ECONSTOR
Make Your Publications Visible.

A Service of
ZBW
Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Galloway, Taryn Ann

Working Paper

Do Immigrants Integrate Out of Poverty in Norway

Discussion Papers, No. 482

Provided in Cooperation with:
Research Department, Statistics Norway, Oslo

Suggested Citation: Galloway, Taryn Ann (2006) : Do Immigrants Integrate Out of Poverty in Norway, Discussion Papers, No. 482, Statistics Norway, Research Department, Oslo

This Version is available at:
https://hdl.handle.net/10419/192464

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

Discussion Papers No. 482, October 2006
Statistics Norway, Research Department

Taryn Ann Galloway

Do Immigrants Integrate Out of Poverty in Norway?

Abstract:
In light of the riots and unrest among immigrants in France during the fall of 2005, the question of how immigrants are faring with respect to a certain minimum in society is both a timely and pertinent question for a number of European countries. In Norway, the prevalence of poverty is alarmingly high among immigrants and stands in stark contrast to the very low poverty rates for the native Norwegian population. Thus, unless the high poverty rates in the immigrant population are just a temporary feature of the immigrants' initial period of adjustment in the host country, poverty among immigrants is a cause for concern in Norway, too. This paper wishes to serve as a complement or extension of previous studies of immigrant adjustment; the study also aims to provide insights on the substantial heterogeneity -- observed, unobserved and unobservable -- in the immigrant population in Norway.

Keywords: Immigration, Integration, Assimilation

JEL classification: I32

Acknowledgement: I would like to thank Rolf Aaberge, Magne Mogstad ,Terje Skjerpen and Steinar Strøm for their many useful comments and insights. I would also like to thank Tom Wennemo for his invaluable programming assistance. This work was part of a research project funded by the Research Council of Norway.

Address: Taryn Ann Galloway, Statistics Norway, Research Department. E-mail: tag@ssb.no

Discussion Papers comprise research papers intended for international journals or books. A preprint of a Discussion Paper may be longer and more elaborate than a standard journal article, as it may include intermediate calculations and background material etc.

Abstracts with downloadable Discussion Papers
in PDF are available on the Internet:
http://www.ssb.no
http://ideas.repec.org/s/ssb/dispap.html

For printed Discussion Papers contact:

Statistics Norway
Sales- and subscription service
NO-2225 Kongsvinger

Telephone: +47 62 88 55 00
Telefax: +47 62 88 55 95
E-mail: Salg-abonnement@ssb.no

1 Introduction

In light of the riots and unrest among immigrants in France during the fall of 2005, the question of how immigrants are faring with respect to a certain minimum in society is both a timely and pertinent question for a number of European countries. In Norway, the prevalence of poverty is alarmingly high among immigrants and stands in stark contrast to the very low poverty rates for the native Norwegian population. Poverty in Norway is thus in very large part an issue of poverty among immigrants. Unless the high poverty rates in the immigrant population are just a temporary feature during the immigrants' initial period of adjustment in the host country, poverty among immigrants constitutes a cause for great concern in Norway. This paper wishes to address such concerns by carefully studying five of the largest non-European immigrant groups in Norway during the early 1990s in order to uncover the extent to which poverty may simply be a temporary experience during a period of adjustment in the host country.

Immigrant groups with persistently high probabilities of poverty, i.e. who fail to integrate out of poverty, may be a source of concern for the host countries both for reasons of efficiency and altruism. Poverty in large numbers in any segment of society, native or immigrant, can entail any of a number of social costs and woes, such as increased crime, unrest, and discrimination. It might thus be in the interest of the society as a whole to limit the potential for such problems by paying particular attention to the lower end of the distribution regardless of whether that segment of society is dominated by immigrants or natives. In addition, when immigrants (legally) enter a country they do become rightful members of that society. The precise rights associated with that membership are sources of continual debate and revision in the host countries. There can, however, be little doubt that (legal) immigrants do to some extent become a part of the general altruistic concern of the societies they (legitimately) enter.

This study, with its focus on immigrants' performance in relation to a certain

minimum living standard in the host society, provides valuable insights and serves as a complement to previous studies of the earnings assimilation of immigrants.[1] An additional strength of this focus on poverty is its implied emphasis on household income and the well-being of households instead of a focus on wages for individuals in the labor market alone. Poverty studies thus provide valuable added insights into how the portions of the immigrant populations outside of the labor market are faring.

The particular strengths and perspectives offered by poverty analysis in assessing the situation for immigrants led to the cross-sectional analysis of immigrants in Norway in Galloway and Aaberge (2005); Blume et al. (2006) performed similar analysis of immigrants in Sweden and Denmark. However, the cross-sectional nature of those initial studies of poverty among immigrants severely limit the ability to interpret the results with confidence. This paper wishes to extend the applicability of such early studies by employing richer methods and models for addressing the substantial heterogeneity – observed, unobserved and unobservable – within the immigrant population.

The paper is structured as follows. The next section provides a more detailed discussion of the topics and concerns addressed in the previous literature on immigrant adjustment in the host country. Section 3 describes the definitions, methods and specification used in this analysis and Section 4 presents the empirical results. The final section summarizes the findings and discusses them in a broader perspective.

[1]Studies of earnings or wage assimilation, with various refinements and extensions, include, among others, Chiswick (1978) and Borjas (1985) for the US as well as Hayfron (1998), Longva and Raaum (2003), and Barth, Bratsberg and Raaum (2004) for Norway.

2 Difficulties in Assessing Immigrant Adjustment

A growing literature has addressed various aspects of immigrant adjustment, i.e. how immigrants are performing with respect to earnings, welfare use or poverty over time in the host country.[2] The major variable of interest in interpreting results has been the duration of residence in the host country, which can be interpreted as a proxy for at least potential integration. Many early studies suffered from limitations in the data, most notably the inability to follow the same immigrants with repeated observations over time. In other words, the implicit assumption had to be that the immigrants who arrived as different times (and were still observable at the time of analysis) were sufficiently similar as to serve as relevant counterfactuals for each other. Obviously, such an assumption can be problematic and improved data has allowed further studies to review, moderate and revise insights in these areas. In this section we will therefore first provide a brief introduction to several of the potential biases and/or concepts used in the previous literature on immigrant adjustment before closing with a formulation of the precise focus for this analysis of poverty rates in Norway.

2.1 Cohort Quality

The concept of 'cohort quality' addresses the issue that immigrants who have arrived at different periods may differ greatly in certain (cross-sectionally) unobservable ways and that this underlying variation in arrival cohorts is the true reason for the estimated adjustment effect in cross-sectional analysis. Such changes in 'cohort quality' can occur for various reasons: a restrictive immigration policy may have been loosened up for immigrants with certain skills or an open immigration

[2] In addition to the previously cited studies of earnings assimilation, Galloway and Aaberge (2005) and Blume et al. (2006) have focused on poverty; studies of immigrant participation in welfare or social assistance include Borjas and Trejo (1991), Baker and Benjamin (1995), Borjas and Hilton (1996), and Hansen and Lofstrom (2003).

policy may have been replaced by a quota system, for example. Discussions of differences in cohort quality are, thus, simply an attempt to express the concern that the composition of the immigrant population has changed in certain unobservable ways over time, thus biasing the estimated results for adjustment effects. One of the main purposes of the current analysis and other similar studies should, thus, be to improve our handle on *observable* qualities in an attempt to limit just such biases.

Borjas (1985) introduced the concept of cohort quality in his discussion of how a *deterioration* of cohort quality affects cross-sectional results on earnings assimilation for immigrants in the US. Note, however, that any of a number of different constellations with respect to changes in cohort quality are conceivable. Figure 1 illustrates some of these and indicates how cross-sectional results for poverty propensity might be driven by such latent differences in cohort quality for three different cohort groups: 'Cohort A' refers to the earliest cohorts and 'Cohort C' to the most recent.[3] Recall that there will be a negative relationship between cohort quality and poverty propensity: 'high quality' cohorts will have a lower probability of experiencing poverty. Panel 1(a) illustrates the case for a general deterioration in cohort quality. In such a case, cross-sectional analysis will overestimate the adjustment effect, i.e. the decrease in poverty propensity for a longer period of time in the country. Panel (b) shows how a general increase in immigrant 'quality' can lead to an underestimation of the adjustment effect in a cross-sectional study. In fact, the example drawn in Panel (b) might even lead us to *reject* the hypothesis that there is any sort of adjustment effect: the variable reflecting years since migration appears to have no effect in such a cross-sectional perspective. Panels (c) and (d) provide further examples in which latent immigrant quality fluctuates. Such cases might arise if a change in immigration policy is first instituted and then repealed or the influx of refugees varies for different periods, if one assumes that

[3]Note that the pace of adjustment - the slope of the curves in Figure 1 - can also be different. We use the example of different levels simply as an illustration to fix ideas.

large refugee groups have a detrimental effect on adjustment results.

In the particular case of Norway, a number of institutional, economic and social changes can have influenced cohort quality during the last 40 years. Net immigration was actually negative in Norway up until about the late 1960s. Even at the end of the 1980s, over a quarter of the immigrants were from other Scandinavian countries; a total of over half of the immigrants were from Western or industrialized countries. Immigration from non-Western countries thus has a rather short history in Norway; substantial numbers of immigrants from non-Western countries first appeared in Norway during the early 1970s . While there were no restrictions on immigration to Norway up until 1975, immigration from outside the European Economic Area has since been limited to specialist (skills-based) labor immigration, political asylum and family reunification.

Scandinavian immigrants face far fewer difficulties both in terms of language and culture when migrating to Norway; in that sense, they surely constitute 'high-quality' immigrants. The decline of their relative importance within the immigrant population in Norway would therefore suggest a relative decline in 'cohort quality' for the immigrant population as a whole during the last 40 years. However, such considerations only emphasize the need to properly account for country of origin and/or ethnicity in any proposed analysis of adjustments in the host country. Hayfron (1998), the first study of earnings assimilation in Norway, concluded that a deterioration of cohort quality had also taken place in Norway; as that study did little to control for ethnic background or country of origin, one might suspect that the suggested deterioration of 'cohort quality' simply reflects a change in the composition of immigrants along ethnic lines. Longva and Raaum (2003) took an important step towards explanation of the deterioration in cohort quality suggested in Hayfron (1998) by performing separate analysis of OECD and non-OECD immigrants: the conclusion was that the two groups differed greatly in their adjustments in the host country. In addition, little difference in cohort quality with

respect to earnings assimilation could be ascertained *within* the two groups. Thus, the conflicting evidence in Hayfron (2003) and Longva and Raaum (2003) leaves even the *existence* of differences in cohort quality among immigrants to Norway open to discussion.

Arguments with respect to cohort quality also open up a new perspective for interpretation of the cross-sectional poverty results for Asian immigrants in Galloway and Aaberge (2005). In particular, the duration of residence in Norway appears to have less of an effect on the probability of poverty for Asian immigrants than immigrants from other regions. However, this may actually be a situation like that described in Figure 1(b): Asian immigrants may assimilate out of poverty at more or less the same pace as other immigrants, but *recent arrival cohorts may differ in certain favorable ways from earlier immigrants.* In fact, Figure 2 suggests just such a situation in Norway. The immigrant groups presented there were generally the largest Asian groups during the 1990s in Norway and are those we will study in greater detail below.[4] Turkish and Pakistani immigrants have both high poverty rates and relatively long (average) duration of residence in Norway. However, some of the more recent Asian immigrants, most notably refugees from Vietnam, Iran and Sri Lanka fared much better during the 1990s.

In sum, discussions on cohort 'quality' can be useful if used in proper perspective, but may be very misleading if misconstrued. Suggestions of differences in cohort quality should serve as an impetus for further effort into *explaining* the sources or potential sources of any eventual differences in 'cohort quality'. An estimated effect of a change in 'cohort quality', may, for example, not actually be due to dramatic changes in successive arrival cohorts. Other societal or economic changes may also have an effect on how successive cohorts of immigrants perform in the host country. Increasing or decreasing intensity of racism or discrimination,

[4]More specifically, these five groups were the largest non-European immigrant groups in Norway in 1993. Towards the very end of the period of analysis (1993-2001), Somalian and Iraqi immigrants surpassed some of these groups in number.

especially in cases in which more and more immigrants are coming from countries far away, might present greater difficulties for newly arrived immigrant; in other words, it might not be the immigrants, but rather the natives that are changing in 'quality'.

2.2 Macroeconomic conditions

Barth, Bratsberg and Raaum (2004) make one attempt to unveil the source of estimated differences in cohort quality by investigating how macroeconomic conditions, embodied by local unemployment rates, affect the earnings estimates for immigrants and natives differently. Suppose that immigrants have much greater difficulty in the labor market than natives and that the degree of that difficulty depends on the time (experience) in the host country (i.e. the duration of residence). Differences in 'cohort quality' might actually reflect the effect of such macroeconomic conditions rather than changes in 'cohort quality' alone if variables on the macroeconomic conditions are excluded from the analysis. It is simply not possible to interpret results on differences in 'cohort quality' as true differences in the cohorts or composition of the cohorts. Rather, the estimated differences, i.e. the parameters associated with cohort dummy variables, may simply capture special features of a particular economic period.

The gist of arguments presented in Barth, Bratsberg and Raaum (2004) can easily be adapted to the analysis of poverty. In terms of poverty analysis, other elements are also relevant: newly arrived immigrants might not have been able to acquire employment (or the right to unemployment benefits) at all during a period of high unemployment. Thus, they may have little or no income beyond last-resort benefits such as (means-tested) social assistance at such a time.

While Barth, Bratsberg and Raaum (2004) focus on macroeconomic conditions at the time of the analysis, such factors at the *time of arrival* in the host country may also have an effect. As suggested above, if unemployment is high during

and/or shortly after arrival in the host country, then immigrants may not be able to gain a foothold in the labor market until several years after arrival. Hence, they are unable to gain (as much) host-country-specific human capital in the early years of their stay. Within such a framework, macroeconomic conditions may represent a sort of shock to the adjustment curves for immigrants. Therefore, macroeconomic conditions may have an effect at two different times: both the current period (i.e. the period under investigation) and the time of arrival. If the observation period does not encompass the entire period in the country for all the immigrants being analyzed, some of the differences in cohorts with respect to the macroeconomic conditions during their stay in the host country may still be inseparable from estimated differences in cohort quality.

2.3 Out-Migration and Return Migration

High incidence of out-migration (emigration to a third country or return migration to the country of origin) can also affect estimates of adjustment effects, i.e. results might be biased by selection in migration out of the host country. Once again, the direction and magnitude of the effect will depend on the particular context. On the one hand, immigrants with persistent poverty may decide to leave the country, thus leading to a positive selection of (successful) immigrants in the host country over time. In such a case, the adjustment effect will be overestimated. On the other hand, successful immigrants may also find that they have acquired skills and knowledge in the (initial) host country which can reap an even larger reward back home (or in a third country). In such a case, only the unsuccessful immigrants (i.e. those who often experience poverty) may remain and an underestimation of the adjustment effect would occur.

Out-migration also creates an identification problem with respect to any eventual cohort dummies, a topic which has received little notice in the literature on immigrant adjustment. If, for the sake of argument, we assume that immigrants

first remain in the host country a certain number of years before assessing their 'success' and making the eventual decision to out-migrate if they are 'unsuccessful', positive selection will only be a problem for earlier cohorts. Such positive selection in the earlier vs. more recent immigrant cohorts will thus be captured in the estimates for the parameters associated with dummy variables for arrival cohorts in much the same manner as any other (latent) cohort-specific differences.

In this sense, the cohort fixed effects reflect, at least in part, the bias due to selection in out-migrants, because they simply capture *all* (current) unobservable differences in cohorts, whatever the underlying cause. While the causes and determinants of out-migration may be interesting in their own right, in studies of immigrant adjustment they are essentially of peripheral interest and are simply one of many unobservable differences entering into the dummy variables for different arrival cohorts.

2.4 Research Focus

These discussions suggest good reason for scepticism with respect to results on poverty propensity obtained in cross-sectional analyzes such as Galloway and Aaberge (2005) as well as Blume et al. (2006). As a result, quite a number of questions remain open with regard to effects of integration on the probability of poverty among immigrants in Norway. The purpose of this study is thus two-fold. First, armed with better data, we continue to ask the question: Do immigrants integrate out of poverty? Second, using the analysis of poverty as an example, we wish to assess the extent to which heterogeneity – observed, unobserved, and unobservable – in the immigrant population can affect results in studies of immigrant adjustment.

In order to render the task at hand manageable, we will focus exclusively on five selected groups of immigrants generally included in the broad grouping of Asian immigrants. This restriction of scope to immigrants from Pakistan, Turkey, Vietnam, Sri Lanka and Iran is, however, not truly a drawback or limitation when

studying immigrants in Norway. These groups represent the largest non-European groups at the start of the period we study and are therefore the most relevant groups for analysis anyway. In addition, their large numbers ensure a good basis for econometric analysis: we can and will analyze each group on its own. Finally, as suggested above, descriptive studies of Norway suggest that these large groups of Asian immigrants may indeed be very different. Thus, the heterogeneity of the Asian grouping can serve as an indication of the type of bias or error that may result from grouping potentially diverse groups.

The overriding question for this analysis is thus: Do Asian immigrants integrate out of poverty in Norway? However, a number of subsidiary questions dealing with the validity of estimated changes in poverty propensity in regard to the heterogeneity between and among ethnic group will also be addressed along the way, most notably:

1. Difference between groups: What is the extent of the difference between groups of Asian immigrants by ethnic background or country of origin?

2. Differences within groups: What is the extent of the differences or unobserved heterogeneity *within* ethnic groups?

3. Cohort quality: Are we left with any indication of changes in 'cohort quality' *within* the immigrant groups?

4. Sources of differences: If different groups of Asian immigrant differ greatly in their poverty experiences in Norway, then why might that be so?

3 Methods and Specification

3.1 Poverty definition

Construction of the poverty line was based on register data supplied by tax authorities as well as the appropriate government welfare and pension agencies and

made available by Statistics Norway for the years 1993 to 2001. The data encompassed the entire resident population of Norway during the period and the entire population was also used for determining the relative poverty line set at 50 percent of median equivalent income after tax based on the traditional OECD equivalence scale.[5] Household income after tax was defined as the sum of labor income, income from self-employment, capital income and all types of cash benefits from the government minus taxes for all members of the household. The total household income after tax was divided by the relevant household equivalence weight and each member of the household was thus assigned the resulting equivalent income after tax. Classification as poor was then determined by comparison of each individual's equivalent income after tax with the poverty line defined at 50 percent of median equivalent income after tax.

3.2 Model for the Analysis of Poverty Rates

Within each group by land of origin we wish to control for *household-specific* effects in a logistic regression of poverty status. We assume that the probability of poverty for individual i in household h at time t is given by

$$p_{iht}(\alpha_h) = Pr(y_{iht} = 1) = \frac{exp(\alpha_h + \beta' x_{iht})}{1 + exp(\alpha_h + \beta' x_{iht})}. \tag{1}$$

where subscript i, $i = 1, ..., N$, is used to represent individuals, subscript h, $h = 1, ..., H$, is used to denote the household (to which i belongs) and the subscript t, $t = 1, ...T$, indicates the year of the observation. The variable $y_{iht} = 1$ if individual i in household h is poor in year t and $y_{iht} = 0$ otherwise; α_h represents the household-specific intercept for the household to which individual i belongs; x_{iht} is a vector of covariates for individual i in household h in year t; and β represents the vector of parameters to be estimated.

[5]The traditional OECD scale assigns weight one to the first adult in a household, 0.7 to the second adult and 0.5 to each child (under the age of 16).

The inclusion of the household-specific intercept helps us to limit the effect of biases due to household-specific unobservables, but entails a departure from the somewhat more typical practice of estimating an individual-specific intercept in panel data studies. The correlation between individuals within the same household (and over time) is thus emphasized over the correlation in observations of the same individual *alone* over time. The households are in end effect treated as clusters encompassing both different individuals at the same time period and the same individuals over time. This is desirable due to the manner in which equivalent income is defined and poverty status determined. If individuals change households due to divorce, marriage or widowhood, for example, then a new household (i.e. a new cluster) is formed or a person joins an existing household. More specifically, the household is defined according to its head, which is the man for couples or couples with adult children in the household and the single parent (person) for single parent (person) households.[6]

While one might be tempted to suggest a three-level model to account for both the correlation in the individual observations over time as well as the correlation within each household (at a given time and/or over time), this is, in fact, largely unfeasible. The (standard) higher dimensional multi-level model requires a hierarchical framework in which the lower level cluster – the individual in our analysis – is nested in the higher level (super-)cluster – the household. This is, however, not the case when individuals change households over time; we have a situation with crossed random effects.[7] Attempts to accommodate such crossed random ef-

[6]Hence, the split-up of a marriage results in the wife forming a new household, while the man remains in the old. When an adult child leaves the parental home, he or she thus forms a new household or turns up in the household of another adult. The birth of children to an already existing couple does not affect the household identifier, but does result in a change in the variable on household type, which is included as a covariate in x_{iht}.

[7]See Skrondal and Rabe-Hesketh (2004, Chapter 3) for further insight on this issue. They also discuss some suggestions for dealing with this complication; those methods are, however, hardly feasible given the numbers and variety in our data, i.e. the extent to which existing households

fects or non-hierarchical models would, at best, be unduly complicated. We are in a sense toning down the correlation between observations of the same individual over time in order to let the more relevant correlation between the members of a given household (also over time) come to the fore.

We are thus interested in maximizing, with respect to β and σ, a likelihood function of the following general form

$$(2) \qquad \prod_{h=1}^{H}\left[\int_{-\infty}^{\infty}\prod_{t=1}^{T}\prod_{i=1}^{N_h} p_{iht}(\alpha_h)^{y_{iht}}(1-p_{iht}(\alpha_h))^{1-y_{iht}} g(\alpha_h;\sigma)d\alpha_h\right],$$

where N_h is the total number of members in household h and $g(\alpha_h;\sigma)$ represents the density function of the distribution of the α_hs which can be described by a vector of parameters σ.

If we assume that the α_hs are normally distributed random variables with mean 0 and variance σ^2, $\alpha_h \sim N(0,\sigma^2)$, then the likelihood function becomes

$$(3) \quad \prod_{h=1}^{H}\left[\int_{-\infty}^{\infty}\prod_{i=1}^{N_h}\prod_{t=1}^{T} p_{iht}(\alpha_h)^{y_{iht}}(1-p_{iht}(\alpha_h))^{1-y_{iht}}\frac{1}{2\pi\sigma^2}exp\left(\frac{-\alpha_h^2}{2\sigma^2}\right)d\alpha_h\right].$$

If we wish to avoid strict or limiting assumptions on the distribution of the household-specific effect, we can employ a semi-parametric method akin to Heckman and Singer (1984). In this case, we assume that the household-specific intercepts α_h are multinomially distributed in the relevant immigrant population with M support points and associated probabilities q_m , $\sum_{m=1}^{M} q_m = 1$. In other words, there are M different types of households which appear in our data with respective probabilities q_m; these parameters are thus also estimated alongside the parameters in β. The likelihood becomes

$$(4) \qquad \prod_{h=1}^{H}\sum_{m=1}^{M} q_m \prod_{t=1}^{T}\prod_{i=1}^{N_h} p_{iht}(\alpha_{hm})^{y_{iht}}(1-p_{iht}(\alpha_{hm})^{1-y_{iht}})$$

split up and their members form new unions with members from other households, etc.

We estimate both the model with both normally distributed household-specific effects and the semi-parametric model represented by the likelihood in expression (4).

3.3 Specification

Once the poverty line has been established and the poverty status of individuals ascertained, the 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 first generation immigrant children, are thus excluded. In addition, we analyze only those immigrants that arrived in Norway after the age of 16, i.e. those who had the major part of their upbringing and basic education abroad, as well as only those immigrants in purely immigrant households, i.e. households with no native Norwegian members.

Cohort dummy variables are included in the analysis 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 the group first arrived in Norway in substantial numbers.[8] 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.

As an extension of the practice in Barth, Bratsberg and Raaum (2004),[9] we construct a measure of economic conditions in the local labor market by utilizing

[8]Immigrants who arrived more than five years before large numbers of compatriots were also excluded from the analysis. One would expect that such isolated early immigrants were a very select group and, therefore, not representative of their compatriots who arrived in large numbers at a later date. Such observations could thus bias the results because they would be the only representatives with very long durations of residence.

[9]They used municipal unemployment rates in their study.

the regional grouping of municipalities based on labor market and economic ties as described in Statistics Norway (2001). A measure based on such an intermediate regional grouping is a significant improvement over other measures of local economic conditions because it better reflects the relevant labor market for persons where they actually live and work. Data at 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 at their place of residence (in other words, in the short run). 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[10] and household type. Summary statistics for the pooled populations of the different ethnic groups for the period 1993-2001 are presented in Table A.1 in the Appendix.

[10]Information on the education of many 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. More specifically, if immigrants have taken some type of education during the period we study, we assume that their educational level is one below the level they are taking, i.e. middle school if they are taking high school education, Bachelor's degree if they are enrolled in a Master's program, etc. Second, Statistics Norway made explicit efforts to obtain this information for immigrants in 1998. Given that no form of education was registered for the intervening years, the information thus obtained can be used for earlier years.

4 Results

The parameters estimates for each country are presented in separate tables (A.2-A.6) in the Appendix. The following three models are presented for each country:

1. Model N: The household-specific effect is modelled as normally distributed.
2. Model M2: The household-specific effect is modelled multinomially with 2 mass points.
3. Model M4: The household-specific intercept is modelled multinomially with 4 mass points.

Due to the inability to read marginal effects directly from the parameter estimates in logistic regression, the following subsections will provide simulations based on the estimated parameters in order to give an impression of the magnitude of effects. Unless otherwise noted, we will concentrate on a reference person defined as a 40 year old married man with secondary education from the earliest cohort of the relevant immigrant group. Furthermore, the local unemployment rate is set at 2.87 percent, which was the national annual average for the period under investigation.[11]

4.1 Integration Effects

In this subsection we will concentrate on presenting results for a person in an "average" household. Such an "average" household is one with $\alpha_h = 0$ for the model with normally distributed household-specific intercepts; the intercept for the "average" household in the semi-parametric model is given by $\alpha = \sum_{m=1}^{M} q_m \alpha_m$.

[11]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 level; trends, i.e. increases and decreases, were largely of the same magnitude. The average is over the years 1993-2001.

Increasing the number of mass points for $M > 2$ had little effect on the main object of our inquiry, i.e. the effect of the duration of residence. More specifically, given the same starting probability of poverty (i.e. the probability of poverty during the first year in the country), the estimated decrease in the probability of poverty was largely the same regardless of the number of mass points M included in the model.[12] For the sake of simplicity and comparability, we therefore choose to focus on the semi-parametric model with two mass points when discussing the results for the semi-parametric model in this subsection; a more thorough discussion and interpretation of the results with respect to the unobserved household-specific effect is saved for the following subsection.

Similar analysis of a random sample of the native Norwegian population was also performed as a relevant comparison for these immigrant groups.[13] However, given the very low poverty rates for native Norwegians (see Figure 2), the probability of poverty for any 'average-type' native was generally well below 1 percent and would be virtually indecipherable from the x-axis in the figures for average types presented here. The overriding and most relevant conclusions regarding natives are simply that the probability of poverty is extremely low and, given that low probability, the differences with respect to any of the variables used here – even those that are statistically significant – are minute. Natives are therefore not included in the figures and will not be included in any more detail in the following analysis.[14] The reader interested in the differences between these immigrant groups and natives are

[12]The level of poverty for the "average" immigrant is, however, affected by the manner in which the unobserved household-specific term is modelled. This is largely due to the presence of certain 'extreme' latent household types, i.e. households that are always or never poor in the semi-parametric model. See the discussion of unobserved heterogeneity in Section 4.2 for more details on such extreme households types in the semi-parametric model.

[13]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 only a random sample was analyzed in order to facilitate the maximization of the likelihood in expression (3) and (4) for natives.

[14]Results for natives are available from the author upon request.

thus asked to simply keep these basic insights on natives in mind when interpreting the figures.

Figures 3 and 4 illustrate how poverty rates vary with YSM for the reference person with Model N and Model M2, respectively. There are few observations of Sri Lankan and Iranian immigrants with YSM beyond 10 years; the curves for Sri Lanka and Iran are thus presented only for YSM up to 10.

Figure 3 and 4 are remarkably similar. The greatest difference in the results from the two different modelling approaches seems to be somewhat higher estimated probabilities of poverty for the "average household" with the M2-model, but this is largely related to how the models are able to handle 'extreme' latent household types, a topic which will be discussed in greater detail shortly. The relative differences between the ethnic groups as well as the slopes of the curves give largely the same impressions for the two different models. Thus, the effect of YSM seems to be largely robust with respect to the method for modelling the unobserved heterogeneity within these immigrant groups.

As both figures suggest, the five immigrant groups differ greatly in the probability of poverty after their migration to Norway. The "average" immigrants from Sri Lanka, Pakistan, Turkey and Iran have higher probabilities of poverty than their counterparts from Vietnam at the start of their stay. However, the similarities between those four groups end there. An immigrant from an average Sri Lankan household experiences a rapid decline in the probability of poverty during the first few years in Norway, while the decline for the other immigrant groups is much more modest. Vietnamese immigrants also experience a decline in the probability of poverty even from their low starting probabilities. Immigrants from Sri Lanka and Vietnam thus achieve rather low probabilities of poverty after about 10 years in Norway. The probability of poverty for immigrants from Iran, Pakistan and Turkey are still quite high after many years in the country, although a noticeable and statistically significant decline in the probability of poverty does occur for those

groups.

Different types of immigration to Norway are prevalent among these groups. Immigrants from Sri Lanka, Vietnam and Iran are for the most part refugees and are eligible for a number of specific programs, both financial and educational, to aid them in their adjustment to life in Norway. Such benefits can, thus, explain the lower starting levels of these groups. However, these benefits are intended only for a limited interim period; a decline in poverty levels after the first few years in the country thus suggests that the immigrants are finding alternative sources of income over time. The earliest immigrants from Pakistan and Turkey were labor migrants; subsequent cohorts came on the basis of family reunification or as specialist laborers. These immigrants are expected to fend for themselves upon arrival in Norway.[15] Kurdish refugees from within the borders of Turkey are, however, also present in the group of immigrants from Turkey, but it was not possible to identify these refugees as a separate ethnic group in the data.

The main qualitative conclusions with respect to the duration of residence remain the same even if we consider different types of households or different levels of education: immigrants from Sri Lanka and Vietnam rather quickly achieve low poverty rates. Immigrants from Pakistan, Iran and Turkey also achieve lower poverty rates after some time in the country, but they are never able to attain the same low rates as the Sri Lankan and Vietnamese immigrants.

4.2 Unobserved Heterogeneity

Up until now we have focused on results for an immigrant from an "average" household. To what extent is this construct of an individual in the "average" immigrant household representative of the ethnic group in general? As mentioned above, the estimates of the integration effects, i.e. the 'effect' of a longer duration of residence, are rather robust with respect to the manner in which the unobserved heterogeneity

[15] They were, however, also eligible for free language instruction during the period of analysis.

is modelled. However, the different methods for modelling unobserved heterogeneity in these populations can provide us with additional insights into poverty within these immigrant groups.

The N-model is, of course, rather restrictive in its modelling of the household-specific heterogeneity; all the differences between the households are summarized by means of just one parameter: σ. We can therefore first see what sort of information we can glean from this rather restrictive model. In order to illustrate the extent of the unobserved heterogeneity in households in the N-model, we analyze the probability of poverty for the first and tenth years of residence in Norway in Figure 5. We once again illustrate by means of a reference individual defined as a 40 year old married man with secondary education from the earliest cohort of the relevant immigrant group and with the the local unemployment level at 2.87 percent. The reference individuals differ only by belonging to households of different latent types. The quantiles of the (normal) distribution of latent types within each ethnic group are presented on the x-axis and the probability of poverty is presented on the y-axis. In other words, we can find the probability of poverty for the "average type" in each ethnic group by locating the median (0.5) on the x-axis and locating the associated probability of poverty on the y-axis. In order to also illustrate the effect of the duration of residence, we present results for the first (full) year in Norway in Panel (a) and results after 10 years in Panel (b). For the sake of simplicity, we will somewhat informally refer to the types associated with lower probabilities of poverty as "low-poverty types" and household types associated with the higher poverty rates as "high-poverty types".

Figure 5 thus indicates that, after 10 years in the country, the vast majority of households of immigrants from Sri Lanka and Vietnam are low-poverty types – with probabilities of poverty of well below 0.1. The probabilities of poverty for immigrants from Vietnam and Sri Lanka are also very similar up until about the 70th quantile; however, there is a larger portion of immigrants with much higher

probabilities of poverty among immigrants from Sri Lanka. We can also see that among the other immigrant groups, there are also large portions – some one-third – with probabilities of poverty of less than 0.1 after 10 years in the country.

Table 1 presents probabilities of poverty for different latent types based on estimates from the M4-model. We see first that substantial portions of all the immigrant groups are more or less never poor, i.e. they have estimated probabilities of poverty near zero from the very onset of their stay in Norway. The exact extent of this extreme low-poverty type does, however, vary within the different ethnic groups. The *majority* of the immigrants from Sri Lanka are actually of this type according to the estimates from the model M4. Over 40 percent of the immigrants from Vietnam and Iran are also estimated to be of this type and over one-quarter of the households from Pakistan are estimated with such extremely low probabilities of poverty.

Similarly, a small, but nonetheless noticeable portion of each ethnic group has extremely high probabilities of poverty. The estimated size of this high-poverty household type ranges from just 4 percent among Vietnamese and Iranian immigrants to almost 10 percent for immigrants from Sri Lanka and over 12 percent for immigrants from Pakistan and Turkey. Such differences in the distribution of "extreme" households with very low or very high probabilities of poverty low probabilities will thus greatly influence impressions of results for an "average" household type.

The insights into the unobserved heterogeneity within these groups with two different modelling strategies for latent household types are, thus, also remarkably similar. The discrete nature of the estimates from the model M4 holds a certain intuitive appeal, but upon careful scrutiny the representation of the latent heterogeneity in Figure 5 yields many of the same insights.

The distribution of latent types is, however, not a fixed or permanent feature of these ethnic groups. It will, in fact, be affected by such factors as immigration

and asylum policy (i.e. access to the host country) as well as the distribution of types in the original (source country) population. New questions thus arise: How do refugees arrive in Norway? Might dissidents might be of different types than "boat people"? Are labor migrants negatively or positively selected from the source country? How do policies upon arrival affect the distribution of latent types? Obviously, the scope of these questions is beyond this present paper, but they are representative of the little questions that ultimately need to be addressed when hoping to answer the big questions of immigrant adjustment in the long run.

4.3 Cohort Effects

There is little evidence for differences in cohorts for immigrants from Pakistan and Turkey: the parameter estimates are generally not statistically significantly different from zero.

For immigrants from the refugee countries of Vietnam and Sri Lanka, later cohorts have lower poverty rates. As an illustration, Figure 6 presents the probability of poverty for different cohorts of Vietnamese immigrants.[16] Cohorts from the end of the 1990s have the lowest poverty rates; the earliest cohorts - from before 1980 - have by far the highest poverty rates.[17] The earliest immigrants from Sri Lanka arrived in the second half of the 1980s and these also fared worse than later cohorts from this country.

There are several possible explanations for these differences. As pointed out above, adverse economic conditions at the time of arrival may have a prolonged effect on the prospects of avoiding poverty for immigrants. While we do include

[16]Figure 6 uses the Model M2 only. The results for the Model N were very similar except for the slightly lower rates as mentioned for the Model N in general above.

[17]Note, too, that the difference between the first and the most recent cohort was large enough that attempts to estimate an assimilation effect based on cross-sectional data would be likely to give the impression of little, if any, integration effect for Vietnamese immigrants; estimated poverty rates would, however, have been low in any case.

a variable on the observed levels of local unemployment in hopes of capturing the effect of *current* economic conditions on the probability of poverty, we are unable to measure the effect of such macroeconomic conditions for those cohorts who arrived before the observation period. Thus, the estimated parameters on the cohort dummies may, in part, be capturing such an effect.

In addition, the earliest cohorts are in essence pioneers who face the daunting task of adjusting to the host country with no one from their own ethnic group to guide them. Subsequent waves of immigrants may benefit from the hard-won knowledge and experience of their countrymen and, thus, more easily avoid poverty.

Developments in the Norwegian labor market since the 1970s provide inconclusive evidence in this regard. Unemployment rates did rise quite dramatically in Norway at the end of the 1980s and the start of the 1990s before falling again in the second half of the 1990s. This suggests that the earliest arrivals from Sri Lanka and Iran may have indeed faced very large obstacles in the first few years of their stay. However, the arrival of the first refugees from Vietnam in the 1970s coincided with a period of low unemployment rates. The fact that these early arrivals from Vietnam also fared the worse within their respective ethnic groups lends support to the argument that the pioneering first cohorts of a particular refugee group face greater difficulties in adjustment as reflected by higher poverty rates.

5 Robustness

A number of modifications were made in order to access the robustness of the conclusions. Regressions were run with a different poverty line set at 60 percent of median equivalent income with the modified OECD-scale.[18] Generally, the estimated probabilities of poverty were higher, as is consistent with the generally

[18]This scale entails larger economics of scale within household; the first adult receives weight 1, the second 0.5 and children (under 16) 0.3.

higher poverty rates for such a poverty line[19]; the qualitative results – with respect to the differences between the ethnic groups in terms of the both level and slopes – were, however, very similar. Discrete periods for the duration of residence as well as alternative groupings for arrival cohorts were also analyzed but did not alter the main conclusions of the analysis.

6 Conclusions and Discussion

Integration out of poverty seems to be a common occurrence for many of the immigrants studied here. Thus, while poverty rates may be high for immigrants as a whole, such high rates are hardly representative for all immigrants, nor are they a persistent feature of the immigrant experience in Norway. In addition, the immigrant groups studied here do differ greatly in their poverty experience in Norway. Immigrants from Sri Lanka or Vietnam generally achieve low probabilities of poverty quite quickly; in contrast, Pakistani, Turkish and Iranian immigrants, while also generally experiencing a slight decline in poverty probability with increased duration of stay in Norway, nonetheless continue to have high probabilities of poverty even after many years in the country. Thus, while high poverty rates do seem to be a temporary phenomenon for some groups, they are a more persistent feature of other groups.

The sources of the differences between and within these groups can be many and we have previously hinted at some of the possibilities. Selection into the host country, i.e. the type of immigration prevalent in a particular group arriving in Norway, would be expected to have an impact on the type of individuals who enter the country. Such a perspective focuses on differences in the groups upon arrival. Differences can, however, also be created: access and eligibility for benefits and other types of assistance can also have an impact on what sort of "types"

[19]Galloway and Mogstad (2006) provide a detailed descriptive account of this difference in the context of Norway.

immigrants eventually become and how well they integrate into the functioning of their new home. Finally, many of the differences may simply be cultural or, in other words, the sum of all the influences and experiences these immigrant group bring with them and let influence their behavior and attitudes, as well as their perceptions of opportunities, in the host country. All these explanations probably play some role in the differences we have uncovered and one is immediately tempted to compare and contrast these groups.

Descriptive analysis in Lie (2004) as well as Østby (2004a, 2004b) suggest that different ethnic groups have very different employment rates in Norway; a more recent and detailed regression analysis in Galloway (2006) provides further insight into that issue. The groups that are performing well in terms of poverty are, in fact, the same ones with high employment rates *for both men and women.* While there are notable differences between immigrant men in the groups studied here, the vast majority of the men from these groups do eventually integrate into the labor market in Norway. The women from these groups, however, adjust quite differently to the labor market in Norway. Women from Sri Lanka, Vietnam and Iran eventually achieve participation rates similar to their male counterparts; the majority of the women from Pakistan and Turkey remain outside the labor market in Norway.

The insights into welfare effects such as those provided by this study of poverty are important for understanding the adjustment of immigrants in Norway. Without the household perspective offered by such a study we might be tempted to interpret a decent degree of earnings assimilation for immigrant men as indication that, over time, all is well with immigrants in Norway. Differences in employment propensities might simply be interpreted as preferences for a division of labor – with paid employment for men and unpaid household production for women – in some of these immigrants groups. However, the knowledge of rather persistently high poverty rates as revealed for some of the groups in this study are far more troubling. It

suggests that some immigrant groups might nonetheless be failing to keep up with welfare improvements taken for granted in the rest of Norwegian society, simply because they are not mobilizing the resources of the women in their ranks.

It is interesting to note that it is immigrants from two refugee countries – Sri Lanka and Vietnam – who seem to perform the best in this poverty analysis. That might, however, be simply coincidental; the reasons for their success might not be due to their special treatment as refugees, but, rather, a result of a culture or characteristics they have brought with them. However, such results lend little support to claims that refugees are themselves a sort of poorer 'quality' immigrants; they also suggest that further detailed study of these groups may aid in uncovering what types of integration programs and assistance may be useful in immigrants' adjustment to the host country. Similarly, it is immigrants from the predominantly Muslim countries of Turkey and Pakistan that seem to fare the worst among the groups studied here, although that does not mean that the roots of the differences lie in religion per se. Rather, cultural differences in perceptions of the role of men and women in these groups may be an important factor to take into account when attempting to foster rapid and successful adjustment to the host country.

Finally, in closing we should also note in particular that the large differences between these immigrant groups suggest that pooling very different ethnic groups can lead to spurious results and misleading conclusions. Where possible, studies of immigrant adjustment should abstain from relying on an implicit assumption that immigrants from different ethnic groups represent suitable counterfactuals for each other. The heterogeneity between and among immigrant groups warrant sufficient attention if one wishes to avoid incorrect and potentially harmful results.

References

Baker, Michael and Dwayne Benjamin (1995)] The Receipt of Transfer Payments by Immigrants to Canada. *The Journal of Human Resources* 30:650-676.

Barth, Erling, Bernt Bratsberg and Oddbjørn Raaum (2004)Identifying the Earnings Assimilation of Immigrants under Changing Macroeconomic Conditions. *Scandinavian Journal of Economics* 106, 1-22.

Blume, Kræn, Björn Gustafsson, Peder J. Pedersen and Mette Verner (2006)At the Lower End of the Table - Determinants of Poverty among Immigrants to Denmark and Sweden. forthcoming in *Journal of Ethnic and Migrant Studies*.

Borjas, George J. (1985)Assimilation, Changes in Cohort Quality and the Earnings of Immigrants. *Journal of Labor Economics* 3, 463-489.

Borjas, George J. and Lynette Hilton (1996)Immigration and the Welfare State: Immigrant Participation in Means-Tested Entitlement Programs, *The Quarterly Journal of Economics* 111: 575-604.

Borjas, George J. and Stephen Trejo (1991)Immigrant Participation in the Welfare System, *Industrial and Labor Relations Review* 44: 195-211.

Chiswick, Barry R. (1978)The Effect of Americanization on the Earnings of Foreign-born Men, *Journal of Political Economy* 86:897-921.

Galloway, Taryn Ann. (2006)The Labor Market Integration of Immigrant Men and Women, Discussion Paper 483, Statistics Norway.

Galloway, Taryn Ann and Rolf Aaberge (2005)Assimilation Effects on Poverty among Immigrants in Norway, *Journal of Population Economics* 18:691-718.

Galloway, Taryn Ann and Magne Mogstad (2006)Kronisk og årlig fattigdom i Norge: En empirisk analyse fra perioden 1993-2001 (Chronic and Annual Poverty in Norway: An Analysis of the Period 1993-2001). Rapporter 2006/20, Statistics Norway.

Hansen, Jorgen and Magnus Lofstrom (2003)Immigrant Assimilation and Welfare Participation. *Journal of Human Resources* 38(1), 74-98.

Hayfron, John E. (1998)The Performance of Immigrants in the Norwegian Labor Market. *Journal of Population Economics* 11, 293-303.

Heckman, J. and B. Singer (1984)A Method for Minimizing the Impact of Distributional Assumptions in Econometric Models for Duration Data. *Econometrica*, 52(2), 271-320.

Lie, Benedicte (2004)Fakta om ti innvandrergrupper i Norge. (Facts on Ten Immigrants Groups in Norway) *Rapporter*, Nr. 14, Statistics Norway.

Longva, Pål and Oddbjørn Raaum (2003)Earnings Assiimilation of Immigrants in Norway - A Reappraisal. *Journal of Population Economics* 16, 177-193.

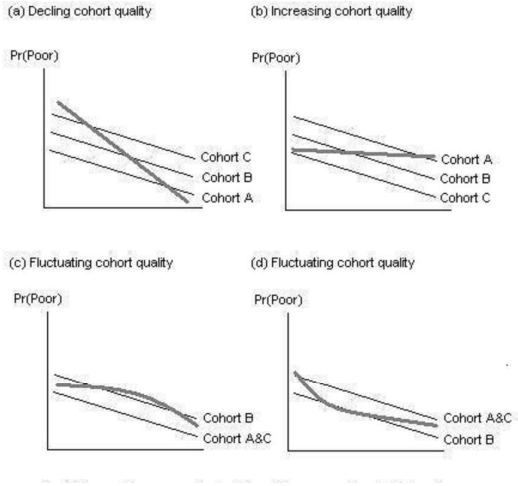
Skrondal, Anders and Sophia Rabe-Hesketh (2004)*Generalized Latent Variable Modeling*, Boca Raton, FL: Chapman and Hall /CRC.

Statistics Norway (2001)Classification of Economic Regions, *Official Statistics of Norway (NOS)*, C 634.

Østby, Lars (2004a)Innvandrere i Norge - Hvem er de, og hvordan går det med dem? Del I: Demografi.(Immigrants in Norway . Who Are They, and How Are They Doing? Part I: Demographics) *Notater*, Nr. 65, Statistics Norway.

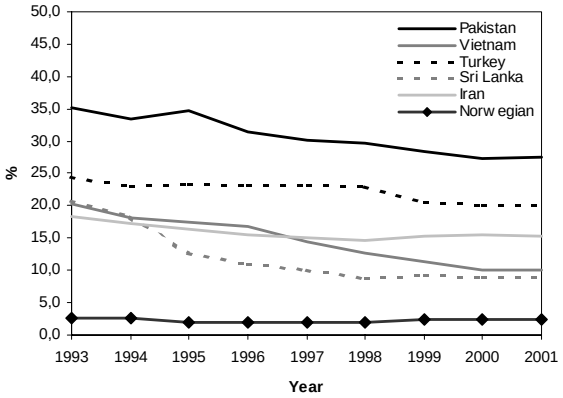
Østby, Lars (2004b)Innvandrere i Norge - Hvem er de, og hvordan går det med dem? Del II: Levekår. (Immigrants in Norway . Who Are They, and How Are They Doing? Part II: Socio-Economic Performance.) *Notater*, Nr. 66, Statistics Norway.

Figure 1.
Differences in Cohort Quality



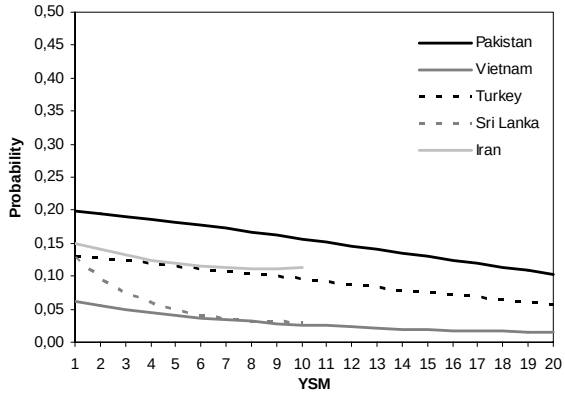
The thick gray line represents an example of the cross-sectional result without consideration of differences in cohort quality.

Figure 2.
Percentage Poor in Selected Immigrant Groups. 1993-2001



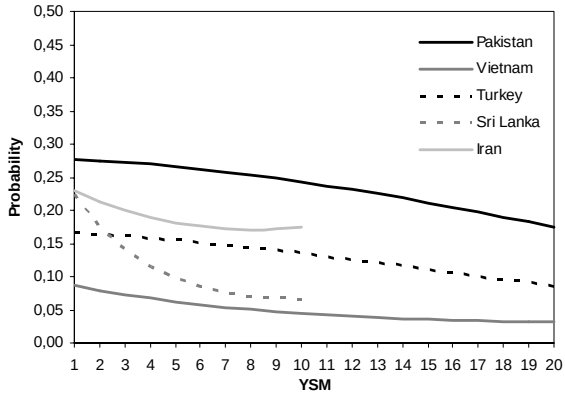
Source: Galloway and Mogstad (2006)

Figure 3.
The Probability of Poverty by Years Since Migration (YSM). N-Model



For a reference person defined as a 40 year old married man with little or unknown education; local unemployment rate equal to 2.87%; average household type ($u_h = 0$).

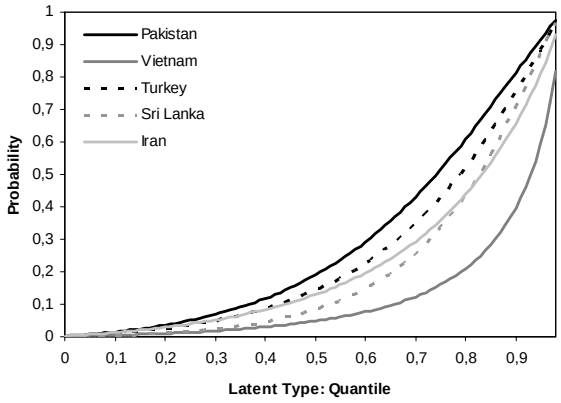
Figure 4.
The Probability of Poverty by Years Since Migration (YSM). M2-Model



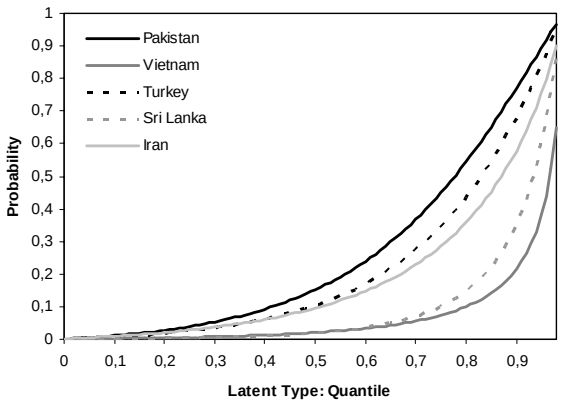
For a reference person defined as a 40 year old married man with little or unknown education; local unemployment rate equal to 2.87%; average household type ($u_h = q_1\alpha_1 + q_2\alpha_2$).

Figure 5.
The Probability of Poverty for Different Latent Types of Immigrant Households.* N-model

(a) YSM=1



(b) YSM=10



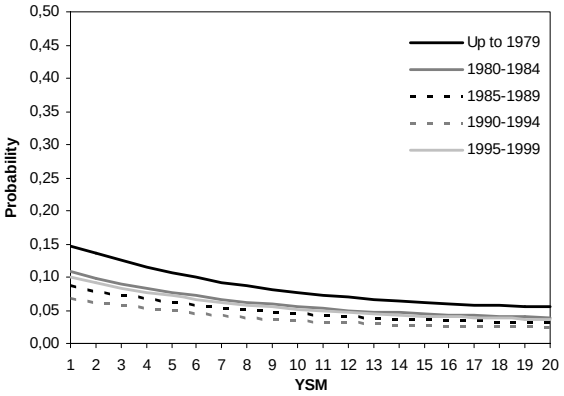
* For a reference person defined as a 40 year old married man with no children and little or no education living in a region with local unemployment rate equal to 2.87%.

Table 1.
The Distribution of Latent Household Types in the M4-Model

m	q_m	α_m	Probability of poverty YSM=1	YSM=5	YSM=10
Immigrants from Pakistan					
1	0.277	-26.428	0.000	0.000	0.000
2	0.339	-1.710	0.155	0.150	0.145
3	0.259	-0.017	0.497	0.489	0.479
4	0.125	2.248	0.929	0.927	0.923
Immigrants from Turkey					
1	0.3472	-14.000	0.000	0.000	0.000
2	0.3002	-1.7095	0.116	0.110	0.104
3	0.2241	-0.2063	0.397	0.384	0.369
4	0.1286	1.8672	0.828	0.820	0.810
Immigrants from Vietnam					
1	0.436	-7.401	0.000	0.000	0.000
2	0.161	0.731	0.452	0.355	0.249
3	0.364	-0.845	0.157	0.111	0.070
4	0.039	2.679	0.824	0.758	0.653
Immigrants from Sri Lanka					
1	0.580	-1.673	0.003	0.001	0.000
2	0.219	1.643	0.269	0.071	0.010
3	0.107	3.654	0.723	0.350	0.070
4	0.093	7.594	0.995	0.977	0.854
Immigrants from Iran					
1	0.419	-3.555	0.014	0.009	0.005
2	0.394	-0.523	0.268	0.189	0.118
3	0.144	1.276	0.692	0.590	0.451
4	0.042	3.692	0.964	0.945	0.908

The probabilities of poverty are for a reference person defined as a 40-year old married man with no children living in a region with a local unemployment rate of 2.87%.

Figure 6.
The Probability of Poverty for Different Cohorts of Vietnamese Immigrants.* M2-Model



* For a reference person defined as a 40 year old married man with no children and little or no education living in a region with local unemployment rate equal to 2.87%; average household type.

Appendix

Table A.1
Summary Statistics for Pooled Observations by Ethnic Group
Mean (standard deviation).

	Pakistan	Tyrkia	Vietnam	Sri Lanka	Iran
Poor	0.296	0.238	0.131	0.126	0.152
Age	40.3 (10.4)	37.0 (10.6)	38.1 (10.6)	33.9 (7.9)	36.7 (8.6)
YSM	14.8 (8.3)	11.6 (7.4)	10.3 (5.5)	7.9 (4.0)	7.4 (3.7)
Local unemployment rate	0.029 (0.010)	0.029 (0.010)	0.029 (0.010)	0.029 (0.010)	0.028 (0.010)
Female	0.484	0.461	0.473	0.402	0.371
Single, no children	0.132	0.176	0.250	0.304	0.394
Single, 1 child	0.013	0.021	0.036	0.010	0.039
Single, 2 or more children	0.021	0.025	0.046	0.008	0.038
Couple, no children	0.170	0.170	0.151	0.181	0.130
Couple, 1 child	0.152	0.186	0.148	0.209	0.150
Couple, 2 children	0.171	0.221	0.177	0.193	0.163
Couple, 3 or more children	0.340	0.199	0.191	0.095	0.084
Secondary education	0.319	0.281	0.558	0.552	0.516
Tertiary education	0.111	0.072	0.094	0.142	0.285
Cohort up to 1974	0.232	0.120			
Cohort 1975-1979	0.195	0.119	0.085		
Cohort 1980-1984	0.118	0.122	0.280	0.067	0.011
Cohort 1985-1989	0.237	0.323	0.275	0.532	0.569
Cohort 1990-1994	0.131	0.201	0.315	0.276	0.284
Cohort 1995-1999	0.083	0.109	0.043	0.120	0.126
Number of observations	70 273	34 575	57 610	44 967	43 377

Table A.2
Estimation Results for Pakistani Immigrants
(Standard errors in parentheses)

	N	M2	M4
Female	-0.1389	-0.1557	-0.0586
	(0.0339)	(0.0291)	(0.0331)
Single, no children	0.5645	0.5980	0.4387
	(0.0630)	(0.0482)	(0.0626)
Single, 1 child	0.7813	0.7174	0.6160
	(0.1348)	(0.1141)	(0.1362)
Single, 2 or more children	0.9839	0.8007	0.7375
	(0.1186)	(0.0960)	(0.1108)
Couple, 1 child	0.1163	-0.0439	0.0656
	(0.0550)	(0.0471)	(0.0544)
Couple, 2 children	0.5179	0.2460	0.4187
	(0.0576)	(0.0463)	(0.0560)
Couple, 3 or more children	1.4939	1.0478	1.2810
	(0.0591)	(0.0469)	(0.0562)
Tertiary education	-0.5941	-0.4687	-0.3475
	(0.0639)	(0.0325)	(0.0373)
Secondary education	-0.4065	-0.4927	-0.4551
	(0.0390)	(0.0481)	(0.0620)
Age*	-0.0368	-0.2746	-0.3683
	(0.0135)	(0.1138)	(0.1296)
Age^2*	0.0008	0.0667	0.0806
	(0.0002)	(0.0133)	(0.0155)
YSM*	-0.0197	-0.0569	-0.0805
	(0.0116)	(0.1050)	(0.1144)
YSM^2*	-0.0009	-0.1072	-0.1153
	(0.0003)	(0.0293)	(0.0324)
Local unemployment rate	0.1364	0.1496	0.1473
	(0.0196)	(0.0176)	(0.0194)
Cohort 1995-1999	-0.1170	0.1369	-0.1461
	(0.1517)	(0.1341)	(0.1523)
Cohort 1990-1994	-0.1381	0.1579	-0.2437
	(0.1246)	(0.1089)	(0.1227)
Cohort 1985-1989	-0.1051	0.1259	-0.2242
	(0.0980)	(0.0850)	(0.0968)
Cohort 1980-1984	-0.1771	-0.0648	-0.2538
	(0.0861)	(0.0737)	(0.0842)
Cohort 1975-1979	-0.0319	0.0215	-0.0644
	(0.0552)	(0.0471)	(0.0537)
Constant	-1.5300		
	(0.3065)		
σ^2	2.200		
	(0.0281)		
q_2		0.4047	0.3391
q_3			0.2590
α_1		-2.7764	-26.4289
α_2		0.1224	-1.7100
α_3			-0.0174
α_4			2.2481

* For the models M2 and M4, the following variables are used: age/10, age^2/100, YSM/10 and YSM^2/100.

Table A.3
Estimation Results for Turkish Immigrants
(Standard errors in parentheses)

	N	M2	M4
Female	-0.1036	-0.0850	0.0158
	(0.0471)	(0.0413)	(0.0462)
Single. no children	0.8793	0.7388	0.7336
	(0.0871)	(0.0724)	(0.0892)
Single. 1 child	0.4999	0.3022	0.4075
	(0.1717)	(0.1491)	(0.1748)
Single. 2 or more children	0.6206	0.1078	0.3458
	(0.1626)	(0.1475)	(0.1589)
Couple. 1 child	-0.0430	-0.2181	-0.0974
	(0.0796)	(0.0705)	(0.0798)
Couple. 2 children	0.4398	0.0759	0.3070
	(0.0844)	(0.0727)	(0.0845)
Couple. 3 or more children	1.4078	0.8703	1.0766
	(0.0920)	(0.0768)	(0.0926)
Tertiary education	-0.5483	-0.3037	-0.3981
	(0.1243)	(0.0510)	(0.0598)
Secondary education	-0.3923	-0.3390	-0.4533
	(0.0598)	(0.0918)	(0.1256)
Age*	-0.0737	-0.6344	-0.6261
	(0.0179)	(0.1506)	(0.1627)
Age^2*	0.0014	0.1182	0.1111
	(0.0002)	(0.0183)	(0.0207)
YSM*	-0.0302	-0.1361	-0.1317
	(0.0161)	(0.1444)	(0.1917)
YSM^2*	-0.0008	-0.1247	0.0338
	(0.0005)	(0.0446)	(0.0969)
Local unemployment rate	-0.0342	0.0014	0.0735
	(0.0270)	(0.0244)	(0.0229)
Cohort 1995-1999	0.0447	0.0999	0.6128
	(0.1788)	(0.1595)	(0.1173)
Cohort 1990-1994	-0.0744	0.0007	0.3151
	(0.1434)	(0.1225)	(0.1005)
Cohort 1985-1989	-0.1139	-0.1896	0.2350
	(0.1202)	(0.1014)	(0.0853)
Cohort 1980-1984	-0.0940	-0.0333	0.2029
	(0.1080)	(0.0915)	(0.0952)
Constant	-0.8641		
	(0.3853)		
σ^2	2.2037		
	(0.0381)		
q_2		0.3676	0.2241
q_3			0.1286
q_4			0.3002
α_1		-1.8902	-14.0000
α_2		1.1736	-0.2063
α_3			1.8672
α_4			-1.7095

* For the models M2 and M4. the following variables are used: age/10. age^2/100. YSM/10 and YSM^2/100.

Table A.4
Estimation Results for Vietnamese Immigrants
(Standard errors in parentheses)

	N	M2	M4
Female	-0.0365	0.0136	0.0052
	(0.0385)	(0.0357)	(0.0383)
Single, no children	1.2459	1.0644	1.1205
	(0.0797)	(0.0657)	(0.0831)
Single, 1 child	0.9505	0.7236	0.8212
	(0.1240)	(0.1152)	(0.1263)
Single, 2 or more children	0.8203	0.5136	0.6759
	(0.1256)	(0.1173)	(0.1280)
Couple, 1 child	0.2988	0.1910	0.2520
	(0.0817)	(0.0695)	(0.0833)
Couple, 2 children	0.5633	0.3108	0.4668
	(0.0850)	(0.0710)	(0.0899)
Couple, 3 or more children	1.4724	0.9962	1.2851
	(0.0879)	(0.0715)	(0.0939)
Tertiary education	-0.6547	-0.3959	-0.4068
	(0.0970)	(0.0417)	(0.0491)
Secondary education	-0.3917	-0.5757	-0.6011
	(0.0478)	(0.0783)	(0.1068)
Age*	-0.0573	-0.1691	-0.5586
	(0.0139)	(0.1238)	(0.1360)
Age^2*	0.0009	0.0403	0.8988
	(0.0002)	(0.0145)	(0.1643)
YSM*	-0.1175	-1.0311	-0.1010
	(0.0165)	(0.1561)	(0.0164)
YSM^2*	0.0019	0.2257	0.1734
	(0.0006)	(0.0592)	(0.0650)
Local unemployment	0.0879	0.1388	0.1181
	(0.0265)	(0.0249)	(0.0265)
Cohort 1995-1999	-0.2844	-0.4239	-0.3610
	(0.1902)	(0.1710)	(0.1927)
Cohort 1990-1994	-0.7195	-0.8308	-0.9260
	(0.1406)	(0.1226)	(0.1405)
Cohort 1985-1989	-0.4118	-0.5715	-0.5762
	(0.1242)	(0.1030)	(0.1268)
Cohort 1980-1984	-0.2997	-0.3453	-0.2785
	(0.1042)	(0.0755)	0.0052
Cohort 1975-1979			
Constant	-1.6666		
	(0.3401)		
σ^2	1.9468		
	(0.0318)		
q_2		0.7344	0.4357
q_3			0.0388
q_4			0.3642
α_1		0.0899	0.7315
α_2		-2.8560	-7.4013
α_3			2.6785
α_4			-0.8450

* For the model M2 the following variables are used: age/10, age^2/100, YSM/10 and YSM^2/100. For the model M4 the following variables are used: age/10, age^2/1000, YSM and YSM^2/100.

Table A.5
Estimation Results for Sri Lankan Immigrants
(Standard errors in parentheses)

	N	M2	M4
Female	0.3928	0.3741	0.2605
	(0.0586)	(0.0531)	(0.0677)
Single, no children	1.7556	1.3071	1.5917
	(0.0915)	(0.0778)	(0.1149)
Single, 1 child	2.3082	1.8398	2.4518
	(0.2044)	(0.2046)	(0.2569)
Single, 2 or more children	1.5365	0.8940	1.5563
	(0.2473)	(0.2102)	(0.2720)
Couple, 1 child	-0.2092	-0.5051	-0.0698
	(0.1025)	(0.0875)	(0.1100)
Couple, 2 children	0.0687	-0.5451	0.1138
	(0.1073)	(0.0915)	(0.1207)
Couple, 3 or more children	1.0163	-0.0956	1.0766
	(0.1226)	(0.1148)	(0.1261)
Tertiary education	-1.1296	-0.6994	-0.7554
	(0.1083)	(0.0629)	(0.0845)
Secondary education	-0.8194	-0.8941	-1.0957
	(0.0691)	(0.0860)	(0.1277)
Age*	-0.1230	-0.8134	-1.4486
	(0.0225)	(0.2078)	(0.2658)
Age^2*	0.0023	0.1520	0.2342
	(0.0003)	(0.0254)	(0.0339)
YSM	-0.3672	-0.3308	-0.3942
	(0.0251)	(0.0249)	(0.0291)
YSM^2	0.0181	0.0167	0.0206
	(0.0013)	(0.0012)	(0.0014)
Local unemployment	0.1146	0.1576	0.0487
	(0.0328)	(0.0330)	(0.0378)
Cohort 1995-1999	-0.6398	-0.7207	-0.4111
	(0.1426)	(0.0843)	(0.1037)
Cohort 1990-1994	-0.5045	-0.7953	-0.5757
	(0.0905)	(0.1371)	(0.1641)
Constant	-0.6780		
	(0.4539)		
σ^2	2.4982		
	(0.0380)		
q_2		0.2968	0.2191
q_3			0.1071
q_4			0.0934
α_1		-1.8333	-1.6734
α_2		2.1069	1.6427
α_3			3.6538
α_4			7.5942

* For the models M2 and M4, the following variables are used: age/10, age^2/100.

Table A.6
Estimation Results for Iranian Immigrants
(Standard errors in parentheses)

	N	M2	M4
Female	-0.0592	-0.0204	-0.0447
	(0.0474)	(0.0434)	(0.0483)
Single, no children	0.7967	0.6469	0.7563
	(0.0833)	(0.0696)	(0.0862)
Single, 1 child	-0.1027	-0.1114	-0.0987
	(0.1544)	(0.1288)	(0.1580)
Single, 2 or more children	0.0668	-0.0467	0.0861
	(0.1567)	(0.1477)	(0.1566)
Couple, 1 child	-0.1403	-0.1947	-0.1410
	(0.0948)	(0.0819)	(0.0963)
Couple, 2 children	0.2731	0.1514	0.2675
	(0.0984)	(0.0830)	(0.1005)
Couple, 3 or more children	1.1368	0.8241	1.1232
	(0.1146)	(0.1077)	(0.1146)
Tertiary education	-1.5675	-1.0702	-1.0720
	(0.0833)	(0.0551)	(0.0710)
Secondary education	-1.1636	-1.3841	-1.4935
	(0.0652)	(0.0698)	(0.0871)
Age*	-0.0477	-0.2839	-0.5098
	(0.0175)	(0.1510)	(0.1768)
Age^2*	0.0008	0.4773	0.8507
	(0.0002)	(0.1798)	(0.2191)
YSM*	-0.1025	-1.0753	-1.1186
	(0.0244)	(0.2189)	(0.2450)
YSM^2*	0.0059	0.6585	0.6275
	(0.0014)	(0.1249)	(0.1366)
Local unemployment	0.1200	0.1511	0.1108
	(0.0296)	(0.0254)	(0.0296)
Cohort 1995-1999	0.1052	0.0119	0.0752
	(0.1196)	(0.1040)	(0.1242)
Cohort 1990-1994	-0.2235	-0.3506	-0.2538
	(0.0796)	(0.0679)	(0.0835)
Constant	-1.3171		
	(0.3697)		
σ^2	1.9409		
	(0.0339)		
q_2		0.7440	0.4195
q_3			0.3945
q_4			0.1443
α_1		0.9180	3.6924
α_2		-2.0235	-3.5546
α_3			-0.5233
α_4			3.6924

* For the models M2 and M4, the following variables are used: age/10, age^2/1000, YSM/10 and YSM^2/100.

Recent publications in the series Discussion Papers

391 G. H. Bjønnes, D. Rime and H. O.Aa. Solheim (2004): Liquidity provision in the overnight foreign exchange market

392 T. Åvitsland and J. Aasness (2004): Combining CGE and microsimulation models: Effects on equality of VAT reforms

393 M. Greaker and Eirik. Sagen (2004): Explaining experience curves for LNG liquefaction costs: Competition matter more than learning

394 K. Telle, I. Aslaksen and T. Synnestvedt (2004): "It pays to be green" - a premature conclusion?

395 T. Harding, H. O. Aa. Solheim and A. Benedictow (2004). House ownership and taxes

396 E. Holmøy and B. Strøm (2004): The Social Cost of Government Spending in an Economy with Large Tax Distortions: A CGE Decomposition for Norway

397 T. Hægeland, O. Raaum and K.G. Salvanes (2004): Pupil achievement, school resources and family background

398 I. Aslaksen, B. Natvig and I. Nordal (2004): Environmental risk and the precautionary principle: "Late lessons from early warnings" applied to genetically modified plants

399 J. Møen (2004): When subsidized R&D-firms fail, do they still stimulate growth? Tracing knowledge by following employees across firms

400 B. Halvorsen and Runa Nesbakken (2004): Accounting for differences in choice opportunities in analyses of energy expenditure data

401 T.J. Klette and A. Raknerud (2004): Heterogeneity, productivity and selection: An empirical study of Norwegian manufacturing firms

402 R. Aaberge (2005): Asymptotic Distribution Theory of Empirical Rank-dependent Measures of Inequality

403 F.R. Aune, S. Kverndokk, L. Lindholt and K.E. Rosendahl (2005): Profitability of different instruments in international climate policies

404 Z. Jia (2005): Labor Supply of Retiring Couples and Heterogeneity in Household Decision-Making Structure

405 Z. Jia (2005): Retirement Behavior of Working Couples in Norway. A Dynamic Programming Approch

406 Z. Jia (2005): Spousal Influence on Early Retirement Behavior

407 P. Frenger (2005): The elasticity of substitution of superlative price indices

408 M. Mogstad, A. Langørgen and R. Aaberge (2005): Region-specific versus Country-specific Poverty Lines in Analysis of Poverty

409 J.K. Dagsvik (2005) Choice under Uncertainty and Bounded Rationality

410 T. Fæhn, A.G. Gómez-Plana and S. Kverndokk (2005): Can a carbon permit system reduce Spanish unemployment?

411 J. Larsson and K. Telle (2005): Consequences of the IPPC-directive's BAT requirements for abatement costs and emissions

412 R. Aaberge, S. Bjerve and K. Doksum (2005): Modeling Concentration and Dispersion in Multiple Regression

413 E. Holmøy and K.M. Heide (2005): Is Norway immune to Dutch Disease? CGE Estimates of Sustainable Wage Growth and De-industrialisation

414 K.R. Wangen (2005): An Expenditure Based Estimate of Britain's Black Economy Revisited

415 A. Mathiassen (2005): A Statistical Model for Simple, Fast and Reliable Measurement of Poverty

416 F.R. Aune, S. Glomsrød, L. Lindholt and K.E. Rosendahl: Are high oil prices profitable for OPEC in the long run?

417 D. Fredriksen, K.M. Heide, E. Holmøy and I.F. Solli (2005): Macroeconomic effects of proposed pension reforms in Norway

418 D. Fredriksen and N.M. Stølen (2005): Effects of demographic development, labour supply and pension reforms on the future pension burden

419 A. Alstadsæter, A-S. Kolm and B. Larsen (2005): Tax Effects on Unemployment and the Choice of Educational Type

420 E. Biørn (2005): Constructing Panel Data Estimators by Aggregation: A General Moment Estimator and a Suggested Synthesis

421 J. Bjørnstad (2005): Non-Bayesian Multiple Imputation

422 H. Hungnes (2005): Identifying Structural Breaks in Cointegrated VAR Models

423 H. C. Bjørnland and H. Hungnes (2005): The commodity currency puzzle

424 F. Carlsen, B. Langset and J. Rattsø (2005): The relationship between firm mobility and tax level: Empirical evidence of fiscal competition between local governments

425 T. Harding and J. Rattsø (2005): The barrier model of productivity growth: South Africa

426 E. Holmøy (2005): The Anatomy of Electricity Demand: A CGE Decomposition for Norway

427 T.K.M. Beatty, E. Røed Larsen and D.E. Sommervoll (2005): Measuring the Price of Housing Consumption for Owners in the CPI

428 E. Røed Larsen (2005): Distributional Effects of Environmental Taxes on Transportation: Evidence from Engel Curves in the United States

429 P. Boug, Å. Cappelen and T. Eika (2005): Exchange Rate Rass-through in a Small Open Economy: The Importance of the Distribution Sector

430 K. Gabrielsen, T. Bye and F.R. Aune (2005): Climate change- lower electricity prices and increasing demand. An application to the Nordic Countries

431 J.K. Dagsvik, S. Strøm and Z. Jia: Utility of Income as a Random Function: Behavioral Characterization and Empirical Evidence

432 G.H. Bjertnæs (2005): Avioding Adverse Employment Effects from Energy Taxation: What does it cost?

433. T. Bye and E. Hope (2005): Deregulation of electricity markets—The Norwegian experience

434 P.J. Lambert and T.O. Thoresen (2005): Base independence in the analysis of tax policy effects: with an application to Norway 1992-2004

435 M. Rege, K. Telle and M. Votruba (2005): The Effect of Plant Downsizing on Disability Pension Utilization

436 J. Hovi and B. Holtsmark (2005): Cap-and-Trade or Carbon Taxes? The Effects of Non-Compliance and the Feasibility of Enforcement

437 R. Aaberge, S. Bjerve and K. Doksum (2005): Decomposition of Rank-Dependent Measures of Inequality by Subgroups

438 B. Holtsmark (2005): Global per capita CO_2 emissions - stable in the long run?

439 E. Halvorsen and T.O. Thoresen (2005): The relationship between altruism and equal sharing. Evidence from inter vivos transfer behavior

440 L-C. Zhang and I. Thomsen (2005): A prediction approach to sampling design

441 Ø.A. Nilsen, A. Raknerud, M. Rybalka and T. Skjerpen (2005): Lumpy Investments, Factor Adjustments and Productivity

442 R. Golombek and A. Raknerud (2005): Exit Dynamics with Adjustment Costs

443 G. Liu, T. Skjerpen, A. Rygh Swensen and K. Telle (2006): Unit Roots, Polynomial Transformations and the Environmental Kuznets Curve

444 G. Liu (2006): A Behavioral Model of Work-trip Mode Choice in Shanghai

445 E. Lund Sagen and M. Tsygankova (2006): Russian Natural Gas Exports to Europe. Effects of Russian gas market reforms and the rising market power of Gazprom

446 T. Ericson (2006): Households' self-selection of a dynamic electricity tariff

447 G. Liu (2006): A causality analysis on GDP and air emissions in Norway

448 M. Greaker and K.E. Rosendahl (2006): Strategic Climate Policy in Small, Open Economies

449 R. Aaberge, U. Colombino and T. Wennemo (2006): Evaluating Alternative Representation of the Choice Sets in Models of Labour Supply

450 T. Kornstad and T.O. Thoresen (2006): Effects of Family Policy Reforms in Norway. Results from a Joint Labor Supply and Child Care Choice Microsimulation Analysis

451 P. Frenger (2006): The substitution bias of the consumer price index

452 B. Halvorsen (2006): When can micro properties be used to predict aggregate demand?

453 J.K. Dagsvik, T. Korntad and T. Skjerpen (2006): Analysis of the disgouraged worker phenomenon. Evidence from micro data

454 G. Liu (2006): On Nash equilibrium in prices in an oligopolistic market with demand characterized by a nested multinomial logit model and multiproduct firm as nest

455 F. Schroyen and J. Aasness (2006): Marginal indirect tax reform analysis with merit good arguments and environmental concerns: Norway, 1999

456 L-C Zhang (2006): On some common practices of systematic sampling

457 Å. Cappelen (2006): Differences in Learning and Inequality

458 T. Borgersen, D.E. Sommervoll and T. Wennemo (2006): Endogenous Housing Market Cycles

459 G.H. Bjertnæs (2006): Income Taxation, Tuition Subsidies, and Choice of Occupation

460 P. Boug, Å. Cappelen and A.R. Swensen (2006): The New Keynesian Phillips Curve for a Small Open Economy

461 T. Ericson (2006): Time-differentiated pricing and direct load control of residential electricity consumption

462 T. Bye, E. Holmøy and K. M. Heide (2006): Removing policy based comparative advantage for energy intensive production. Necessary adjustments of the real exchange rate and industry structure

463 R. Bjørnstad and R. Nymoen (2006): Will it float? The New Keynesian Phillips curve tested on OECD panel data

464 K.M.Heide, E. Holmøy, I. F. Solli and B. Strøm (2006): A welfare state funded by nature and OPEC. A guided tour on Norway's path from an exceptionally impressive to an exceptionally strained fiscal position

465 J.K. Dagsvik (2006): Axiomatization of Stochastic Models for Choice under Uncertainty

466 S. Hol (2006): The influence of the business cycle on bankruptcy probability

467 E. Røed Larsen and D.E. Sommervoll (2006): The Impact on Rent from Tenant and Landlord Characteristics and Interaction

468 Suzan Hol and Nico van der Wijst (2006): The financing structure of non-listed firms

469 Suzan Hol (2006): Determinants of long-term interest rates in the Scandinavian countries

470 R. Bjørnstad and K. Øren Kalstad (2006): Increased Price Markup from Union Coordination - OECD Panel Evidence.

471 E. Holmøy (2006): Real appreciation as an automatic channel for redistribution of increased government non-tax revenue.

472 T. Bye, A. Bruvoll and F.R. Aune (2006): The importance of volatility in inflow in a deregulated hydro-dominated power market.

473 T. Bye, A. Bruvoll and J. Larsson (2006): Capacity utilization in a generlized Malmquist index including environmental factors: A decomposition analysis

474 A. Alstadsæter (2006): The Achilles Heel of the Dual Income Tax. The Norwegian Case

475 R. Aaberge and U. Colombino (2006): Designing Optimal Taxes with a Microeconometric Model of Household Labour Supply

476 I. Aslaksen and A.I. Myhr (2006): "The worth of a wildflower": Precautionary perspectives on the environmental risk of GMOs

477 T. Fæhn and A. Bruvoll (2006): Richer and cleaner - at others' expense?

478 K.H. Alfsen and M. Greaker (2006): From natural resources and environmental accounting to construction of indicators for sustainable development

479 T. Ericson (2006): Direct load control of residential water heaters

480 J.K. Dagsvik and G. Liu (2006): A Framework for Analyzing Rank Ordered Panel Data with Application to Automobile Demand

481 J.K. Dagsvik and Z. Jia (2006): Labor Supply as a Choice among Latent Job Opportunities. A Practical Empirical Approach

482 T.A. Galloway 2006): Do Immigrants Integrate Out of Poverty in Norway?

483 T.A. Galloway 2006): The Labor Market Integration of Immigrant Men and Women