrearing and female labour-force participation. Thus, for the native German population, patterns in childbearing by various socio-economic characteristics appear completely different from those observed for Sweden (Kreyenfeld 2004).

When we interpret the results of our event-history analysis, we want to stress that the estimated relative risks of entry to motherhood by labour-market activity need not necessarily be taken as a firm proof of causal effects of such activity on childbearing behaviour. We also need to be aware of possible 'endogeneity' of the two types of careers: i.e. those of the family and the labour market. Such endogeneity could, for example, be reflected in a change in labour-market activity in anticipation of childbearing. Nevertheless, our results give very clear indications of what types of activities that tend to be compatible with childbearing, and what activities that are not so strongly connected with entry to motherhood. What is important is that the patterns we observe make perfect sense in the light of the opportunities and constraints that are provided in the context of Swedish society, and that such institutional factors thus appear to affect individual behaviour. The elevated risks of childbearing of women with a high level of earned income could to some extent arise from an additional spurt in labour-market activity in anticipation of childbearing and subsequent parental leave. In Sweden, such behaviour would be rational. In a society where institutional constraints tend to support a male bread-winner system of family life one might rather find elevated first-birth risks for women

who are non-participants in the labour market, just like Kreyenfeld (2004) does for West Germany. In our study, we found that German women living in Sweden behave differently from those in Germany.

Another very important conclusion from our study is that it is crucial to account for the time since migration in an analysis of the childbearing behaviour among immigrants. In many cases, a registered migration event is related to the transition to parenthood: First-birth rates are strongly elevated for foreign-born women with a short duration of time in Sweden. It would be very inaccurate to not control for such 'migration effects' on childbearing and instead rely on aggregate data on first births and some other characteristics of women from different countries of origin. The results of such a crude calculation would to a very large extent depend on the degree to which any particular immigrant group consists of recent immigrants or women who have been living in their country of destination for a more extended period of time. In our case, such a calculation would be particularly biased since the labour-market attachment of immigrant women also is strongly dependent on time since immigration. We have experimented with the estimation of models where we have not controlled for time since migration and have derived results which were very unclear as concerns the impact of the labour-market status of foreign-born women on their first-birth risks. In short, we want to underline the importance of having access to accurate longitudinal data for studies of the childbearing of migrants.

When we use such data and appropriate methods of analysis, we found that patterns in first births appear strikingly similar for Swedish- and foreign-born women living in Sweden. Practically all population sub-groups respond in a similar way to their various individual-level labour-market characteristics. Such a finding indicates that even if most immigrant groups not are fully integrated into the Swedish labour market (see Table A1) they are at least 'integrated' in terms of the demographic response to their labour-market activity. To conclude, it suggests that various cultural factors might be less decisive in childbearing dynamics than the different institutional factors that are at play in shaping childbearing behaviour for everyone in the country. It certainly shows that many common stereotypes of immigrant childbearing behaviour do not hold on closer scrutiny.

Our finding that foreign-born women appear reluctant to become mothers when they are dependent on social welfare, while no such inhibiting effect is evident for the Swedish-born population, is one result that runs counter to common prejudice. We take it as an indication that integration into Swedish society mainly goes via the individual

establishment at the labour market, and that foreign-born women who live in Sweden aim at getting established in their new society before finding it appropriate to start childbearing.

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Table A1a: Labour market status of Finnish childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	0%	1%	3%	6%	3%	7%	5%
Welfare recipient	3%	2%	2%	2%	2%	3%	2%
Earning unemployment benefits	2%	3%	4%	5%	4%	8%	5%
Non-participant	46%	27%	19%	12%	10%	9%	14%
Income < 107 100 SEK	32%	19%	20%	17%	10%	15%	16%
Income 107 - 178 500	15%	42%	45%	48%	44%	45%	43%
Income 178 - 267 750	1%	5%	7%	10%	24%	12%	14%
Income > 267 750	0%	1%	1%	1%	3%	1%	2%

Table A1b. Labour market status of German childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	2%	4%	9%	12%	5%	14%	10%
Welfare recipient	2%	1%	1%	1%	1%	2%	2%
Earning unemployment benefits	2%	6%	5%	5%	5%	8%	6%
Non-participant	66%	41%	33%	31%	27%	17%	29%
Income < 107 100 SEK	18%	22%	16%	12%	9%	14%	14%
Income 107 - 178 500	8%	18%	25%	25%	26%	32%	26%
Income 178 - 267 750	2%	6%	9%	12%	22%	11%	12%
Income > 267 750	1%	1%	2%	2%	4%	2%	2%

Table A1c. Labour market status of Polish childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	2%	5%	10%	12%	5%	25%	10%
Welfare recipient	5%	9%	6%	5%	3%	7%	5%
Earning unemployment benefits	2%	9%	14%	12%	11%	11%	11%
Non-participant	77%	35%	19%	14%	13%	12%	22%
Income < 107 100 SEK	12%	28%	22%	17%	12%	14%	16%
Income 107 - 178 500	2%	13%	25%	33%	38%	23%	27%
Income 178 - 267 750	0%	1%	3%	6%	15%	7%	8%
Income > 267 750	0%	0%	1%	1%	3%	1%	2%

Table A1d. Labour market status of Greek childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	2%	4%	7%	9%	4%	10%	8%
Welfare recipient	3%	1%	1%	1%	1%	2%	2%
Earning unemployment benefits	1%	4%	6%	4%	3%	6%	5%
Non-participant	75%	51%	47%	45%	41%	34%	40%
Income < 107 100 SEK	14%	23%	19%	18%	13%	16%	16%
Income 107 - 178 500	3%	14%	15%	18%	25%	23%	21%
Income 178 - 267 750	2%	2%	4%	5%	10%	8%	7%
Income > 267 750	0%	1%	0%	1%	2%	1%	1%

Table A1e. Labour market status of Iranian childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	3%	15%	39%	45%	25%	48%	31%
Welfare recipient	35%	39%	18%	11%	8%	10%	18%
Earning unemployment benefits	1%	7%	13%	14%	18%	10%	12%
Non-participant	60%	30%	12%	10%	13%	8%	20%
Income < 107 100 SEK	2%	7%	10%	9%	8%	9%	8%
Income 107 - 178 500	0%	2%	7%	9%	15%	12%	8%
Income 178 - 267 750	0%	0%	1%	2%	11%	3%	3%
Income > 267 750	0%	0%	0%	0%	2%	0%	0%

Table A1f. Labour market status of Turkish childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	1%	5%	10%	13%	7%	14%	10%
Welfare recipient	18%	23%	17%	11%	6%	5%	10%
Earning unemployment benefits	1%	6%	13%	17%	14%	18%	14%
Non-participant	75%	43%	26%	19%	26%	13%	25%
Income < 107 100 SEK	5%	16%	15%	15%	13%	18%	15%
Income 107 - 178 500	0%	7%	18%	23%	29%	27%	22%
Income 178 - 267 750	0%	0%	1%	2%	6%	5%	3%
Income > 267 750	0%	0%	0%	0%	0%	0%	0%

Table A1g. Labour market status of Somalian childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	1%	3%	14%	27%	17%	37%	13%
Welfare recipient	47%	65%	53%	33%	16%	16%	45%
Earning unemployment benefits	1%	3%	8%	10%	11%	9%	6%
Non-participant	51%	23%	18%	16%	14%	13%	26%
Income < 107 100 SEK	1%	3%	4%	6%	10%	9%	4%
Income 107 - 178 500	0%	2%	4%	7%	22%	14%	5%
Income 178 - 267 750	0%	0%	0%	1%	8%	4%	1%
Income > 267 750	0%	0%	0%	0%	2%	0%	0%

Table A1h. Labour market status of Thai childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	3%	5%	10%	10%	5%	29%	12%
Welfare recipient	3%	4%	4%	4%	2%	7%	4%
Earning unemployment benefits	1%	7%	14%	13%	11%	14%	11%
Non-participant	84%	51%	27%	20%	16%	8%	31%
Income < 107 100 SEK	9%	22%	22%	16%	11%	16%	16%
Income 107 - 178 500	1%	11%	21%	33%	43%	22%	23%
Income 178 - 267 750	0%	0%	2%	4%	10%	4%	4%
Income > 267 750	0%	0%	0%	0%	1%	0%	0%

Table A1i. Labour market status of Vietnamese childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	1%	2%	7%	10%	5%	21%	10%
Welfare recipient	22%	31%	26%	14%	4%	7%	14%
Earning unemployment benefits	1%	4%	12%	18%	13%	19%	14%
Non-participant	71%	34%	12%	8%	19%	9%	19%
Income < 107 100 SEK	5%	19%	14%	12%	8%	15%	12%
Income 107 - 178 500	0%	9%	28%	34%	38%	24%	26%
Income 178 - 267 750	0%	1%	2%	5%	12%	6%	6%
Income > 267 750	0%	0%	0%	0%	0%	0%	0%

Table A1j. Labour market status of Chilean childless women aged 21-45, 1982-1997, by duration in Sweden

Labour-market status	1st year	2nd year	3-4th years	5-7th years	8th+years	Arrived as child	Total
Enrolled student	2%	7%	13%	17%	12%	29%	20%
Welfare recipient	27%	25%	12%	8%	4%	10%	11%
Earning unemployment benefits	1%	5%	13%	15%	12%	14%	12%
Non-participant	59%	24%	14%	12%	15%	9%	15%
Income < 107 100 SEK	9%	22%	20%	16%	11%	15%	15%
Income 107 - 178 500	1%	16%	27%	28%	34%	20%	23%
Income 178 - 267 750	0%	1%	2%	4%	10%	4%	4%
Income > 267 750	0%	0%	0%	0%	1%	0%	0%

Table A2.1: *Relative risk of becoming a mother by labour-market participation, status of the local labour market, calendar period, and time since migration to Sweden. Childless women in Sweden, by country of birth. Also absolute risks (per year) by age of woman.*

	Sweden	Finland	Germany	Poland	Greece	Iran
Ages 16-17	0.01	0.03	0.01	0.01	0.06	0.00
18-20	0.06	0.10	0.07	0.06	0.10	0.02
21-23	0.09	0.12	0.07	0.10	0.11	0.04
24-26	0.13	0.14	0.08	0.11	0.10	0.05
27-29	0.15	0.14	0.11	0.11	0.10	0.07
30-32	0.13	0.11	0.11	0.10	0.09	0.07
33-35	0.08	0.08	0.09	0.07	0.09	0.05
36-38	0.05	0.04	0.04	0.04	0.06	0.04
39-41	0.02	0.02	0.01	0.02	0.02	0.02
42-44	0.01	0	0	0	0	0
W: low income	0.69*	0.71*	0.68*	0.78*	0.61*	0.71*
W: medium (ref)	1	1	1	1	1	1
W: high	1.00	1.03	1.11	1.10	1.22	0.75*
W: top	1.20*	1.36*	0.95	1.41*	1.17	1.17
Student	0.23*	0.34*	0.38*	0.40*	0.27*	0.33*
Welfare	1.03	0.90*	1.06	0.60*	0.48*	0.33*
Unemployed	0.81*	0.92*	1.03	0.87*	0.80	0.79*
Non-participant	0.26*	0.42*	0.42*	0.71*	0.25*	0.65*
Labour market: Good (ref)	1	1	1	1	1	1
Poor market	0.93*	1.01	1.01	0.92*	0.87	1.36*
1982-84	0.91*	0.88*	1.07	0.80*	1.27*	1.06
1985-87	0.97*	0.90*	1.00	1.06	1.20	1.00
1988-91 (ref)	1	1	1	1	1	1
1992-94	1.02	0.95	1.05	1.03	1.08	1.08
1995-97	0.88*	0.89*	0.92	0.83*	0.98	1.07
Immigrated as child (ref)	1	1	1	1	1	1
2nd cal year	NA	1.20*	2.33*	4.07*	7.20*	6.18*
3rd year in Sw.	NA	1.01	1.81*	2.38*	4.01*	5.47*
4-5th year	NA	1.02	1.48*	1.78*	2.45*	3.66*
6-8th year	NA	1.00	1.05	1.47*	1.05	2.04*
9th + year	NA	0.94	0.78*	1.09	0.68*	1.58*

* Significant at the 5% level

Table A2.2: *Relative risk of becoming a mother by labour-market participation, status of the local labour market, calendar period, and time since migration to Sweden. Childless women in Sweden, by country of birth. Also absolute risks (per year) by age of woman.*

	Sweden	Turkey	Somalia	Thailand	Vietnam	Chile
Ages 16-17	0.01	0.03	0.02	0.02	0.01	0.03
18-20	0.06	0.18	0.06	0.06	0.03	0.10
21-23	0.09	0.19	0.12	0.08	0.08	0.13
24-26	0.13	0.18	0.13	0.09	0.09	0.14
27-29	0.15	0.15	0.12	0.09	0.08	0.17
30-32	0.13	0.13	0.11	0.09	0.07	0.12
33-35	0.08	0.10	0.05	0.05	0.06	0.10
36-38	0.05	0.08	0.05	0.04	0.03	0.07
39-41	0.02	0.02	0	0.02	0.02	0.03
42-44	0.01	0	0	0	0.01	0.02
W: low income	0.69*	0.76*	1.00	0.72*	0.95	0.87*
W: medium (ref)	1	1	1	1	1	1
W: high	1.00	0.79	1.44	1.02	1.29	0.90
W: top	1.20*	1.64	NA	3.14*	1.32	1.35
Student	0.23*	0.25*	0.36*	0.35*	0.30*	0.37*
Welfare	1.03	0.51*	0.70	0.95	0.37*	0.75*
Unemployed	0.81*	0.83*	0.68	0.91	0.99	0.88
Non-participant	0.26*	0.55*	1.01	0.66*	0.65*	0.59*
Labour market: Good (ref)	1	1	1	1	1	1
Poor market	0.93*	0.99	1.31*	0.93	1.07	0.87*
1982-84	0.91*	0.99	0.40*	0.79*	0.42*	1.00
1985-87	0.97*	1.10	0.85	0.90	0.81	1.08
1988-91 (ref)	1	1	1	1	1	1
1992-94	1.02	0.89*	0.94	1.04	1.27*	1.03
1995-97	0.88*	0.91	0.93	1.00	1.20	0.91
Immigrated as child (ref)	1	1	1	1	1	1
2nd cal year	NA	5.53*	3.82*	4.38*	6.41*	2.30*
3rd year in Sw.	NA	3.44*	2.61*	2.37*	3.96*	1.64*
4-5th year	NA	1.92*	1.60*	1.88*	2.46*	1.30*
6-8th year	NA	1.35*	1.15	1.53*	1.59*	1.27*
9th + year	NA	0.83*	0.74	1.07	1.19	1.05

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