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MIGRATION AND POST-MOVE EMPLOYMENT IN TWO-EARNER FAMILIES

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Abstract. This paper examines employment consequences of family migration. Post-migratory employment prospects of both genders are investigated and migration self-selection is taken into account. The results suggest that migrants are less likely in employment, but their employability improves faster. Women's employment is at lower level than men's and returns take longer to accrue for women. Higher education is in the central position in securing post-move employment. Moreover, men's success in getting a job depends on the region of destination, while the size of the labour market is more important for women.

Key words: family migration, employment, self-selection

1. Introductionⁱ

Over the last two decades interest in the economic returns to migration has increased, bringing about a flow of studies examining the individual consequences of moving. These investigations have typically concentrated on potential earnings gains (Nakosteen and Zimmer, 1980; Hunt and Kau, 1985; Eriksson, 1993; Axelsson and Westerlund, 1995; Laakso, 1998; Pekkala, 1999). The effect of migration on employment has reached far less attention (Herzog and Schlottman, 1984; Van Dijk et al, 1989; Haapanen, 1998; Tervo, 2000) even though it is often employment or, to be more specific, lack of it which forces people to leave their familiar surroundings in the first place. Moreover, employment prospects of migrants are in the central position when assessing the micro-economic efficiency of interregional labour migration.

Issues become even more interesting within family context. Unless all family members have identical tastes and needs, family ties may give birth to tied movers and stayers. This means that even if family's welfare would increase as a result of migration, one of the spouses may suffer losses. Thus outcomes of migration may differ between males and females. Husband's career is often given more weight (e.g. Long, 1974; Snaith, 1990; Nivalainen, 2000) and women's employment considerations are of minor importance in family migration decisions (see e.g. Bielby and Bielby, 1992). Therefore, family migration is generally beneficial for men, both in terms of income and employment. It is usually women that bear the negative outcomes, and migration has been proved to have negative impact on their number of weeks worked (Sandell, 1977; Morrison and Lichter, 1988), labour force participation (Long, 1974; Duncan and Perrucci, 1976; Lichter, 1980) and probability of employment (Shihadeh, 1991).

As the pace of migration has accelerated in Finland during the last few years, and the trend seems to continue, Finnish economists have devoted more attention to migration recently. However, studies investigating the returns to migration have merely concentrated on individuals, and used persons as units. These studies show that migration does not affect the employment probabilities of the unemployed or new entrants in the labour force but has a negative impact on those employed before the move (Tervo, 2000). Not surprisingly, women's employment probabilities are smaller than men's (Laakso, 1998). Further, unemployed persons' likelihood of transferring outside the labour force in-

creases after migration (Haapanen, 1998). However, migration seems to be beneficial in the sense that both in terms of income and employment migrants tend to progress more quickly than the original population (Laakso, 1998).

An important issue connected with the consequences of migration, which none of the above mentioned studies deals with, is the potential migration self-selection bias, i.e. the results are obtained without identifying the fact that migrants and non-migrants may differ in ways that are systematically related to their employment. After controlling for the bias, Cooke and Bailey (1996) observed that migration does not affect married men's employment probabilities. In contrast, women appeared to benefit from moving. Somewhat diverse outcomes, however, were demonstrated in Bailey and Cooke (1998) as married men generally accrued returns, while women's employment remained unaffected after initial migration. On the other hand, onward migration seemed to be negatively and return migration positively related to women's employment probabilities.

As can be seen above, the evidence of the impact of migration on employment has not been very conclusive so far. In addition, many migrants have family relations, but studies considering family migration and its consequences are rare. Therefore, the present study concentrates on the employment returns to migration in the family context. Compared to earlier studies the study utilises unique data, which consist on actual families and contain all the relevant characteristics of both spouses. The primary concern of empirical examination is to investigate post-move employment probabilities of men and women in the years following the move. The study seeks to find out whether moving improves employability and whether there are any differences in the outcomes of migration between males and females. In addition, determinants of employment among migrants are detected. Estimations are conducted with logit models and the existence and effect of potential migration self-selection is inspected.

The results show that migration has a negative effect on employment; the probabilities of being employed are lower for migrants. On the other hand, positive and significant self-selection is detected, implying that individuals who have the characteristics of migrant do best in the labour market when they migrate. Even though migrants' employment is at lower level than non-migrants' both before and after migration, their employability improves much faster. Women are less likely employed than men, and this dif-

ference is wider among migrants both before and after migration. This gives support men's dominating interests in migrating decisions and migrant women's adjustment to tied migration. In addition, migration returns take longer to accrue for women, as their employment decreases right after moving but rises above the initial level after a couple of years. Thus, when evaluated in a longer time-span, migration can be regarded as an beneficial action. When inspecting who gets a job after migration, higher education appears to be one of the most important factors securing post-move employment. Older age and previous unemployment experience are among the greatest barriers in finding a job. Moreover, region of destination has importance in the outcomes of migration, as men migrating to prosperous Uusimaa-region succeed best in the labour market. On the other hand, the size of the destination labour market is important for women; apparently those following their men find employment more easily in the larger labour market.

The remainder of the paper is organised so that the second section briefly introduces the theoretical background for studying family migration and describes the method utilised. Data and variables are introduced in the third section, while section four presents the results of estimation. Section five provides a summary and conclusion.

2. Analytical framework

The study utilises Sjaastad's (1962) well-know human capital framework, which considers migration as an investment producing both costs and benefits. These affect the potential migrant for several years. Mincer (1978) applies the human capital theory to family migration decisions. In the family context, migration is a joint welfare maximisation decision. The family weighs up the expected benefits and costs of moving, and migration takes place if the benefits exceed the costs, i.e. if

$$(1) \quad NB_{fij} = \sum_{k=1}^n [B_{kij} - C_{kij}] = \sum_{k=1}^n \left[\sum_{t=0}^{T_k} (1+r)^{-t} [(Y_{kjt} - Y_{kit}) - C_{kt}] \right] > 0$$

where NB_{fij} is the present value of net benefits for the whole family, consisting of k family member's discounted lifetime (T_k) net benefits ($B_{kij} - C_{kij}$). B_{kij} are the benefits of a family member k accruing from the move from region i to region j , and C_{kij} are the costs, correspondingly.

Decision making for families is more complicated compared to single individuals, as family migration affects several persons simultaneously. Moreover, individual net benefits may differ between the family members. Usually it is the wage earners' (spouses') net benefits that are evaluated in the decision making processⁱⁱ. These may have opposite signs or refer to different destinations. Therefore, family ties may give birth to tied movers, who follow their families and in doing so suffer a personal loss. On the other hand, if the individual benefits are in favour of moving but do not point to the same destination, a family may move to a region where neither of the spouses personal gains are maximised but the sum of both is the greatest. Therefore, two earner families may wish to move into large diversified labour markets, which offer best chances for both spouses to optimise their future employment, career development and lifetime earnings.

As noted in the introduction, the possible migration self-selection bias should be taken into account whenever inspecting the consequences of moving. Several alternative ways exist to handle with the bias (see more closely e.g. Maddala, 1983; Heckman, 1979). In the present analysis a two-stage alternative resembling that of Lee (1983) is utilised. First a binomial logit model is used to estimate the probability that a family migrated between 1993 and 1995:

$$(2) \quad \Pr(MIG = 1) = \frac{e^{b'x}}{1 + e^{b'x}}$$

where $\Pr(MIG=1)$ is the probability of migration, \mathbf{b} is a vector of parameters, and x is a vector of independent variables.

Next, on the basis of the parameter estimates of the preceding logit model, a selectivity variable \mathbf{I} is calculated for each family:

$$(3) \quad \mathbf{I} = \frac{f(q)}{F(q)}$$

where

$$(4) \quad q = \text{inv}F \left[\frac{e^{b'x}}{1 + e^{b'x}} \right].$$

F and f are the standard normal cumulative distribution function and the probability density function, respectively. After that, the employment equation is estimated separately both for men and women with a logit model:

$$(5) \quad \Pr(EMPL96 = 1) = \frac{e^{\mathbf{a}'\mathbf{v}}}{1 + e^{\mathbf{a}'\mathbf{v}}}$$

where $\Pr(EMPL96 = 1)$ is the probability that an individual was employed in 1996, and \mathbf{a} and \mathbf{v} are the vector of parameters and independent variables, respectively. In addition to the selection variable also the migration variable is used as a regressor in modelling the probability of employment. The parameter estimate associated with the migration variable gives the effect of migration on employment, and the selection variable reflects the unobservable differences between migrants and non-migrants.

3. Data and variables

The data are from the Statistics Finland longitudinal census file, which contains information collected in population and housing censuses, completed with information from various official registers. Consequently, this large data set contains rich information on individuals' characteristics as well as on individuals' family relations. Of especial interest for the purposes of this study is that all the persons belonging to same family as well as all the characteristics of both spouses can be identified .

The sample used in this study was formed from a basic sampleⁱⁱⁱ in the following way: First, only adults belonging to two-adult families in 1990 were selected^{iv}. Second, men and women belonging to same family were merged, after which the observation unit in the data was family. To avoid retired persons, only families in which the husband (or cohabiting male) was under 65 years of age in 1995 were selected. In order to concentrate on behaviour of two-earner couples, only families where both spouses were in the labour force at the end of 1992 were selected. Further, to focus on stable couples, the sample was restricted to cases where the man and woman had been living together (i.e. married or cohabiting) in the same household during each of the years 1990-1996. Thus, every family in the data had been a family at least for two years before the move and remained a family at least for one year after the move.

In the present study, a family who has moved between the Finnish provinces (NUTS3) in 1993, 1994 or 1995 is defined as a migrant. There was a severe economic slump in Finland in 1990-93, during which the unemployment rates were high and the mobility of labour was low. By directing the analysis to the period following the slump it was attempted to minimise the potential effects of this exceptional period on the results and to give a more up-to-date picture of the employment consequences of moving. The investigation was directed to those in the labour force before the move to be able to examine the employment of both genders and to minimise the number of students and retired persons. The variables used in the analyses and their expected effects are defined in Table 1.

In general, definition of employment varies from one study to another, mainly due to data limitations. In the present study it was possible to select among several indicators. Labour market status at the end of the year is widely used as a separator between employed and other persons, and it was utilised in the present study, too. In addition, the present study also defines employment as follows: a person is categorised as employed if he/she participates in the labour force at the end of year *and* has worked at least nine months during that year. The latter indicator was formed because, among other things, labour market status at the end of year does not take seasonal nature of certain occupations (construction workers, for example) into account. By not restricting to end-of-year situation only, we wish to paint more reliable picture of employment consequences of moving.

migrants and migrant wives are more often unemployed compared to men. On the other hand, tendency to migrate decreases for home-owners and for those with children. It can also be seen that migrant men's income tends to be higher and migrant wives' income lower compared to non-migrants. In addition, share of agriculture is lower and share of industry higher in the migrants' places of origin.

Table 2 Means of the variables by migration status

VARIABLE NAME	MEAN	
	MIGRANTS	NON-MIGRANTS
AVERAGE	35	39
HEDU1	0,21	0,17
HEDU2	0,31	0,17
WEDU1	0,29	0,22
WEDU2	0,24	0,16
HINCOME	135	132
WINCOME	88	94
HUNEMP	0,21	0,13
WUNEMP	0,24	0,12
HCOMMU	0,29	0,26
WCOMMU	0,23	0,21
HOUSE	0,59	0,84
CHILD718	0,27	0,50
UERATE	19,0	18,7
PRI	0,57	0,69
IND	2,47	2,38
Number of observations	1 048	63 565

As the primary concern here is to find out the effects of migration on employment prospects, migrants versus non-migrants are next compared with respect to main type of activity at the end of 1992 and 1996. Tables 3 and 4 portray transfers of men and women by migrant status with respect to main type of activity in 1992 and 1996, measured in the last week of the respective year.

Table 3 Comparison of men by migrant-status and main type of activity

Men Main type of activity in 1996		Main type of activity in 1992	
		Employed	Unemployed
Migrants	Employed	79 %	47 %
	Unemployed	10 %	36 %
	Outside labour force	11 %	17 %
Non-migrants	Employed	87 %	47 %
	Unemployed	6 %	40 %
	Outside labour force	7 %	13 %
Migrants vs. non-migrants in 1992 p = 0.000 (t-test)			
Migrants vs. non-migrants in 1996 p = 0.000 (t-test)			

For men, it appears that approximately 80 % of those employed before the move remained employed also after the move. For non-migrants, the respective figure is even higher, being almost 90 %. Interestingly, the proportion of those unemployed both in 1992 and 1996 is higher for non-migrants. On the other hand, migrants have more often transferred outside the labour force between these two time points.

Table 4 Comparison of women by migrant status and main type of activity

Women		Main type of activity in 1992	
Main type of activity in 1996		Employed	Unemployed
Migrants	Employed	59 %	44 %
	Unemployed	19 %	35 %
	Outside labour force	22 %	21 %
Non-migrants	Employed	84 %	40 %
	Unemployed	7 %	41 %
	Outside labour force	9 %	19 %
Migrants vs. non-migrants in 1992 p = 0.000			
Migrants vs. non-migrants in 1996 p = 0.000			

For women the differences between migrants and non-migrants are even more obvious. Of migrants only under 60 % is employed in both years, while the respective figure for non-migrants is almost as high as for men, being nearly 85 %. Again, the proportion of those remained as unemployed is lower for migrants. Even though women in general are more often outside the labour force, the incidence is particularly high among migrant women as over one fifth of those employed before the move has transferred outside the labour force.

Further, significant differences are observed in Table 5, which compares unemployment rates of migrants versus non-migrants and men versus women. First, it can be seen that for both genders the proportion of unemployed is significantly higher among migrants. The difference is particularly clear among women, as over one third of migrant women was unemployed in the year following the move. When comparing men and women, it appears that women, in general, are more often unemployed. The gap is most striking among migrants, and migrant women are over 1,5 times more likely to be unemployed than men.

Table 5 Unemployment rates by mobility status and gender

Unemployment rate in 1996			
	Men	Women	p-value (t-test)
Migrants	21,5	33,3	0.000
Non-migrants	13,5	15,3	0.000
p-value (t-test)	0.000	0.000	

While the average duration of unemployment for migrant men in 1996 was 1.8 months, it was 1.1 months for non-migrant men. The respective figures for women were 2.6 and 1.2 months. There are also differences in duration of unemployment, as 5.7% of migrant men and 3.3% of stayers were unemployed full 12 months during 1996. For women the figures were 6.2% and 2.9%. Note that lower share of migrant men suffer from long-term unemployment compared with women, while the opposite is true for non-migrants.

Even though the sample was restricted to those in the labour force before the move, we do not know how many actually moved for labour market reasons. The above results may simply derive from the fact that many migrants left the labour force ‘voluntarily’ for studying, home-making, disability, early retirement etc. In addition, it must be kept in mind that, besides migration, various aspects affect the employment prospects of an individual. Among other things, age and educational level are bound to have effect on person’s labour market status. So, we really cannot draw any far-reaching conclusions on the basis of above tabular comparisons. They simply do not take all the relevant aspects into account, and, therefore, more formal analysis is called for.

4. Empirical analysis of migration, employment prospects and self-selection

The estimates of the logit model of family migration are presented in Table 6. For most part, the results are in accordance with the expectations. Age has negative and education positive effect on migration probabilities. Higher education of the husband augments family migration. Personal unemployment and commuting increase the propensity to migrate and existence of children as well as home-ownership inhibit migration. With regard to regional characteristics, migration propensities increase with the area unemployment rate and share of industry, while agriculture seems to have no effect on family migration.

Table 6 Determinants of family migration; marginal effects of the logit model

VARIABLE	PARAMETER ESTIMATE	MARGINAL EFFECT
CONSTANT	-239.2 (-3.8)	-25.4 (-3.8)
AVERAGE	-10.0 (-3.2)	-1.1 (-3.2)
AVERAGE2	9.9 (2.5)	1.0 (2.5)
HEDU1	55.9 (6.5)	5.9 (6.5)
HEDU2	104.7 (11.9)	11.1 (11.9)
WEDU1	28.9 (3.6)	3.1 (3.6)
WEDU2	44.1 (4.5)	4.7 (4.5)
HINCOME	0.1 (2.0)	0.567E-02 (2.0)
WINCOME	-0.3 (-3.5)	-0.03 (-3.5)
HUNEMP	51.7 (6.0)	5.5 (6.0)
WUNEMP	63.8 (7.5)	6.8 (7.5)
HCOMMU	17.0 (2.2)	1.8 (2.2)
WCOMMU	21.7 (2.6)	2.3 (2.6)
HOUSE	-106.4 (-15.3)	-11.3 (-14.9)
CHILD718	-60.7 (-7.5)	-6.4 (-7.7)
UERATE	3.6 (3.7)	0.3 (3.7)
PRI	-1.2 (-0.3)	-0.1 (-0.3)
IND	14.2 (4.1)	1.5 (4.1)

Notes: The coefficient are presented as percentages. Numbers in parentheses are t-values.

The fact that also wife's education significantly increases the likelihood to move is somewhat surprising, as in a recent study (see Nivalainen, 2000) wife's education was found to be insignificant factor in family migration. However, the present setting differs from that of the above mentioned investigation, as here we concentrate on dual occupation families. Although men's education imposes a much stronger effect, it seems that in two earner families wives do have some bargaining power in the decision making process. This conclusion is further verified by the significance of wife's other characteristics, too. It even seems that, compared to men, wife's unemployment experience and commuting behaviour have slightly stronger positive effects on family migration. On the other hand, working wives appear to inhibit family migration - and thus the mobility of their men - as migration propensities decrease with the wife's income.

Let us now turn to employment issues. Table 7 presents the estimation results of the logit model of the probability of employment for men and women, respectively. Nearly all coefficients are significant and most of the parameter estimates conform to expectations. In addition, many of the outcomes are independent of gender. Employment probabilities decrease with age and increase with education. Recent unemployment experience has a striking negative effect on employment. The higher the unemployment rate at the area of residence, the lower the odds of being employed. Further, chances of em-

ployment are worse for those living in urban areas, even though one could imagine that larger labour markets offer better employment opportunities.

Table 7 The effects of migration on employment for men and women; marginal effects of logit models

	MEN SPECIFICATION 1	WOMEN SPECIFICATION 1	MEN SPECIFICATION 2	WOMEN SPECIFICATION 2
CONSTANT	36.1 (36.1)	36.3 (34.2)	36.4 (36.2)	36.7 (34.4)
AGE3544	0.25 (0.5)	6.90 (14.2)	0.01 (0.1)	6.56 (13.4)
AGE4554	-3.51 (-5.9)	5.02 (8.2)	-3.80 (-6.4)	4.62 (7.5)
AGE5564	-26.12 (-40.7)	-21.7 (-30.6)	-26.39 (-40.8)	-22.15 (-30.9)
EDU1	2.95 (6.7)	4.16 (9.3)	3.03 (6.9)	4.29 (9.5)
EDU2	4.77 (10.2)	10.81 (19.8)	5.00 (10.6)	11.08 (20.2)
SINCOME	0.03 (8.2)	4.13E-04 (0.3)	0.03 (8.1)	5.35E-04 (0.4)
UNEMP95	-41.74 (-91.0)	-48.35 (-98.1)	-41.68 (-90.9)	-48.26 (-97.9)
CHILD7	1.84 (4.5)	-9.42 (-20.6)	1.87 (4.6)	-9.38 (-20.5)
UERATE	-0.39 (-11.0)	-0.36 (-8.7)	-0.38 (-10.9)	-0.36 (-3.2)
URBAN	-0.77 (-2.5)	-1.23 (-3.4)	-0.75 (-2.4)	-1.18 (-3.2)
MIG93	-4.83 (-2.5)	-10.30 (-4.8)	-14.40 (-4.5)	-27.6 (-6.8)
MIG94	-8.14 (-4.6)	-8.64 (-4.3)	-18.50 (-5.7)	-26.7 (-6.4)
MIG95	-4.48 (-2.5)	-11.46 (-5.7)	-15.07 (-4.5)	-30.01 (-7.1)
SELEC	-	-	5.08 (3.7)	8.76 (5.0)

Notes: The coefficient are presented as percentages. Numbers in parentheses are t-values.

There are few differences among men and women. First, presence of pre-school aged children significantly decreases women's employment probabilities. The effect on men is opposite, which is understandable as men generally start their career at younger age. Second, men's employment is positively connected with their spouses earnings, while women's is not. Apparently there is a successful woman behind a successful man, and not the other way around. Third, men over 45 years of age have significantly lower likelihood of employment than younger ones. For women, the situation is somewhat different, as those between 35 and 54 years of age have higher employment odds than younger women. This, most probably, reflects the effect of child bearing and caring on women.

With regard to migration, it can be seen that employment probabilities are lower for migrants than for non-migrants. This outcome does not depend on the time of migration, which means that for migrants the odds of being employed continue to be lower even after three years following the move. In addition, the negative effect is slightly stronger among women. These results require careful interpretation, as they *do not* necessarily mean that migrants would not benefit from moving. They just indicate that migrants'

probability of employment is lower than that of the average population. The estimates appear to be relatively robust, as they remain almost unchanged when selectivity-variable is added to the models. The negative coefficient of migration becomes larger, though. The results indicate the presence of positive and significant self-selection for both genders. Thus, migrants and non-migrants differ from each other in some respects that affect individuals' employment probabilities. In fact, despite the negative effect of migration, the positive selection-coefficient signals that individuals who have the characteristics of a migrant actually do best in the labour market when they migrate. Naturally, this holds other way round, too.

As it is possible that some migrants in the sample left the labour force voluntarily, and that the results presented above in that sense are misleading, the sample was restricted to those in the labour force both in 1992 and 1996. The second sample thus excludes retired people, students, house-wives as well as all other people for some reason not in the labour force after migration^v. All previous models were re-estimated using this sample. Results for the employment equation for labour force participants are listed in Table 8.

Table 8 The effects of migration on employment for men and women participating in labour force in 1992 and 1996; marginal effects of logit model

VARIABLE	MEN SPECIFICATION 1	WOMEN SPECIFICATION 1	MEN SPECIFICATION 2	WOMEN SPECIFICATION 2
CONSTANT	20.45 (31.3)	24.53 (34.2)	20.63 (31.5)	24.64 (34.3)
AGE3544	-0.45 (-1.6)	1.07 (3.6)	-0.60 (-2.1)	0.91 (3.0)
AGE4554	-1.50 (-4.7)	0.15 (0.4)	-1.70 (-5.3)	-0.43 (-0.1)
AGE5564	-4.98 (-12.4)	-5.08 (-9.6)	-5.18 (-12.8)	-5.28 (-10.0)
EDU1	1.91 (7.4)	2.22 (8.1)	1.96 (7.6)	2.27 (8.2)
EDU2	3.87 (12.6)	6.01 (17.0)	4.03 (13.1)	6.14 (17.3)
SINCOME	0.01 (5.7)	0.43E-02 (3.2)	0.01 (5.5)	0.42E-02 (3.2)
UNEMP95	-20.33 (-51.9)	-25.11 (-61.6)	-20.27 (-51.9)	-25.05 (-61.5)
CHILD7	0.47 (2.1)	-1.27 (-4.7)	0.49 (2.3)	-1.25 (-4.6)
UERATE	-0.23 (-11.4)	-0.31 (-12.9)	-0.23 (-11.3)	-0.30 (-12.04)
URBAN	-0.56 (-3.1)	-0.45 (-2.0)	-0.54 (-3.0)	-0.42 (-1.9)
MIG93	0.58 (0.5)	-1.54 (-1.1)	-6.78 (-3.4)	-9.64 (-4.0)
MIG94	-2.62 (-2.3)	-1.63 (-1.4)	-10.26 (-5.1)	-10.08 (-4.2)
MIG95	0.26 (0.3)	-2.53 (-2.2)	-7.75 (-3.7)	-11.29 (-4.5)
SELEC	-	-	3.59 (4.3)	3.94 (3.9)

Notes: The coefficient are presented as percentages. Numbers in parentheses are t-values.

It can be seen that the findings are qualitatively similar with the previous ones. There are, however, some observable differences in migration-variables. When selectivity is

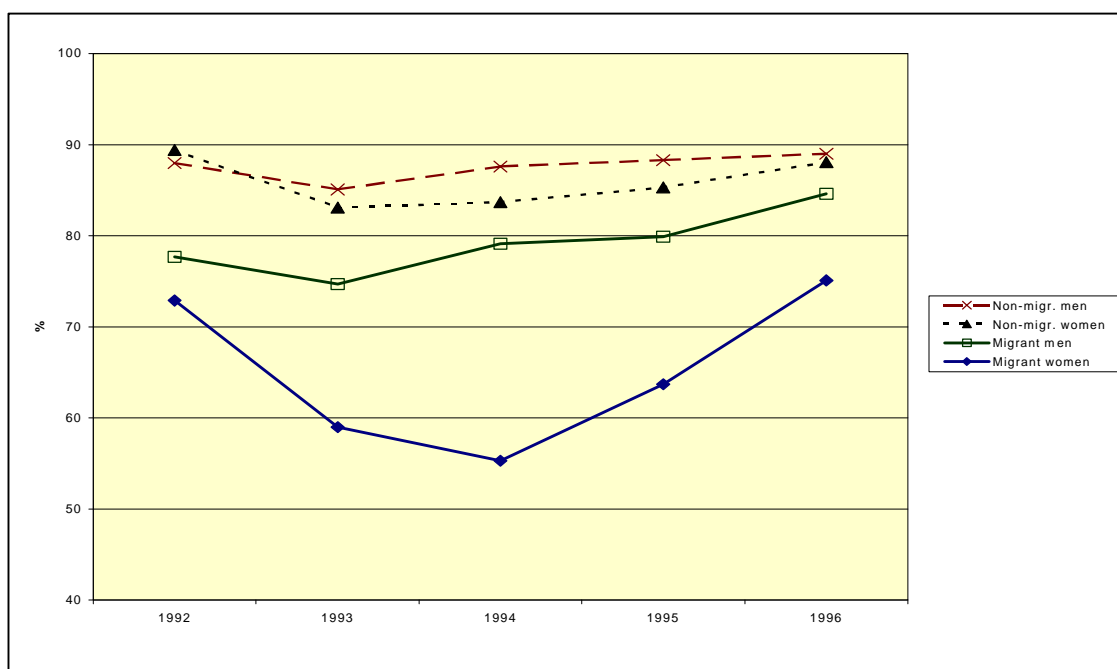
not taken into account, the findings signal migration three years or one year earlier to enhance men's employability (not significant). Only those who moved in 1994 have significantly lower odds for employment. Women, in turn, appear to be less employable in all years after migration. However, only migration one year earlier shows significant effect. These indications change a bit when selectivity is accounted for: post-migratory employment is at lower level for both genders in all years. In addition, positive and significant selectivity is again discovered. Thus, men's positive coefficient for migration did not in fact reflect the effect of migration itself, but rather the effect of migrant men's certain characteristics.

Does gender matter?

Predicted probabilities calculated from the latter employment equation indicate that an average woman, who did not migrate, has 0.94 likelihood of being employed in 1996. The employment probability for a similar woman who migrated was on average 0.73, depending on the year of migration. An average man who chose to stay, had 0.95 likelihood of employment in 1996. The respective probability for an identical man who moved was on average 0.76. The predicted probabilities again indicate that the employment odds for migrants are lower. In addition, gender seems to matter: women are less employable than men, and the difference is larger among migrants.

However, one should note that as migrants are a minority in the sample, the above predicted probabilities mainly tell what would happen to an average non-migrant in case he moved. Moreover, all above analyses describe the employment situation in the terminal point of inspection, i.e. in 1996. This rises an interesting question: what about the development of employment *during* the period under scrutiny? To take a closer look to the employment outcomes of men and women, the share of employed migrants and non-migrants were calculated using the second sample. Figure 1 portrays the development of this share two years before and two years after migration. For convenience, 1994 was chosen as a year defining migration.

Figure 1 Share of employed men and women at the end of year two years before and two years after migration (year of migration is 1994)



Before going any further, it should be noted that the recession of the early 1990s is clearly present in the figures. Unemployment rate peaked in Finland in 1993, and this can be seen with this sample, too. Nevertheless, the figure shows some interesting differences between men and women, especially among migrants. First, men's employment is almost every year at higher level than women's. Further, employment of migrants is at considerably lower level than that of non-migrants, and the difference between women is much larger than between men.

While the employment of non-migrants remains fairly stable after 1993, there are some drastic changes in migrant's employment. As migration took place during 1994, all those defined as movers most likely have changed provinces by the end of 1994. Therefore, the employment situation at the end of 1994 represents the situation following the move. It is easily seen that men have benefited from moving: more men are employed in 1994 than in 1993, and this improvement is larger compared to non-migrants. The consequences for migrant women are just opposite, as their employment has decreased during these two time points. At the same time, the share of employed non-migrant women has risen. This, with a fact that employment levels of spouses in migrant families diverge more already before the move, could be interpreted as a sign of migrant

women's adjustment to tied migration. However, during the subsequent years in the new location, employment prospects of migrant women improve much faster, and they appear to succeed considerably well. The difference between migrant men and women remains relatively large, though.

Who gets a job after migration?

Above examinations show that employment prospects of migrants and non-migrants diverge. In addition, there are also differences among migrants. Therefore, the next rational step is to investigate whether the characteristics that separate employed and non-employed migrants can be isolated. The sample used in following analyses is formed from the first sample by selecting only families that migrated between 1993 and 1995.

Logit models for men and women were run first. The dependent variable was the same as before, indicating whether the person was employed or not. Marginal effects of these models are presented in Table 9.

Table 9 Logit model of employment (1=employed, 0=other) among migrants; marginal effects

VARIABLE	MEN	WOMEN
CONSTANT	53.5 (5.1)	42.1 (3.6)
AGE3544	0.64 (0.2)	2.60 (0.6)
AGE4554	-12.18 (-2.4)	-2.64 (-0.4)
AGE5564	-50.30 (-6.9)	-54.8 (-5.5)
EDU1	3.68 (0.9)	-0.33 (-0.0)
EDU2	15.81 (3.7)	22.72 (4.8)
SINCOME	0.07 (1.8)	0.01 (0.7)
UNEMP95	-50.74 (-13.4)	-46.35 (-12.2)
CHILD7	-2.80 (-0.7)	-12.74 (-2.9)
UERATE	-1.24 (-3.1)	-1.25 (-2.7)
URBAN	6.77 (2.0)	7.01 (1.8)
MIG94	-5.17 (-1.3)	11.27 (0.3)
MIG95	-0.31 (-0.0)	-4.15 (-1.0)

Notes: The coefficient are presented as percentages. Numbers in parentheses are t-values.

It appears that for men the likelihood of employment peaks before the age of 45, while women's employment probabilities start to decrease significantly at the age of 55 years, i.e. about 10 years later compared to men. The positive effect of higher education is especially clear among migrants: probabilities of being employed increase significantly

for those with university degree or equivalent. Recent unemployment experience has significant negative effect on employment. In line with earlier notion, men's odds of being employed increase with wife's income, while husband's income has no effect on women. Again, being a mother of under school aged children significantly decreases employment probabilities. Conversely, existence of young children does not seem to change men's employability. With regard to regional characteristics, those who migrated to a region of high unemployment rate have weaker chances of getting a job. On the other hand, and different from the results obtained with the first and second sample, those heading to urban areas have higher likelihood of being employed after moving. Finally, employment probabilities do not depend on the timing of migration; none of the year-dummies are significantly different from zero.

Besides the determinants of employment, also the factors determining unemployment and exit from the labour force are interesting as such. In addition, as migrants to urban areas seem to succeed better, labour market status might have regional variation, too. Therefore, new variables were added to the analysis. In what follows, the dependent variable describes the labour market status at the end of 1996: *0=employed*, *1=unemployed*, *2=out of labour force*. In addition, five regional dummies were created: North, West, East, South (excluding Uusimaa) and Uusimaa. The region of Uusimaa, where the capital of Finland is located, is the most prosperous region and is therefore taken as a leading region. Other variables are defined similarly as earlier. The results of multinomial logit models for men and women are listed in Table 10.

Older men are less likely employed and more likely unemployed than younger ones. Youngest women have the lowest likelihood of unemployment after migration. On the other hand, they, together with the oldest ones are most likely to transfer outside the labour force. The most active working age seems to be around 35-54 years for women and before 45 years for men. Higher education, again, has a central role in securing one's success in labour market, especially for women. Spouse's income diminishes the probability of unemployment for both genders. In addition, the positive effect of husbands' earnings on the wives' probability of being outside the labour force most likely signals that wives of wealthier men can afford to exit the labour force.

Table 10 Determinants of labour force status among migrants; marginal effects of multinomial logit model

VARIABLE	MEN			WOMEN		
	Employed	Unemployed	Out of labour force	Employed	Unemployed	Out of labour force
CONSTANT	52.0 (5.5)	-25.59 (-4.7)	-26.39 (-3.4)	51.18 (4.5)	-37.85 (-4.5)	-13.32 (-1.4)
AGE3544	0.86 (0.2)	-0.64 (-0.3)	-0.22 (-0.1)	3.83 (0.9)	5.56 (1.8)	-9.39 (-2.9)
AGE4554	-7.73 (-1.8)	0.36 (0.1)	7.37 (2.1)	5.10 (0.8)	14.07 (3.4)	-19.17 (-3.4)
AGE5564	-40.68 (-6.5)	8.00 (2.3)	32.68 (7.1)	-47.78 (-5.2)	18.67 (3.1)	29.10 (4.7)
EDU1	5.37 (1.5)	-5.65 (-2.7)	0.28 (0.1)	5.86 (1.4)	-3.33 (-1.1)	-2.53 (-0.8)
EDU2	13.93 (3.9)	-8.00 (-3.7)	-5.93 (-2.1)	24.83 (5.5)	-9.38 (-2.6)	-15.44 (-4.1)
SINCOME	0.03 (1.0)	-0.03 (-1.6)	-2.03E-03 (-0.1)	7.1E-03 (0.5)	-3.4E-02 (-2.5)	2.72E-02 (2.4)
UNEMP95	-29.21 (-8.9)	19.66 (8.9)	9.54 (3.8)	-25.96 (-7.4)	29.16 (11.9)	-3.21 (-1.1)
CHILD7	-0.64 (-0.2)	-0.19 (-0.1)	0.82 (0.3)	-10.97 (-2.7)	2.64 (0.8)	8.33 (2.4)
UERATE	-0.37 (-0.9)	0.33 (1.5)	0.04 (0.1)	-0.75 (-0.4)	0.73 (1.9)	0.02 (0.0)
URBAN	0.39 (0.1)	-0.15 (-0.1)	-0.24 (-0.1)	7.13 (2.0)	-4.18 (-1.6)	-2.95 (-1.0)
NORTH	-10.35 (-1.7)	5.57 (1.6)	4.77 (0.9)	-5.78 (-0.8)	-1.94 (-0.3)	7.73 (1.3)
EAST	-15.16 (-2.9)	6.27 (2.1)	8.89 (2.1)	-9.96 (-1.5)	3.11 (0.6)	6.85 (1.2)
WEST	-8.62 (-1.6)	9.36 (3.1)	-0.74 (-0.2)	-14.12 (-2.3)	0.55 (0.1)	13.57 (2.7)
SOUTH	-8.11 (-1.9)	5.61 (2.2)	2.49 (0.7)	-4.01 (-0.8)	1.74 (0.5)	2.27 (0.5)

Notes: The coefficient are presented as percentages. Numbers in parentheses are t-values.

Unemployment experience significantly reduces the odds of becoming employed and increases the likelihood of unemployment. Unlike women, unemployed men are more likely to exit the labour force. Moreover, presence of under school aged children has no effect on men, but increases women's likelihood of being outside the labour force. When regional dummies are present, regional unemployment rate becomes insignificant in nearly all cases. Likewise, migration to urban areas loses its significance, as only women seem to benefit from moving to urban areas. With regard to regional dummies, it can be seen that destination area matters. Compared to those heading to Uusimaa-region, men migrating to other regions less likely become employed and more likely become unemployed. In addition, men moving to Eastern Finland have higher likelihood of transferring outside the labour force. For women it appears that those heading to Western Finland have significantly lower odds of becoming employed and higher odds of dropping out of labour force than those relocating to Uusimaa-region. Thus, the leading region of Uusimaa seems to offer best employment prospects for men. For women the region itself is not so important, but it is mainly the size of labour market that matters.

5. Conclusions

The study investigated the effect of family migration on employment. Some apparent failures of earlier studies were attempted to avoid by taking the potential migration self-selection into account. A large data set consisting of actual families was used and the empirical examinations were conducted with logit models. First a migration decision was modelled, after which a migration selection variable was calculated on the basis of the parameter estimates. The selection variable together with a migration variable were included in the employment equation. In addition, graphical illustrations were used to study the development of employment in the years following the move. Moreover, characteristics improving post-move employability were detected.

For both genders, the results show migration to have a negative effect on employment; migrants' probabilities of being employed are below that of non-migrants. The findings also indicate the existence of positive self-selection in migration decisions, and thus it may be argued that migrants differ from others in a way that enables benefiting from the move. Women's characteristics seem to bear importance in migration decisions, but women do not necessarily have sufficient power in the processes preceding migration. The significance of women's characteristics may just reflect the factors common to wives of migrant men.

When the development of employment is used as a criterion, migrants seem to succeed better than average population in the longer run. Independent of migration, employment of women is constantly below that of men. In migrant families, however, this difference is much wider. This further supports men's dominating interests in migration decisions and indicate that moves in reality predominantly take place because of men. Family migration seems to interrupt women's job search or employment, but this interruption is caught up in subsequent years. In fact, when the long run development of employment is used as a criterion, migrant women seem to succeed relatively better than men.

One of the central factors securing post-move employment is education, those with university degree or equivalent succeed significantly better than others. In turn, previous unemployment experience together with age is among greatest obstacles in finding employment. The results show that the destination region is important especially for men;

migrants to Uusimaa-region do best in the labour market. For women it is not so much the location but the size of the labour market that matters. In large labour markets women following their men have best chances of finding a job.

The present study has revealed many interesting aspects of family migration. However, it is clear that analyses concentrating on the level of employment are not sufficient enough to draw conclusions on the consequences of migration. I believe that it would make more sense to direct the investigation to the development of employment, measured for example by hours worked. Moreover, instead of cross-sectional analyses, investigations utilising panel data could offer a more fruitful way to evaluate the outcomes of migration, also in the longer run. In addition to employment, benefits of moving may include higher income in the destination. Therefore, examining the differences in the level and growth of income between migrant and non-migrant families would be rational. These are the challenges facing future research.

FOOTNOTES

ⁱ This study has been financially supported by the Yrjö Jahnsson Foundation.

ⁱⁱ Children affect decisions through increased costs.

ⁱⁱⁱ The basic sample is a 1% sample drawn from the longitudinal census file complemented with individuals belonging to the same household-dwelling unit with the sample individuals.

^{iv} Families can be identified in 1985, 1990 and 1995. For the purposes of this study the most convenient year was 1990.

^v They may be outside the labour force *between* 1992 and 1996, though.

REFERENCES

- Axelsson R. and Westerlund O. (1995) A Panel Study of Migration, Household Real Earnings and Self-Selection. In Westerlund O. (1995) *Economic Influences on Migration in Sweden*. Umeå Economic Studies 379/1995.
- Bailey A. J. and Cooke T. J. (1998) Family Migration and Employment: The Importance of Migration History and Gender. *International Regional Science Review*, vol. 21, pp. 99-118.
- Bielby W. T. and Bielby D. D. (1992) I Will Follow Him: Family Ties, Gender-role Beliefs, and Reluctance to Relocate for a Better Job. *American Journal of Sociology*, vol. 97, pp. 1241-1267.
- Cooke T. J. and Bailey A. J. (1996) Family Migration and the Employment of Married Women and Men. *Economic Geography*, vol. 72, pp. 38-48.
- Duncan R.P. and Perrucci C. C. (1976) Dual Occupation Families and Migration. *American Sociological Review*, vol. 41, pp. 252-261.
- Eriksson T. (1993) Mobility and Individual Earnings Growth. In Bunzel H., Jensen P. and Westergård-Nielsen N. (Eds.) *Panel Data and Labour Market Dynamics*. Elsevier.
- Haapanen M. (1998) *Internal Migration and Labour Market Transitions of Unemployed Workers*. Government Institute for Economic Research, Helsinki.
- Heckman J. (1979) Sample Selection Bias as a Specification Error. *Econometrica*, vol. 47, pp. 153-161.
- Herzog H. W. Jr. and Schlottmann A. M. (1984) Labour Force Mobility in the United States: Migration, Unemployment and Remigration. *International Regional Science Review*, vol. 9, pp. 43-58.
- Hunt J. and Kau J. (1985) Migration and Wage Growth: A Human Capital Approach. *Southern Economic Journal*, vol. 51, pp. 697-710.
- Laakso S. (1998) *Inter-regional Migration In Finland*. City of Helsinki Urban Facts, Research Series 4 (in Finnish, Abstract in English).
- Lee L. (1983) Generalized Econometric Models with Selectivity. *Econometrica*, vol 51, pp. 507-512.
- Lichter D. (1980) Household Migration and the Labour Market Position of Married Women. *Social Science Research*, vol. 9, pp. 83-97.
- Long L. H. (1974) Women's Labour Force Participation and the Residential Mobility of Families. *Social Forces*, vol. 52, pp. 342-348.

Maddala G. (1983) *Limited-Dependent and Qualitative Variables in Econometrics*. Cambridge University Press.

Mincer J. (1978) Family Migration Decisions. *Journal of Political Economy*, vol. 86, pp. 749-773.

Morrison D. and Lichter D. (1988) Family Migration and Female Employment: The Problem of Under-employment Among Migrant Married Women. *Journal of Marriage and the Family*, vol. 50, pp. 161-172.

Nakosteen R. A. and Zimmer M. A. (1980) Migration and Income: The Question of Self-Selection. *Southern Economic Journal*, vol. 46, pp. 840-851.

Nivalainen, S. (2000): *The Effects of Family Life Cycle, Family Ties and Distance on Migration: Micro Evidence from Finland*. University of Jyväskylä, School of Business and Economics, Working Paper 215, Jyväskylä.

Pekkala, S. (1999): *Migration and Individual Earnings in Finland: a Regional Perspective*. University of Jyväskylä, School of Business and Economics, Working Paper 211, Jyväskylä.

Sandell S. H. (1977) Women and the Economics of Family Migration. *The Review of Economics and Statistics*, vol. 59, pp. 406-414.

Shihadeh E. S. (1991) The Prevalence of Husband-Centered Migration: Employment Consequences for Married Mothers. *Journal of Marriage and the Family*, vol. 53, pp. 432-444.

Sjaastad L. A. (1962) The Costs and Returns of Human Migration. In Richardson H. W. (ed.) *Regional Economics*. The University Press, Glasgow.

Snaith J. (1990) Migration and Dual Career Households. In Johnson J. and Salt J. (eds.) *Labour Migration*. David Fulton, London, pp. 155-171.

Tervo H. (2000) Post-migratory Employment Prospects: Evidence from Finland. *Labour*, 14, pp. 331-350.

Van Dijk J., Folmer H., Herzog H. W. Jr. and Schlottmann A. M. (1989) Labor Market Institutions and the Efficiency of Interregional Migration: a Cross-nation Comparison. In Van Dijk J., Folmer H., Herzog H. W. Jr. and Schlottmann A. M. (eds.) *Migration and Labor Market Adjustment*. Kluwer Academic, Dordrecht, pp. 61-83.