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Self-selection and Motivations of Emigrants from a Welfare State

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1 Introduction

This report analyzes self-selection and motivations of emigrants from Denmark, one of the richest and most redistributive welfare states in the world. We first present evidence on how migrants are self-selected with respect to their education, earnings, and unobservable abilities, measured by residual earnings. We then document main motivations of emigrants, based on survey evidence on emigrants who had emigrated five to 20 years before being surveyed, with main focus being on the relative importance of own work and family considerations. After that, we present evidence on how couples have self-selected into emigration in terms of their earnings, as well as on how couples decided on their emigration and how the partners' labor force participation changed after emigration. Analyzing family decision-making on international migration is especially relevant for Nordic countries in which the vast majority of couples pursues a dual-earner model. Finally, we ask whether emigrants differ from non-migrants in terms of their attitudes towards redistribution.

A central finding in the economic literature on international migration is that emigrants tend to differ systematically from the population of the source countries. One reason for the systematic differences is that both rewards and costs of migration can differ between individuals with different labor market characteristics. In economic theory, this idea was first formalized by Borjas (1987), who applied the Roy-model of occupational choice to international migration. The basic idea of the model is that if skills are transferable across countries, migrant selection should be determined by differences in returns to skill in the sending and destination countries. That is, individuals with different labor market characteristics face different economic incentives for migration, depending on how destination country labor markets value their skills. In case of *positive self-selection*, migrants would tend to be better educated, more able or ambitious, or tend to have other characteristics that are beneficial in the labor market. In case of *negative self-selection*, the migrants would be less skilled. Self-selection of migrants could also be driven by differences in both monetary and other migration costs. Taxation and public goods can also play a role, as migrants may vote with their feet and choose jurisdictions offering the most attractive bundle of public goods, taxes, and various other amenities and disamenities (Tiebout 1951).

Self-selection of migrants is an important policy issue, as economic and social consequences of migration for both sending and receiving countries depend on the nature of selection. The empirical results by Borjas (1987) do indeed point towards a negative relationship between the earnings of immigrants in the United States and income inequality in the source countries. Since then, the paper has been followed by a body of literature analyzing self-selection of migrants, most of which has focused on migration to the United States or migration from poor to rich countries. However, migration flows between rich countries are also sizable. According to the United Nations (2017), 22.8 million persons born in one of the EU15 countries lived outside their country of origin. Out of those, 43 percent lived in another EU15 country and an additional 12% in the United States. Returns to skills are relatively low in many European countries both because these countries have narrower wage distributions and more progressive income taxation. Economic theory predicts that emigrants from these countries should be positively self-selected, and empirical knowledge about the quality and degree of selection is important for policy.

The rest of the report is structured as follows. Section 2 documents how emigrants from Denmark are self-selected in terms of their earnings. Section 3 reports the emigrants' main motivations. Section 4 analyzes family migration and section 5 studies how emigrants are self-selected according to their redistributive preferences. Section 6 concludes.

2 Self-selection of emigrants in terms of earnings

This section discusses the main findings of the study by Borjas, Kauppinen and Poutvaara (2019), that analyzes emigration from Denmark using Danish full population administrative data. The study analyzes how Danish emigrants differ from the rest of the population in terms of their earnings and education. As Denmark is a highly redistributive country with a compressed wage distribution, economic theory predicts that the most productive individuals should be more prone to leave the country. The results are in line with the prediction: the migrants were better educated and earned more prior to emigration than the rest of the population.

In 2013, over a quarter million Danish citizens lived outside their native country, corresponding to about 5 percent of the Danish population. The emigration rate for the native born 25-54 –year olds was 0.33 percent in 2012, which is comparable to a number of Western-European countries. Labor market returns to skills are relatively low in Denmark due to both low gross wage premia for higher education and progressive income taxation. Thus, according to economic theory emigrants from Denmark should be positively self-selected.

The analysis uses administrative register data for the Danish population from 1995 to 2004 on Danish citizens who were 25-54 years old and working full-time during the calendar year. The register includes information on education, income and other socio-economic characteristics at individual level. The data was merged with the migration register for the years 1995 to 2010. The migration register reports the date of emigration and the initial destination country for each registered emigration, and this information was used to identify whether an individual emigrated from Denmark during the following calendar year. The register also has information on possible return migration, which was used to determine the length of the stay abroad. In the main analysis, the interest is on individuals who were found in the register data for at least one of the years 1995-2004 and emigrated from Denmark the following year for at least five years.[1] The analysis distinguishes between migrants to other Nordic countries and the rest of the world. This distinction is important as other Nordic countries are rather similar to Denmark in terms of income redistribution and a relatively egalitarian wage distribution.

Table 1 reports summary statistics from the data. The panel data set contains over 6.4 million male and 5.1 million female non-migrants and 7323 male and 3436 female

[1] Having stayed abroad for five years predicts longer migration spells. For example, 72% of men and 71% of women who left Denmark in 1996 and were still abroad after five years were also abroad after ten years. The study also analyses shorter-term migrants who returned within five years from emigration and the main qualitative findings hold for both groups. Migrants to Greenland and the Faroe Islands are autonomous regions but still part of Denmark. We have excluded these destinations as many of these migrants could have originated in Greenland or the Faroe Islands, and many would actually be returning home rather than emigrating from Denmark.

migrants.[2] The Danish emigrants are slightly younger than the non-migrants, but despite the age difference, they earned higher annual incomes in the year prior to migration than non-migrants. The table also reports summary statistics for a measure of "standardized earnings" that adjusts for differences in age, gender, and year effects. Standardized earnings were defined by the ratio of a worker's annual gross earnings to the mean gross earnings of workers of the same age and gender during the same year. Emigrants earned more than non-migrants in terms of standardized earnings. The table also reports the education distributions for non-migrants and migrants. Among both men and women, migrants tend to be more educated than non-migrants. The fraction of male migrants to non-Nordic destinations with a Master's degree is 24 percent, whereas only 7 percent of male non-migrants have a Master's degree.

The summary statistics already suggest positive selection of emigrants. However, they could still hide substantial differences between the underlying distributions, and the study also compares the distributions of standardized earnings between migrants and non-migrants. Figure 1a illustrates the cumulative earnings distributions for male non-migrants, male migrants to other Nordic countries and male migrants to destinations outside Nordic countries. The figure confirms that migrants were positively selected during the study period, as the cumulative distribution function of standardized earnings of migrants to destinations outside the Nordic countries is clearly located to the right of the corresponding cumulative distribution for non-migrants. The distribution function for migrants to other Nordic countries is also located to the right of that for non-migrants, but the selection of the migrants to Nordic countries seems weaker. Figure 1b presents corresponding distributions for women. The main findings are qualitatively similar, but the self-selection is weaker.

This weaker selection to other Nordic countries may arise because the rate of return to skills in Nordic countries is relatively low when compared to that in other potential destinations. There is also a considerable population of Danes who live in southern Sweden but work in Denmark. This type of migration is not related to returns to skills in the destination country, so it should decrease the estimated selection to Nordic countries. For example, Bratu et al. (2018) show that Danish citizens emigrated to

[2] The construction of the data implies that non-migrants appear in the data multiple times (potentially once in each cross-section between 1995 and 2004).

Sweden after the Danish government introduced stricter family reunifications policies in 2002, but many continued to receive income from Denmark.

It is important to note that the graphs for the cumulative earnings distributions for migrants are to the right of those for non-migrants for most income levels. This means that positive self-selection is taking place on all income levels.[3] It is not only the case that high earners would be more prone to emigrate, but the higher earning among lower income categories also emigrate more often.

The study also examines self-selection of migrants in terms of the component of earnings due to characteristics that are not observed in the data. The analysis adjusts for differences in educational attainment and other observable variables between migrants and non-migrants by running regressions that control for the effect these characteristics have on earnings. Residuals from the earnings regressions are then compared between migrants and non-migrants. The residuals reflect the part of earnings that is uncorrelated with the observed measures of skill. Figure 2a presents the cumulative distributions of earnings regression residuals for male migrants to Nordic countries, male migrants to destinations outside Nordic countries, and male non-migrants. The cumulative distribution function of residuals for emigrants who moved outside the Nordic countries is located to the right of the cumulative distribution for migrants to Nordic countries, which in turn is located to the right of the cumulative distribution of the non-migrants, providing a strong indication that migrants were positively selected in terms of unobserved characteristics. Figure 2b presents the analogous evidence for women. As was the case in the comparison of the standardized pre-emigration earnings, also the self-selection in unobserved characteristics is less pronounced for women than for men.

The evidence on the positive selection in unobserved characteristics obviously implies that the selection in pre-migration earnings cannot be attributed solely to the fact that migrants are more educated. Instead, there is positive selection also within education groups. Even among individuals who have a similar level of educational attainment, the one who earns more during a year is more prone to emigrate during the following

[3] This is also a theoretical contribution of the study. The authors show that the Roy-model predicts this type of self-selection and not only self-selection in terms of averages.

year. To evaluate the importance of unobserved characteristics for self-selection, the study also decomposes the self-selection in earnings into self-selection in observable characteristics and self-selection in unobservable characteristics. Following the methodology introduced by DiNardo, Fortin, and Lemieux (1996), the study uses the observable characteristics of migrants to estimate their pre-emigration earnings in Denmark. The estimated earnings distribution is then compared to the real earnings of the non-emigrant and emigrant populations. Figures 3a and 3b present the resulting density functions of the logarithm of standardized earnings as well as the actual distributions for migrants and non-migrants.[4] The difference between the actual density for non-migrants and the estimated density for migrants reflects the part of self-selection that is due to observable characteristics. Similarly, the difference between the counterfactual and actual densities for migrants reflects the part of selection that is due to unobserved characteristics. A simple way of quantifying these distributional differences is to compare the averages of the distributions. In terms of averages, about 70 percent of the positive self-selection in pre-migration earnings is attributable to unobservable determinants of productivity for men. For women, the fraction is about 50 percent. Selection in unobservable characteristics plays a crucial role in determining the skill composition of emigrants.

3 Main motivations to emigrate from a welfare state

The previous section showed that emigrants from Denmark are characterized by high levels of education, high gross earnings and high unobserved productivity. However, the political implications of such positive self-selection depend on the reasons of emigrating. There is scarce evidence on what motivates emigrants from rich European welfare states. To close this knowledge gap, we conducted a representative survey among Danish emigrants which can be linked to the administrative register data.

Emigrants from Denmark could be attracted by better job opportunities, higher earnings but also by better study opportunities, a partner living abroad, a less redistributive welfare state or a different way of life. Therefore, in our survey, we asked

[4] The counterfactual analysis pools all migrants regardless of whether they moved to other Nordic countries or other destinations.

for the main motivation to emigrate, as well as how various factors influenced the respondents' emigration decision. The target population of the survey was native Danes who had emigrated in eight selected years between 1987 and 2002 and still lived abroad at the end of 2007.[5] The final sample of the survey includes 4068 individuals.

In Poutvaara, Nikolka and Munk (2019) we show that a more interesting job, a partner living abroad, and the search for adventure are the most common reasons to emigrate (Table 2). Only a small minority emigrates mainly in search of higher earnings. Furthermore, Table 2 reveals that the majority of male respondents (53.6%) emigrate for work reasons and almost half of the female respondents (47.2%) for family reasons. The gender difference in motivations to emigrate is surprisingly strong, given that Denmark is one of the most gender-equal countries in the world. Among couples, the share of women who migrate for family reasons is even larger. This finding will be discussed in more detail in the next section.

4 International family migration and the dual-earner model

Most of the research studying international migration takes an individual level approach abstracting from family ties and the household perspective. However, according to the survey responses in Table 2, 47 percent of female respondents and 19 percent of male respondents stated that the family was the main reason to migrate. The importance of family ties for migration decisions has been pointed out early in the literature (Mincer 1978; Frank 1978a and 1978b). However, there is only little evidence on the role of family considerations in the context of international migration. Most of the existing empirical work analyzing migration of families is restricted to within country migration (e.g. Mincer 1978, Nivalainen 2004, Tenn 2010). One reason for this is a lack of data on family ties of international migrants. Based on the data presented above, this section provides new insights into the role of family considerations for emigration decisions. Our analysis sheds light on the self-selection patterns of family

[5] Statistics Denmark used full population registers from 1987 to 2007 to identify all Danish citizens who had emigrated in 1987, 1988, 1992, 1993, 1997, 1998, 2001 or 2002 and who were still abroad in 2007. Emigrants had to be aged 18 or more when they emigrated, and at most 59 in 2007. They also had to have at least one parent who was born in Denmark.

migrants taking into account labor force participation decisions among partners. We also provide first evidence on how partners' motivations, preferences and eventual decisions to migrate are related to family characteristics as well as labor market outcomes in the context of international migration.

Two of the few previous papers studying the role of family ties in international migration outside the developing country context, Borjas and Bronars (1991) and Cobb-Clark (1993), find that self-selection of migrants with family ties to the United States tends to be weaker compared to single migrants in terms of observable labor market characteristics. To examine self-selection into international migration among couples, we use full population register data as presented in Section 1, and as reported in Junge et al. (2019). We restrict our data to the entire Danish population from 1982 to 2010 and identify cohabiting couples by using a household identifier. In our analysis we exploit individual level information for both partners on age, gender, educational attainment, earnings, taxes and transfers and migration events. The main results relate to dual-earner couples in which both partners worked at least 60 percent of the full working time during the previous year, and are between 25 and 37 years of age. We restrict our attention to male-female couples due to the difficulty of recognizing cohabiting same-sex couples in the data. These restrictions yield more than 500,000 couple-year observations in which the female partner is the primary earner and more than 2.6 million couple-year observations in which the male partner is the primary earner. Following Costa and Kahn (2000), couples in which both partners have a college education are referred to as power couples and couples in which neither partner has a college education are referred to as low-power couples. In male-power (female-power) couples, only the male (female) partner has a college education. Furthermore, we are the first to analyze couple migrations separately for couples in which men earn more, compared to couples in which women earn more. This comparison allows us to test two competing hypotheses. The first hypothesis embodies the traditional male breadwinner model: migration is more strongly influenced by the educational attainment and earnings of the male partner. The second hypothesis is that family migration is influenced more strongly by the better educated or higher earning spouse's job opportunities. Given that investments in education and early career choices are made under uncertainty concerning own and partner's future job opportunities, expected migration patterns matter for a wider

group than the group that finally migrates. For example, if migration decisions were made typically based on the male breadwinner model, this would discourage female investments in education. If migration patterns are driven by the primary earner's job opportunities, then the possibility of ending up as a tied mover would discourage investments in education by those who expect to be secondary earners, independently of their gender.

Our main empirical finding is that the probability of a dual-earner couple's emigration increases with the earnings of the higher-earning partner, regardless of whether the primary earner is male or female. Figure 4 shows elasticities for the probability to emigrate with respect to the partners' individual annual incomes, separately for male and female partners in male and female primary earner couples and by educational attainment. The probability that a couple will emigrate and stay abroad for at least five years increases strongly with the primary earner's income. This relationship can be observed for male as well as female primary earner couples. However, couple migration seems to be more responsive to the male's education than to the female's education. Comparisons with the self-selection of singles suggest that the self-selection of primary earners in emigrating couples from Denmark is, if anything, stronger than the self-selection of emigrating single persons. The effect of the secondary earner's income varies and is generally much weaker than that of the primary earner's.

However, little is known about how couples decide on emigration given that preferences towards migration may not be the same. Using the survey data presented above, Munk, Nikolka, and Poutvaara (2017) are able to analyze the partners' motivations and preferences to emigrate as well as labor force participation before and after migration. In the following analysis we restrict our sample of survey respondents to those who were cohabiting or married before migration according to the data from the administrative registers. We require that both partners emigrated with their partner in the same calendar year to the same destination country and that they did not return until the end of 2007. These restrictions yield a sample of 208 male and 209 female survey respondents. Table 3 report the main motivation to emigrate among male and female partners in migrant couples separately by destination.

Answers to the respondents' main motivation to emigrate show that the own job was most important for males while family reasons were the dominant motive for emigration among female partners - we find that 52 percent of female respondents emigrated for family reasons, while 76 percent of male respondents emigrated for work reasons. The gender difference is most pronounced among couples migrating to the United States and to non-Western countries.

Table 4 shows that migration outside the Nordic countries in many cases is associated with reduced female labor force participation among couples. Before migration, in almost all couples in the sample both partners participated in the labor force. There is no big difference in labor force participation patters between couples subsequently migrating to different destinations. After migration, female labor force participation drops substantially and is particularly low among couples migrating outside the Nordic countries where migration is associated with a drop by 23 percent in female labor force participation. Among couples migrating to one of the other Nordic countries, the dual-earner model dominates. These differences between female labor force participation rates across destination countries might be driven by different institutional environments abroad and by couples' self-selection in unobservable characteristics into migration. The empirical results confirm the theoretical prediction from a household labor supply model which rationalizes reduced female labor supply with high prices and lower availability of daycare services, like in many non-Nordic countries (Munk, Nikolka and Poutvaara, 2017).

5 Preferences for redistribution among emigrants

Cross-country differences in the level of redistribution can further contribute to the differences in returns to skills. The relatively high levels of redistribution in many European countries can thus work as a push factor for high earning and highly educated migrants (Pauly 1973; Epple and Romer 1991; Wildasin 1991).

Literature has shown that migration decisions of highly skilled special groups like top inventors and professional athletes do indeed respond to tax-incentives (Abramitzky 2008, 2009; Kleven et al. 2014; Akcigit et al. 2016). However, opinions on the appropriate level of income taxation and redistribution of income are also known to

depend on factors like fairness considerations and political ideology (Alesina et al. 2001; Fong 2001; Corneo and Gruener 2002) as well as beliefs about whether economic success is mainly caused by own effort or external circumstances. These types of considerations can also be important for international migration if migrants choose their destination partly based on a wish to live in a society that redistributes justly. Kauppinen and Poutvaara (2018) use survey evidence to analyze Danish emigrants' preferences for redistribution of income.

The study uses data from the European Social Survey (ESS) on Danes living in Denmark and own survey data on emigrant Danes living abroad to compare how attitudes towards redistribution differ between migrants to different destinations and Danes living in Denmark. The survey on emigrants has questions concerning both attitudes towards redistribution in Denmark and in the country of residence.

Studying preferences for redistribution in Denmark among emigrants living outside the country allows focusing on the effect of fairness considerations, as the emigrants are not paying taxes in Denmark.

In the survey for Danes living abroad, preferences for redistribution in Denmark were measured with the following question: "*What is your opinion of a suggestion to increase taxes on those with high incomes in Denmark, and distribute the money to those with low incomes?*" Correspondingly, the preferences for redistribution in the country of residence were measured with the question "*What is your opinion of a suggestion to increase taxes on those with high incomes in the country you live in, and distribute the money to those with low incomes?*" For both questions, we used a 5-point scale from "Strongly in favor" to "Strongly against". In the European Social Survey, attitudes towards income redistribution were measured by asking respondents to state whether they agree strongly, agree, neither agree nor disagree, disagree or disagree strongly with the statement "*The government should take measures to reduce differences in income levels.*"

Table 5 presents the distribution of answers separately for men and women living in Denmark. Women are somewhat more positive towards increasing redistribution, although the differences are not very big. There is no majority in favor or against increasing redistribution. Table 6a reports the answers concerning redistribution in Denmark by emigrant men and Table 6b by emigrant women, according to the

residence country group. Comparing tables 5, 6a and 6b reveals that there is a greater gender difference in attitudes towards income redistribution among migrants than among non-migrants. The majority of emigrant men oppose a suggestion to increase income redistribution in Denmark, and the majority of emigrant women support it. The majority of Danish men in all destinations except other Nordic countries are against a suggestion to increase redistribution in Denmark, whereas the majority of women in all destinations are in favor of increasing redistribution in Denmark. Tables 7a – 7d present preferences for redistribution in Denmark separately for migrants in high-, low- or medium-skilled occupations, showing that the difference between migrants and non-migrants is mainly driven by men in high-skilled occupations.

Among men emigrating outside Nordic countries, 67 percent of those in high-skilled occupations are against increasing redistribution in Denmark and 26 percent are in favor, while 50 percent of those in low- or medium-skilled occupations are in favor and 37 percent against. Among women, support for increasing redistribution is larger than opposition among both skill groups.

Comparing men's attitudes in Denmark, to other Nordic countries and the rest of the world suggests sorting into different destinations according to fairness preferences, while there is no such pattern among women. The results for women in high-skilled occupations are not in line with self-selection according to redistributive preferences. Instead, higher support for redistribution among women who emigrate could arise as they no longer have to pay for redistribution after having emigrated. A similar mechanism is present also for men as both male and female emigrants tend to be net payers towards income redistribution, but self-selection among men is sufficiently strong to limit its effects.

Tables 8a and 8b show preferences concerning redistribution in the country of residence. A majority of women support more redistribution in their current country of residence. A majority of men support more redistribution in the United States. Comparing Tables 3a and 5a shows that both Tiebout sorting and common norms related to fairness are important in explaining cross-country differences in support for increasing redistribution in the current country of residence. Relatively high support for more redistribution in already highly redistributive other Nordic countries, compared with somewhat less redistributive other Western European countries, can

be best explained by sorting according to preferences for redistribution. One possible interpretation for the findings is that although the majority of Danish emigrant men living in the United States and non-Western countries view redistribution in Denmark as excessive, they find the level prevailing in the United States and most non-Western countries unfairly low.

To conclude, there is a remarkable gender difference among emigrants: a majority of men who have emigrated outside other Nordic countries are against increasing redistribution in Denmark, and a majority of women are in favor, independently of the country of residence. Women are somewhat more positive towards redistribution also among non-migrants, but the gender difference is much smaller than among emigrants. Furthermore, emigrant men are more negative towards redistribution than men staying in Denmark and emigrant women are more positive than women staying in Denmark. Interesting findings also emerge when the distribution of pre-emigration income is compared between emigrants with different redistributive preferences. Section 2 already shows that emigrants from Denmark are positively self-selected in terms or education, earnings and unobservable abilities. Kauppinen and Poutvaara (2018) match the survey data on emigrants with the register data sources used in Borjas, Kauppinen and Poutvaara (2019) to obtain information on earnings from the year before emigration. Figures 6 a and 6b present cumulative distribution functions of log standardized annual income[6] from the year before emigration, according to the support for redistribution in Denmark. Those who were against increasing redistribution in Denmark are classified as having low support and those who were in favor are classified as having high support.[7] Among both men and women, those who are against increasing redistribution earned more prior to migration than those who are in favor of increasing redistribution. As migrants neither gain nor lose from redistribution in their country of origin, this is strong evidence that fairness concerns are strongly correlated with the hypothetical material interest of similar people living in the country.

[6] As in section 2, the standardization adjusts for age, gender, and year effects.

[7] The analysis is restricted to those working 90% or more of the full working time; annual earnings of a student or a recent graduate who started working in, say, October are misleading about their real earnings potential.

6 Conclusion

In this report, we have analyzed self-selection of emigrants from Denmark, one of the richest and most redistributive welfare states. We first showed that emigrants are strongly positively self-selected in terms of their education, earnings, and residual earnings. Then we presented evidence on the main motivations to emigrate, finding that own work dominates among men, and family considerations among women. This gender difference is especially pronounced among couples that emigrate outside Nordic countries. Although about half of couples reported that both partners wanted to emigrate to the same extent, when the partners differed in their preference towards emigration, it was typically the male partner who wanted to emigrate to a larger extent. Our survey evidence also shows that female labor force participation drops significantly among couples that emigrate outside Nordic countries. Among respondents residing in the United States and non-Western countries, couples mostly pursue a male breadwinner model, with about half of the women leaving the labor market.

Finally, we investigated self-selection according to redistributive preferences. We found an intriguing gender difference: men who emigrate from Denmark tend to be more negative towards increasing income redistribution in Denmark than men who stay in Denmark, while women who emigrate from Denmark tend to be more positive towards increasing income redistribution in Denmark than women who stay in Denmark. This suggests Tiebout sorting according to redistributive preferences among men but not among women. It could be explained by the gender differences in the main reasons to emigrate: since women are more often tied movers, it is not surprising that they are not as strongly self-selected according to their redistributive preferences.

Identifying migrants' views about fair redistribution is important not just to researchers testing the Tiebout model, but also to policymakers in countries worried about brain drain due to heavy redistribution. If potential migrants view generous redistribution as fair, but are reluctant to pay for it in the form of high taxes, then increasing the salience of redistribution that is financed with tax revenue could encourage them to stay. If potential migrants, instead, view prevailing level of redistribution excessive also from a fairness perspective, then making redistribution

more salient could backfire and encourage emigration. Our results suggest that men and women may react differently to increasing the salience of the redistribution provided by the welfare state, with the majority of female emigrants being sympathetic towards generous redistribution, but the majority of male emigrants not.

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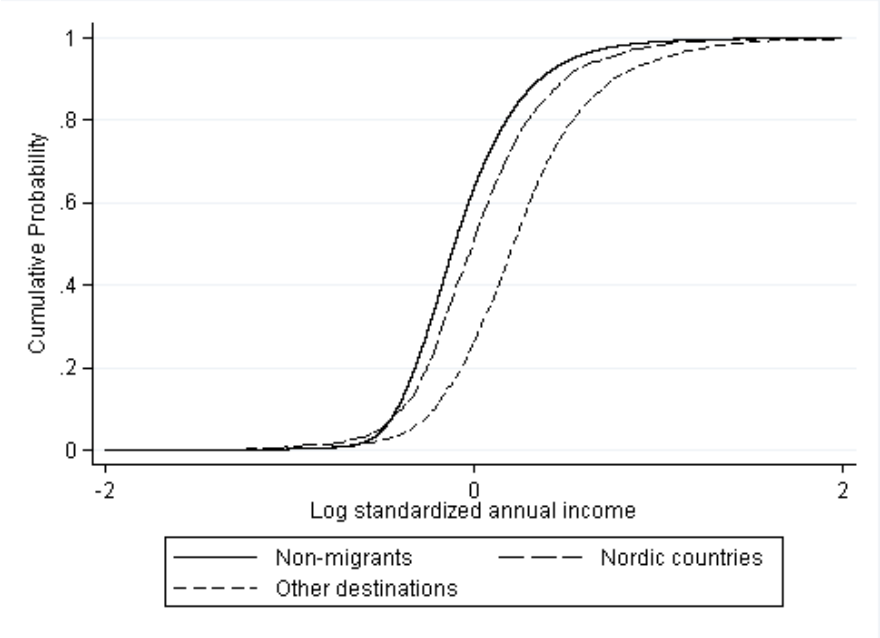
Figures

Figure 1. Distribution functions of standardized annual earnings for migrants and non-migrants

a. Men



b. Women

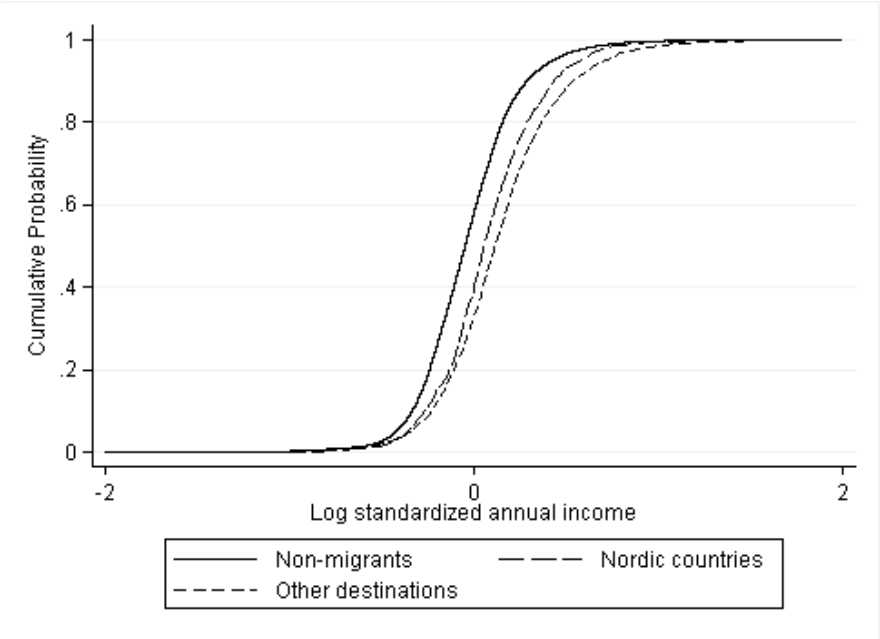
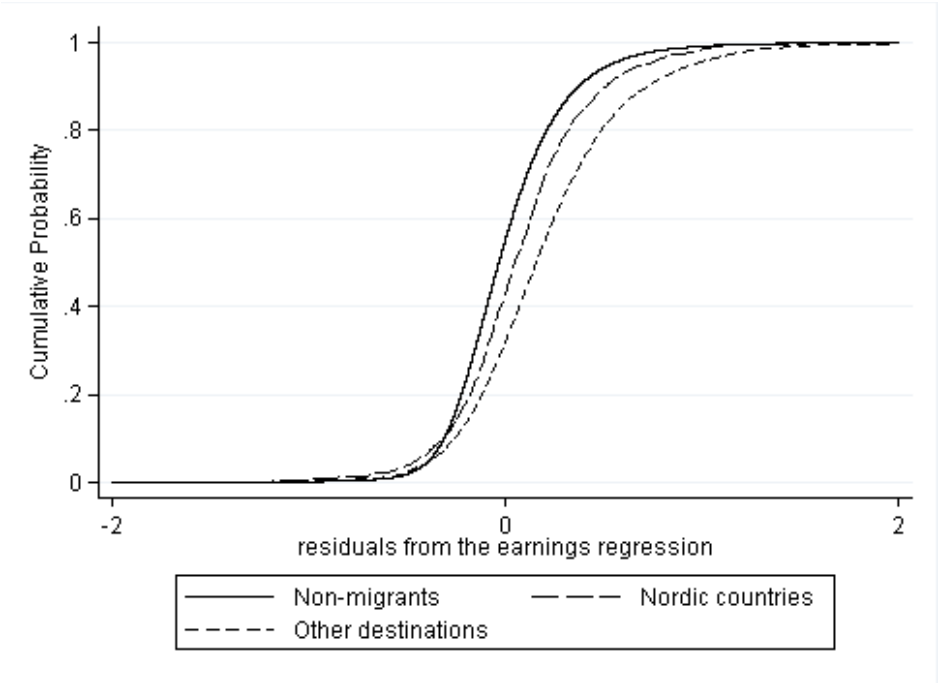


Figure 2. Distribution functions of residuals from earnings regression for migrants and non-migrants

a. Men



b. Women

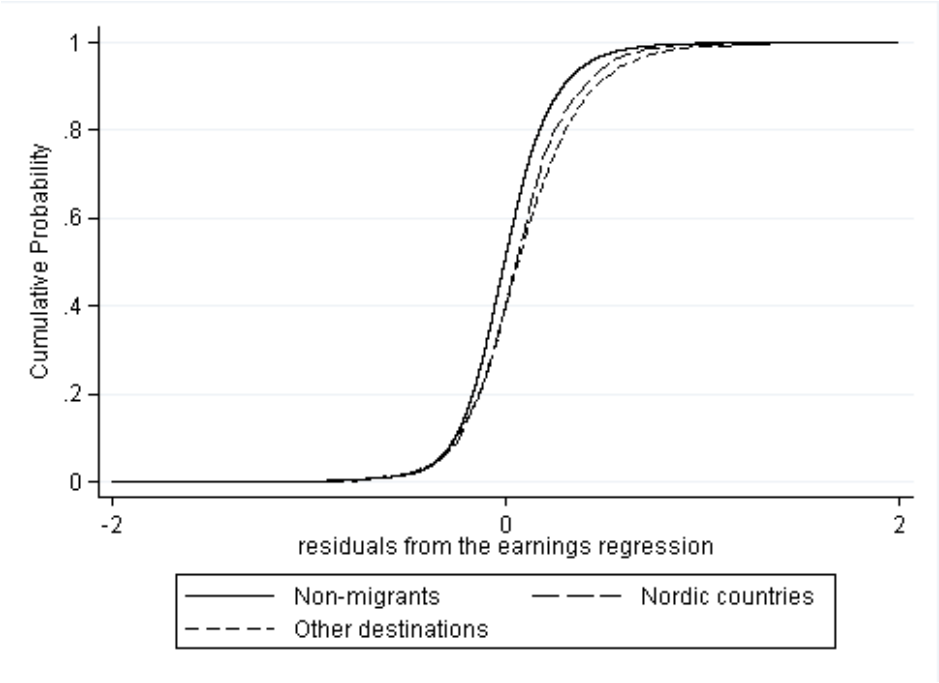
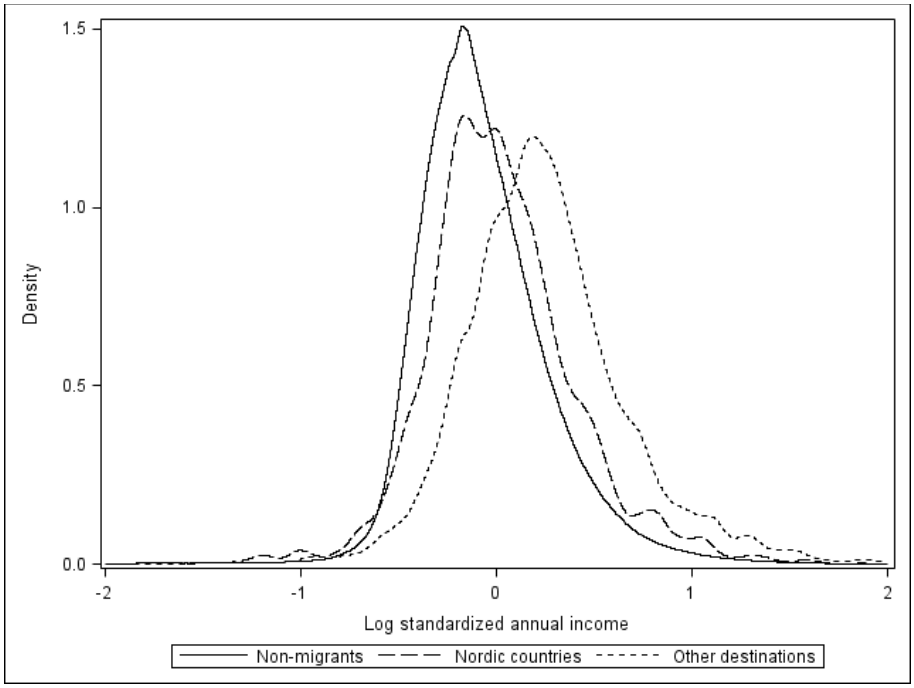


Figure 3. Density functions for standardized earnings for migrants and non-migrants

a. Men



b. Women

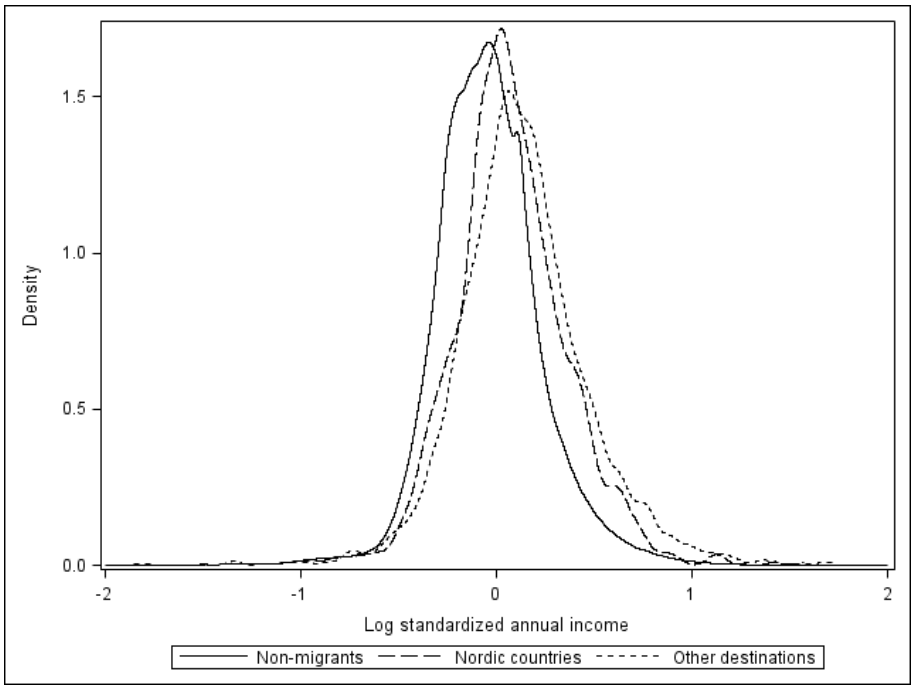
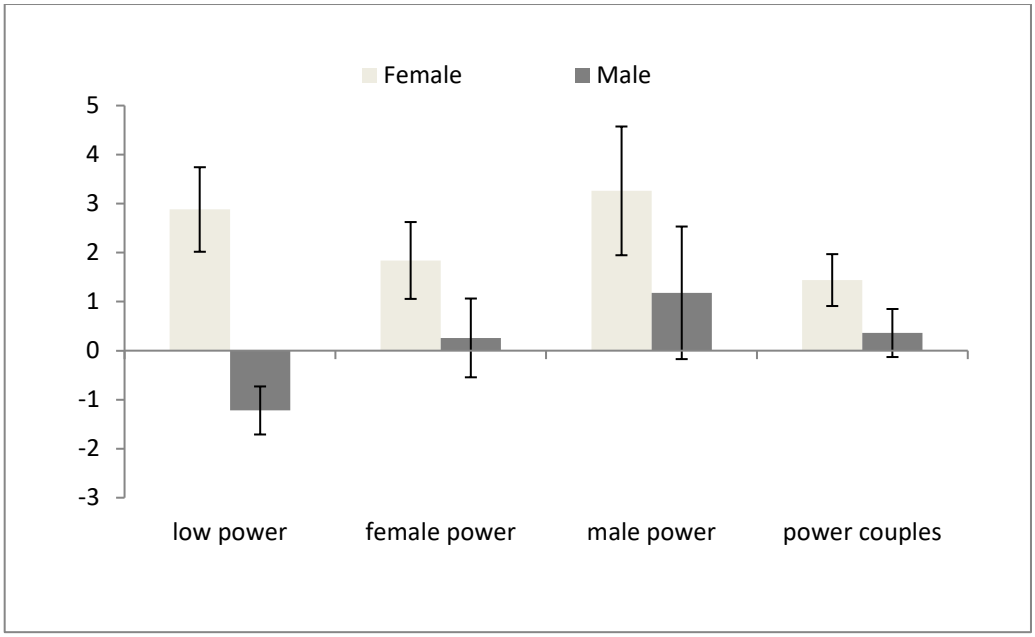
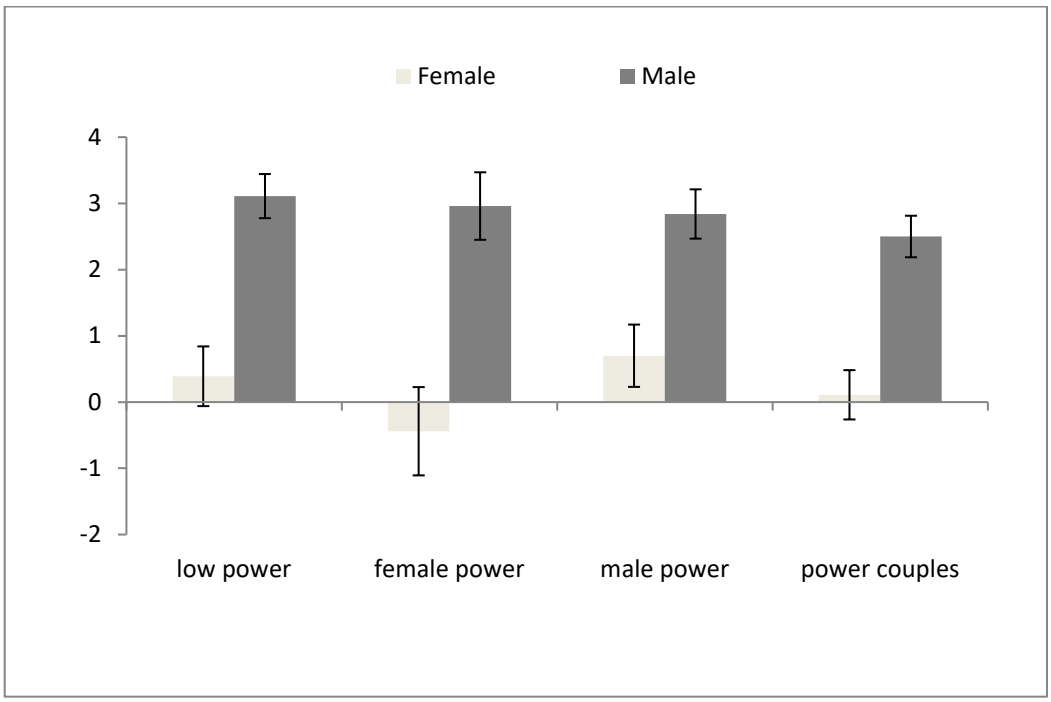


Figure 4. Elasticities of migration with respect to gross annual income.

Female earned more



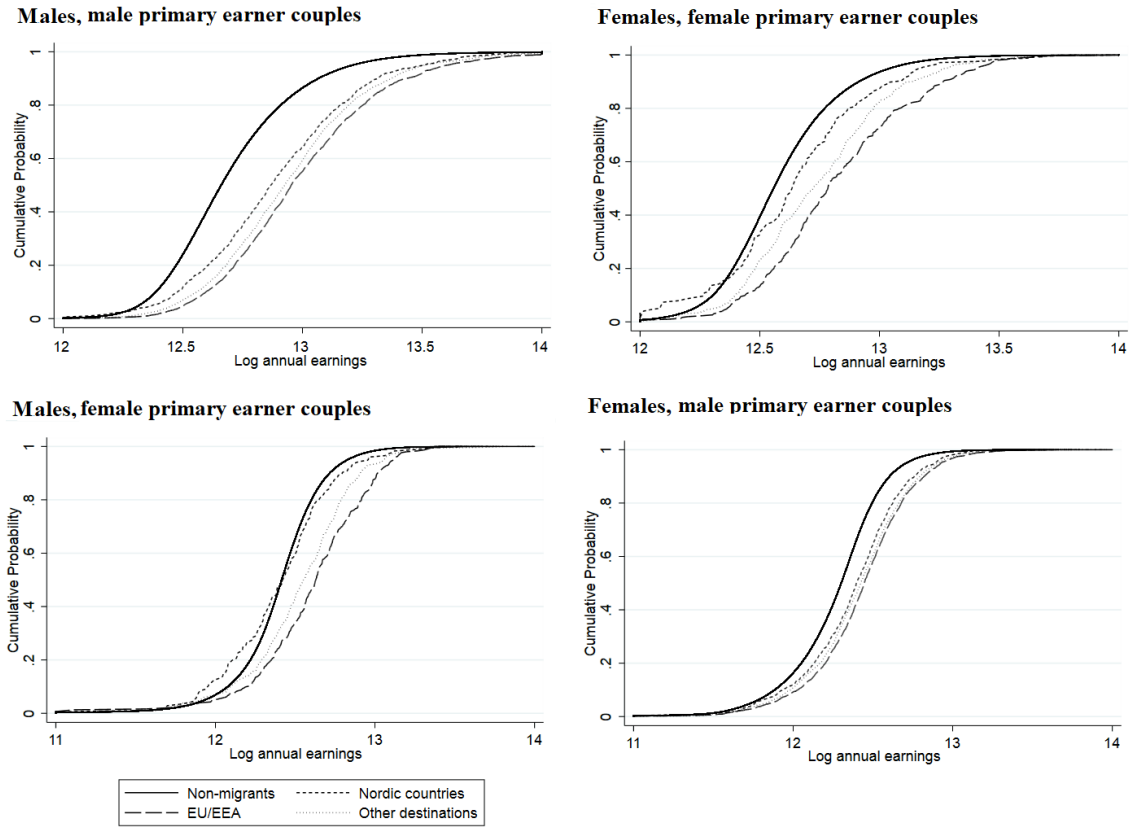
Male earned more



NOTE: The results are presented as elasticity with 95% confidence intervals, which are estimated at the average ages and gross earnings within the groups for which the

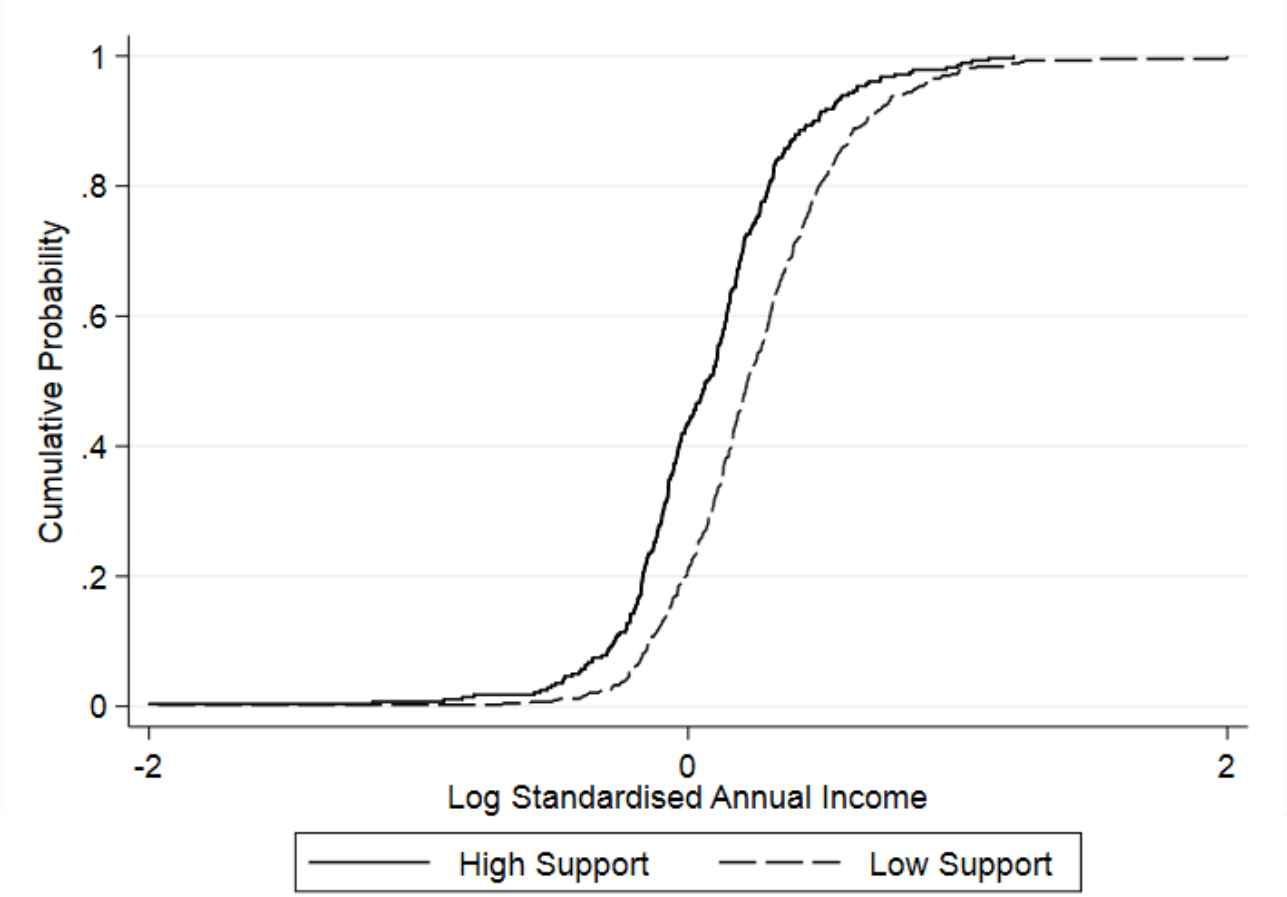
elasticity is calculated. Women and men are between 25 to 37 years of age. Emigration years are 1982 to 2005 in panels B and D with the restriction that both partners stayed abroad for at least 5 years. The probability of emigration was estimated based on the gross earnings during the previous year including only the couples in which both partners worked at least 60% of the full working time. Source: register data.

Figure 5. Log annual earnings of partners in dual earner couples.



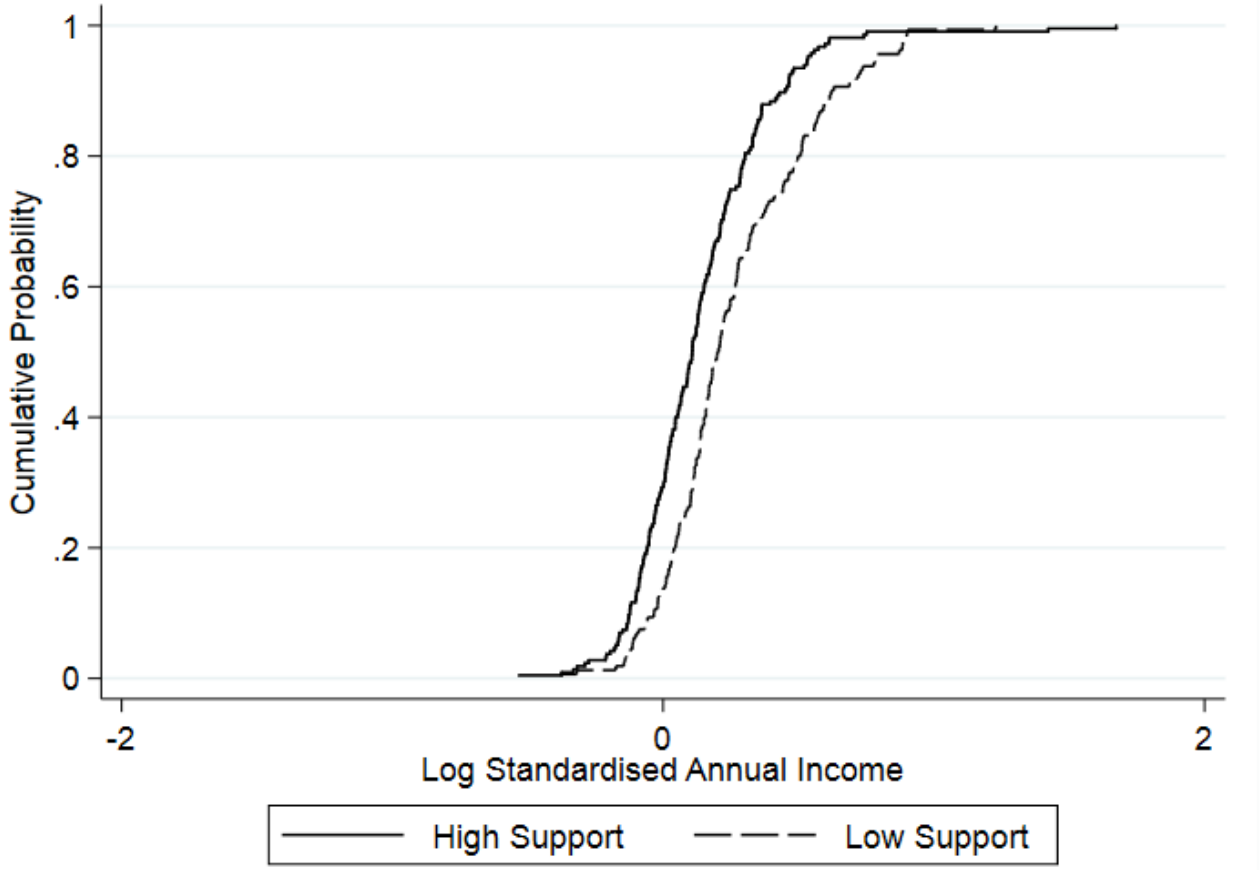
Source: register data.

Figure 6 a. Log standardized annual income according to preferences for increasing redistribution in the year before emigration for men



Notes: Cumulative distribution functions of log standardized annual income from the year before emigration according to support for increasing redistribution in Denmark. The standardized income is defined by the ratio of the worker's annual gross earnings to the mean gross earnings of workers of the same age and gender during the calendar year. Those who chose options 1-2 in the question about the support for redistribution in Denmark are classified as having low support and those who chose 3-5 are classified as having high support. The analysis is restricted to respondents who worked full time at least 90% of the year before emigration.

Figure 6 b. Log standardized annual income according to preferences for redistribution in the year before emigration for women



Notes: Cumulative distribution functions of log standardized annual income from the year before emigration according to support for increasing redistribution in Denmark. The standardized income is defined by the ratio of the worker's annual gross earnings to the mean gross earnings of workers of the same age and gender during the calendar year. Those who chose options 1-2 in the question about the support for redistribution in Denmark are classified as having low support and those who chose 3-5 are classified as having high support. The analysis is restricted to respondents who worked full time at least 90% of the year before emigration.

Tables

Table 1. Summary statistics

	Men			Women		
	Non-migrants	Nordic countries	Other destinations	Non-migrants	Nordic countries	Other destinations
Observations	6450665	2104	5219	5163129	993	2443
Age						
Average	39.8	35.5	35.3	40.2	35.9	34.7
Median	40	33	33	40	34	33
Annual earnings in 2010 euros						
Average	52725	56557	72825	40299	44462	47204
Median	46675	49646	61283	37976	41235	43109
Standardized annual earnings						
Average	1.0	1.1	1.4	1.0	1.1	1.2
Median	0.9	1.0	1.2	0.95	1.1	1.1
Education						
Comprehensive school	21.4	19.8	8.3	21.5	15.7	8.9
High school	3.2	7.8	8.6	3.1	6.9	8.9
Vocational school	49.8	43.5	30.3	41.8	36.5	30.8
Advanced vocational	5.6	5.7	6.6	4.9	5.1	7.8
Bachelor or equivalent	12.2	11.6	20.6	23.3	22.9	25.4
Master's or equivalent	7.3	10.6	23.9	5.1	12.3	17.6

Doctoral or equivalent	0.5	1.0	1.7	0.2	0.7	0.7

Notes: Standardized earnings are defined by the ratio of a worker's annual gross earnings to the mean gross earnings of workers of the same age and gender during the calendar year. The category "advanced vocational" includes all the tertiary education programs below the level of a Bachelor's program or equivalent. Programs on this level may be referred to for instance with such terms as community college education, advanced vocational training or associate degree.

Table 2. Main motivation to emigrate among survey respondents.

Main motivation	Men	Women
Own work	**53.6**	**21.9**
Being sent by employer	19.1	4.8
A more interesting job	16.7	5.9
Higher earnings	5.2	0.9
Poor job opportunities in Denmark	7.7	6.2
Fixed-term contract abroad	4.8	4.1
Partner and family	**18.6**	**47.2**
Studies and language	**9.3**	**11.0**
Adventure	**12.2**	**13.2**
Other motivations	**6.4**	**6.7**
Number of observations	**1,979**	**2,089**

Source: survey data.

Table 3. Main motivation to emigrate to different destination countries.

	Nordic countries	United States	Other Western countries	Non-Western countries	Total
a. Female respondents					
Own work	23	17	27	10	23
Family	31	71	50	86	52
Other	46	13	24	5	26
Observations	52	27	108	22	209
b. Male respondents					
Own work	74	69	75	94	76
Family	16	0	2	0	4
Other	10	31	23	6	19
Observations	46	37	99	26	208

Source: Survey data

Notes: Included are male and female survey respondents, who emigrated in 1987, 1988, 1992, 1993, 1997, 1998, 2001, or 2002, were cohabiting or married before migration in Denmark, both partners were Danish citizens without immigrant background, aged 18 or above in the year of observation and at most 59 in 2007. Migration refers to both partners having emigrated in the given year to the same destination according to administrative registers and neither partner having returned until the end of 2007. The numbers refer to column percentages in rows 1-3 separately for (a.) female and (b.) male respondents.

Table 4. Labor force participation among couples in the survey.

	Female labor force participation			Male labor force participation		
Destination country	In Denmark	After migration	Abroad in 2008	In Denmark	After migration	Abroad in 2008
All	92.4	60.6	69.4	95.2	98.3	99.2
Nordic countries	92.6	79.2	87.7	93.8	100.0	98.5
Non-Nordic countries	92.3	53.5	63.2	95.8	97.7	99.5
United States	90.2	45.8	54.3	94.3	100.0	100.0
Other Western countries	92.5	57.3	70.8	96.6	97.4	99.1
Non-Western countries	94.6	47.6	48.4	94.9	96.0	100.0
Observations	326	175	255	326	183	255

Source: Survey and register data.

Notes: Included are male and female survey respondents, who emigrated in 1987, 1988, 1992, 1993, 1997, 1998, 2001, or 2002, were cohabiting or married before migration in Denmark, both partners were Danish citizens without immigrant background, aged 18 or above in the year of observation and at most 59 in 2007. In migrant couples, both partners migrated in the given year to the same destination according to administrative registers and neither partner returned until the end of 2007. Columns 1 and 4 report labor force participation of the female and male partner at the end of the year before migration according to register data. Columns 2 and 5 report female and male labor force participation of the survey respondents for the situation after migration. Columns 3 and 6 report female and male labor force participation in 2008 based on answers provided by the survey respondent for both partners. Couples in which the male and female partner answered the survey are only included once. Couples in which either partner was a retiree or student at the time of observation are excluded in Columns 1, 3, 4 and 6. Respondents who were students or retirees at the time of observation are excluded in Columns 2 and 5. Labor force

participation is defined according to register data on occupation in Denmark at the end of the year before emigration or based on the survey question on the respondent's or partner's occupation abroad.

TABLE 5. Attitudes of non-migrant Danes towards increasing redistribution in Denmark

	strongly against	somewhat against	Neutral	somewhat in favor	strongly in favor
Men	11	32	20	28	10
Women	4	29	21	32	13

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: European Social Survey.

TABLE 6a. Attitudes of emigrant men towards increasing redistribution in Denmark

	strongly against	somewhat against	neutral	somewhat in favor	strongly in favor
Other Nordic countries	23	17	12	30	18
UK or Ireland	38	23	10	20	9
Rest of Western Europe	39	20	8	24	9
United States	31	25	10	21	13
Canada, Australia, or New Zealand	35	17	12	20	16
Rest of the world	44	24	7	14	11
Total	35	21	10	22	12

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 6b. Attitudes of emigrant women towards increasing redistribution in Denmark

	strongly Against	somewhat against	neutral	somewhat in favor	Strongly in favor
Other Nordic countries	15	17	12	32	25
UK or Ireland	16	16	12	32	24
Rest of Western Europe	14	20	13	33	19
United States	17	20	10	30	23
Canada, Australia, or New Zealand	13	21	12	36	18
Rest of the world	15	19	12	34	20
Total	15	18	12	33	22

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 7a. Attitudes of emigrant men in high-skilled occupation towards increasing redistribution in Denmark

	strongly against	somewhat against	Neutral	somewhat in favor	strongly in favor
Other Nordic countries	31	19	10	29	12
Other destinations	44	23	8	17	9
Total	42	24	7	12	9

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 7b. Attitudes of emigrant women in high-skilled occupation towards increasing redistribution in Denmark

	strongly Against	somewhat against	Neutral	somewhat in favor	strongly in favor
Other Nordic countries	25	19	10	28	18
Other destinations	17	20	14	30	20
Total	19	20	13	30	19

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 7c. Attitudes of emigrant men in low- or medium-skilled occupation towards increasing redistribution in Denmark

	strongly against	somewhat against	Neutral	somewhat in favor	strongly in favor
Other Nordic countries	14	17	15	33	21
Other destinations	19	18	13	36	13
Total	17	18	14	35	16

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 7d. Attitudes of emigrant women in low- or medium-skilled occupation towards increasing redistribution in Denmark

	strongly Against	somewhat against	Neutral	somewhat in favor	strongly in favor
Other Nordic countries	9	15	14	35	27
Other destinations	9	15	12	37	28
Total	9	15	12	36	27

Notes: Subjective support for increasing income redistribution in Denmark. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 8a. Attitudes of emigrant men towards increasing redistribution in the country of residence

	strongly Against	somewhat against	neutral	somewhat in favor	Strongly in favor
Other Nordic countries	21	18	11	31	18
UK or Ireland	26	19	9	31	15
Rest of Western Europe	28	21	9	30	11
United States	16	20	6	32	27
Canada, Australia, or New Zealand	24	18	12	25	20
Rest of the world	22	17	13	25	24
Total	23	19	10	30	18

Notes: Subjective support for increasing income redistribution in the country of residence. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

TABLE 8b. Attitudes of emigrant women towards increasing redistribution in the country of residence

	strongly Against	somewhat against	Neutral	somewhat in favor	Strongly in favor
Other Nordic countries	13	16	10	36	25
UK or Ireland	11	14	8	34	32
Rest of Western Europe	10	17	10	40	23
United States	10	19	5	33	33
Canada, Australia, or New Zealand	6	19	8	45	22
Rest of the world	7	10	5	33	45
Total	10	16	8	37	28

Notes: Subjective support for increasing income redistribution in the country of residence. The numbers are row percentages. Data source: survey on Danish emigrants. The country groups refer to the country the migrant resides in at the time of the survey.

EconPol Europe

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4) governance and macroeconomic policy in the European Monetary Union.

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