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The Labor Market Integration of Immigrant Men and Women

Abstract:
Out of necessity, the earliest studies of immigrants' performance in the labor market in Western countries focused solely on men. However, as the employment rates of women in Western countries rise and approach those of men, questions about the labor market adjustments of immigrant women also become increasingly relevant. Furthermore, studies of earnings assimilation have typically analyzed only those individuals actually employed (full-time) in the labor market. Hence, they are unable to provide valuable insights into the extent to which the participation rates of immigrants – men or women – increase over time in the host country. This study analyzes explicitly the extent to which non-Western immigrants – both men and women – enter the labor market in Norway.

Keywords: Employment, Immigration, Integration, Assimilation

JEL classification: J20

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1 Introduction

During the last few decades the vast majority of Western countries have been confronted with a large influx of immigrants from cultures and countries far away. For many of the host countries, large-scale immigration was in and of itself a new phenomenon, but immigration from vastly different cultures represents a challenge to all of these countries. Implicitly, the host countries have expected that immigrants sooner or later fend for themselves as well as contribute to the collective welfare of their new homes by participating in the labor market; much debate – both in politics and research – has focused on the extent to which they do so.

At the same time, the women's rights movement has led to a very significant rise in the labor market participation of native women in most of the Western countries. The one breadwinner model has been slowly replaced by the two – or at least one-and-a-half – breadwinner model. Due to low participation rates for women in general, the earliest studies of immigrants' performance in the labor market focused, quite naturally and out of necessity, on men alone. However, as the employment rates of women generally rise and approach those of men, questions about the labor market adjustments of immigrant women also become increasingly relevant. Indeed, in a society such as Norway in which two (or one-and-a-half) breadwinners are increasingly becoming the norm, households in which women fail to participate in the labor market may fall behind economically. Hence, if immigrant women are not participating in the labor market to the same degree as native women, higher rates of poverty and/or other social or economic woes may be occurring in the immigrant population even if the immigrant men are working or performing well compared to native men. Thus, in order to achieve better understanding of the variation in economic well-being among immigrant households, one must address in greater detail the particular issues related to the integration and labor market performance of female immigrants in the host country.

Precisely because women's participation rates are generally lower than men's

(even if they are increasing), one quite naturally pays special attention to questions and insights into the circumstances pertaining to women's *participation* in the labor market; these discussions might in part be kept separate from discussions and analyzes of earnings differentials between men and women. Indeed, if early female labor market participants were positively selected, i.e. better trained or more highly motivated, one might even expect earnings differentials between men and women to *increase* as a larger proportion of women enter the labor market. Analogous arguments may, however, also apply to immigrants, men or women. Given the special circumstances surrounding the integration and adjustment of immigrants in the host country, it can not be taken for granted that *all* immigrants are able to immediately enter the labor market upon arrival in the host country. Earnings parity with (observationally) similar natives also may not be the standard by which to judge immigrant performance in the labor market simply because immigrants may experience such a large decrease in human capital upon migration that they are never truly able to catch up to 'similar' natives.[1] Studies of earnings assimilation or earnings differentials between immigrants and natives, which have traditionally focused on the performance of immigrants in employment, fail to provide us with insights into the extent to which immigrants enter or integrate into the labor market in the host country.

The aims of this study are thus two-fold. First, the topic of participation rates for immigrants will be analyzed for several of the major immigrant groups in Norway and will serve to illustrate and reinforce the above-mentioned arguments as to the relevance of participation rates in assessing immigrant adjustment. Second, we will do our part to give the topic of the labor market adjustment of immigrant *women* the attention it does deserve in the 21st Century. The paper is structured in the following manner. The next section provides a more in-depth discussion of previous studies of immigrant adjustment; the third section focuses on the meth-

[1]This can be due to the non-transferability of human capital to the new environment or due to immigrants never achieving complete proficiency in the language of the host country.

ods and definitions used for the study of immigrant participation rates. Section 4 presents the empirical results of the study of immigrants' probability of employment. Section 5 then closes with a summary of the results as well as a discussion of their relevance and shortcomings.

2 Studies of Immigrant Adjustment

The pioneering study of Chiswick (1978) on the earnings of immigrant men led to a renewed interest in the topic of immigrant adjustment within the field of economics. Since that time, the topic has burgeoned into a substantial field of study encompassing analysis of immigrants' performance not only in the labor market, but also in terms of participation in social assistance programs and with respect to poverty.[2] Further study into earnings assimilation have led to refinements such as the discussion of 'cohort quality' in Borjas (1985) or the attempt to identify and entangle period effects from measures of the duration of residence and the arrival cohort in Barth, Bratsberg og Raaum (2004). Studies also now span across a wide-range of countries and include Baker and Benjamin (1994) for Canada, Bell (1997) and Shields and Price (1998) for the United Kingdom, Schmidt (1997) for Germany, Aguilar and Gustafsson (1991) as well as Gustafsson and Zheng (2006) for Sweden and Hayfron (1998), Longva and Raaum (2003) and Barth, Bratsberg and Raaum (2004) for Norway. Barth, Bratsberg and Raaum (2006) also present more recent results for the US.

While the recent forays into the analysis of welfare participation and poverty among immigrants have been more likely to focus on immigrant *households*, i.e. both men and women together, the studies of wage or earnings assimilation have largely focused on immigrant men alone and, have, in addition, restricted the stud-

[2]See Borjas and Trejo (1991), Baker and Benjamin (1995), Borjas and Hilton (1996) and Hansen and Lofstrom (2003) for studies of social assistance or welfare; Galloway and Aaberge (2005) and Blume et al. (2006) study poverty among immigrants.

ies to men actually employed or even employed full-time in the labor market. The overwhelming focus on the study of the earnings assimilation of *employed* immigrant men has two unfortunate consequences. Firstly, it provides us with almost no insights into the extent to which (male) immigrants are actually entering the labor force, i.e. becoming employed, be it part-time or full-time.[3] And, secondly, we have but few insights into the labor market adjustment of immigrant *women*.[4]

The overwhelming focus on earnings or wage assimilation in the previous literature on immigrant adjustment has somewhat overshadowed the supply and demand for other perspectives and insights on the integration of immigrants into the labor market in the host country. In particular, insights into whether and to what extent immigrants – men or women – integrate into the labor market at all may, in fact, be blurred or somewhat obscured by the focus on earnings assimilation. A number of different scenarios are conceivable. The population of immigrants may, for example, consist of a small group of highly able employed individuals on the one hand and a large group of non-employed persons on the other. In this case, studies of earnings assimilation may find a large degree of earnings assimilation (or that (employed) immigrants even surpass natives in earnings), but those finding would hardly be representative for the immigrant population as a whole. Alternatively, many immigrants may be initially non-employed but enter the labor market as their duration of residence in the host country increases. Such integration into

[3]One exception can be found in Chiswick, Cohen and Zach (1997), which does look more directly at participation rates for immigrants.

[4]Given the extensive literature on the earnings assimilation of immigrant men, the contributions with some insights on women are few and far between. Long (1980) was quick to supply some preliminary results on earnings assimilation for immigrant women in response to Chiswick (1978). Some of the more recent analyzes of earnings assimilation such as Barth, Bratsberg and Raaum (2004, 2006) and Gustafsson and Zheng (2006) do include regressions for immigrant women, but do not pay any heed to the particularly strong case for possible selection into the employment status for women, immigrant or native. MacPherson and Stewart (1989) and Baker and Benjamin (1997) both focus on married women only.

employment would not be captured at all by studies which focus entirely on the *earnings* of *employed* immigrants. In addition, studies of earnings assimilation based entirely on the earnings of employed immigrants may also be biased by the selective forces at play with respect to the integration of immigrants into the labor market. Thus, despite the extensive and outstanding literature on earnings assimilation we are still left with major gaps in our knowledge of the performance of immigrants in the labor market. The analysis of employment rates for immigrants represents a valuable complementary perspective on immigrant performance in the labor market while at the same time providing useful information on the extent of potential bias in previous studies of earnings assimilation.

Given the general rise in participation rates for women in many Western societies in the last few decades, the relative lack of insights into the labor market adjustment of immigrant women is nothing short of troubling. Figure 1 illustrates the dramatic rise in participation for all women aged 25-54 in Norway in the period 1974-2001. In the particular case of immigrant women, it may thus be precisely the increase in participation rates, rather than increased earnings, which is most relevant for women immigrants at this stage. In other words, one might be particularly interested in whether immigrant women are following the example of native women. In addition, attempts to analyze earnings assimilation among immigrant women may be more difficult given the prevalence of part-time employment among women in general.[5] Hence, direct analysis of the employment *status* of immigrant women would seem appropriate. A major goal of our study is thus to indicate whether or not immigrant women are integrating into the labor market and approaching participation rates such as those seen for native women after some time in the country; to the best of our knowledge, such analysis will be unique in the literature.

[5]Table A.1 in the Appendix highlights the extent of part-time employment among women in Norway. Thus, while labor market participation for Norwegian women is very high, a substantial portion of female employment is, in fact, part-time.

The particular importance of immigrant women in the workforce can also be illustrated from another angle. Recent insights on the probability of poverty for immigrants in Galloway (2006) suggest that immigrants from different ethnic groups differ greatly with respect to the extent to which they integrate out of poverty in Norway. One possible explanation for such differences, may, indeed, be found in differences in the labor market participation for immigrant women. Thus, even if one finds similar patterns for the labor market participation of immigrant men, differences in poverty may nonetheless arise if the immigrant women are responding very differently to the labor market in the host country. In a society in which women are increasingly participating – and indeed are expected to participate – in the labor market, households in which women do not participate may fall behind the economic progress taking place for the rest of society.

In sum, therefore, previous studies of earnings assimilation have not been able to address all the relevant issues pertaining to immigrant men, let alone immigrant women, and this study hopes to start filling in the gaps in the existing literature by: (1) studying directly the employment status of immigrants and (2) by paying particular attention to how immigrant women adjust to the labor market in the host country.

3 Labor Market Participation: Methods, Model and Specification

3.1 Definition of Labor Market Status

The ability to utilize register data on the entire resident population of the Norway provides us with unique opportunities in the study of the immigrant population. In fact, proper study of immigrants, and, in particular, non-Western immigrants in Norway would hardly be possible without the use of such data, simply because the immigrant population is both too small and too diverse to be done justice in

surveys. However, detailed information on hours worked as well as the number of days, weeks or months employed is not available in Norwegian register data, but even if it were, we would have to make some debatable choices about what would constitute employment during the course of a certain period.[6] However, the Norwegian pension and social welfare system regularly invokes the use of a construct or parameter that can be useful for the task at hand. This parameter is referred to as the 'basic amount' (B.a.) and is used to assess an individual's eligibility for a wide variety of social security benefits as well as the amount of benefits he or she can receive based on previous earnings. Broadly speaking, a person receives pension points towards an old-age pension if he or she earns more than 1 B.a. during the course of a calendar year. The B.a. is also used in the system for unemployment insurance; in addition to other requirements, a person must have earned more than 1.5 times the B.a. during the course of the previous calendar year in order to be eligible for any unemployment benefits.[7] Multiples of the B.a. thus represent a sort of administrative benchmark for determining real and substantial participation in the labor market in a given year. Table 1 provides further information on the B.a. in relation to other parameters of interest in the Norwegian economy and social welfare system. In this paper, we would like to borrow from the administrative practice of the 1 B.a. threshold and will thus classify a person as participating in the labor market if his or her earnings were more than 1 B.a. that year. Table A.2 in the Appendix presents the resulting participation rates for men and women age 25-54 during the years 1993-2001; these are almost identical to the rates for those years based on Statistics Norway's Labor Force Survey (LFS) presented in Figure 1.

[6] In other words, just what should be the relevant period –a year or a certain month, week or day of the year?

[7] A person is, however, eligible to receive the maximum *duration* of unemployment benefits only if he or she earned more than 2 B.a. during the previous calendar year. Lesser earnings result in a shorter maximum duration for employment benefits.

As Table 1 indicates, the minimum old-age pension and the poverty line (both for a single person) can be interpreted as indication of the minimum income required to participate in Norwegian society; both were a little under 2 B.a. in the period under investigation. One could therefore interpret 2 B.a. as subsistence earnings and this, too, might be of interest if one wishes to acquire insights into the extent to which immigrants are able to fend for themselves in Norway.

Table A.2 in the Appendix also illustrates that participation rates for the general Norwegian population age 25-54 are but little affected by raising the earnings cut-off to 2 B.a. Just 2-3 percent of the men and 5-6 percent of the women have earnings between 1 B.a. and 2 B.a. However, such a relationship does not necessarily hold for the immigrant population. Given the intuitive appeal of the interpretation of the 2 B.a. threshold as subsistence earnings and the suggestions of the relationship between the employment of women and poverty rates in different ethnic groups in Norway in Galloway (2006), we will present results based on two different earnings thresholds for defining labor market status. The results with the 1 B.a. cut-off will be referred as as Definition 1; Definition 2 employs the 2 B.a. threshold.

The earnings which will be compared with the B.a. thresholds for the classification of labor market status are based on tax record data and defined as the sum of wages, salary or other income from employment as well as income from self-employment over the course of the entire calendar year. For tax reasons a substantial portion of the earnings of self-employed persons may be reported as capital income. Hence, we also include capital income in earnings if a person is registered with any income from self-employment.[8]

[8]Note, too, that unemployment benefits are *not* included in this definition of earnings, whereas they were included in the earnings definition employed in previous studies of the earnings assimilation of immigrants in Norway (Hayfron 1998), Longva and Raaum 2000, and Barth, Bratsberg and Raaum 2004). Thus, the earnings definition used in such previous studies of earnings assimilation in Norway exacerbate the problems and shortcomings involved in interpreting studies of earnings assimilation as indicative of the labor market performance of immigrants. More specifically, it is debatable whether or not benefits from the system of unemployment insurance should

3.2 Model for the Analysis of Labor Market Participation

Within each group by country of origin we wish to control for individual effects in a probit model of employment status.[9] We assume that the probability of employment for individual $i, i = 1, 2, ...N$, at time $t, t = 1, 2, ..., T$, is given by

$$p_{it}(\alpha_i) = Pr(Y_{it} = 1) = \Phi(\alpha_i + \beta' x_{it}), \tag{1}$$

where $\Phi(.)$ is the standard normal cumulative distribution function. The variable $Y_{it} = 1$ if individual i is working in year t and $Y_{it} = 0$ otherwise; x_{it} is a vector of covariates for individual i in year t; β represents the vector of parameters to be estimated and α_i represents the individual-specific intercept for person i .

If we assume that the α_is are normally distributed random variables with mean 0 and variance σ^2, i.e. $\alpha_i \sim N(0, \sigma^2)$, then the objective is to maximize the following likelihood with respect to β and σ^2:

$$\prod_{i=1}^{N} \left[\int_{-\infty}^{\infty} \prod_{t=1}^{T} p_{it}(\alpha_i)^{Y_{it}} (1 - p_{it}(\alpha_i))^{1-Y_{it}} \frac{1}{\sqrt{2\pi\sigma^2}} exp\left(\frac{-\alpha_i}{2\sigma^2}\right)^2 d\alpha_i \right] \tag{2}$$

3.3 Specification

We will concentrate on the five largest non-Western/non-European immigrant groups in Norway as of 1993: immigrants from Pakistan, Vietnam, Turkey, Sri Lanka and Iran. The data span the period 1993-2001. Separate analyzes were conducted for the men and women in each of the five immigrant groups and with the two different earnings thresholds for defining employment status. Analogous models were also estimated for a random sample of the native population.[10] The

be counted as part of earnings when studying the performance of immigrants in the labor market.

[9] An analogous logit model gave almost identical results; estimates from the logit model are available from the author upon request.

[10] Access to the data for the entire native population – well over 4 million people in each of the 9 years of the analysis – was available, but a random sample was analyzed in order to facilitate

analysis focuses solely on first generation immigrants between the ages of 18 and 67; so-called second generation immigrants, i.e. children born in Norway to two immigrant parents, as well as all first generation immigrant children under the age of 18 are thus excluded. Immigrants who arrived in the country before the age of 16 and are thus likely to have received a good portion of education or instruction in Norway are also excluded from the analysis. Finally, Meng and Gregory (2005) suggest that intermarried immigrants, i.e. those married to natives, perform better than endogamously married immigrants in the labor market of the host country. We therefore exclude such intermarried immigrants from our population for study.

In line with common practice in the literature on earnings assimilation, cohort dummy variables are included based on five-year periods of arrival and according to dates relevant for each specific group. The cohort dummies are, in other words, adjusted to reflect when each individual group first arrived in Norway in substantial numbers. The earliest cohort is always used as the reference group for the dummy variables. Pakistani immigrants, the non-Western immigrant group with the longest history in Norway, are thus assigned cohort dummies for the following arrival dates: up to 1974, 1975-1979, 1980-1984, 1985-1989, 1990-1994 and 1995-1999 with the group arriving up to 1974 used as reference for the dummy variables. As Galloway (2006) points out, interpretation of the parameters associated with such cohort dummies is, at best, problematic.

Barth, Bratsberg and Raaum (2004) illustrate both the relevance and difficulties of incorporating good measures of labor market conditions in studies of earnings assimilation. We provide an improvement on the measure of labor market conditions employed in Barth, Bratsberg and Raaum (2004) by constructing a measure of economic conditions in the local labor market defined by the regional groupings of municipalities described in Statistics Norway (2001). A measure based on such an intermediate regional grouping is a significant improvement over other measures

the maximization of the likelihood in expression (2) for natives.

of economic conditions because it better reflects the relevant labor market for persons where they actually live and work. Data on the municipal level, i.e. at a lower level, fail to reflect the degree to which individuals travel between municipalities for work and other economic purposes; data on a larger regional or national level would be unable to identify just which arena is truly relevant for the economic activity of individuals (in the short run) at their place of residence.[11] A regional measure of unemployment is calculated by taking the average number of registered unemployed for the relevant year and dividing this by the number of persons in the working-age population (persons age 16-66 years) in the relevant economic region.

The main parameters of interest will be those associated with the duration of residence or the "years since migration" (YSM). Further variables reflect information on age, education[12] and household type (including the number of children). Summary statistics for the pooled populations over time for women and men by ethnic group are presented in Table A.3 and Table A.4 in the Appendix.

4 Labor Market Participation: Results

The parameter estimates for the two models are presented for each of the ethnic groups plus natives in tables A.5-A.10 in the Appendix. Due to the inability to read marginal effects directly from the parameter estimates in probit regressions, the following subsections will provide simulations based on the estimated parameters in

[11] An identification problem can also arise in studies of earnings assimilation when a national rate is used, see Barth, Bratsberg and Raaum (2004).

[12] Information on the education of many newly arrived immigrants is often missing in the first few years after their arrival. We can, however, fill in some of these blanks by two means. First, we can make use of information on immigrants who participate in education in Norway and impute education for earlier years based on the education level achieved in Norway (later on). Second, Statistics Norway made explicit efforts to obtain this information for immigrants in 1998. Given that no form of education was registered for intervening years, the information obtained in 1998 can thus be used for earlier years.

order to give an impression of the magnitude of effects. Unless otherwise noted, we will concentrate on a reference person defined as having entered Norway at age 25 as part of the 1990-1994 arrival cohort and with secondary education. Furthermore, the local employment rate is set at 2.87 percent, which was the national annual average for the period under investigation.[13]

4.1 Integration Effects

Figures 2 and 3 present the estimated probabilities for employment with Definition 1 for women and men, respectively. The x-axis indicates time as represented by both increasing age and increasing YSM.[14] We focus on the employment probabilities for an "average" or median individual type, i.e. for $\alpha_i = 0$; we shall provide a more thorough discussion of the meaning of such an "average type" in the following subsection. Results for immigrants from Iran and Sri Lanka are presented only up to YSM equal to 10, because immigrants with longer duration of residence were rare in those populations during the 1990s.

The ethnic groups differ greatly in their adjustment to the labor market in Norway. The "average" women in these immigrant groups start out with employment probabilities below 0.15. However, the similarity for the women in the different ethnic groups ends there. The probabilities of employment for women from Sri Lanka and Vietnam increase dramatically to well over 0.85 and to a large degree approach those of native females after 10 years in the country. The increases in the probabilities of employment for women from Turkey and Pakistan are also noticeable, but after 15 years in Norway, the probability of employment for Turkish

[13]For this purpose, the national rate was calculated by the author in the same manner as the local unemployment rate for use in this study. It was generally lower than the official unemployment rates published by Statistics Norway. The difference appears, however, to be entirely in levels; changes in unemployment rates, i.e. increases and decreases, were largely of the same magnitude. The national average is calculated over the years 1993-2001.

[14]Note, too, the $YSM = 0$ indicates the first *full* year of residence in Norway.

and Pakistani women only reach approximately 0.6 and a mere 0.33, respectively. The employment probabilities of Iranian women also rise dramatically, but do not obtain quite the same high levels as for the immigrant women from Sri Lanka and Vietnam.[15]

The average men from Pakistan, Turkey and Sri Lanka start out with a probabilities of employment over 0.70 and those probabilities also increase for subsequent years in the country. The average men from Iran and Vietnam start out with a probability of employment around 0.10, but their employment probability increases dramatically for longer durations of residence. The increase is so dramatic for Vietnamese immigrants in particular that their employment probabilities actually surpass those of all the other groups after about 10 years in the country. The average-type men from Sri Lanka, Vietnam and Pakistan approach probabilities of employment similar to those of the average-type native after some 10-12 years in the country, but Iranian and Turkish immigrants lag far behind their counterparts even after many years in the country. Turkish immigrants do not seem to maintain a steady integration into the labor market; their probability of employment actually declines noticeably after 10 years.

The immigrant groups analyzed in this paper represent different types of immigration to Norway. While immigrants from Pakistan and Turkey are largely labor migrants (for specialist labor) or immigrants entering the country on the basis of family ties, immigrants from Sri Lanka, Iran and Vietnam are generally refugees or persons granted asylum.[16] Refugees enjoy more extensive rights and assistance upon entry into the country,[17] but at the time of analysis, free language instruction

[15]Figure 2 focuses on married women with no children in order to allow comparison between men and women. The probability of employment for married women *with* children is, unsurprisingly, lower for all the groups. The decrease in the probability of employment with children in the household is, however, larger for the immigrant women than the native women.

[16]Some of the Turkish immigrants are also Kurdish refugees.

[17]Refugees have, for example, the same rights to the generous system of educational loans and stipends as native Norwegians upon arrival in the country.

was available for all immigrants. The low initial employment rates for immigrant men from Iran and Vietnam can, thus, be due to participation in language instruction and educational programs during the first few years of residence as well as easier access to social assistance and other alternative forms of income. The higher initial rates for immigrants from Turkey and Pakistan reflect the fact that these immigrants are implicitly expected to support themselves upon arrival and, indeed, may have entered the country precisely because of employment. Although immigrants from Sri Lanka are also largely refugees, the men seem to be entering the labor market quite rapidly.

Furthermore, if we focus on results with employment status based on earnings above 2 B.a. threshold, as presented for men and women in figures 4 and 5, respectively, then we see that the results for men from Pakistan, Turkey and Iran are the most affected. In other words, the probability of employment with earnings above subsistence levels given in Definition 2 for those immigrants groups are lower than we would have expected based on the results from Definition 1. The results are, thus, not entirely robust to the choice of earnings threshold for determining employment status. However, many of the same general insights, such as the dramatic rise in employment probability for certain groups and the large differences for women after several years in the country, are conveyed by the two different definitions of employment status.

4.2 Unobserved Heterogeneity

The discussion in the preceding focused on an "average" individual type for each of the immigrant groups. The question thus arises as to just how representative this average individual is for his or her ethnic group in Norway. In other words, the extent of the heterogeneity *within* these groups might also vary and the "average type" of individual discussed in the previous sub-section might only be representative of his or her group to varying degrees.

Figure 6 can be used to illustrate the extent of the unobserved heterogeneity among immigrant women as well as expand on the basic conclusions of the previous sub-section. The definition of employment status in Figure 6 is based on the earnings threshold at 1 B.a. Panel (a) presents the the probability of employment during the first year of residence in Norway for selected quantiles of the estimated normally distributed (latent) individual types within each ethnic group; panel (b) presents the same for the tenth year of residence in Norway. We once again illustrate by means of a reference individual defined as a married person who arrived at age 25 as part of the 1990-1994 arrival cohort and with secondary education. The local employment rate was once again set the national average of 2.87 percent. The results thus differ along the curves only by representing individuals of different latent types. The quantiles of the distribution of latent types within each ethnic group are presented on the x-axis and the probability of employment on the y-axis. In other words, we can find the probability of employment for the "average type" in each ethnic group by locating the median (0.5) on the x-axis and then finding the associated probability of employment on the y-axis. For the sake of simplicity, we will somewhat informally refer to the quantiles associated with lower employment probabilities (i.e. probabilities of employment less than 0.3) as "low-employment types" and the quantiles associated with higher employment probabilities (probabilities larger than 0.7) as "high-employment types".

As Figure 6 indicates, the vast majority of the women in all these immigrants groups have very low probabilities of employment during their first year in the country, i.e. they are low-employment types. Just a tiny group of women in all the groups could be considered high-employment types at the start of their stay in Norway. However, quite the opposite is true of immigrant women from Sri Lanka and Vietnam after 10 years in Norway: their ranks are then dominated by high-employment types. In other words, a large portion of these women are changing from low-employment to high employment types during the course of 10 years in

the country, i.e. they are integrating into the labor market in Norway. The low probability of employment of the "average" Pakistani women seems to be largely representative of her ethnic group: even after 10 years in the country, very few of these women become high-employment types.

Figure 7 presents analogous results for immigrant men. It indicates that a large portion of Vietnamese men are also changing from low-employment types to high-employment types during the first 10 years of their stay in Norway. After 10 years in the country, the populations of Pakistani, Vietnamese and Sri Lanka men are largely dominated by high-employment types. There are still substantial portions of Iranian and Turkish men with only intermediate (0.3-0.6) probabilities of employment, but the majority from these countries are also high-employment types.

Finally, note another striking difference between the immigrant men and women from these immigrants groups as illustrated in figures 6 and 7: the immigrant women in the different groups start out very similar, but become very different over time. The immigrant men, on the other hand, start out very different, but become very similar with respect to their employment probabilities over time. In other words, initial differences in employment probabilities are being wiped away with time for the immigrant men: the majority the men in all the groups either have high initial probabilities of employment or are integrating into the labor market. However, the immigrant women from different ethnic groups are responding very differently to their experience in Norway. The majority of the women from Sri Lanka and Vietnam as well as a very large portion of the women from Iran are integrating into the labor market, whereas the majority of the women from Turkey and Pakistan remain outside the labor market.

5 Conclusions and Discussion

As the findings of this analysis indicate, many immigrants integrate into the labor market in Norway and they do so with earnings above a subsistence level. The differences between the ethnic groups and between men and women are, however, large. The vast majority of the immigrant men achieve high probabilities of employment after some time in the country, but they do so with very different patterns. Men from Sri Lanka, Turkey and Pakistan have relatively high initial probabilities of employment and those probabilities also rise noticeably for the men from Sri Lanka and Pakistan. Men from Iran and Vietnam are initially outside the labor market, but eventually do integrate into employment. Hence, immigrant men are becoming more similar both to each other and to native men over time. The immigrant women are, in contrast, starting out very different than native women in terms of employment probability. All the immigrant women start out with very low employment probabilities at the start of their stay, but the women in some ethnic groups – most notably, Vietnam and Sri Lanka – integrate into the labor market whereas the immigrant women from Pakistan and Turkey largely remain outside the labor force even after 10-15 years in Norway. Hence, the women in only some of the groups are integrating into the labor market and thus becoming more similar to native women over time.

As an indication of the extent to which immigrants enter the labor market and are able to support themselves economically, these results have a policy relevance of their own. However, they also have a significance beyond their own immediate content. Firstly, they reinforce the need to address immigrant women when studying immigrant adjustment; it might be precisely the labor market behavior of immigrant women that is the deciding difference in the overall economic performance of different immigrant groups in the host society. Secondly, the results presented here suggest that selection into employment might be a factor which in general needs more attention in studies of earnings assimilation.

Studying the earnings assimilation of immigrant men in employment is not sufficient for assessing the adjustment of immigrants as a whole. Study of the labor market behavior of immigrant women reveals large differences between groups that have a relevance both of their own and with respect to the larger discussions of how immigrants are faring in the host country. As an example, Galloway (2006) indicates that the poverty rates for immigrants from Pakistan and Turkey are persistently much higher than rates for immigrants from Sri Lanka and Vietnam, i.e. high poverty rates remain a feature of the immigrant experience for immigrants from Pakistan and Turkey even after many years in the country. Such differences in the probability of poverty would be very puzzling indeed without added insights on the labor market participation of immigrant women. The insights provided by the focus on employment probabilities for women suggest that it may be low employment among women which is the reason behind the differences in poverty experiences. Studies of earnings assimilation that focus exclusively on immigrants in employment would also be unable to convey information on such differences, because the earnings of the women actually in employment might not differ greatly between the groups.

In addition, these results indicate that immigrants are, in fact, entering the labor market at different times following their arrival in Norway. Hence, there is good reason to suspect selection into the population typically studied by analyzes of earnings assimilation; such selection may thus bias the results of traditional studies of earnings assimilation. Vietnamese immigrants provide an interesting example; both the men and the women in that group have very low probabilities of employment at the start of their stay. However, they do eventually catch up to and even surpass the other groups in terms of employment probabilities after several years in the country. Vietnamese immigrants might, thus, be using the first few years of their stay to invest in valuable language skills and other forms of human capital specific to the host country; this human capital accumulation

might, in turn, better enable them to later enter, remain and earn well in the labor market. Hence, Vietnamese immigrants are a group for which one might suspect severe biases in estimates of earnings assimilation with traditional methods that focus only on immigrants in employment. However, the results of this analysis of employment probabilities suggest that integration into the labor market is occurring to some extent in all the groups studied here; selection bias would thus be expected to influence results on earnings assimilation for *all* the immigrant groups and for both male and female immigrants in Norway.

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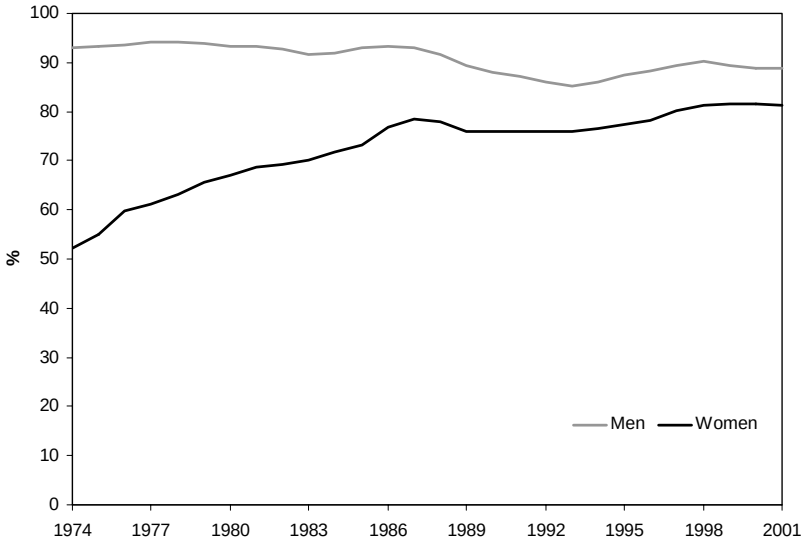
Figure 1.
Employment rates for men and women age 25-54 in Norway. 1993-2001.



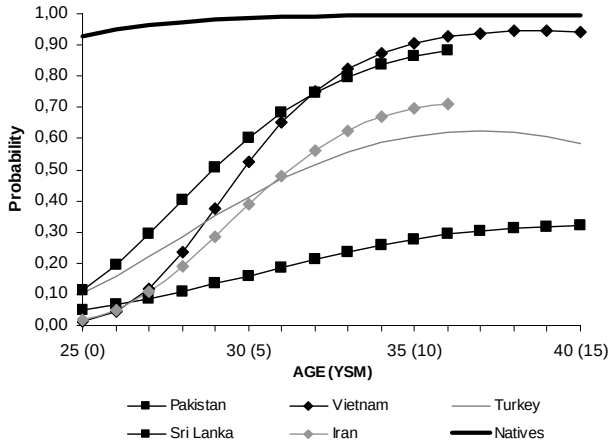
Source: Labour Force Survey (LFS), Statistics Norway.

Table 1.
The Basic Amount (B.a.) in Norwegian kroner (NOK). 1993-2001

	Basic amount (B.a.) in NOK	Minimum old-age pension* (MP) in NOK	MP/ B.a.	Poverty line* in NOK	Poverty line / B.a.	Average yearly wage in industry (AAWI) in	AAWI/ B.a.
1993	37 033	71 312	1.93	68 037	1.84		
1994	37 820	71 798	1.90	68 203	1.80		
1995	38 847	72 238	1.86	68 859	1.77		
1996	40 410	74 277	1.84	71 430	1.77		
1997	42 000	75 927	1.81	73 197	1.74		
1998	44 413	83 979	1.89	77 324	1.74	252 200	5.68
1999	46 423	88 459	1.91	80 284	1.73	265 900	5.73
2000	48 377	89 386	1.85	81 808	1.69	277 000	5.73
2001	50 603	90 746	1.79	83 620	1.65	289 400	5.72

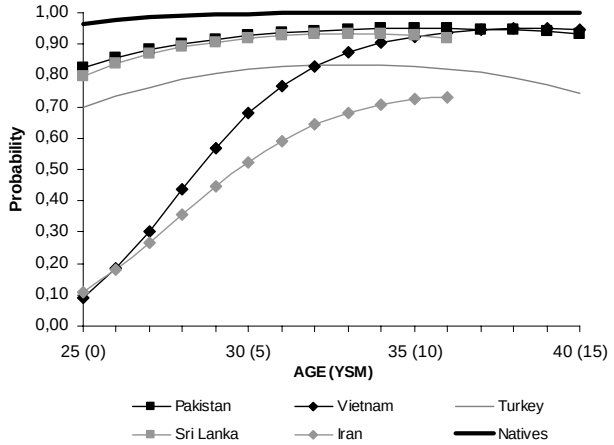
* For a single person household.
Source: Poverty line and minimum pension: Galloway and Mogstad (2006); AAWI: Labor Force Survey (LFS), Statistics Norway. The AAWI is only available starting in 1998.

Figure 2.
Probability of employment for immigrant women



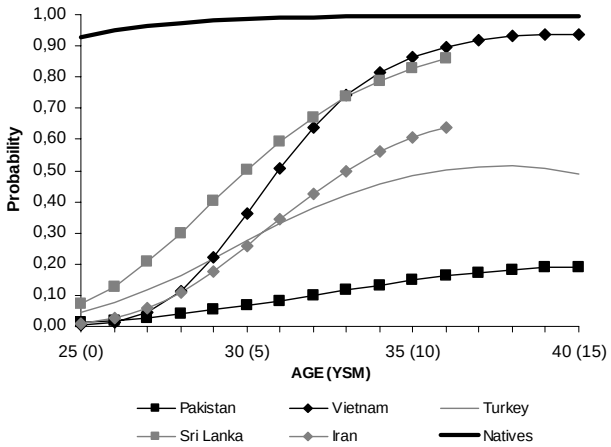
For a reference person defined as married woman with no children; secondary education; local unemployment equal to 2.87%; average individual type ($\alpha_i = 0$).

Figure 3.
Probability of employment for immigrant men



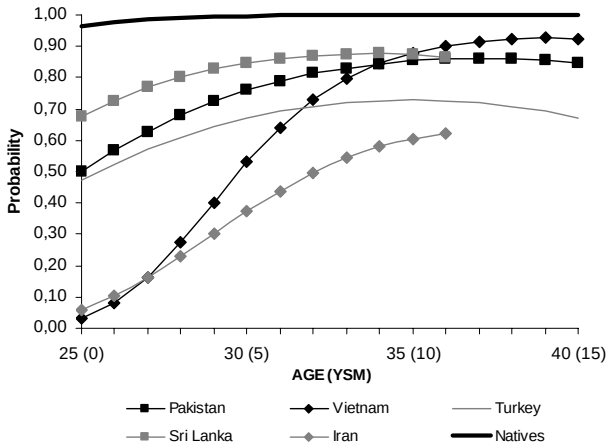
For a reference person defined as married man with no children; secondary education; local unemployment equal to 2.87%; average individual type ($\alpha_i = 0$).

Figure 4.
Probability of earnings above 2 B.a. for Immigrant Women



For a reference person defined as married woman with no children; secondary education; local unemployment equal to 2.87%; average individual type ($\alpha_i = 0$).

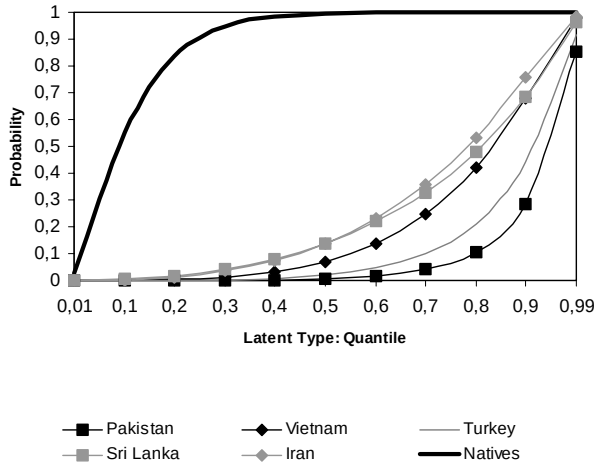
Figure 5.
Probability of earnings above 2 B.a. for Immigrant Men



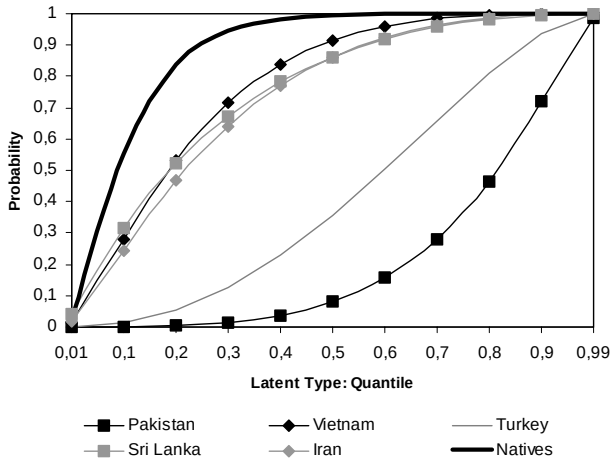
For a reference person defined as married man with no children; secondary education; local unemployment equal to 2.87%; average individual type ($\alpha_i = 0$).

Figure 6.
The Probability of Employment for Different Latent Types of Immigrant Women*

(a) age=25, YSM=0



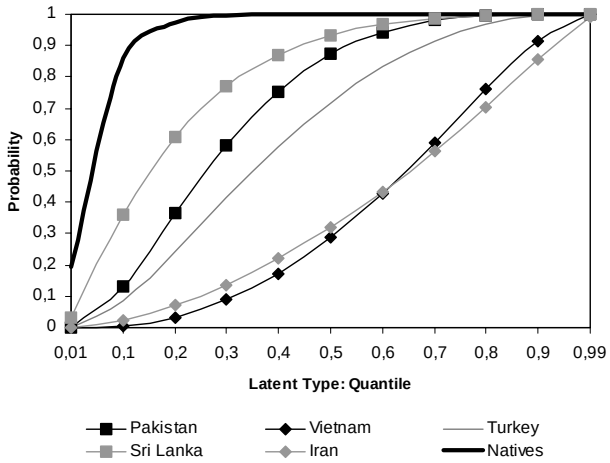
(b) age=35, YSM=10



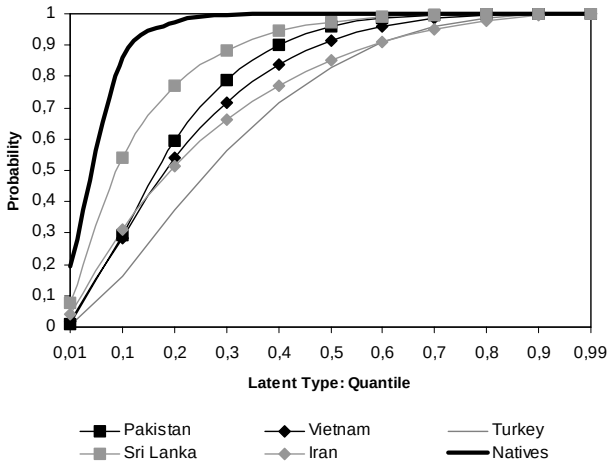
* For a reference person defined as a married woman with no children; secondary education; local unemployment equal to 2.87%.

Figure 7.
The Probability of Employment for Different Latent Types of Immigrant Men*

(a) age=25, YSM=0



(b) age=35, YSM=10



* For a reference person defined as a married man with no children; secondary education; local unemployment equal to 2.87%.

Appendix

Table A.1
Distribution of working hours for men and women. 1996-2001. Percent

	Men				Women			
	1-19 hrs	20-36 hrs	37+ hrs	All	1-19 hrs	20-36 hrs	37+ hrs	All
1996	5.6	4.4	90.1	100.0	21.9	23.8	54.3	100.0
1997	5.6	4.1	90.3	100.0	20.9	24.6	54.6	100.0
1998	5.6	4.1	90.3	100.0	20.5	24.3	55.2	100.0
1999	6.0	4.4	89.6	100.0	20.1	24.5	55.3	100.0
2000	6.3	4.1	89.6	100.0	19.1	23.9	57.0	100.0
2001	6.5	4.6	88.9	100.0	18.9	23.9	57.2	100.0

Source: Labour Force Survey (LFS), Statistics Norway.

Table A.2
Participation Rates based on the Basic Amount (B.a.). 1993-2001. Percent

	Participation Rates according to:			
	1 B.a.		2 B.a.	
	Men	Women	Men	Women
1993	87.7	77.6	84.9	71.4
1994	87.9	78.0	85.3	72.1
1995	88.3	78.8	85.8	73.2
1996	88.6	79.5	86.2	74.0
1997	88.8	80.0	86.6	74.7
1998	89.0	80.8	86.8	75.7
1999	88.9	81.1	86.7	76.1
2000	89.3	81.1	86.3	74.7
2001	88.7	81.1	85.6	74.7

Table A.3
Summary Statistics for Immigrant Women by Ethnic Group
Mean (standard deviation).

	Pakistan	Tyrkia	Vietnam	Sri Lanka	Iran
Age	38.3 (10.2)	35.6 (10.6)	37.9 (10.9)	33.4 (8.4)	36.6 (9.3)
YSM	12.4 (7.1)	9.9 (6.3)	9.2 (5.3)	6.4 (4.0)	6.8 (3.7)
Local unemployment	0.029 (0.009)	0.028 (0.009)	0.029 (0.010)	0.028 (0.010)	0.027 (0.010)
Female					
Single, no children	0.058	0.072	0.148	0.131	0.157
Single, 1 child	0.019	0.034	0.061	0.016	0.081
Single, 2 or more children	0.036	0.047	0.086	0.016	0.090
Couple, no children	0.178	0.183	0.166	0.221	0.163
Couple, 1 child	0.158	0.202	0.157	0.256	0.189
Couple, 2 children	0.180	0.245	0.184	0.240	0.210
Couple, 3 or more children	0.372	0.216	0.198	0.120	0.110
Secondary education	0.244	0.224	0.481	0.558	0.517
Tertiary education	0.077	0.052	0.069	0.119	0.238
Cohort up to 1974	0.070	0.023			
Cohort 1975-1979	0.200	0.129	0.066		
Cohort 1980-1984	0.187	0.147	0.213	0.038	0.008
Cohort 1985-1989	0.268	0.291	0.280	0.347	0.481
Cohort 1990-1994	0.173	0.276	0.367	0.388	0.310
Cohort 1995-1999	0.096	0.128	0.070	0.220	0.187
Number of observations	34011	15927	27264	18068	16074

Pooled observations within each ethnic group 1993-2001

Table A.4
Summary Statistics for Immigrant Men by Ethnic Group
Mean (standard deviation)

	Pakistan	Tyrkia	Vietnam	Sri Lanka	Iran
Age	42.1 (10.4)	38.2 (10.4)	38.2 (10.2)	34.3 (7.5)	36.7 (8.1)
YSM	17.0 (8.7)	13.0 (7.9)	11.3 (5.4)	8.9 (3.8)	7.8 (3.6)
Local unemployment	0.029 (0.010)	0.029 (0.010)	0.029 (0.010)	0.029 (0.010)	0.028 (0.010)
Female					
Single, no children	0.201	0.265	0.342	0.419	0.533
Single, 1 child	0.008	0.010	0.014	0.006	0.014
Single, 2 or more children	0.008	0.008	0.009	0.003	0.009
Couple, no children	0.162	0.159	0.138	0.154	0.111
Couple, 1 child	0.147	0.172	0.139	0.177	0.128
Couple, 2 children	0.163	0.201	0.171	0.162	0.136
Couple, 3 or more children	0.311	0.184	0.185	0.078	0.069
Secondary education	0.391	0.331	0.627	0.547	0.515
Tertiary education	0.143	0.089	0.117	0.157	0.313
Cohort up to 1974	0.384	0.203	0.001		
Cohort 1975-1979	0.190	0.110	0.102		
Cohort 1980-1984	0.053	0.100	0.340	0.087	0.013
Cohort 1985-1989	0.208	0.351	0.269	0.657	0.620
Cohort 1990-1994	0.091	0.136	0.268	0.200	0.269
Cohort 1995-1999	0.070	0.093	0.019	0.053	0.090
Number of observations	36262	18648	30346	26899	27303

Pooled observations within each ethnic group 1993-2001

Table A.5
Estimation Results for Immigrants from Pakistan

	Model 1				Model 2			
	Men		Women		Men		Women	
	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev
Single. no children	-0.1674	0.0484	0.3834	0.0755	-0.1866	0.0470	0.3671	0.0792
Single. 1 child	-0.0621	0.1328	0.0894	0.1117	-0.1780	0.1310	-0.0666	0.1222
Single. 2+ children	-0.1857	0.1378	-0.3071	0.0991	-0.2562	0.1400	-0.3635	0.1077
Couple. 1 child	0.1734	0.0457	-0.1286	0.0517	0.2020	0.0439	-0.1587	0.0560
Couple. 2 children	0.1066	0.0495	-0.1155	0.0550	0.1460	0.0477	-0.1253	0.0588
Couple. 3+ children	0.0773	0.0521	-0.3565	0.0593	0.1292	0.0505	-0.4382	0.0634
Tertiary education	0.6682	0.0843	1.3060	0.0980	0.6342	0.0813	1.3023	0.0987
Secondary education	0.4904	0.0595	0.8243	0.0599	0.4131	0.0574	0.7991	0.0623
Age	0.2104	0.0190	0.0967	0.0211	0.2225	0.0186	0.1015	0.0230
Age^2	-0.0034	0.0002	-0.0019	0.0003	-0.0035	0.0002	-0.0019	0.0003
YSM*	0.1017	0.0121	0.1606	0.0145	0.1306	0.0117	0.1689	0.0160
YSM^2	-0.0033	0.0003	-0.0036	0.0004	-0.0038	0.0003	-0.0036	0.0005
Local unemployment	-0.2291	0.0873	-0.6126	0.0941	-0.2229	0.0847	-0.4894	0.1011
Local unemployment^2	-0.0006	0.0138	0.0718	0.0152	-0.0040	0.0135	0.0496	0.0164
Cohort 1995-1999	0.3112	0.1706	0.1177	0.1814	0.3961	0.1617	0.2546	0.1979
Cohort 1990-1994	-0.2609	0.1533	-0.0028	0.1596	-0.0955	0.1464	0.1112	0.1726
Cohort 1985-1989	-0.6282	0.1161	-0.0771	0.1381	-0.4680	0.1116	0.0777	0.1478
Cohort 1980-1984	-0.2562	0.1527	-0.1977	0.1322	-0.1968	0.1459	-0.1171	0.1389
Cohort 1975-1979	-0.1996	0.0878	-0.2203	0.1236	-0.1893	0.0847	-0.1254	0.1270
Constant	-2.0042	0.4217	-2.5474	0.4364	-3.1187	0.4123	-3.3503	0.4758
σ^2	1.7634	0.0301	1.5468	0.0302	1.7065	0.0290	1.4876	0.0322
$\rho = \sigma^2/(\sigma^2+1)$	0.7567	0.0063	0.7053	0.0081	0.7444	0.0065	0.6888	0.0093

Table A.6
Estimation Results for Immigrants from Vietnam

	Model 1				Model 2			
	Men		Women		Men		Women	
	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev
Single. no children	-0.3625	0.0503	-0.2492	0.0650	-0.4056	0.0499	-0.3542	0.0685
Single. 1 child	-0.5105	0.1210	-1.0315	0.0842	-0.4964	0.1272	-0.9794	0.0893
Single. 2+ children	-0.4498	0.1419	-1.2285	0.0814	-0.4286	0.1445	-1.2319	0.0853
Couple. 1 child	-0.1354	0.0543	-0.2544	0.0572	-0.0654	0.0537	-0.2786	0.0595
Couple. 2 children	-0.1308	0.0578	-0.3729	0.0630	-0.0969	0.0574	-0.4597	0.0652
Couple. 3+ children	-0.1876	0.0635	-0.8144	0.0712	-0.1965	0.0637	-0.8979	0.0737
Tertiary education	1.0436	0.0967	1.1758	0.1117	1.0464	0.0997	1.1569	0.1123
Secondary education	0.4833	0.0616	0.5060	0.0563	0.4400	0.0646	0.4447	0.0591
Age	0.3074	0.0167	0.3372	0.0187	0.3137	0.0175	0.3654	0.0202
Age^2	-0.0043	0.0002	-0.0048	0.0002	-0.0043	0.0002	-0.0050	0.0002
YSM*	0.3475	0.0137	0.4564	0.0145	0.3753	0.0142	0.4834	0.0155
YSM^2	-0.0121	0.0005	-0.0155	0.0006	-0.0126	0.0005	-0.0154	0.0006
Local unemployment	-0.7140	0.0802	-0.5519	0.0846	-0.7521	0.0805	-0.4632	0.0872
Local unemployment^2	0.0533	0.0121	0.0457	0.0134	0.0608	0.0123	0.0413	0.0139
Cohort 1995-1999	0.2459	0.2217	0.1257	0.1714	0.4450	0.2291	0.6312	0.1857
Cohort 1990-1994	-0.1840	0.1418	-0.5675	0.1398	-0.0286	0.1452	-0.1463	0.1499
Cohort 1985-1989	-0.2510	0.1247	-0.8076	0.1337	-0.1631	0.1280	-0.5480	0.1410
Cohort 1980-1984	-0.0664	0.1052	-0.4880	0.1292	0.0027	0.1083	-0.2972	0.1331
Constant	-5.0352	0.3902	-6.3865	0.4043	-5.7616	0.4063	-8.1230	0.4384
σ^2	1.5088	0.0295	1.5245	0.0312	1.5730	0.0298	1.5483	0.0322
$\rho = \sigma^2/(\sigma^2+1)$	0.6948	0.0083	0.6992	0.0086	0.7122	0.0078	0.7056	0.0086

Table A.7
Estimation Results for Immigrants from Sri Lanka

	Model 1				Model 2			
	Men		Women		Men		Women	
	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev
Single. no children	-0.2657	0.0496	-0.5077	0.0658	-0.2524	0.0436	-0.5258	0.0650
Single. 1 child	-0.9776	0.1622	-0.4130	0.1287	-1.1691	0.1602	-0.6107	0.1297
Single. 2+ children	-0.7070	0.1999	-0.7392	0.1420	-0.8094	0.1919	-0.8785	0.1411
Couple. 1 child	-0.0165	0.0538	-0.2146	0.0447	-0.0128	0.0474	-0.3307	0.0448
Couple. 2 children	-0.0125	0.0602	-0.3385	0.0546	-0.0848	0.0533	-0.5839	0.0548
Couple. 3+ children	-0.0394	0.0762	-0.3787	0.0693	-0.1217	0.0683	-0.7442	0.0700
Tertiary education	0.4862	0.0847	0.4439	0.0891	0.3534	0.0763	0.3080	0.0855
Secondary education	0.3619	0.0618	0.0777	0.0546	0.2121	0.0558	-0.0388	0.0540
Age	0.1100	0.0187	0.0747	0.0194	0.1304	0.0174	0.1247	0.0201
Age^2	-0.0019	0.0002	-0.0015	0.0002	-0.0021	0.0002	-0.0020	0.0003
YSM*	0.1639	0.0158	0.3562	0.0150	0.1608	0.0146	0.3481	0.0151
YSM^2	-0.0102	0.0008	-0.0127	0.0009	-0.0092	0.0008	-0.0106	0.0009
Local unemployment	-0.0758	0.0833	-0.3059	0.0847	-0.0610	0.0748	-0.4136	0.0842
Local unemployment^2	-0.0169	0.0123	0.0409	0.0131	-0.0245	0.0111	0.0628	0.0131
Cohort 1995-1999	0.1929	0.1226	0.6235	0.0896	0.1411	0.1105	0.6709	0.0883
Cohort 1990-1994	-0.1782	0.0803	0.1705	0.0736	-0.1271	0.0720	0.2618	0.0718
Constant	-0.4282	0.3784	-1.5690	0.3825	-1.1681	0.3492	-2.7968	0.3911
σ^2	1.4512	0.0341	1.2285	0.0308	1.3220	0.0302	1.1776	0.0292
$\rho = \sigma^2/(\sigma^2+1)$	0.6781	0.0102	0.6015	0.0120	0.6361	0.0106	0.5810	0.0121

Table A.8
Estimation Results for Immigrants from Turkey

	Model 1				Model 2			
	Men		Women		Men		Women	
	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev
Single. no children	-0.1293	0.0617	0.2776	0.0969	-0.0833	0.0593	0.1394	0.1002
Single. 1 child	-0.0559	0.1554	-0.4429	0.1221	0.0791	0.1515	-0.5480	0.1292
Single. 2+ children	0.2046	0.1648	-0.9189	0.1183	0.1805	0.1647	-1.0240	0.1278
Couple. 1 child	0.0988	0.0591	-0.1512	0.0644	0.1584	0.0567	-0.2013	0.0687
Couple. 2 children	0.1241	0.0644	-0.3312	0.0720	0.2019	0.0622	-0.4038	0.0764
Couple. 3+ children	0.0171	0.0704	-0.3924	0.0819	0.0785	0.0691	-0.6143	0.0883
Tertiary education	0.7473	0.1205	1.1036	0.1535	0.7347	0.1149	1.1296	0.1559
Secondary education	0.3778	0.0674	0.4775	0.0756	0.3066	0.0652	0.4702	0.0808
Age	0.1789	0.0214	0.1382	0.0250	0.1785	0.0211	0.1391	0.0275
Age^2	-0.0030	0.0003	-0.0027	0.0003	-0.0029	0.0003	-0.0027	0.0004
YSM*	0.0829	0.0138	0.2593	0.0175	0.1034	0.0134	0.2736	0.0194
YSM^2	-0.0038	0.0005	-0.0082	0.0006	-0.0038	0.0004	-0.0082	0.0007
Local unemployment	-0.2870	0.1032	-0.3728	0.1216	-0.3193	0.1006	-0.2957	0.1294
Local unemployment^2	0.0171	0.0162	0.0401	0.0194	0.0239	0.0158	0.0278	0.0208
Cohort 1995-1999	0.1037	0.1727	0.5405	0.2042	0.2381	0.1651	0.4805	0.2241
Cohort 1990-1994	-0.2741	0.1535	0.4135	0.1729	-0.0215	0.1473	0.4160	0.1878
Cohort 1985-1989	-0.6752	0.1203	0.2669	0.1547	-0.5261	0.1160	0.2831	0.1659
Cohort 1980-1984	-0.4679	0.1419	-0.0663	0.1539	-0.3796	0.1363	0.0268	0.1608
Constant	-1.4812	0.4537	-3.1508	0.5115	-2.2603	0.4451	-3.7456	0.5572
σ^2	1.5171	0.0357	1.4763	0.0405	1.4626	0.0348	1.4819	0.0428
$\rho = \sigma^2/(\sigma^2+1)$	0.6971	0.0099	0.6855	0.0118	0.6815	0.0103	0.6871	0.0124

Table A.9
Estimation Results for Immigrants from Iran

	Model 1				Model 2			
	Men		Women		Men		Women	
	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev
Single. no children	-0.2539	0.0434	-0.1738	0.0782	-0.2552	0.0437	-0.1423	0.0826
Single. 1 child	-0.0982	0.1133	-0.3799	0.0910	-0.2741	0.1163	-0.4202	0.0956
Single. 2+ children	-0.5556	0.1646	-0.5487	0.0919	-0.4378	0.1755	-0.7410	0.0981
Couple. 1 child	0.0160	0.0514	-0.2628	0.0663	0.0938	0.0514	-0.3633	0.0705
Couple. 2 children	0.0128	0.0565	-0.2058	0.0732	0.0500	0.0570	-0.2647	0.0768
Couple. 3+ children	-0.3312	0.0736	-0.4281	0.0943	-0.3366	0.0761	-0.5460	0.0999
Tertiary education	0.8936	0.0649	1.1757	0.0932	0.8460	0.0676	1.1969	0.0983
Secondary education	0.2882	0.0570	0.5366	0.0763	0.2053	0.0603	0.4743	0.0830
Age	0.1974	0.0159	0.2505	0.0237	0.2315	0.0171	0.2957	0.0260
Age^2	-0.0027	0.0002	-0.0035	0.0003	-0.0030	0.0002	-0.0039	0.0003
YSM	0.3334	0.0158	0.4563	0.0230	0.3128	0.0167	0.4189	0.0249
YSM^2	-0.0151	0.0009	-0.0197	0.0014	-0.0130	0.0010	-0.0157	0.0015
Local unemployment	-0.3785	0.0655	-0.6207	0.0914	-0.4867	0.0674	-0.5370	0.0956
Local unemployment^2	0.0139	0.0101	0.0616	0.0146	0.0271	0.0106	0.0513	0.0155
Cohort 1995-1999	0.7142	0.0908	0.3679	0.1131	0.6673	0.0947	0.3861	0.1222
Cohort 1990-1994	0.1570	0.0585	-0.0722	0.0861	0.1768	0.0602	0.0192	0.0891
Constant	-4.3134	0.3305	-5.7202	0.4717	-5.1816	0.3574	-7.2388	0.5239
σ^2	1.1940	0.0245	1.3889	0.0383	1.2142	0.0251	1.3889	0.0370
$\rho = \sigma^2/(\sigma^2+1)$	0.5877	0.0099	0.6586	0.0124	0.5958	0.0100	0.6586	0.0120

Table A.10
Estimation Results for Natives

	Model 1				Model 2			
	Men		Women		Men		Women	
	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev	Est.	Std.Dev
Single. no children	-0.2942	0.0290	-0.0417	0.0299	-0.2265	0.0273	0.0406	0.0282
Single. 1 child	-0.3005	0.0800	-0.6349	0.0442	-0.3001	0.0769	-0.6342	0.0432
Single. 2+ children	-0.1705	0.1536	-1.1233	0.0584	-0.3139	0.1437	-1.2115	0.0571
Couple. 1 child	0.0408	0.0322	-0.2692	0.0291	-0.0031	0.0298	-0.4072	0.0270
Couple. 2 children	0.1235	0.0433	-0.7348	0.0348	0.0902	0.0397	-0.9370	0.0328
Couple. 3+ children	0.0437	0.0631	-1.1524	0.0480	0.0497	0.0588	-1.4639	0.0454
Tertiary education	1.1199	0.0520	1.6648	0.0514	1.1678	0.0518	1.8111	0.0512
Secondary education	0.5749	0.0448	0.8432	0.0436	0.5886	0.0450	0.8466	0.0435
Age	0.5739	0.0067	0.4854	0.0067	0.6495	0.0069	0.5826	0.0069
Age^2	-0.0071	0.0001	-0.0062	0.0001	-0.0078	0.0001	-0.0071	0.0001
Local unemployment	-0.0949	0.0433	-0.1487	0.0377	-0.0610	0.0404	-0.2067	0.0355
Local unemployment^2	0.0066	0.0066	0.0144	0.0058	0.0004	0.0062	0.0235	0.0055
Constant	-8.4961	0.1486	-7.3473	0.1459	-10.6406	0.1502	-10.0559	0.1487
σ^2	1.8706	0.0182	1.9465	0.0184	1.8878	0.0182	1.9178	0.0179
$\rho = \sigma^2/(\sigma^2+1)$	0.7777	0.0034	0.7912	0.0031	0.7809	0.0033	0.7862	0.0031

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