Family Migration and Gender Differentials in Earnings: The Impact of Occupational Sex Segregation

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Family Migration and Gender Differentials in Earnings: The Impact of Occupational Sex Segregation

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Abstract: Family migration is often associated with an increase in men's income and a decrease in women's income. Attempts have been made to explain this gender imbalance with gender differences in economic bargaining power and gender traditional ideology. This study addresses a far less studied underlying mechanism, namely the impact of occupational sex segregation. Female-dominated occupations have been suggested to have a secondary migration status, which may be why women do not gain as much as men from moving. I test this hypothesis using unique Swedish population register data, including all dual-earner couples aged 20 to 55 with at least one common child in any of the years 1998-2001, and follow how their annual earnings trajectories and changes in the women's economic dependency in the household are associated with their migration status. Results reveal that it is not until after six years that men gain from moving. A substantial part of these gains stems from moving men working in occupations with high earnings potential. In the first few years after a move, women's earnings trajectories suffer, to some extent because of additional children being born. Six years after a move, moving women's earnings trajectories have recovered and are similar to those of staying women. Women's gains, however, are still lower than men's even after adjusting for occupational differences. Women and men gain more from moving if they are working in occupations that exist all over the country. Men also have steeper earnings trajectories if partnered with women in these types of occupations, regardless of whether the couple moves.

Keywords: family migration, earnings, gender, occupation, sex segregation

Introduction

Couples are more likely to move to a new region to accommodate the man's career rather than the woman's (Cooke 2008). Therefore, partnered men's income often increases from moving, whereas women often lose economically from moving to a new place. In the US, this pattern is well examined (Cooke 2008). Interestingly, the few studies on Sweden indicate similar patterns (Åström and Westerlund 2009; Nilsson 2001), despite the strong gender egalitarian norms in this country. Common attempts to explain why men seem to benefit more from migration, even in dualearner couples, include gender differences in bargaining power (Lundberg and Pollak 2003) and gender traditional ideology (Bielby and Bielby 1992). These explanations are important, but they fail to take into account one crucial aspect of how gender operates in decisions surrounding migration, namely the different occupations women and men hold (Halfacree 1995). When choosing careers, women tend to select occupations that facilitate the combination of work and family life (Okamoto and England 1999). These choices are connected to gender differences in earnings in that women's occupations provide fewer advancement possibilities and have a more compressed wage structure than men's, even within similar qualification levels. Furthermore, women are more likely than men to work in occupations that have high geographic ubiquity; that is, these occupations are available in most if not all regions and have smaller wage differences between regions (Brandén 2013a; Shauman 2010; Shauman and Noonan 2007).

Sweden has one of the highest female labor market participation rates in the world (Magnusson 2010) and an individualized taxation system that encourages both women and men to engage in paid labor (Sainsbury 1999). In addition, Swedes

generally hold egalitarian attitudes (Fahlén 2013). Nevertheless, family migration tends to benefit men more than women (Åström and Westerlund 2009; Nilsson 2001). One plausible explanation for this phenomenon may lie in the fact that Swedish women and men work in different occupations. Although egalitarian in many aspects, Sweden has high levels of sex segregation in the labor market (Magnusson 2010). This phenomenon makes Sweden an important case for testing the occupational sex segregation hypothesis in family migration, which until now has been mainly studied in the US, Germany, Great Britain and the Netherlands.

These analyses are based on unique Swedish register data including 196,075 couples with common children, where both partners were gainfully employed in any of the baseline years 1998, 1999, 2000 or 2001. Having access to these population data is a great advantage when studying such an uncommon event as families' long-distance migration. Ordinary least square regressions are used to examine how family migration during the year after the baseline year is associated with the development in the annual earnings of (1) the man, (2) the woman, and (3) the couple, as well as (4) the woman's economic dependency in the household, during six subsequent years. I then examine how these patterns change when adding intervening covariates aimed at capturing occupational differences between women and men. Two main contributions of this study are (1) the longitudinal character of the data, which makes it possible to detect changes in earnings from family migration up to six years following a potential move and (2) the Swedish context, which makes it possible to better isolate the importance of occupational sex segregation in gendered family migration without the influence of low female labor force participation and a male breadwinner system.

Theoretical background

A common starting point for understanding single individuals' migration decisions is the utility maximizing process, which holds that individuals move when they believe they will experience some gain (Lee 1966). Economic gains have been emphasized as important determinants of individuals' decisions to move (Lee 1966; Sjaastad 1962), although ties to friends and family have been suggested to be even more important at times (Lundholm et al. 2004), particularly for understanding why individuals do not move (Amcoff, Niedomysl, and Moberg 2012; Fischer and Malmberg 2001). What is considered to be a rational migration decision is likely to vary between individuals (Goldthorpe 1998) as well as throughout individuals' life course (Cadwallader 1992). Whereas a single person might feel relatively unrestricted in deciding where to live, a couple faces a more complex migration decision. This scenario is particularly true for dual-earner couples, who are the primary focus of this study.

The first theoretical attempts to explain couples' migration decisions as opposed to individuals' migration decisions assumed rational couples, similar to Lee's (1966) rational individual. That is, whereas individuals move when they believe their own utility would increase sufficiently, couples move when the joint couple's utility would increase (Mincer 1978). In other words, one of the partners may lose from moving, as long as the other partner's gains are large enough to compensate for this loss. An individual who would gain individually from moving, but whose gains are not sufficient to make the couple move, is called a "tied stayer", whereas an individual who moves because of his or her partner, without gaining personally from the move is called a "tied mover" (Mincer 1978). Behind this "rational" couple approach is the

assumption of gender symmetry, that both the man's and the woman's gains would be valued similarly. Research on family migration, however, reveals few patterns of gender symmetry, demonstrated by the fact that women's income suffers disproportionally when families move (Cooke 2008). Therefore, competing or additional theoretical approaches have been developed.

Lundberg and Pollak (2003) suggested that gender differences in bargaining power are important for understanding why women do not seem to benefit as much as men from family migration. The authors argued that even when living as a couple, individuals consider their own utility rather than the couple's utility as their primary interest. Negotiations on where to live will often result in the partner with the greater bargaining power making the final decision; therefore, migration decisions will not necessarily lead to gains for the couple. Because men generally have higher earnings than women, men drive migration decisions more frequently. Therefore, they also are more likely to gain economically from migration (Lundberg and Pollak 2003).

As in most decisions made by couples, gender ideology and societal norms are likely to matter (Bielby and Bielby 1992; Brandén 2013b; Cooke 2009; Jürges 2006; Markham et al. 1983). Because of traditional gender ideology, which sees the man's paid labor as more important than the woman's (Davis and Greenstein 2009), couples are more likely to move for the sake of the man's job and economic gains than those of the woman (Bielby and Bielby 1992).

Finally and most importantly for this study, labor market structures are essential for understanding why men tend to drive couples' migration decisions and consequently gain more from moving (Halfacree 1995). Most labor markets are gendered, with women and men working in different occupations with different

characteristics. This is linked to gender ideology, for instance demonstrated by the fact that women from an early age anticipate working in family friendly occupations where they can combine work and motherhood (Okamoto and England 1999).

Because female- dominated occupations have high geographic ubiquity, few advancement possibilities and lower status in general, women may be more likely to move for a partner, hence decreasing their own gains from moving (Halfacree 1995). It has even been suggested that women choose occupations that facilitate geographical mobility, so that a woman can move for her partner (Long 1974). This phenomenon suggests that women's disadvantageous position in family migration are of a structural nature and stems from occupational differences between women and men. Therefore, occupational differences function as a mediator for the commonly found gender differences in gains from migration.

Family migration and income development for women and men

Most research suggests that migration results in an increase in income. Böheim and Taylor (2007) studied British men aged 21-49 and found that individuals who moved to change jobs experienced a wage increase of more than three times the increase of those who did not move. Moreover, in the United States, individuals who moved to change jobs seemed to gain increased income compared to individuals who changed jobs without moving (Yankow 2003). Gains were most immediate for low-skilled workers, whereas more highly skilled workers experienced a delay in increased income, with the most pronounced effect at five years or more following the move. This finding emphasizes the need for a sufficiently long follow-up period when studying the consequences of migration. Results for Sweden are mixed. Nakosteen

and Westerlund (2004) studied the period 1994-1995 and found that both employed and unemployed individuals gained in the short term from migration, although they also found patterns of self-selection, meaning that migrants may have had certain attributes that affected both their earnings potential and migration behavior. Axelsson and Westerlund (1998) found that migration did not affect household disposable income in Sweden. They were, however, using a small sample of data (n=1309) from the 1981 and 1991 waves of the Level of Living Survey. There are also indications that the gains from moving are profoundly affected by the process of urbanization, where most individuals who move go to larger labor markets where both wages and costs are higher. Using Swedish register data from 1993 to 2002, Korpi and colleagues (2011) found that after adjusting for the higher costs of living in urban areas, individuals who moved upwards in the urban hierarchy experienced no income gains. Because the effects of moving on net income were so small, the authors concluded that short-term income gains might not drive most internal migration (Korpi, Clark, and Malmberg 2011).

Most studies concerning gender differences in economic gains resulting from migration indicate that women in couples gain less from moving than men. Using US data from 1980 to 1989, Jacobsen and Levin (2000) found that married women who moved had significantly lower incomes compared to married women who did not move. However, the authors did not find any increases in income for men who moved. Cooke (2003), conversely, found that migration increased the earnings of US men while leaving women's income unchanged. Smits (2001) studied the relationship between migration and earnings for married women and men in the Netherlands. He found significantly higher hourly wages for women and men who had recently made a long-distance move compared to non-movers. These differences were explained by

movers differing from stayers in non-measured characteristics. After adjusting for these differences, migration was found to have a negative impact on the earnings for both spouses. Smits interprets this as if male movers were in unfavorable labor market situations in the beginning of the study as compared to non-migrants, which makes them both more likely to move and to increase their earnings. Smits interprets the results for women as indicating that they often move for their husbands' career.

Cooke and Bailey (1996) found similar results for the US. Their findings indicate a lower likelihood for female movers to be employed compared to female stayers; the reason for this disparity is that female movers are a select group that were inherently different from female stayers. Cooke and colleagues (2009) however found women's earnings to initially decline after migration but recover slowly afterward, and this pattern remains even after adjusting for self-selection of movers. (Cooke et al. 2009).

For Sweden, Nilsson (2001) found men's earnings to be positively affected by migration, whereas women's earnings remained unaffected. In households where both partners had a degree from a university, migration also increased the gap between the two partner's earnings. Nilsson found migration to be particularly disadvantageous for women with children, whereas other groups generally gained from moving. Åström and Westerlund (2009) studied the period 1997-2003 and found that migration increased the total gross earnings of young Swedish households (with both partners aged 25-45), but it did not affect the gender earnings gap. Total gross earnings of the households increased due to gains experienced by highly educated men postmigration. Although the authors conclude that the gender earnings gap remained unaffected by family migration, they found little evidence of women gaining from moving. Women only gained from migration if they were highly educated and

married or cohabiting with a less educated male. These findings support theories on bargaining power.

Men's and women's occupational characteristics have been found to affect couples' migration propensities differently depending on the country studied. The men's occupational characteristics often tend to dominate couples' migration propensities in the US and the UK (Duncan and Perucci 1976; McKinnish 2008; Shauman 2010), whereas in Sweden and the Netherlands, the occupational characteristics have a more gender symmetrical effect on couples' migration propensities (Brandén 2013a; Smits, Mulder, and Hooimeijer 2003). In the UK, characteristics commonly associated with female-dominated occupations, such as lower opportunities for wage growth, tend to lead to tied moving. However, even after adjusting for gender differences in occupational characteristics, it is more common for couples to move for the sake of the man's job than for the woman's job (Perales and Vidal 2013).

In studies using occupations or occupational characteristics to explain gender differences in post-migration earnings, the focus has mainly been on the vertical dimension of occupations, namely how gender differences in occupational status can explain male dominance in migration decisions. Lichter (1983) found migration to have a negative effect on women's short-term earnings in the US, but there were only minimal long run effects. Occupational and educational resources did not explain the negative short-term effects of migration on women's earnings (Lichter 1983). Boyle and colleagues (1999) studied gender differences in employment and economic activity following migration in the US and Great Britain. Their findings indicate that men are more likely to be employed after migration than women, regardless of

occupational status and migration status. They did not find any patterns indicating that the partners' relative power regarding occupational status would explain why men are more likely to gain from migration (Boyle et al. 1999).

To the best of my knowledge, Shauman and Noonan (2007) were the first scholars to take into account the horizontal gender differences in occupational characteristics, to explain why men gain more than women from migration. Shauman and Noonan examine how women's employment and income are affected by family migration in the US, and how this in turn is affected by gender differences in occupational characteristics. Even after adjusting for the prevalence of migration within the occupation, the fact that female-dominated occupations generally have flatter wage trajectories, the unemployment rate of the occupation, and the geographic ubiquity of the occupation, women are still more likely to be unemployed and gain less economically after migration compared to their male counterparts (Shauman and Noonan 2007). McKinnish (2008) examined how mobility rates in a spouse's occupation affect the earnings of the other spouse in the US. Her findings indicate that the husband's occupational mobility rate has a large negative association with his wife's earnings, whereas the wife's occupation has no such effect on the husband's earnings.

Most research on family migration has been performed in the US, the UK or the Netherlands. Compared to these countries, Sweden stands out for its higher female employment rates, and low levels of female part-time work (Magnusson 2010). Furthermore, only 8 percent of Swedes surveyed compared to 19 percent of Brits agree with the idea that the man's job is to earn money, whereas the woman's job is to look after the family (Fahlén 2013). Thus, it is likely that occupations and

occupational structures will have an even greater impact on family migration in Sweden than in other countries, as the Swedish labor market represents a gender-traditional remnant in an otherwise gender-egalitarian context. Sweden provides a unique context in which to test the occupational sex segregation hypothesis in family migration; that is whether women's disadvantageous position in family migration stems from occupational differences between women and men. From this, we derive the following hypotheses.

H1. Couple and individual earnings trajectories will increase more for moving couples than for staying couples

H2a. The individual gains in earnings from migration are particularly pronounced for men

H2b. As a result from H2a, the woman's economic dependency in the household develops less in favor of the woman in moving couples than in staying couples H3. After adjusting for occupational characteristics, gender differences in gains in earnings from moving, as well as changes in the woman's economic dependency after moving, will diminish

Study design

I have combined data from several Swedish population and administrative registers to capture how migration structures women's and men's development in annual earnings. I include four baseline years: 1998, 1999, 2000 and 2001. For these years, I sample all couples with both partners aged 20-55, who are gainfully employed in November, have at least one common child, and whose youngest child is at least

two years old. The data from the four baseline years are pooled, which means that couples are included in the analyses each year they fulfill the criteria. In my study, 41 percent of all couples are included only one year, and 15 percent are included all four years. The standard errors in the analyses are adjusted for the non-independent observations with Stata's cluster command. The final population includes 404,085 couple baseline years, or 196,075 unique couples.

I follow the development in annual earnings of the man, the woman and the couple, respectively, as well as the woman's economic dependency in the household (measured by her share of the total couple earnings) during the six years following the baseline year. Couples that are sampled in 1998 are followed until 2004, and couples that are sampled in 2001 are followed until 2007. Couples are followed until they move (again) or the union dissolves due to separation, divorce or death of either partner. Of the included couples, 87 percent are followed all six years, meaning they do not separate, move (again) or die during the years following the baseline year. In total, the number of follow-up years is 2,185,446.

Information on independent and control variables is collected during the baseline year, year t (1998-2001), and migration status is measured one year later, year t+1 (for the baseline year 1998, migration status is measured in 1999 and so on). I then follow the development in (1) the man's annual earnings, (2) the woman's annual earnings, (3) the couple's total annual earnings and (4) the woman's economic dependency in the household, between the baseline year and the subsequent six years, according to the couple's migration status in year t+1.

I use ordinary least squares regressions and perform stepwise regression models for each of the four outcomes (O), with dummy variables indicating year of observation subsequent to the baseline year (1 to 6). I start with (1) a relatively simple model of the development in O by migration status, including an extensive set of control variables, and then (2) introduce a time varying measure of whether the couple has been registered as ever having given birth to a child after the baseline year. After this, I (3) introduce the occupational characteristics of the woman and the man, and interaction terms between occupational characteristics and migration status. By this, I examine whether the reason for the association between gender, migration status and the development in O is because (A) there are gender differences in occupational characteristics that affect both the likelihood to move and the development in O, or (B) women's and men's occupational characteristics are associated with different gains from moving. I examine the development in the man's, the woman's, and the couple's annual earnings, as well as the woman's economic dependency between the baseline year and all subsequent six years. Following couples for a substantial amount of post-migration time is important, although unfortunately it is uncommon to have data that allow for a long follow up period. The returns from migration are dependent on the time spent at the destination, as internal migrants need time to acquire knowledge about their destination before receiving any payoff from migration (Borjas, Bronars, and Trejo 1992). Accordingly, migration studies often reveal a lag time in gains from moving. Cooke and colleagues studied a recovery period of five years following their baseline year and found women's earnings to decrease the year of the move but to then recover during subsequent years (Cooke et al. 2009). The fact that researchers have established such a long delay makes it important not to follow couples for just one or two years after migration, but to study couples over a longer time frame, allowing substantial time for their income to recover. Furthermore, because I only have access to annual earnings, which may be affected by short spells

of unemployment in connection to moving, a sufficiently long follow-up period is even more important. In this study, I build upon the work of Cooke and colleagues (2009) but examine the development over six years instead of five years.

Variable construction

Migration is defined as long-distance migration and measured by whether the couple has moved to another municipality during the year following the baseline year; this municipality must be in another Swedish local labor market. Local labor markets are clusters of municipalities that are distinguished by together being more or less self-sufficient in terms of the work force. Most commuting takes place within and between these municipalities, and only a small fraction of the inhabitants commute outside the local labor market. The measure is constructed by Statistics Sweden and is commonly used to operationalize long-distance migration in Sweden (Korpi, Clark, and Malmberg 2011; Lundholm 2007). The number of local labor markets in Sweden changes over time but is generally around 100. In my models, I distinguish between (1) that the couple stays, and (2) that the couple moves. Couples that dissolve their union in year t+1 are not followed further. Couples that dissolve during subsequent years, however, are followed until the year they dissolve. Table 1 includes the distribution of couples' migration statuses during year t+1. Approximately half a percent of the studied couples moved to a new local labor market, and three percent of the unions ended during year t+1.

Table 1 Long-distance migration status during year t+1. Sweden, 1998-2001.

	Percentages	N
Stay	96.5	389,820
Move	0.6	2,337
Union dissolution	2.9	11,928
Total	100.0	404,085

Source: Swedish register data, author's calculations

The annual earnings are derived from the Swedish taxation register and include all declared income from employment during a year (SEK) before taxation but after deduction of social-insurance fees (*Deklarerad löneinkomst*). The measure of annual earnings is adjusted for inflation of SEK as of 2007. This variable only covers income from employment and is consequently low for individuals on parental leave. This is why couples with children below age two are excluded from the baseline year. The man's and the woman's annual earnings are their individual declared income from employment, and the couple's total annual earnings is the sum of these two values.

The woman's economic dependency in the household is calculated as (Earnings_{MAN}/Earnings_{COUPLE})-(Earnings_{WOMAN}/Earnings_{COUPLE}). The measure varies between -1 and +1 where -1 means that the woman contributes all the earnings and +1 means that the man contributes all the earnings (Sørensen and McLanahan 1978).

The mediators of primary interest in my analysis are *occupational characteristics*. These are derived from the Swedish earnings structure statistics, which include information on occupation by SSYK codes (Standard for Swedish Occupational Characterization). I recode these to 3-digit ISCO-88 codes (International Standard Classification of Occupations as of 1988) and distinguish between 115

occupations based on skill level and type of work being performed. This information is collected in November/September each year, depending on the sector of employment. For individuals with more than one occupation at this point in time, I select the occupation with the highest skill level, and within skill levels I select the occupation with the highest monthly wage.

The Swedish earnings structure statistics cover all employers in Sweden with the exception of private companies with fewer than 500 employees, for which information is collected in a randomized sample of work places. In other words, employees at small private workplaces are underrepresented in the data set. Statistics Sweden estimates to have information on approximately 50 percent of the employees in the private sector. The statistics are weighted to compensate for this underrepresentation, and these weighted data have been used to construct my measures on occupational characteristics

Note that only couples where both partners appear in the earnings structure statistics are included in the analyses; thus, couples where either or both partners are employed in small private firms are undersampled. The only other systematic way these couples differ from the overall population of dual-earner couples is that the couples in the earnings structure statistics have a higher educational level than those that are not included (see Appendix A for a description on how the couples in the earnings structure statistics differ from the overall population of couples). As the sampling procedure is performed by sector of employment, I include a variable in all models that measures the sector of employment for the woman and the man in each couple. I have also re-run the analyses separately by the two partners' educational

attainment, and by their sector of employment, to ensure that the results are robust.

The results from the re-run models are discussed in "Robustness checks"

I include three occupational characteristics that have previously been shown to be important in explaining men's larger gains from moving and in explaining why men's characteristics affect couples' migration propensities more than women's (Brandén 2013a; Shauman 2010; Shauman and Noonan 2007). I include a measure of to what extent a particular occupation can be found all over the country (*geographic ubiquity*) (Shauman and Noonan 2007), *the earnings potential in the occupation*, measured by the year and sex specific ratio of the 80th and 20th wage percentile, and the wage differences between regions for a particular occupation (*geographical wage differences*) (Brandén 2013a). See Appendix B for a more detailed description of how these measures have been constructed, and Appendix C for a correlation matrix of the variables.

In all models, I control for several demographic and socio-economic characteristics that may influence both a couple's migration propensity and their development of annual earnings. These characteristics are always measured in the baseline year and include the calendar year of the baseline year, the woman's economic dependency in the household (as described above), civil status (married or cohabiting), age of youngest child, age of oldest child, number of children, and (for both the woman and the man) age, age squared, being foreign born, being enrolled in education, being on parental leave, being unemployed, and level of education. I also include a combined variable for the sector of work of the woman and man (public or private) to adjust for the sampling procedure in the earnings structure statistics. To adjust for whether women's lack of gains from moving stems from the fact that

couples often move when they intend to have more children (Feldhaus, Vidal and Huinink 2013), I include a time-varying dummy variable in Model 2 to measure whether the couple has ever had any additional children between the baseline year and the year in question.

Descriptive results

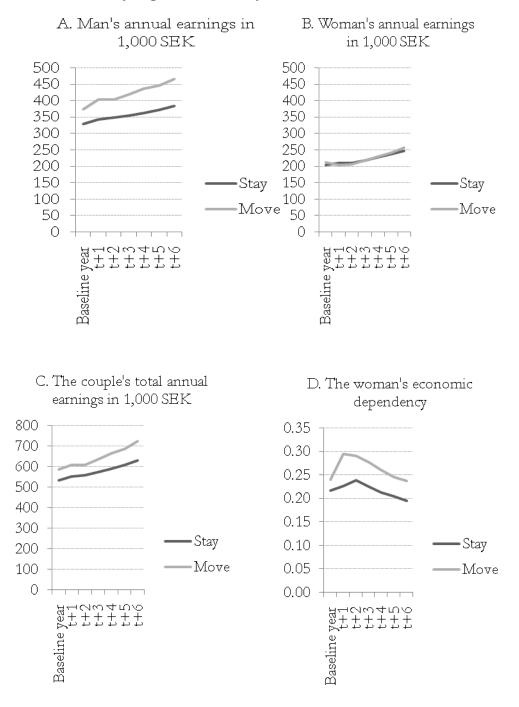
Figure 1 includes mean values of (A) the man's annual earnings, (B) the woman's annual earnings, (C) the couple's total annual earnings and (D) the woman's economic dependency in the household, according to the couple's migration status and year since the baseline year.

We see that the men in moving couples are a select group, whose annual earnings were already higher in the baseline year, as compared to men in couples that did not move. The common phenomenon of moving men having a better income development than staying men is also true for Sweden. The increase in annual earnings between the baseline year and six years later of men in couples that moved was 37,000 SEK larger than the increase in annual earnings of staying men.

The annual earnings of women in moving couples were roughly the same in the baseline year as those of staying women (Figure 1B). We also see that virtually no differences in subsequent earnings exist between women of different migration statuses. The development in the mean annual earnings is only slightly better (4,000 SEK) between the baseline year and six years later for women who moved than it was for staying women. Therefore, men seem to gain more from moving than women do.

Figure 1C indicates that the total couple annual earnings increased more for couples who moved than for couples who stayed. Finally, from Figure 1D, we see that couples who moved during year t+1 had a more unequal earnings distribution than couples who stayed, even prior to migration. The woman's economic dependency increased slightly during the first few years following a move, but after this initial lagphase, it was reduced. With the exception of this initial lag time, the development in female dependency is only slightly lower for moving than for staying couples. The development in the woman's economic dependency is primarily the result of the man's better earnings trajectory following migration.

Figure 1 Mean values by migration status in year t+1. Sweden, 1998-2001.



Source: Swedish register data, author's calculations

Multivariate analyses

After these initial descriptive analyses, I performed multivariate OLS regressions on the same four outcomes. Table 2 includes the distribution of couples over included control variables, according to the couple's migration status. Couples with children in pre-school ages move more often than other couples, as do couples with only one child compared to couples with more than one child. Couples are also more likely to move when one of the partners was born abroad or is on parental leave, studying, or unemployed. Couples where partners have high levels of education are more likely to move than other couples, and those working in the public sector also seem more prone to move than those with private sector jobs. The younger the woman and the man are, the more likely the couple is to move.

Regarding the occupational characteristics of primary interest to this study, we see that women are in occupations with higher geographic ubiquity than men, meaning that these occupations are more evenly distributed throughout Sweden. Geographic ubiquity, however, is not very strongly linked to migration patterns, at least not for women. Earnings potential is strongly linked to both migration propensities and sex. Men's occupations have higher earnings potential than women's, and the mean earnings potential is higher for movers than for stayers. Finally, the geographical wage differences are greater for men's occupations than for women's. Having an occupation with substantial differences in wages between regions is positively associated with a couple's migration propensities. This descriptive association between occupational characteristics and migration propensities confirms previous findings from multivariate analyses on couples' migration propensities (Brandén 2013a).

Table 2
Descriptive statistics of independent and control variables in baseline year, by couple's migration status at year t+1. Sweden, 1998-2001. Percentages

		Stay	Move
		%	%
Year	1998	99.4	0.6
	1999	99.3	0.7
	2000	99.4	0.6
	2001	99.5	0.5
Marital status	Cohabiting	99.5	0.5
	Married	99.4	0.7
Age of youngest child	< 6 years	99.2	0.8
	7-18 years	99.6	0.4
	>18 years	99.6	0.4
Age of oldest child	< 6 years	98.9	1.1
_	7-18 years	99.6	0.5
	>18 years	99.6	0.4
Number of common children	1	99.1	0.9
	2	99.5	0.5
	3	99.5	0.5
	4 or more	99.4	0.6
Foreign born, woman	Born in Sweden	99.4	0.6
,	Born abroad	99.1	0.9
Foreign born, man	Born in Sweden	99.4	0.6
,	Born abroad	99.1	0.9
On parental leave, woman	No	99.5	0.5
,	Yes	99.2	0.8
On parental leave, man	No	99.4	0.6
•	Yes	99.2	0.8
Enrolled in studies, woman	No	99.4	0.6
•	Yes	99.2	0.8
Enrolled in studies, man	No	99.4	0.6
	Yes	98.9	1.1
Unemployed, woman	No	99.5	0.6
2 2	Yes	98.7	1.3
Unemployed, man	No	99.4	0.6
•	Yes	99.0	1.1

Continues on next page

Table 2, continued

Education, woman	Primary or lower secondary	99.6	0.4
	Upper secondary	99.6	0.4
	Post secondary less	99.3	0.7
	than 2 years		
	Post secondary, 2 years	99.1	0.9
	or longer	a = 4	• 0
	Missing	97.1	2.9
Education, man	Primary or lower	99.8	0.2
	secondary	99.6	0.4
	Upper secondary Post secondary less	99.0 99.5	0.4
	than 2 years	99.3	0.3
	Post secondary, 2 years	98.9	1.1
	or longer		
	Missing	98.7	1.3
Sector of work	Both private	99.5	0.5
	Woman public	99.5	0.5
	Man public	99.3	0.7
	Both public	99.1	0.9
		Mea	Mea
		n	n
Age, woman		37.0	35.7
Age, man		38.7	37.3
Geographic ubiquity, woman		0.88	0.88
Geographic ubiquity, man		0.80	0.82
Earnings potential, woman		1.28	1.32
Earnings potential, man		1.42	1.52
Geographical wage spread, woman		1.08	1.10
Geographical wage spread,		1.15	1.18
man			

Source: Swedish register data, author's calculations

First, I present how occupational characteristics and the combined effect of occupational characteristics and migration status are associated with the earnings development of the man, the woman and the couple, respectively, as well as with the woman's economic dependency in the household. Then, I present how the impact of migration on earnings development and

the differential effects by gender in these patterns appear when adjusting and not adjusting for these factors. The estimates of how occupational characteristics matter for earnings development are presented in Table 3. All models control for the additional effect of (as of baseline year) calendar year, the woman's economic dependency, civil status (married or cohabiting), age of youngest child, age of oldest child, number of children, and (for both the woman and the man) age, age squared, being foreign born, being enrolled in education, being on parental leave, being unemployed, level of education, and a time-varying measure of whether the couple has ever given birth to a new child after the baseline year. All models also control for the outcome variable as measured in the baseline year. Estimates should therefore be interpreted as "change in the outcome after the baseline year." Only interaction effects that are significant on at least a five percent level are included in Table 3. The full Model 3, including coefficients and model statistics, is presented in Appendix D.

Table 3 indicates that the man's earnings development is greater if his partner has an occupation with high geographic ubiquity. This scenario could mean that having a partner in such an occupation makes it possible to live in a region that is well suited to the man's career. The man's earnings development is also greater if his partner has an occupation with high earnings potential. Working in a geographically ubiquitous occupation is associated with a better earnings development for men, as is being in an occupation with high earnings potential. Furthermore, men in occupations with high geographic ubiquity gain more from moving than other men. This phenomenon is indicated by the interaction term in column 1 of Table 3. The other occupational characteristics are equally important for the wage development of moving and staying men.

The woman's earnings development is not affected as much by her partner's occupational characteristics, with the exception of geographical wage differences. Women who have partners in occupations where the wages differ much between regions have a slower earnings development than other women, which could indicate that the large geographical wage differences of the man's occupation make it difficult to find a suitable region for both

partners' careers. Similar to men, women have better earnings development if they work in an occupation with high geographic ubiquity, high earnings potential and large geographical wage spread. Furthermore, similar to men, women gain more from moving if they work in an occupation with high geographic ubiquity (see interaction term in column 2). This finding is interesting and could indicate that working in a geographically ubiquitous occupation functions as a buffer for both women and men in family migration, facilitating the continuation of work in the same occupation in the new region of residence.

The development in the couple's total annual earnings is the aggregation of the impact of the woman's occupational characteristics on her earnings and the impact of the man's occupational characteristics on his earnings. No interaction terms between migration status and gender were significant for the analyses on the couple's earnings development.

Finally, the woman's economic dependency develops more favorably for the woman in couples where the woman works in a geographically ubiquitous occupation, if her occupation has high earnings potential and if the occupation has similar wages throughout the country. The same scenario is true if the man works in an occupation with low earnings potential and large differences in wages between regions. For a woman who works in a geographically ubiquitous occupation, migration is associated with a change toward less economic dependence.

Table 3 OLS regressions on the effects of occupational characteristics and migration on the man's annual earnings, the woman's annual earnings, the couple's total annual earnings, and the woman's economic dependency. Sweden, 1998-2001. Full models in Appendix D.

_	_	Outcome			
		The man's annual earnings in 1,000 SEK	The woman's annual earnings in 1,000 SEK	The couple's total annual earnings in 1,000 SEK	The woman's economic dependency
Occupational characteristics of woman	Geographic ubiquity	10 *	62 ***	66 ***	-0.06 ***
	Earnings potential	51 **	153 ***	182 ***	-0.19 ***
	Geographical wage spread	11	34 *	35 **	0.05 ***
Occupational characteristics of man	Geographic ubiquity	42 ***	-1	41 ***	0.00
	Earnings potential	118 ***	18	125 ***	0.11 ***
	Geographical wage spread	16	-15 ***	0	-0.04 ***
Interaction effects between migration status and	Man's geographic ubiquity	54*			
	Woman's geographic ubiquity				-0.21 **

^{***} p<.001, ** p<.01, * p<.05

Source: Swedish register data, author's calculations

Table 4 and Figure 2 include Average Marginal Effects (AME) from stepwise OLS regressions on the four outcomes by year since the baseline year. The AME of migration means holding each couple at their true values on all the variables included in the models, while letting their migration status vary. Then, the average difference between moving and staying couples is calculated, using Stata's margins command (Bartus 2005). Presenting results as AME makes the results easily interpretable despite many included interaction terms. Similar to previously presented results, all models control for the outcome variable as measured in the baseline year. Estimates should therefore be interpreted as "change in ... after the baseline year."

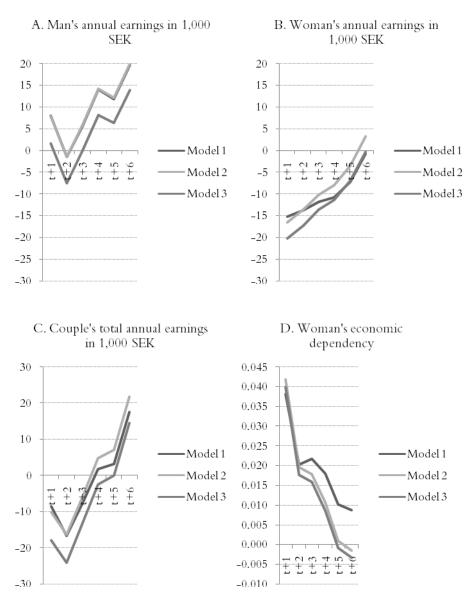
Model 1 indicates the association between moving at year t+1 and the development in annual earnings of the man, the woman and the couple, as well as the woman's economic dependency during the subsequent years, after controlling for calendar year, the woman's economic dependency in the baseline year, civil status (married or cohabiting), age of youngest child, age of oldest child, number of children, and (for both the woman and the man) age, age squared, being foreign born, being enrolled in education, being on parental leave, being unemployed, and level of education in the baseline year. In Model 2, I add a timevarying measure of whether the couple has ever given birth to a new child after the baseline year. Model 3 adds the occupational characteristics of both partners to adjust for the fact that some occupations are both more geographically flexible and have a better development in annual earnings. It also adds interaction terms between the occupational characteristics of both partners and the couple's migration status to adjust for the possibility that some occupational characteristics are associated with larger gains from moving than others. Only interaction terms that were significant on at least a five percent level are retained in Model 3 (see previous section). The full Model 3, including all coefficients and further model statistics, is presented in Appendix D.

Table 4
OLS regressions on the effect of moving on the development in the man's annual earnings, the woman's annual earnings, the couple's annual earnings and the woman's economic dependency in the household. Sweden, 1998-2001. Average Marginal Effects (AME). P-values indicate whether differences are significantly different from stayers. Full Models 3 in Appendix D.

A. N	Ian's an	nual earning	gs in 1,00	00 SEK			B. W	Voman's	annual earr	nings in 1,	000 SEK		
	Model	. 1	Model	2	Model	3		Model	1	Model 2		Model 3	
	AME	p-values	AME	p-values	AME	p-values		AME	p-values	AME	p-values	AME	p-values
t+1	8	0.059	8	0.063	2	0.660	t+1	-15	0.000	-17	0.000	-20	0.000
t+2	-2	0.750	-2	0.753	-8	0.076	t+2	-14	0.000	-14	0.000	-17	0.000
t+3	6	0.336	6	0.325	0	0.976	t+3	-12	0.000	-10	0.000	-14	0.000
t+4	14	0.051	14	0.047	8	0.239	t+4	-11	0.000	-8	0.003	-11	0.000
t+5	12	0.050	12	0.044	6	0.275	t+5	-7	0.030	-4	0.271	-7	0.026
t+6	20	0.001	20	0.001	14	0.016	t+6	-1	0.811	3	0.267	0	0.924
C. C	ouple's	annual earn	ings in 1	,000 SEK			D. V	Voman's	s economic	dependenc	су		
	Model	1											
	1110001	. 1	Model	2	Model	3		Model	1	Model 2		Model 3	
	AME	p-values	Model AME	p-values	Model AME	p-values		Model AME	p-values	Model 2 AME	p-values	Model 3 AME	p-values
t+1							t+1						
t+1 t+2	AME	p-values	AME	p-values	AME	p-values	t+1 t+2	AME	p-values	AME	p-values	AME	p-values
	AME -9	p-values 0.061	AME -10	p-values 0.025	AME -18	p-values 0.000		AME 0.038	p-values 0.000	AME 0.042	p-values 0.000	AME 0.040	p-values 0.000
t+2	AME -9 -17	p-values 0.061 0.002	AME -10 -16	p-values 0.025 0.002	AME -18 -24	p-values 0.000 0.000	t+2	AME 0.038 0.020	p-values 0.000 0.010	AME 0.042 0.020	p-values 0.000 0.010	AME 0.040 0.018	p-values 0.000 0.018
t+2 t+3	AME -9 -17 -8	p-values 0.061 0.002 0.230	AME -10 -16 -6	p-values 0.025 0.002 0.345	AME -18 -24 -13	p-values 0.000 0.000 0.024	t+2 t+3	AME 0.038 0.020 0.022	p-values 0.000 0.010 0.008	AME 0.042 0.020 0.018	p-values 0.000 0.010 0.026	AME 0.040 0.018 0.016	p-values 0.000 0.018 0.047

Source: Swedish register data, author's calculations

Figure 2 OLS regressions on the effect from moving on the development in the man's annual earnings, the woman's annual earnings, the couple's annual earnings and the woman's economic dependency in the household. Sweden, 1998-2001. Average Marginal Effects (AME). Full Models 3 in Appendix D.



Source: Swedish register data, author's calculations

From the estimates for the man's annual earnings (Table 4A and Figure 2A), we see that migration tends to benefit men's earnings development in the long term. On average, men who have moved during year t+1 have a 20,000 SEK greater development in earnings between the baseline year and year t+6, as compared to staying men (Model 1). Nevertheless, it is not until year t+5 that the difference between moving and staying men becomes significant at the five

percent level. The birth of additional children does not change the impact of migration on men's earnings development (Model 2). In addition, note the negative coefficient for year t+2. It is commonly found that a woman's earnings suffer the year following a move, and a similar pattern exists for Swedish men. From Model 3, we find that a substantial portion of men's returns from migration can be explained by men working in occupations that are both more mobile and have a better earnings development. After adjusting for occupational characteristics and the combined effect of occupational characteristics and migration (Model 3), only the long-term gains (year t+6) remain significant, however reduced from 20,000 SEK to 14,000 SEK.

From the estimates of women's annual earnings (Table 4B and Figure 2B), we see that women in moving couples have smaller earnings development than women in staying couples (Model 1). Their earnings are particularly negatively affected in the early phase following a move, whereas six years later, moving women's earnings trajectories have recovered and reached the same levels as those of staying women. Some of this negative association is explained by the fact that that moving women often give birth to another child after the baseline year. After adjusting for child bearing, we see that earnings development recovers more quickly (Model 2). After adjusting for moving women having different occupations from staying women, the gains from moving decrease even further (Model 3). This phenomenon occurs because moving women were in occupations with good earnings potential, which would have benefitted them even if they had stayed in their home region.

From Figure 2C and Table 4C, we see that the development in total couple earnings is lower for movers than stayers for the two years following the move, and the total couple earnings does not recover until after three years. Six years later, moving couples have increased their earnings by 17,500 SEK more than staying couples (Model 1) and even more when adjusting for couples having more children after a move (Model 2). After adjusting for the occupations of both partners, the difference in the development in the total couple annual earnings between moving

and staying couples is reduced to 14,500 SEK, and it is not until year t+6 that the difference is significant.

Finally, we turn to how changes in the woman's economic dependency are associated with the migration status of the couple (see Figure 2D and Table 4D). Positive values indicate a development toward greater female dependency. We see that in the first years after the move, moving women become more economically dependent on their partner than staying women. Childbearing following migration explains this initial result to a large extent, as seen by how Figure 2D changes between Models 1 and 2. Six years later, there is no difference in how the woman's economic dependency has changed since year t for moving compared to staying couples. The occupational characteristics have no large impact on how the woman's economic dependency changes in the long-term from migration.

Robustness checks

To ensure that my results are not driven by the behavior of highly educated persons working in the public sector, as produced by the sampling procedure in the earnings structure statistics, I have re-run the analyses in Model 3 for sub-samples of couples with different combinations of (1) educational attainment and (2) employment sector of the two partners. Results by educational attainment indicate that men gain from moving particularly in couples where both partners have higher levels of education. For couples where both partners' highest education is at the primary or upper secondary level, men's earnings development is lower for movers than for stayers. The same scenario holds true for the couples' total earnings. The results for the development in women's earnings and women's economic dependency in the household are robust regardless of the couple's educational level. Results by employment sector reveal that women gain less than men from moving in all groups except one: couples in which the man is working in the public sector and the woman works in the private sector. For these couples, the woman's long-term gains from moving are greater than those of the man, even after adjusting for occupational

characteristics. Furthermore, for couples where both partners work in the private sector, neither the woman nor the man experiences any significant long-term gains or losses from moving, after adjusting for occupational characteristics. Finally, I have tested for whether women's non-existing gains from migration are explained by their level of economic dependency in the household the year before moving. No interaction between migration status and dependency at the baseline year was significant. This finding indicates that in contemporary Sweden, economic bargaining power does not help to explain women's somewhat disadvantaged position in family migration.

Discussion and concluding remarks

The scope of this study was to examine (1) how family migration affects subsequent development in women's and men's annual earnings, couples' total annual earnings, and women's economic dependency in the household, and (2) how this phenomenon can be explained by occupational differences between women and men in the Swedish labor market.

The findings indicate that there are no immediate gains in earnings from moving, either for the couple as a whole, or for any of the two partners individually. It is not until six years after migration that movers experience a significantly greater earnings development than stayers, and this phenomenon only holds for the man and for the couple as a whole. The standard errors for men are large, which indicates that whereas some men gain from moving, many others have the opposite experience. Moving women experience a lower development in income compared to their staying counterparts, at least during the first five years after the move. To some extent, women's lower earnings development is explained by the fact that many couples give birth to additional children after a move. Women's initially poor earnings development, combined with men's slight increase in earnings, results in women's economic dependency developing less in favor of women for movers than for stayers. This is the case until five years after the move, after which no difference can be observed between movers and stayers.

If couples move with the purpose of increasing their total monetary utility (Mincer 1978), it would be reasonable to expect faster gains from moving than what is demonstrated in this study. If these moves were undertaken to increase the couples' economic gains, then these couples must have been very forward-looking and surprisingly good at predicting their future outcomes. Rather, the results point to factors other than economic motives driving migration, such as those related to friends or family. The migration of couples with children seems to occur for reasons other than to produce an increase in earnings. Findings from survey data indicate that only one fifth of all moves in Sweden are made primarily for career reasons (Brandén 2013b; Lundholm et al. 2004), which is perhaps reflected in these findings.

One main aim of this study is to examine the impact of occupational characteristics in explaining gender inequalities in post-migration earnings. However, rather than leveling out the differences in gains for women and men, adjusting for occupational characteristics decreased the gains for both women and men, thus keeping gender differences intact. This is because the earnings potential of occupations is strongly linked with migration propensities for both women and men (Brandén 2013a), with individuals in occupations with high earnings potential being more geographically mobile than others. In other words, these movers may have had a steeper earnings trajectory even if they had not moved. The geographic ubiquity of occupations seems to increase the gains from moving for both women and men, after adjusting for geographically ubiquitous occupations' often having lower earnings potential. A woman who works in an occupation with high geographic ubiquity experiences a faster recovery in economic dependency after a move, most likely because of a faster connection to the labor market at the place of destination. Brandén (2013b) finds that women often are willing to move for the sake of their partner, even prior to finding a suitable job at the destination. To work in an occupation that exists all over the country may facilitate this post-migration job-matching process, and therefore reduce the female disadvantage following a move. The study also suggests that men gain from being partnered with women who work in occupations that exist all over Sweden, regardless of

the couples' migration status. This finding could indicate that if women work in occupations that can be found all over Sweden, it is common for them to also stay in a particular region to benefit their partners.

In conclusion, occupations indeed matter. However even after adjusting for occupational characteristics, men's long-term gains from family migration are, albeit small, greater than women's. The occupational characteristics as such however have quite a similar effect on women and men's wage development. The delayed effect of migration on earnings development emphasizes the need for a sufficiently long follow-up period when studying consequences from family migration. The surprisingly small effects of migration on women's and men's earnings development points to the importance of acknowledging non-monetary motives in family migration processes.

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Appendix A Distribution of independent variables in baseline year, by whether a couple is included in the earnings structure statistics. Percentages / means.

		All	Couples
		couples	in
			earnings
			structure
			statistics
		%	%
Married vs. cohabiting	Married	71	73
Age of youngest child	< 6 years	53	51
	7-18 years	46	48
	>18 years	1	1
Age of oldest child	< 6 years	27	25
1180 01 010000 011110	7-18 years	67	69
	>18 years	6	6
Number of children	1	20	19
Tamber of Cillusti	2	57	58
	3	19	20
	4 or more	4	4
T ' 1			
Foreign born	Woman	9	9
	Man	9	8
On parental leave	Woman	22	24
	Man	17	19
Enrolled in study	Woman	7	5
	Man	2	1
Unemployed	Woman	8	6
	Man	6	3
Education, woman	Primary or lower secondary	9	7
Laucation, woman	Upper secondary	57	51
	Post secondary less than 2 years	4	4
	Post secondary, 2 years or longer	29	39
Education, man	Primary or lower secondary	16	12
	Upper secondary	54	49
	Post secondary less than 2 years	10	10
	Post secondary, 2 years or longer	20	29
		Mean	Mean
Age, woman		36	37
Age, man		38	39
N		1217371	392498

Source: Swedish register data, author's calculations

Appendix B Occupational characteristics

Potential for earnings growth in occupations is measured as the rate of the 80th and the 20th percentile of the sex- and year-specific wages in an occupation (Shauman and Noonan 2007). A high value indicates greater career prospects in an occupation.

Geographical wage spread is measured by first calculating region- sex- and year specific median wages of occupations, and then calculating the quota of the 80th and the 20th percentile of regions. It therefore measures the difference in median wages between the regions with the highest and the lowest wage levels for each occupation, and is aimed at capturing potential for earnings growth after migration.

Geographic ubiquity of occupations is year-specific and also constructed similarly to Shauman and Noonan (2007). I have calculated how people working in a certain occupations are distributed over Sweden's ~100 local labor markets. The measure is not calculated separately by sex, because the uneven distribution of population in Sweden gives too few employees in some occupations in the most sparely populated regions.

$$1 - \frac{\sum_{t=1}^{n} (t_t | p_t - P|)}{2TP(1 - P)}$$

(Shauman and Noonan 2007)

 t_i is the total population of employees in local labor market i, T is the total population of employees, p_i is the proportion of employees in labor market i employed in occupation j, P is the proportion of the total population of employees employed in occupation j. The measure varies from 0 to 1 with 1 indicating a totally even distribution over Sweden's labor markets of employees in that specific occupation.

Appendix C Correlation matrix between the occupational characteristics. R-values.

	Geographic ubiquity, woman	Earnings potential, woman	Geographical wage spread, woman	Geographic ubiquity, man	Earnings potential, man	Geographical wage spread, man
Geographic ubiquity, woman	1					
Earnings potential, woman	-0.39	1				
Geographical wage spread,						
woman	-0.67	0.78	1			
Geographic ubiquity, man	0.16	0.04	-0.05	1		
Earnings potential, man	-0.03	0.28	0.18	0.01	1	
Geographical wage spread,						
man	-0.09	0.17	0.15	-0.43	0.73	1

Source: Swedish register data, author's calculations

Appendix D Model 3 of OLS regressions on man's annual earnings, woman's annual earnings, couple's total annual earnings, and the woman's economic dependency

		Man's anr earnings i SEK		Woman's annual earnings i SEK	annual earnings in 100		Couple's annual earnings in 100 SEK		's ic ency
	Dependent variable at baseline year Female dependency at baseline	0.780 546.5	***	0.693 -233.3	***	0.800 483.8	***	0.732	***
Migration status	Couple moved during t+1	-419.3	*	-653.3	***	-180.2	***	0.224	***
Number of years after baseline year (as compared to t+1)	t+2 t+3	71.3 136.4	***	23.6 121.1	***	95.0 257.6	***	0.006 -0.011	***
	t+4 t+5 t+6	213.4 309.6*** 427.6	*** ***	217.9 315.7*** 425.4	*** ***	431.4 625.5*** 853.3	*** ***	-0.025 -0.035 -0.045	*** ***
Year* Migration status	Move*t+2 Move*t+3 Move*t+4 Move*t+5 Move*t+6	-92.5 -18.1 65.3 46.0 122.6	**	30.6 67.2 89.6 132.8 200.5	** *** ***	-61.7 48.4 154.5 179.2 325.1	* ** **	-0.022 -0.024 -0.031 -0.041 -0.043	*** ** *** ***
Baseline year (as compared to 1998)	1999 2000 2001	-24.6 -90.6 -106.3	*** ***	-37.4 -42.9 -41.7	*** ***	-66.5 -145.5 -162.0	*** ***	0.005 0.000 -0.002	***
Civil status at baseline (as compared to cohabiting)	Married	30.5	***	-7.6		19.7	***	0.007	***

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Appendix	D ,	continue	d
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7-18 years	28.1	***	31.4	***	54.4	***	-0.003	**
19 years or older	17.8		-2.4		13.4		-0.002	
7-18 years	-6.6		1.7		-10.8		0.002	
19 years or older	-30.2	*	-52.2	***	-89.6	***	0.009	***
2								
	36.1	***	1.3		36.4	***	0.004	*
3	43.3	***	-10.1		36.8	***	0.005	**
4 or more	33.7	*	-24.3		18.3		0.007	*
Woman foreign born	-25.4	*	-21.4	**	-43.3	***	0.001	
Man foreign born	-57.1	***	3.4		-46.9	**	-0.019	***
Woman on parental leave	19.6	**	17.5	**	43.0	***	-0.001	
Man on parental leave	-24.3		4.2		-8.2		-0.004	***
Woman enrolled	-101.4	*	334.9	***	265.9	***	-0.098	***
Man enrolled	461.6	***	-74.9		447.2	***	0.094	***
Woman unemployed during year	-108.1	**	56.5		-19.7		-0.030	***
Man unemployed during year	136.3	***	-59.5		125.7	***	0.017	***
Upper secondary								
	37.6	***	75.2	***	106.4	***	-0.015	***
Post secondary < 2 years	98.4	***	252.9	***	333.1	***	-0.050	***
Post secondary 2 years +	123.1	***	346.9	***	437.5	***	-0.063	***
	7-18 years 19 years or older 2 3 4 or more Woman foreign born Man foreign born Woman on parental leave Man on parental leave Woman enrolled Man enrolled Woman unemployed during year Man unemployed during year Upper secondary Post secondary < 2 years	19 years or older 17.8 7-18 years -6.6 19 years or older -30.2 2 36.1 3 43.3 4 or more 33.7 Woman foreign born -25.4 Man foreign born -57.1 Woman on parental leave 19.6 Man on parental leave -24.3 Woman enrolled -101.4 Man enrolled 461.6 Woman unemployed during year -108.1 Man unemployed during year 136.3 Upper secondary 37.6 Post secondary < 2 years	7-18 years 7-18 years 19 years or older 2 36.1 *** 3	19 years or older 17.8 -2.4 7-18 years 19 years or older -30.2 -52.2 2 -6.6 -30.2 -52.2 2 -6.6 -30.2 -52.2 2 -6.6 -30.2 -52.2 2 -7.18 years -6.6 -30.2 -52.2 2 -7.10 -7.11 -7.10 -7.11 -7.10 -7.11 -7.10 -7.11 -7.11 -7.11 -7.12 -7.12 -7.12 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.13 -7.14 -7.13 -7.13 -7.14 -7.13 -7.13 -7.14 -7.15 -7.14 -7.15 -7.15 -7.15 -7.16 -7.16 -7.17 -7.17 -7.18 -7.	19 years or older 17.8 -2.4 7-18 years 19 years or older -30.2 36.1 43.3 43.3 43.3 43.3 43.3 40.1 40 rmore 33.7 -24.3 Woman foreign born Man foreign born -25.4 -21.4 ** Man on parental leave Man on parental leave Man on parental leave -24.3 Woman enrolled -101.4 Man enrolled Man enrolled 461.6 *** -74.9 Woman unemployed during year Man unemployed during year Man unemployed during year Man unemployed during year Man enrolled 37.6 *** 75.2 *** Post secondary < 2 years	19 years or older 17.8 -2.4 13.4 7-18 years 19 years or older -6.6 1.7 -10.8 19 years or older -30.2 36.1 3.4 3.3 44.3 44.3	19 years or older 17.8 -2.4 13.4 7-18 years 19 years or older -6.6 1.7 -10.8 19 years or older -30.2 36.1 36.1 36.4 34.3 34.3 43.3 43.3 43.3 43.3 44.7 31.3 36.4 44.3 34.4 40 r more 33.7 4.24.3 318.3 Woman foreign born -25.4 3.4 40 r more -25.4 40 r more -26.9 40 r more -27.1 40 r more -28.2 Woman on parental leave -24.3 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2	19 years or older 17.8 -2.4 13.4 -0.002 7-18 years or older -30.2 * -52.2 *** -89.6 *** 0.009 2

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Appendix	D.	continued
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Education of man at baseline (as	Upper secondary								
compared to primary or lower									
secondary)		33.2	***	0.4		28.9	***	0.011	***
	Post secondary < 2 years	145.1	***	-0.6		131.0	***	0.035	***
	Post secondary 2 years +	350.7	***	45.0		363.9	***	0.044	***
Sector of work at baseline (compared	Woman public								
to both private)		-58.5	**	-79.3	***	-116.0	***	0.004	**
	Man public	-139.8	***	-39.7		-150.3	***	0.001	
	Both public	-170.8	***	-90.9	*	-218.3	***	-0.003	
Age at baseline	Age of woman	19.2	**	9.8		33.6	***	-0.004	**
	Age ² of woman	-0.2		-0.1		-0.4	**	0.000	**
	Age of man	32.2	***	-11.6	*	17.7		0.001	
	Age ² of man	-0.6	***	0.2	**	-0.3	**	0.000	*
More children after baseline year	Have had more children	-89.9	***	-713.5	***	-801.1	***	0.177	***
Occupational characteristics of woman	Geographic ubiquity								
at baseline year		94.9	*	615.6	***	658.3	***	-0.056	***
•	Earnings potential	513.7	**	1525.3	***	1823.5	***	-0.186	***
	Geographical wage spread	113.2		342.8	*	350.9	**	0.049	***
Occupational characteristics of man at	Geographic ubiquity								
baseline year		421.3	***	-7.4		410.5	***	-0.001	
·	Earnings potential	1181.5	***	180.1		1247.2	***	0.113	***
	Geographical wage spread	163.3		-149.4	***	-0.6		-0.036	***
Interactions, migration* mans	Geographic ubiquity	541.4	*						
Interactions, migration* womans	Geographic ubiquity			510.7	*			-0.209	**
Constant	a confirmation and the confirm	-3290.8	***	-2342.4	***	-5313.2	***	0.275	***
p		0.000		0.000		0.000		0.000	
N		2,185,446	5	2,185,440	5	2,185,446	5	2,184,12	24
r2		0.60		0.54		0.64		0.33	

*** p<.001, ** p<.01, * p<.05

Source: Swedish register data, author's calculations