

Use It or Save It? Migration Background and Parental Leave Uptake in Sweden

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Abstract Sweden is a welfare state with a family policy that strongly emphasizes equality without distinction by place of birth or gender. In this study, we investigate the differences in uptake of parental leave between native and immigrant mothers, and the connection to labour-market attachment. Sweden represents a unique case study, not only because of the strong effort to combine work and family for all women and men, the high level of fertility and the large presence of immigrants in the country; it also enables a detailed and sophisticated analysis based on the high-quality data derived from its population registers. We find that immigrant mothers use more parental leave benefit the first year after their child's birth, but then fewer in the second year compared with native mothers. The differences diminish when labour-market activity is controlled for. Additionally, after a time in Sweden, immigrant mothers use leave more similarly to how native mothers do.

Keywords Parental leave · Sweden · Integration · Immigrants

1 Introduction

For the past 50 years, Sweden has been a country of immigration; however, there has been great variation in who has immigrated over time. Today, immigrants make up almost 16 % of the country's population, and this share is even larger when only those of childbearing age are considered (Statistics Sweden 2013). The highest

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percentage of foreign born in the country come from Asia; however, after the 2004 European Union extension, migration from European countries changed the composition and an increasing share of migrants from Poland and Romania now live in Sweden (Statistics Sweden 2013).

Swedish family policy mainly supports working parents, and in particular, the parental benefit is based on prior earnings, which is a strong incentive to work before becoming a parent. The income-related benefit is complemented by a low flat rate for parents not active in the labour market, and parental leave use thus becomes a reflection of labour-market participation (Ferrarini and Duvander 2010). Rights to parental leave benefits make no distinction based on citizenship and are based purely on residency; that is, they are the same for immigrant and native parents. Rights to parental leave also make no distinction based on gender, but mothers use the lion's share of the leave.

As there are differences in the labour-market participation and the fertility behaviour between the immigrant and native population, we expect that parental leave use will also vary between the two groups. The use of leave is likely to differ between parents with different economic restrictions. The question of immigrants' parental leave use is therefore of major policy relevance and is emerging on the agenda in Swedish politics (Duvander and Eklund 2006; Government Commission 2012; Vikman 2013). Earnings-related benefits and job protection during leave normally serve as an incentive to combine labour-market participation and children. However, if labour-market integration cannot be achieved, the same policy may have a negative impact, resulting in a low benefit level during parental leave and a more disadvantaged situation after an extended period with no attachment to the labour market. There is no easy solution to a poor economic situation during parental leave, as generous benefits to non-working parents could serve as an incentive for mothers to stay out of the labour market altogether (Vikman 2013).

This study investigates how large the difference is between immigrants and native's use of parental leave. Moreover, we go beyond a dichotomous view on native versus immigrant by studying within-group heterogeneity in the group of immigrant, hence different cohorts of immigrants and among different country of origin. Sweden represents a unique case study not only because of the strong effort to combine work and family for all women and men, the high level of fertility and the large share of immigrants living in the country; it also enables detailed and sophisticated analysis based on the high-quality data derived from population registers.

The study focuses on mothers because they are the main recipients of parental leave benefit and because their situation on the labour market is affected the most by childbearing. Immigrant women are the most vulnerable on the labour market (Boyd 1984; Helgertz 2010); it is therefore important to consider their ability to access parental leave, which is the major Swedish policy for facilitating the combination of work and children. Knowledge of these women's parental leave use will contribute to the understanding of their inclusion in and exclusion from welfare systems.

2 Background

2.1 Parental Leave in Sweden

Swedish parental leave benefit enables a gender-equal sharing of the responsibility for children, but also includes an incentive for labour-market participation before having children through the earnings-related benefit. Parents residing in Sweden receive 480 days of paid leave per child, of which 390 are paid at 80 % of previous earnings and 90 are paid at a flat rate. Labour-market legislation allows for job-protected leave for the child's first 18 months and during any parental leave taken within 8 years of the birth (within 12 years since 2014), which is as long as the leave can be used. This means that it is possible to stretch one's days of leave over a longer period by mixing paid and unpaid days during the first 18 months, and using paid leave when the child is somewhat older. This is a common strategy, and many parents, for instance, use leave days to extend holidays during the child's preschool years. Thus, children's period at home and parents' labour-market exits vary substantially (see, e.g., Evertsson and Duvander 2010).

To get parental leave with an earnings-related benefit, the parent has to work at least 8 months before childbirth. Parents who have done so receive 80 % of their prior normal earnings from the Swedish Social Insurance Agency, often supplemented with another 10 % from their employer through collective agreement. If a parent has not worked for the previous 8 months, for example if he or she has been unemployed or a student, the benefit consists of a low flat rate of approximately 20 Euro a day. This flat rate was 6 Euro a day throughout the 1990s and after 2002 was increased stepwise. Each parent receives half of the leave days, but days can be transferred between parents, something that is done often as mothers commonly use most of the leave. However, 2 months are reserved for each parent and cannot be transferred; this is referred to as *Daddy's quota*. Almost all mothers make use of parental leave benefits and, presently, take about three quarters of all leave days (76.3 %). Fathers' share of the leave has steadily increased, not least in connection to the introduction of the reserved months (Duvander and Johansson 2012).

The variations in leave strategy between parents are based on parents' knowledge of the system and the available family resources to meet the parents' preferences, something that obviously varies between groups of parents. A survey investigating parents' knowledge about parental leave rights indicates that immigrants' knowledge is especially low, which obviously restricts flexible and efficient use (National Social Insurance Board 2003a).

Previous studies have shown that substantial differences persist in the use of parental leave between immigrant and native parents, even when the main socio-demographic characteristics are taken into account (Duvander 2010; Duvander and Eklund 2006). A major reason for differences is difficulties on the labour market for the immigrant population, and the connection between the labour-market participation and parental leave may take different routes. First, lower income will give a lower level of benefits, often the flat rate. The parental benefit at the flat rate (for parents with low or no income) is claimed more often by immigrant parents than

native parents. For example, among mothers of children born in 1999, 64 % of mothers from sub-Saharan Africa but <4 % of native mothers claimed only flat rate benefits (Swedish Social Insurance Agency 2005). Immigrant parents also received a lower average compensation than those born in Sweden (Swedish Social Insurance Agency 2014). Second, if the parent is unemployed, he or she will often be encouraged by the social welfare officer to use up all the parental leave before becoming eligible for unemployment benefits or other economic support, even if this is not how the regulations concerning unemployment benefits are stipulated (Government Commission 2012). This in turn restricts the possibility to use the system's flexibility, as most (or all) of the days will be used during the child's first months.

2.2 Immigrants' Fertility and Labour-Market Behaviour in Sweden

Becoming a parent is one of the major transitions to adulthood (Blossfeld et al. 2005; Corijn and Klijzing 2001), and it is often made once stability is acquired in other areas of life, primarily economic stability. Indeed, longitudinal studies show that first-birth intensities in Sweden are positively correlated with higher income for both women and men (Andersson 2000; Duvander and Olsson 2001). It has often been concluded that labour-market stability increases childbearing (Andersson 2000; Andersson and Scott 2005), while instability could have a negative effect on the propensity to become a first-time mother or father (Persson 2001). Chances of getting a job vary with the economic cycle, and the crisis of the 1990s is an example of when childbearing was postponed because of the negative labour-market situation (see Andersson 2000; Oláh and Bernhardt 2008).

Immigrants in the early 1970s, mainly those from Sweden's neighbouring Nordic countries (Finland, Denmark and Norway), had very high rates of labour-force participation, while, like in many other countries, the situation on the labour market for more recent immigrants is worse than for the native-born population (Scott 1999; Statistics Sweden 2008, 2009, 2010a). While Swedish-born men and women have employment rates above 80 %, immigrant men and women have rates at just over 70 and 60 %, respectively (Statistics Sweden 2008), and there is great variation over time and by country of origin.

Immigrants' labour-market integration has been studied extensively in Sweden (see, e.g., Bevelander 2000; Bevelander and Skyt Nielsen 2001; Rosholm et al. 2006; Scott 1999), and it has been found that (like in many countries) immigrants are consistently disadvantaged (Edin et al. 2000; Le Grand and Szulkin 2002), not least in the occupational hierarchy (Borjas 1992; Clark and Drinkwater 2002; Helgertz 2010). Regarding earnings performance, Andersson and Scott (2007) revealed marked inequalities between native and immigrant men and women. Immigrants who arrived during the crisis of the 1990s were particularly disadvantaged. The most commonly cited reasons for immigrants' disadvantaged situation involve a lack of human capital and social networks, as well as discriminatory practices (Behtoui and Neergaard 2010; Scott 1999).

It has long been noted that the experiences, benefits and costs of migration for women and men are different (Boyd 1984; Pedraza 1991). This holds for a variety

of contexts (see, e.g., Bevelander and Groeneveld 2010; Helgertz 2010; Le and Miller 2010; Rebhun 2008) and is often termed a double disadvantage for women (Boyd 1984; Tang 1997). Immigrant women often carry the additional burden of migrating to a sex-segregated occupational structure and are also ascribed lower status based on both gendered and ethnic roles (Boyd 1984). This is also relevant in Sweden, which has relatively strong sex segregation on the labour market compared with a large number of OECD countries (Brandén 2014; Magnusson 2010). In addition, constraints connected to family responsibilities are likely to be exaggerated in a situation in which a strong social network is lacking (Rajiman and Semyonov 1997). Immigrants, especially women, are disadvantaged, but there is probably also substantial heterogeneity among them (Scott 1999). Thus, the double disadvantage for women may well become a triple disadvantage for the most disadvantaged immigrant groups (Rajiman and Semyonov 1997). These disadvantages may lead to a substantial group of immigrant women perceiving a stable labour-market position as an impossible alternative. Not having had a labour-market position before childbearing may indicate additive and perhaps even multiplicative disadvantages. The reasons for the disadvantages are thus the status of being an immigrant, being a woman, belonging to an immigrant group with low status, and additionally the response and expectations of the welfare systems and labour-market actors in the host country. The relevant comparison here is between immigrant women of different origins and the native women, who may indeed experience disadvantages on the labour market, but probably not to the same extent. In sum, being an immigrant woman could lead to lower labour-market attachment or unemployment, which results in a lower benefit and less possibility to stretch the leave over a longer period. The long parental leave and the fact of becoming a parent with its accompanying responsibilities make it even harder to attain stable employment.

However, immigrants are also highly heterogeneous regarding their reasons for migration. The relationship between labour-force participation and fertility may be different for various subgroups of immigrants. Mussino and Strozza (2012) showed that women migrating to Italy for family reasons have high childbearing intensities in the short run. The reason for this may be that their childbearing has been postponed by the immigration process and they are then inclined to “catch up” their lost childbearing years during their first period in the new country (Andersson 2004; Milewski 2007; Parrado 2011). On the contrary, female labour-market migrants need more time to adjust and decide whether to have children in the host country (Mussino and Strozza 2012). Focusing on the fertility of migrants in Sweden, previous studies have shown that after a peak due to the migration effect, the childbearing patterns of most immigrant groups adapt to those of the native population (Andersson 2004; Andersson and Scott 2005). However, immigrants from less developed countries maintain higher levels of fertility.

Among immigrant women in childbearing ages in Sweden, Asian, African and South American, immigrants are overrepresented, while immigrants from the European countries are more often older. However, European immigrants still have a larger share of individuals of childbearing age compared with the native (Statistics Sweden 2013). In addition to a skewed age distribution, it is also clear that

immigrants of different origins have different fertility behaviour (Lundström and Andersson 2012; Persson and Hoem 2014). The Swedish total fertility rate (TFR), at 1.9, is composed of 1.8 for native women and 2.2 for immigrant women (Statistics Sweden 2010b). Social assistance (i.e. welfare benefits) among immigrant women was associated with a 30–60 % lower risk of having a first child compared with native women (Andersson and Scott 2005). There may obviously be selection effects at play here, and the use of social assistance is also based on knowledge of the system, which may vary by group.

2.3 Research Questions and Hypotheses

Based on previous studies that have established the association between economic considerations and the use of parental leave, we wish to investigate the differences in the timing and intensity of the use of parental leave between immigrant and native mothers and whether these potential differences remain when labour-market status is considered. Earlier studies lead to expectations of great differences in leave use depending on the labour-market situation (Bygren and Duvander 2006; Sundström and Duvander 2002). For instance, Duvander and Eklund (2006) investigate women's and men's used parental leave days in the first 4 years after the birth of a child, for the cohort of children born in Sweden in 1999, distinguishing between natives and immigrants of different origin parents. However, the study could not control for the stability and duration of the immigrant parents' residence in the country and did not analyse the mechanisms behind differences in leave use. In the present study, we go a step further towards understanding why there are differences, as well as when in the child's life the differences occur. As the use of leave is flexible, we are interested in both how much leave is used and when it is used. A common strategy among parents is to extend the leave period by choosing a lower replacement level. Thus, few parental leave benefit days can mean either a short leave at regular benefit level or a long leave at low benefit level. As the leave can be used until the child turns eight, many parents also use the leave to extend holidays later during the child's preschool years. To be able to use the flexibility in the leave system, a parent needs to have the economic resources and a good negotiating position at work, as well as knowledge of the details of the system's regulations. We expect that there are persisting differences in the uptake of parental leave between native and immigrant mothers, as well as strong variations by country of birth. We also expect that a great deal of these differences is connected to the women's labour-market situation. As immigrant women's disadvantage on the labour market leads to a lower level of benefit, when we control for the socio-economic characteristics the "effect" of the disadvantage is likely to diminish.

The results will be of importance, as they will offer insight into how different dimensions of integration may be related to each other. They will also shed light on how the social policy, particularly social insurance, affects immigrant integration. A long leave may be detrimental to one's future labour-market career (Albrecht et al. 1999; Evertsson and Duvander 2010), and a labour-market attachment before childbearing is crucial for participation after becoming a parent (Rønsen and Sundström 2002). The study will thus also offer insight into the relationship

between high female employment rates and high fertility (Ellingsaeter 2009; Olah and Bernhardt 2008) and whether this relationship needs to be scrutinized for different segments of society.

2.4 Data and Methods

To address our research question, we use data from the population registers covering the entire population living in Sweden (STAR—Sweden over Time: Activities and Relations). Individuals enter the register by birth within the country or by immigration. Swedish population registers collect all demographic events (births, deaths, marriages, divorces, international migration and internal mobility) by date of event. Children can be linked to their parents using a personal identification number, if the parents live in Sweden or did so at some point in the past. We also have access to yearly information on educational level, income, labour-market attachment and social insurance benefits, including parental leave benefit days.

The data are impressive, both the number of individuals included and the amount of information available, but for the purpose of this study there are two important limitations. First, the information on parental leave is annual based, so parents of children born at different dates are observed for different durations. Second, the information on parental leave days is related only to the parent and not to each child. It is thus not possible to disentangle leave per child, which is especially notable in Sweden with its short birth intervals and long leave periods. We have considered these limitations when constructing our data set and in performing the analyses.

We focus on the mothers of children born in December during the years 1997–2004, to ensure that the annual-based information on leave use is in accordance with the length of the child's life.¹ We select 23,992 women who had a first child in the selected period, so as to not include leave use for previous children. We observe mothers' leave use for the month of December and for the subsequent 3 years, although parents are eligible to use parental leave up to 8 years after the child is born, the majority of parental leave is used during the first 3 years after childbirth (Swedish Social Insurance Agency 2014). For the dependent variable, we use the number of paid days, so leave taken through the use of vacation days, sick leave or the like will not be counted. Also, unpaid leave will not be counted. However, the use of unpaid days is significant, and we will consider it for the interpretation of our results. There is a mandatory maternity leave (paid or unpaid) of 2 weeks before or after childbirth in Sweden, but this legislation is not widely known, even if most women are off work during this time. Less than 40 % of mothers use parental leave benefits before the child is born, and these women use an

¹ There is no difference between December children and all children regarding the mother's age, but for children with a native mother there is a difference regarding educational level. Native mothers with children born in December have a significantly lower than average educational level. For immigrant mothers, we find no differences between those having children in December and during the rest of the year. As immigrant mothers tend to have lower education, they are more similar to native mothers of December children than to other native mothers. As our aim is to test the difference between these groups, we believe that, if anything, our results would be even stronger if we could use children born during the whole year.

average of 2 weeks of leave (National Social Insurance Board 2003b). We consider this pre-birth leave looking at the days during the *year of birth*. Admittedly, our measures are not exact in that parents of children born at the beginning and the end of December are measured for the same period. Regarding the measure of pre-birth leave, it may be that for children born at the beginning of December, some days after the birth are actually categorized as before the birth. Because of the size of our sample, we do not believe this marginal fuzziness in our measure will have an impact on our conclusions from the study.

We use statistical indicators and graphic measures to summarize the distribution of parental leave days by the characteristics of the mother. The distribution of leave days is divided into *terciles*, indicating *few*, *medium* and *many days of leave*, which is our dependent variable in the multinomial regression models (Hosmer and Lemeshow 2000). We simultaneously evaluate the risk of having *few* days or *many* days of parental leave, as compared to having a *medium* level, on an annual basis. Considering that we are interested in both how much leave is used and when it is used and that our hypothesis is that the use will vary over time since birth, we have constructed different models for each year since birth. We study which mothers use the flexibility in the leave, and present the results for the first (*year + 1*) and second (*year + 2*) years after birth, as leave use is greatest during these periods. However, we will also look at a cumulative pattern (total number of days) of parental leave days during the year of birth and the following 3 years (*year of birth*, *year + 1*, *year + 2* and *year + 3*). For the first year, the first tercile varies between 1 and 210.7 days, the second tercile is between 210.8 and 281 days, and the third tercile is 282 days and more. For the second year, the first tercile is between 1 and 34 days, the second tercile is between 35 and 112 days, and third tercile is 113 days and more. For the cumulative model (from *year of the birth to year + 3*), the first tercile is between 1 and 343 days, the second tercile is between 344 and 437 days, and the third tercile is 438 days and more. To test the importance of the labour-market activity compared with the other covariates, we used a stepwise approach and tested Akaike's information criterion (AIC) and the Bayesian information criterion (BIC). These two latest tests allowed comparing non-nested models, so we tested the variables both one by one and following the stepwise procedure. These are similar approaches that show whether or not the increase in the complexity of the model when inserting an additional variable in the model outweighs the increase in the fit of the model (Klein and Moeschberger 2003).

2.5 The Independent Variables

Our main hypothesis is that the use of parental leave varies among immigrant and native mothers. According to the practice of Statistics Sweden (Hagström 2009), the decomposition in duration of stay in Sweden is divided into (1) 0–4 years, (2) 5 years or more, for immigrants. We further follow Statistics Sweden in differentiating between Swedish-born with (3) two foreign-born parents, (4) one Swedish-born and one foreign-born parent and (5) two Swedish-born parents. The last group is here referred to as natives. We use this combination in the main models comparing various groups of mothers in Sweden. In the models including only

immigrant mothers, we also use a variable including country of birth: (1) born in other Nordic country; (2) born in the former Yugoslavia; (3) born elsewhere in an East European country/former communist country; (4) born elsewhere in Europe; (5) born in North or Central America; (6) born in South America; (7) born in the Middle East (Iraq excluded) or North Africa; (8) born elsewhere in Africa; (9) born elsewhere in Asia; (10) born in Iraq. We followed the categorization suggested by the Swedish Social Insurance Agency (2005), but considering the substantial size of the groups we also differentiate between immigrants from Iraq and former Yugoslavia. We expect that immigrant mothers from developing societies, such as some in Africa (Rajiman and Semyonov 1997), experience the most disadvantages in attempting to find employment and that they thus use the majority of parental leave days during the first year after birth. Our main interest is in how immigrant status in relation to labour-market status influences mothers' parental leave use. *Labour-market activity* is measured by studying the main economic activity (wages and entrepreneurial activities) and the public transfers received during the year of the child's birth (for more detail, see Andersson and Scott 2005). This allows us to classify each mother into one of the following categories based on earnings: low income (between 36,000 and 132,700 SEK), medium income (between 132,700 and 185,900 SEK) and high income (more than 185,900 SEK), unemployment and student status. Mothers that are not included in one of these categories are defined as non-participant in the labour market. To compare the different years under study (1997–2004), income is calculated on the basis of prices in 1997 (Ohlsson-Wijk 2011). Those earning an income are then considered in the labour force. Other demographic and migratory variables included in the study are *age of mother at child birth*, *stability of residence in Sweden*, *education*, *calendar year* of birth of the child, *days of parental leave in the previous year* and *continued childbearing* during the observation period. *Age of the mother* was considered a continuous variable. *Stability of residence in Sweden* was indicated by (1) never emigrated from Sweden, or (2) ever emigrated, that is unstable presence due to the mother having left the country and then returned.² We divided *education* into four groups: (1) primary education (up to 9 years); (2) low secondary (2 years of secondary education); (3) high secondary (3 years); and (4) tertiary education. *Calendar year* is the year of birth of the child from 1997 to 2004. This allows us to consider the most recent cohorts and test whether the pattern changed over the years. The uptake of days in the year of interest is not independent from uptake of *days of parental leave in the previous years*, considering that the number of days with full benefit is limited; for this reason, we control for it in the models. So when we study *year + 1*, we control for uptake of days during *year*. And when we study *year + 2*, we control for the cumulative uptake of days during *year* and *year + 1*. During the observation period, the mother may have had another child. The variable *continued childbearing* is codified into: (1) no more children, (2) a child during the first year or (3) a child during the second or third year. For frequencies of all the variables, see Table 4.

² Only 0.54 % of natives ever emigrated during the observation period.

3 Empirical Observations

3.1 Different Use of Parental Leave

The focus of the analyses is on mothers with newborn children in December during the period 1997–2004 who are followed for the year of birth and the 3 years after birth. In this section, we will present the results of the different use of parental leave for the first (*year + 1*) and second (*year + 2*) years after birth, and a total number of days for the year of birth and the following 3 years (*year, year + 1, year + 2, year + 3*). The results for the year of birth (*year*) and third year after birth (*year + 3*) are consistent with our conclusions, but are not presented due to space limitations. The box plot in Fig. 1 describes the distribution of parental leave days in the 2 years following the birth, as well as the total number of days for the year of birth and the following 3 years of observation. We find that in the first year after birth (Fig. 1a), the distribution of leave days is more diverse among the immigrant mothers who have recently arrived in Sweden than among other groups. This group also has the highest median of days used the first year. Mothers with both Swedish-born parents are the most homogenous in their take-up and also use fewer days than all other groups. During the second year after birth (Fig. 1b), the pattern is inverse;

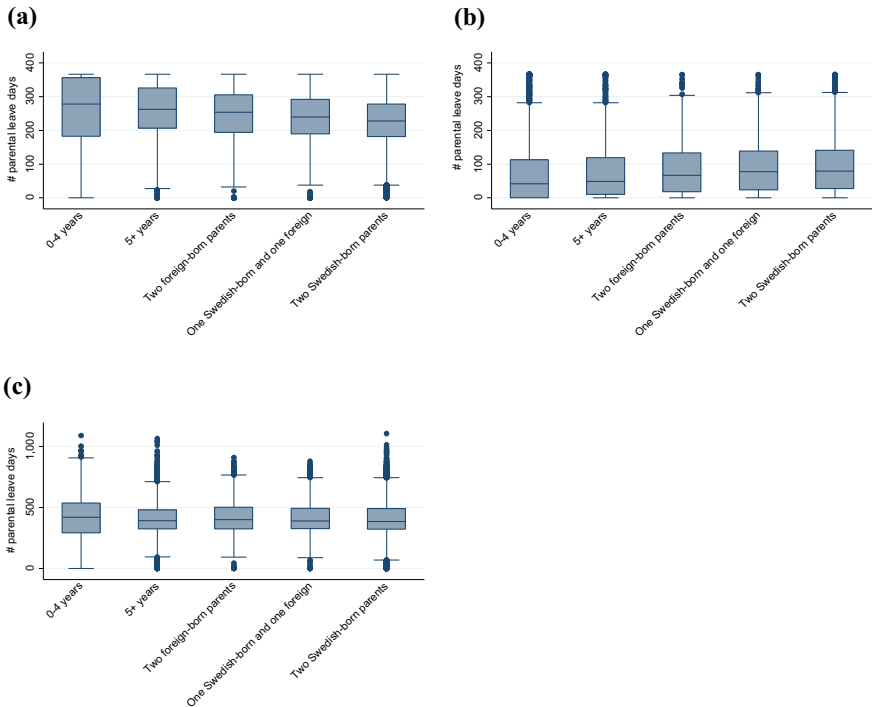


Fig. 1 Number of parental leave days by migrant background. **a** Year + 1, **b** Year + 2, **c** cumulative days over 4 years. *Source* Swedish administrative register data, compiled by the authors

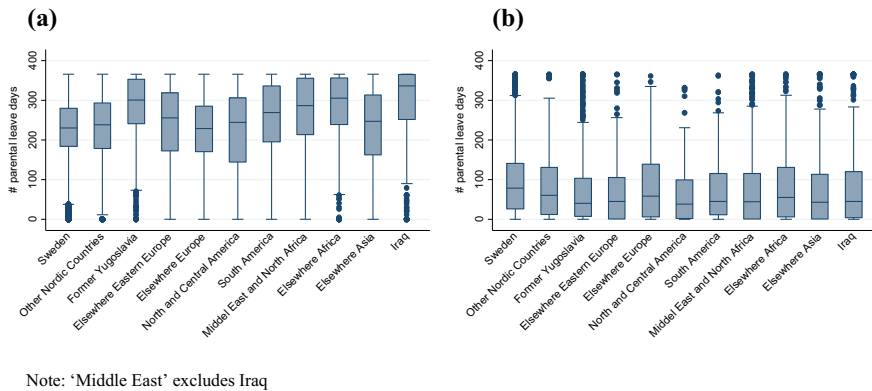


Fig. 2 Number of parental leave days one and 2 years after childbirth by mother's place of birth. **a** Year + 1, **b** Year + 2. *Source* Swedish administrative register data, compiled by the authors. 'Middle East' excludes Iraq

that is, mothers who have spent more time in Sweden take more days of parental leave than newly arrived mothers do. Variation in used days is great in all groups.

Figure 1c shows the total number of days from *year* of the birth to *year* + 3. When the entire period of leave is considered, we can see that the differences between groups diminish, confirming our research focus on different patterns over time. However, it seems that newly arrived immigrants are more heterogeneous in their behaviour and also have the highest median value. In this group, a majority of women use few parental leave days, but there is also a large group using many days. Strong heterogeneity is also presented when leave take-up for different years is investigated separately by region of birth (Fig. 2). Once again, during the first year it appears that native mothers take few days of parental leave, while during the second year they form the group that takes the most days. In contrast, mothers from Iraq use the most days during the first year and relatively few the second year. In general, there is stronger heterogeneity during the first year than the second year when region of birth is considered.

3.2 Determinants of Different Patterns of Parental Leave Use

To further analyse the leave patterns, we will now present multinomial logistic regression models predicting the risk of using *few* or *many* parental leave days versus a *medium* number of days when we control for duration of residency in Sweden for all mothers, as well as country of birth for immigrant mothers. For the multivariate approach, we present our results only for the years *year* + 1 and *year* + 2. As expected, differences between immigrant and native mothers were not significant when we considered the total number of days of parental leave from *year* of birth to *year* + 3. Our primary result is that native and immigrant mothers use the parental leave differently over time since birth, but end up with a similar number of days.

To arrive at a final model, we apply a stepwise procedure, in which the inclusion of labour-market activity is the most important step; however, due to limited space we show only the basic and full models. Mothers with two Swedish-born parents form the reference category throughout the analyses.

Considering the first year after birth and the use of *few* days, the basic model with no controls indicates that immigrant mothers who have spent a longer time in Sweden and the mothers with one parent born in Sweden and one parent not, are less likely to use *few* days compared with the native mothers (Table 1). The mothers with two foreign-born parents do not differ significantly from one with two Swedish-born parents. On the contrary, the newly arrived immigrant mothers are more likely to take *few* days. When we control for labour-market status, the statistical difference between newly arrived immigrants and native mothers disappears. The results are not showed, but the r square of this model is 0.0474 and the likelihood ratio test is highly significant when we control for the labour-market activity. In the full model, the results do not further change when we control for the other socio-demographic and economic characteristics, and it seems that it is labour-market activity that is the important control variable. In the discussion, we will elaborate on that although immigrant and native women do not differ in the amount of leave they take in the first year after their child is born, the underlying motives might differ substantially.

When we consider the risk of taking *many* parental leave days, all groups of immigrant mothers use *many* days in the first year ($year + 1$) more often than native mothers do. When we control for the socio-demographic and economic characteristics, the differences are reduced but remain statistically significant, with the exception of mothers with one parent Swedish-born and one foreign-born parent. Labour-market activity seems not to play a major role here.

Moreover, women who have lived longer in Sweden less often use *many* leave days the first year. Even if the variation in leave use is greater among immigrant mothers, most of them use more parental leave benefit days during the first year following childbirth, and then fewer days compared with natives mothers (Table 2).

In the second year following birth, it is indicated that immigrant mothers limit their use of leave, while natives mothers take more leave. Especially newly arrived immigrant women are more likely to take *few* leave days the second year. When we control for the socio-demographic and economic status, there are still differences in the risk of taking *few* days; however, the differences are reduced. The use of *few* days when the child is over 1 year old may be due to few remaining parental leave days, or the labour-market situation restricting the possibility to use a longer leave.

The risk of taking *many* days the second year is lower for immigrant mothers; however, the differences between groups disappear when we control for labour-market activity. Once again, the introduction of the labour-market activity is improving the fit of the model significantly and the r square of the model is 0.0198 (model not shown). Results are stable when we control also for the other variables.

Our main interest is to analyse whether the use of parental leave days differs between groups and whether there is an impact of labour-market status. However, here we also would like to highlight the importance and the effects of the other independent variables. Mothers employed with low income are more likely to use

Table 1 Relative risk ratios (RRR) of parental leave use

	Year + 1							
	Few		Many		Few		Many	
	RRR	Sign	RRR	Sign	RRR	Sign	RRR	Sign
Duration in Sweden: 0–4 years	1.60	0.000	3.72	0.000	0.89	0.215	1.80	0.000
5 + years	0.83	0.004	2.04	0.000	0.77	0.000	1.63	0.000
Two foreign-born parents	0.90	0.255	1.59	0.000	0.96	0.680	1.28	0.005
One Swedish-born and one foreign-born parent	0.84	0.003	1.16	0.013	0.84	0.005	1.03	0.601
Two Swedish-born parents	1		1		1		1	
Labour market: student					1.50	0.000	1.36	0.000
Unemployed					1.07	0.279	1.46	0.000
Employed with low income					1.23	0.019	1.31	0.000
Employed with medium income					1		1	
Employed with high income					1.07	0.116	0.70	0.000
Non-participant					2.81	0.000	2.33	0.000
Age of mother at child birth					1.03	0.000	0.98	0.000
Stability of presence: never emigrated					1		1	
Ever emigrated					1.41	0.060	1.34	0.116
Educational level: primary					1		1	
Low secondary					0.92	0.280	0.64	0.000
High secondary					1.05	0.533	0.61	0.000
Tertiary					1.62	0.000	0.40	0.000
Year of birth of child: 1997					1		1	
1998					1.20	0.017	1.00	0.982
1999					1.22	0.007	0.92	0.221
2000					1.37	0.000	0.83	0.005
2001					1.73	0.000	0.81	0.003
2002					1.46	0.000	0.77	0.000
2003					1.62	0.000	0.77	0.000
2004					1.72	0.000	0.73	0.000
Parental leave days previous years					0.98	0.000	1.02	0.000
Constant					0.25	0.000	2.40	0.000
R^2	0.0145				0.1038			
LL	−25,811.53				−23,471.87			

Using few days or many days compared to medium number of days (reference), during the first year

Note: We also control for subsequent children

Source: Swedish administrative register data, compiled by the authors

few days, and concentrate their leave days to the first year (Tables 1, 2). Mothers with high income and tertiary education are less likely to use *many* days, in both the first and the second year. Highly educated mothers are also more likely to take *few* days in the first year. Older mothers tend to use the flexibility of the system and

Table 2 Relative risk ratios (RRR) of parental leave use

	Year + 2							
	Few		Many		Few		Many	
	RRR	Sign	RRR	Sign	RRR	Sign	RRR	Sign
Duration in Sweden: 0–4 years	2.00	0.000	0.89	0.083	1.52	0.000	0.91	0.345
5 + years	1.62	0.000	0.85	0.008	1.45	0.000	0.90	0.113
Two foreign-born parents	1.35	0.000	0.97	0.768	1.26	0.006	1.02	0.798
One Swedish-born and one foreign-born parent	1.05	0.452	0.98	0.754	0.99	0.880	1.01	0.862
Two Swedish-born parents	1		1		1		1	
Labour market: student					1.80	0.000	0.60	0.000
Unemployed					1.64	0.000	0.79	0.000
Employed with low income					1.43	0.000	0.71	0.000
Employed with medium income					1		1	
Employed with high income					0.96	0.412	0.75	0.000
Non-participant					1.91	0.000	0.54	0.000
Age of mother at child birth					0.98	0.000	1.02	0.000
Stability of presence: never emigrated					1		1	
Ever emigrated					1.61	0.026	0.79	0.361
Educational level: primary					1		1	
Low secondary					0.81	0.001	0.98	0.834
High secondary					0.85	0.005	0.94	0.374
Tertiary					0.91	0.139	0.68	0.000
Year of birth of child: 1997					1		1	
1998					1.00	0.963	0.97	0.682
1999					0.99	0.915	0.96	0.615
2000					0.93	0.309	0.94	0.374
2001					0.92	0.237	1.02	0.827
2002					0.90	0.105	0.96	0.532
2003					0.98	0.727	0.76	0.000
2004					1.00	0.953	0.71	0.000
Parental leave days previous years					1.00	0.506	0.99	0.000
Constant					1.50	0.004	1.98	0.000
R^2	0.0068				0.1316			
LL	-25,904.89				-22,647.95			

Using few days or many days compared to medium number of days (reference), during the second year

Note: We also control for subsequent children

Source: Swedish administrative register data, compiled by the authors

consequently are more likely to take *few* days the first year and *many* the second. Mothers who are not stable residents of Sweden are more likely to use *few* parental leave days in both the first and the second year. During the first year, there seems to be a trend of fewer days taken over time, which is in line with national statistics.

The increase in the flat rate benefit in 2002 does not seem to have had an effect on the choice of using parental leave days the first year. The impact of calendar year on taking days during $year + 2$ is very small, except for the most recent cohorts. The use of parental leave days in the previous year plays a different role in the first and the second year after birth; mothers who take *many* days the year of birth also do so during the child's first year, while taking *many* days the first year after birth leads to taking fewer days the second year. When we consider the risk of taking *few* days, it is clear that the differences between immigrant and native mothers are related to their different socio-economic statuses; particularly the stepwise procedure shows the importance of labour-market activity. When we consider the risk of taking *many* days, the results do not change to the same extent with the inclusion of economic and socio-demographic variables. Akaike's information criterion and the Bayesian information criterion in the model for $year + 1$ show that educational level and labour-market activity are the most important variables. In $year + 2$, only the labour-market activity is the variable that most influences the pattern.³

We are now interested in whether mothers of different immigrant origins use parental leave differently. To study this, we exclude Swedish-born mothers (Table 3). Focusing on the region of birth, it appears that mothers from Iraq use the leave more clustered in the first year than women from Nordic countries do (reference category in the model), but there are no significant differences during the second year. We found similar results for women from elsewhere in Africa, and South America. When we look at the risk of taking *few* days during the first year, no significant difference emerges between the groups, except for the women from former Yugoslavia. Women from the Middle East, former Yugoslavia and North Africa also use *few* days of parental leave during the second year. The different behaviour based on region of birth may be explained by variations in migratory characteristics.

It seems that time spent in Sweden does not influence the use of parental leave during the second year, while in the first year immigrant women who have spent a longer time in Sweden appear to take *few* days of parental leave. It is thus likely that the opportunities to stretch the leave increase with time spent in Sweden. Also, newly arrived immigrants may aim at intense childbearing the first years (migration effect), and the motivation to "save" leave may be different if more children are expected.

The results indicate a greater difference between immigrant and native mothers (Tables 1, 2) than we find between women of different birth origins (Table 3). When we consider region of birth and control for socio-economic status, there are almost no significant differences between different groups of immigrants based on their country of origin in the first or second year regarding the propensity to take *few* days. There is still strong heterogeneity in the risk of taking *many* days among immigrants of different origins during the first year. In addition, increasing age is associated with the use of *few* days in the first year after birth and *many* days in the second year. The mothers who are unemployed before giving birth take fewer days during both the first and the second year.

³ Results not shown; please contact the authors for details.

Table 3 Only immigrant mothers: relative risk ratios (RRR) of parental leave use

	Year + 1		Year + 2	
	Few	Many	Few	Many
Duration in Sweden: 0–4 years	1	1	1	1
5 + years	0.81	0.084	0.94	0.547
Other Nordic countries	1	1	1	1
Former Yugoslavia	0.58	0.006	1.69	0.002
Elsewhere Eastern Europe (ex-communist)	1.06	0.762	1.34	0.108
Elsewhere Europe	0.93	0.728	0.86	0.503
North and Central America	0.98	0.953	1.45	0.218
South America	0.98	0.922	1.75	0.007
Middle East (excluding Iraq) and North Africa	0.79	0.183	1.58	0.005
Elsewhere Africa	0.70	0.152	2.17	0.000
Elsewhere Asia	1.13	0.477	1.20	0.267
Iraq	0.79	0.359	3.32	0.000
Labour market: student	2.99	0.000	1.46	0.018
Unemployed	1.98	0.000	1.53	0.005
Employed with low income	1.35	0.185	1.25	0.220
Employed with medium income	1	1	1	1
Employed with high income	1.40	0.048	0.78	0.090
Non-participant	3.43	0.000	2.15	0.000
Age of mother at child birth	1.02	0.015	1.00	0.627
Stability of presence: never emigrated	1	1		
Ever emigrated	1.85	0.065	2.11	0.020
Educational level: primary	1	1		
Low secondary	0.73	0.096	0.47	0.000
High secondary	0.89	0.507	0.62	0.001
Tertiary	1.47	0.022	0.52	0.000
Year of birth of child: 1997	1	1		
1998	1.09	0.683	1.06	0.759
1999	0.86	0.474	0.69	0.038
2000	1.02	0.903	0.66	0.019
2001	1.34	0.150	0.80	0.208
2002	1.13	0.554	0.76	0.118
2003	0.80	0.263	0.54	0.000
2004	1.13	0.544	0.72	0.054
Parental leave days previous years	0.99	0.000	1.01	0.000
Constant	0.34	0.007	1.48	0.266
		0.0953		0.1561
LL	-3792.2256		-3523.1191	

Using few days or many days, compared to medium number of days

Note: We also control for subsequent children

Source: Swedish administrative register data, compiled by the authors

4 Discussion

Family policy in Sweden is related to both labour-market participation and childbearing patterns, mainly through a strong encouragement to combine work and family, and indeed most mothers and fathers in Sweden work. The strong incentive through the parental leave system to work before becoming a parent is related to a number of advantages, such as high labour-force participation among mothers and lower child poverty (Ferrarini and Duvander 2010). However, for women for whom stable employment is not attainable before childbearing, the same system may have negative implications. This study focuses on those who have the most difficulty attaining employment in Sweden, that is, immigrant mothers. We do this by analysing the pattern of leave use over time for a sample of immigrant and native mothers of children born in December 1997–2004.

We find that immigrant mothers use more parental leave during the first years compared with native mothers. This finding is in line with studies indicating that immigrants receive lower benefits during leave, and thus can less often afford to stay home without pay (Duvander 2010, Swedish Social Insurance Agency 2014). Instead, native mothers use a large number of the parental leave benefit days the second year after childbirth. However, there is great variation in the immigrant group, and longer residency in Sweden makes the pattern more similar to that of native mothers, indicating signs of adaptation in parental leave use. In addition, as origin is strongly associated with cause of migration, a plausible underlying factor for variations between groups is that Nordic women more often immigrate for labour-force participation while other immigrant women do so for family reasons or as refugees. Immigrants who come for family reasons, as well as refugees, are also more seldom in a relationship with a native-born partner (Dribe and Lundh 2011). The difference in leave use between groups may also be affected by lack of knowledge of parental leave regulations, especially the different options for flexibility. Family policy use may also depend on other factors such as preferences, which may impact on a woman's labour-market participation after becoming a parent.

When mothers' labour-market status is controlled for, the differences between groups diminish. We find that both native and immigrant mothers quite often use *few* days, but we believe that their reasons are different. Among the native mothers, using *few* days is likely to be linked to household economic resources rather than to a situation of disadvantage. In couples with high household income, the woman is able to stretch the leave period by mixing paid parental leave benefit days with unpaid days. Thus, fewer days do not necessarily mean a short leave. Among immigrant mothers, however, using few days is instead likely to indicate a short leave or a situation in which the mother cannot afford to take leave.

When differences between immigrant mothers are analysed, we find that those who have been in Sweden for more than 5 years use more leave during the second year after childbirth, similarly to native mothers. Mothers from Africa and from Iraq use the leave more clustered in the first year compared with women from Nordic countries. We believe that being new in a country and being disadvantaged on the

labour market, as are mothers of African origin, may lead to a multiplicative effect of disadvantage.

There are other examples of immigrant women showing a different response to family policy in Sweden from earlier studies. One specific example is the introduction of the speed premium in the 1980s. The implication of this reform was that women in the labour force who reduced their hours after their first child had an incentive to shorten their birth intervals, and this caused a dramatic decrease in birth intervals (Andersson et al. 2006). Immigrant women did not change their behaviour in the same way, however, and continued with relatively long birth intervals, likely because they had less to gain from the speed premium, which could be used efficiently mainly with a relatively high income before the first birth. Also, the present study focusing on use of parental leave shows a different response to policy among immigrants; immigrant women are less able to exploit the flexibility of the parental leave benefit. A major part of the disadvantages are clearly linked to the socio-demographic and economic characteristics of the mother, especially her labour-market position.

Obviously, there are limits to the conclusions we can draw here. We first want to mention that, despite the advantages of register data, they do not include information on women's reasons for choosing their specific pattern of leave use. Ideally, we would like to be able to draw on surveys and perhaps qualitative studies on reasoning behind leave use to be able to interpret our results. Second, in this study we only consider half the story, as the fathers are left out. Fathers are using increasing amounts of leave in Sweden, and there are also great differences in use among fathers depending on their origin and labour-market attachment (Duvander and Johansson 2012). Furthermore, some immigrant women are more likely to have a child with a native father, which in turn is likely to influence their access to information on parental leave policies.

It seems that Swedish family policy faces new challenges, with a changing population and more heterogeneous behaviour. Even when labour-market status is considered, immigrant women more often take many days in the first year after birth and fewer in the second year. Consequently, this study suggests a need for interventions focusing on information regarding rights and benefits to all parents in Sweden. Even more central, as labour-market participation is found to be crucial for leave use, attention must be drawn not only to the close connection between labour market and family policy, but more specifically to the interaction between these two policy areas; our results show that when immigrant mothers participate on the labour market they use the leave more similarly to how native mothers do. This is especially important for groups who run the risk of marginalization, such as newly arrived immigrant parents. Thus, labour-market integration is central to all integration in Sweden, including when it comes to being able to use family policy effectively.

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Appendix

See Table 4.

Table 4 Mothers of children born in December during the years 1997–2004 by socio-demographic characteristics (absolute and percentage values)

	Absolute values	Percentages
Duration in Sweden: 0–4 years	1968	8.2
5 + years	2042	8.5
Two foreign-born parents	906	3.8
One Swedish-born and one foreign-born parent	1886	7.9
Two Swedish-born parents	17,158	71.5
Missing	32	0.1
Labour market: student	2575	10.7
Unemployed	2977	12.4
Employed with low income	1235	5.1
Employed with medium income	5425	22.6
Employed with high income	9396	39.2
Non-participant	2384	9.9
Stability of presence: never emigrated	23,596	98.3
Ever emigrated	396	1.7
Educational level: primary	2750	11.5
Low secondary	4100	17.1
High secondary	6775	28.2
Tertiary	9570	39.9
Missing	797	3.3
Subsequent children: no child	19,305	80.5
After 1 year	83	0.3
After 2 or 3 years	4604	19.2
Year of birth of child: 1997	2663	11.1
1998	2645	11.0
1999	2889	12.0
2000	2886	12.0
2001	2965	12.4
2002	3214	13.4
2003	3295	13.7
2004	3435	14.3
Sweden	19,832	82.7
Other Nordic countries	484	2.0
Former Yugoslavia	551	2.3
Elsewhere Eastern Europe (ex-Communist)	421	1.8
Elsewhere Europe	239	1.0
North and Central America	106	0.4
South America	259	1.1

Table 4 continued

	Absolute values	Percentages
Middle East (excluding Iraq) and North Africa	771	3.2
Elsewhere Africa	283	1.2
Elsewhere Asia	675	2.8
Iraq	356	1.5
Missing	15	0.1
Total	23,992	100.0

Source: Swedish administrative register data, compiled by the authors

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