

# **Preferences for Redistribution of Danish Emigrants**

**-Research plan and some preliminary results,  
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## **1. Introduction**

The study considered in this plan would use a unique representative survey of Danish emigrants to examine whether preferences for redistribution of income differ between destination countries and what individual level social and economic factors determine ones preferences for redistribution. It is also of interest whether there are differences in relative importance of different factors determining the preferences for redistribution between emigrants living in different destination countries. As Denmark is a Scandinavian welfare state with one of the highest tax rates worldwide, the relationship between individual preferences for redistribution of income and emigration from the country are of interest.

The survey data to be used in this study has been already used by Poutvaara, Munk and Junge (2009) who studied how Danes who emigrate and stay abroad differ from Danes who stay in Denmark, in terms of pre-emigration earnings, educational qualifications and demographic characteristics. The main motivations of emigrating and cross-country differences in educational qualifications and earnings were also examined. The findings were mostly in line with the Borjas (1987) hypothesis that predicts that Danes with high earnings capability should be more likely to emigrate to such rich countries with lower taxes and wider income distribution as the United States and the United Kingdom. The purpose of the proposed study is to complement this previous analysis by examining the relationship between emigration decisions and preferences for redistribution. Specifically, the purpose is to cast light on a number of questions. Do emigrants to different destination countries differ from each other when it comes to their preferences concerning redistribution of income? Are the Danes who have settled to such countries of relatively low taxation and redistribution as the United States less in favor of redistribution than those living in such countries of higher redistribution as other Nordic countries? Furthermore, is there a relationship between individual decisions of staying in a destination country and preferences for redistribution? Are those who are permanently living in a country of relatively less redistribution also less in favor of redistribution than those who have decided to move back to Denmark? Empirical model on determination of preferences of redistribution is needed in order to answer these questions, since different characteristics of Danish emigrants living in different destination countries need to be controlled for. Studying emigrants can also bring new insights on the more general problem of the formation of preferences for redistribution. Issues that can be addressed by studying international migration include relative importance of culture in the determination of prefer-

ences for redistribution<sup>1</sup> and the question on the extent to which individual considerations on redistribution are of purely pecuniary nature.

This paper is organized as follows. Section 2 presents the survey data and gives an overview of Danish emigration from 1987 to 2002 and section 3 introduces shortly the results concerning earnings, educational qualifications and demographic characteristics of Danish emigrants obtained in the earlier study by Poutvaara, Munk and Junge. In section 4 determinants of preferences for redistribution are discussed and preliminary results on determinants of preferences for redistribution of emigrants living in English-speaking countries are introduced.

## 2. Overview on Danish Emigration and the Data

Denmark is a Scandinavian welfare state with a relatively high standard of living, a low level of income inequality, and one of the highest tax rates worldwide. As a member state of the European Union, Denmark participates in the common European labor market, which implemented free mobility of labor in 1993. Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) had implemented free mobility already in 1954.

Figure 1 shows the number of emigrants with Danish citizenship in each year from 1987 to 2007. We restrict the attention to those who were aged 18 or more when they emigrated.

**Figure 1:** Danish migrants aged 18 or more, 1987 to 2007

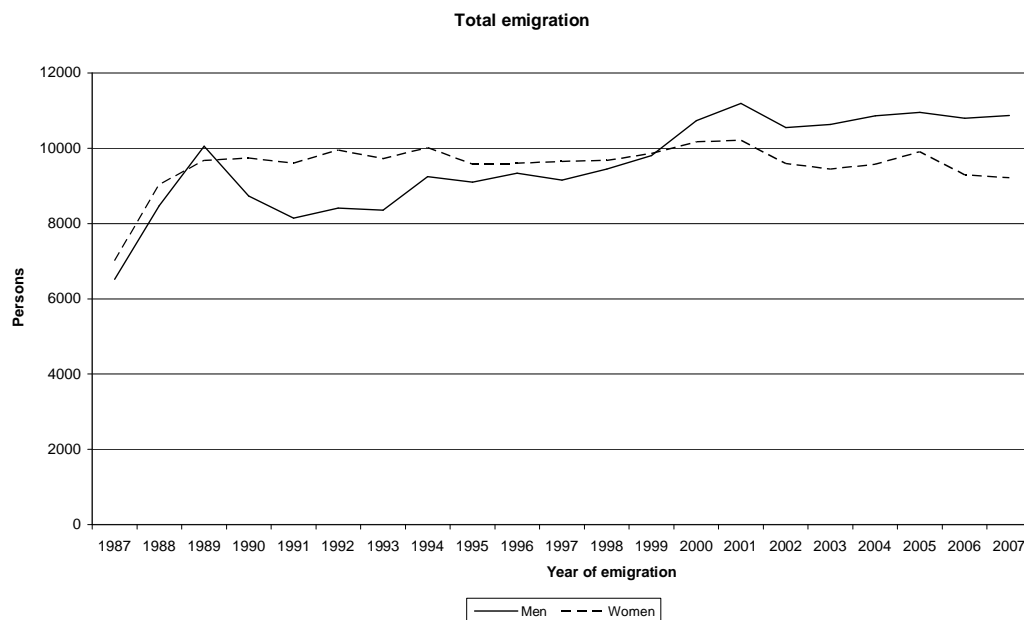
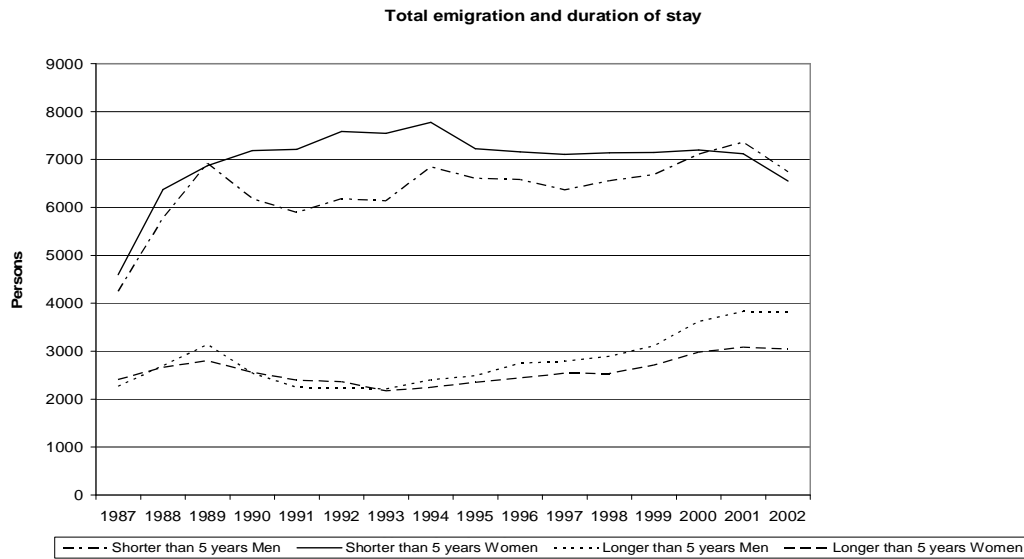


Figure 2 reports the number of male and female adult emigrants from 1987 to 2002, according to whether they stayed abroad for at least 5 years (including those still abroad) or returned within 5 years. Majority of emigrants in each year have returned within 5 years. Staying abroad for at least five years suggests a relatively high likelihood of permanent emigration: from 1980 until 1998, 88 percent of those who had not

<sup>1</sup> See Alesina and Giuliano (2008)

returned within five years stayed abroad still after ten years. And among emigrants who left between 1980 and 1993, 82 percent of those who had not returned within five years had not returned within 15 years, either. Furthermore, we see much more fluctuation in emigration among those who returned within 5 years. The number of women going abroad for at least 5 years has fluctuated between 2,000 and 3,000 in almost every year. There has been a steady increase in long-term emigration from 1993 onwards, especially among men whose annual emigration rate reached almost 4,000 in 2001 and 2002, while the rate for women was about 3,000.

**Figure 2:** Duration of stay abroad for Danish migrants aged 18 or more, 1987 to 2002



In 2008, Statistics Denmark carried out two surveys among Danes who had emigrated in 1987, 1988, 1992, 1993, 1997, 1998, 2001 and 2002. One survey targeted Danes who still stay abroad, and another Danes who had subsequently returned to Denmark. Representative samples of 3,079 Danes who have emigrated and later returned to Denmark, and 4,260 Danes who have emigrated and still live abroad were obtained. The response rate in the survey for Danes who have returned to Denmark was 67 percent. In the survey of Danes who stay abroad, the response rate was 61 percent. The survey also included 134 Danes who had migrated to Greenland or Faroe Islands, which are autonomous regions but still part of Denmark. They have been excluded as many of these migrants could originally come from Greenland or Faroe Islands, and actually be returning home rather than emigrating. Therefore, the data consists of the responses by those 4,126 Danes who did not emigrate to Greenland or Faroe Islands.

The data to be mainly used in this study is the one from the survey of Danes who stay abroad, but the survey on those who have returned can be used as well. Tables 1a and 1b report how the respondents in the survey were distributed between different destination country groups, and where they live currently. English-speaking countries stand out as the main destination, followed by other Nordic countries, Western Europe and German-speaking countries. Looking at individual destination countries instead of country groups, the United Kingdom and the United States are by far biggest destinations, followed by Norway, Germany and Sweden.

**Table 1a.** Main destinations in the survey for Danes who stay abroad

<b>Country group</b>	<b>Men</b>	<b>Women</b>	<b>Total</b>
English-speaking	762	844	1,606
Other Nordic	411	451	862
Western Europe	298	364	662
German-speaking	263	325	588
Rest of Asia	126	40	166
Rest of Europe	62	49	111
Rest of Africa	31	25	56
Latin America	35	17	52
Middle East and North Africa	16	7	23
<b>Total</b>	<b>2,004</b>	<b>2,122</b>	<b>4,126</b>

Source: Register data

**Table 1b.** Main residence country groups in the survey for Danes who stay abroad

<b>Country group</b>	<b>Men</b>	<b>Women</b>	<b>Total</b>
English-speaking	761	833	1,594
Other Nordic	396	443	839
Western Europe	280	361	641
German-speaking	254	306	560
Rest of Asia	144	44	188
Rest of Europe	57	54	111
Latin America	41	16	57
Rest of Africa	29	19	48
Middle East and North Africa	20	13	33
Denmark	22	33	55
<b>Total</b>	<b>2,004</b>	<b>2,122</b>	<b>4,126</b>

Source: survey and register data

### 3. Earlier Results on Danish Emigrants

Poutvaara, Munk and Junge (2009) used the survey data to study how Danes who emigrate and stay abroad differ from Danes who stay in Denmark, in terms of pre-emigration earnings, educational qualifications and demographic characteristics. The main motivations of emigrating and cross-country differences in educational qualifications and earnings were also examined.

In a seminal contribution, Borjas (1987) analyzed the effect of cross-country differences in income distribution on the self-selection and earnings of immigrants. The main thesis was that the immigrants to the United States tend to come from the upper side of the income distribution if there is sufficiently high correlation between individual earnings in the country of origin and expected earnings in the United States, in case of migrating there, and if the country of origin has more equal income distribution than the United States. In case of emigration from Denmark, the Borjas hypothesis suggests that those looking for higher salaries should be more likely to choose countries with a higher average level of earnings, and wider income differences, if they belong themselves on the upper end of the earnings distribution. As Denmark is one of the richest and most redistributive European welfare states, Danes with high earnings capability should be more likely to emigrate to rich countries with lower taxes and wider income distribution. Higher wages and lower taxes should also be a more important motivation for those going to countries like the United States and the United Kingdom, than for those migrating to other Nordic or Western European countries.

Findings by Poutvaara et. al are mostly in line with these predictions. First, Danish men going abroad when aged 30 to 59 earn typically clearly more before emigration than those who stay. A surprising result from analysis of earnings equations was that the destination dummy for university-educated going to the United States was in several years lower than the destination dummy for Sweden, contrary to what the Borjas (1987) hypothesis would suggest. The authors propose that this might be due to posi-

tive selection to the United States taking place through migration before studies are completed, or through migration first to some other country, and then subsequently to the United States.

Second, Danish men also earn considerably more in the United States and the United Kingdom than in Norway, Sweden and Germany, Germany being between Anglo-Saxon and Scandinavian destinations. Among women, cross-country differences in earnings were considerably smaller. A notable difference is that 26 percent of Danish women living in the United States stay at home to take care of home and children. In the United Kingdom and Germany, the fraction of women at home varies between 12 and 15 percent, while in Sweden and Norway it is only 3-4 percent.

Third, differences arose also when occupations of Danes in various countries were examined. Danish men living abroad are most often high-skilled workers (30 percent) or in management (26 percent). Both groups are a considerably larger fraction of Danes living in the United States and the United Kingdom than in Norway and Sweden, with fractions in Germany in between.

Fourth, a huge difference in the educational qualifications between Danes who stayed in Denmark and those who lived abroad was also found. It can be seen by comparing tables 3a and 3b, that the Danish respondents abroad are much better educated than the Danes who stay in Denmark. In 2007, 23 percent of Danes aged 30-59 in Denmark had only basic education. Abroad, the fraction was only 2 percent. In Denmark, less than one percent of men and women aged 30 to 59 have a doctoral degree, and 8 percent of men and 7 percent of women a Master's degree. Among emigrant men who stay abroad, 8 percent have a doctoral degree and 32 percent a Master's degree. The corresponding numbers for Danish women staying abroad are 5 percent and 25 percent.

**Table 3a. Education of Danes abroad in 2007; survey for stayers**

<b>Highest level of education</b>	<b>Men</b>	<b>Women</b>
Basic school	2.40	2.59
General upper secondary	6.30	8.34
Vocational upper secondary	3.80	4.01
Vocational education and training	14.14	11.92
Short higher	8.50	7.78
Medium higher	6.80	17.15
Bachelor degree	16.34	17.81
Long higher	32.73	25.49
Doctoral degree or equivalent	9.00	4.90
<b>Total</b>	<b>100.00</b>	<b>100.00</b>

*Source: Survey and register data*

**Table 3b.** Education of Danes aged 25-57 in 2007

<b>Highest level of education</b>	<b>Men</b>	<b>Women</b>
Basic school	22.92	21.70
General upper secondary	4.57	4.90
Vocational upper secondary	2.06	2.10
Vocational education and training	41.25	34.99
Short higher	7.35	5.16
Medium higher	9.87	20.67
Bachelor degree	1.97	2.45
Long higher	8.00	6.75
Doctoral degree or equivalent	0.63	0.34
Unknown	1.37	0.95
Total number of obs.	1,165,570	1,140,658

Source: Register data

When it comes to motivations of emigrating, work-related considerations were especially pronounced for men going to the United Kingdom, and less so for men going to Sweden and Norway. Remarkable gender differences were also found: for 53 percent of men and 22 percent of women, considerations related to own work were the main motivation to emigrate, whereas Family-related considerations dominated for 47 percent of women and 19 percent of men. The smaller cross-country earnings differences for women are in line with women making their migration decisions more often based on considerations related to their partner.

**Table 4.** Main purpose of emigration

<b>Considerations related to:</b>	<b>Men</b>	<b>Women</b>	<b>Total</b>	
	Pct.	Pct.	Freq.	Pct.
<b>Own work</b>	<b>53.44</b>	<b>21.91</b>	<b>1,536</b>	<b>37.23</b>
Being sent by employer	19.06	4.76	483	11.71
Other work-related	34.38	17.15	1053	25.52
<b>Partner and family</b>	<b>18.61</b>	<b>47.17</b>	<b>1,374</b>	<b>33.30</b>
Migrating to live with a partner	11.78	30.11	875	21.21
Other family-related	6.84	17.06	499	12.09
<b>Studies and language</b>	<b>9.28</b>	<b>11.07</b>	<b>421</b>	<b>10.20</b>
<b>Adventure</b>	<b>11.63</b>	<b>11.88</b>	<b>485</b>	<b>11.75</b>
<b>Other motivations</b>	<b>18.66</b>	<b>19.84</b>	<b>310</b>	<b>7.51</b>
Total number of obs.	2,004	2,122	4,126	4,126

Source: Survey data

**Table 5a.** *Main purpose of emigration for Danish men*

<b>Motivations</b>	<b>English-speaking countries</b>	<b>Other Nordic countries</b>	<b>Western Europe</b>	<b>German-speaking countries</b>	<b>Other European countries</b>	<b>Africa,Asia and Latin America</b>
Own work	48.16	45.26	56.71	58.94	67.74	73.08
Partner and family	18.24	29.20	18.12	13.31	14.52	7.69
Studies and language	12.86	6.33	7.72	13.31	3.23	0.96
Adventure	14.44	8.27	10.74	10.27	8.06	12.02
Other motivations	6.30	10.95	6.71	4.18	6.45	6.25
Total number of obs.	762	411	298	263	62	208

*Source: Survey and register data*

**Table 5b.** *Main purpose of emigration for Danish women*

<b>Motivations</b>	<b>English-speaking countries</b>	<b>Other Nordic countries</b>	<b>Western Europe</b>	<b>German-speaking countries</b>	<b>Other European countries</b>	<b>Africa,Asia and Latin America</b>
Own work	16.82	23.73	26.65	24.31	20.41	33.71
Partner and family	45.50	48.56	46.15	49.23	55.10	48.31
Studies and language	14.93	2.88	13.46	12.92	4.08	3.37
Adventure	15.28	10.64	8.79	8.92	12.24	8.99
Other motivations	7.46	14.19	4.95	4.62	8.16	5.62
Total number of obs.	844	451	364	325	49	89

*Source: Survey and register data*

Interesting findings also arose when respondents were asked on a number of considerations related to income distribution and the welfare state whether they were a reason in favour of or against emigrating from Denmark. Table below reports the fraction of respondents that considered each issue as an argument in favour of emigrating.

**Table 6a.** *Economic and public service considerations related to migration for Danish men*

<b>Considerations related to:</b>	<b>In favor of emigrating</b>	<b>Neutral</b>	<b>Against emigrating</b>	<b>Not relevant</b>	<b>Total no. of obs.</b>
Standard of living	47.36	28.84	7.04	16.77	2004
Wage level	58.43	21.06	6.19	14.32	2004
Taxation	54.84	20.66	2.45	22.06	2004
Daycare	14.33	36.26	21.05	28.36	342
Schools	32.75	32.75	18.71	15.79	342
Health care	10.08	35.23	22.50	32.19	2004
Old-age care	1.80	27.15	19.46	51.60	2004
Public pensions	1.25	26.50	16.87	55.39	2004
Other transfers	1.65	26.50	14.42	57.44	2004

*Source: Survey data*

**Table 6b.** *Economic and public service considerations related to migration for Danish women*

<b>Considerations related to:</b>	<b>In favor of emigrating</b>	<b>Neutral</b>	<b>Against emigrating</b>	<b>Not relevant</b>	<b>Total no. of obs.</b>
Standard of living	32.09	26.15	9.38	32.38	2122
Wage level	28.84	25.78	12.91	32.47	2122
Taxation	27.80	22.48	2.78	46.94	2122
Daycare	16.82	26.79	22.12	34.27	321
Schools	34.27	24.92	16.82	23.99	321
Health care	9.05	26.25	18.57	46.14	2122
Old-age care	1.46	21.21	17.44	59.90	2122
Public pensions	0.80	20.69	16.02	62.49	2122
Other transfers	1.18	21.87	11.59	65.36	2122

*Source: Survey data*

Taxation and the standard of living stand out as the main considerations in favour of migrating for both men and women, but the fractions of women reporting them as relevant are considerably smaller.

It was also explored whether there economic and public service considerations in favour of or against emigrating differ between emigrants to different destination countries. Taxation was a consideration in favour of emigrating for more than half of men going to all other destination countries than other Nordic countries, and even among men going to other Nordic countries, 35 percent regarded taxation as a reason to emigrate. Old-age care, public pensions and other income transfers were typically seen as a reason against emigrating by respondents going outside the Nordic countries.

**Table 7a.** *Economic and public service considerations related to migration for men according to destination*

<b>Considerations related to:</b>	<b>English-speaking countries</b>		<b>Other Nordic countries</b>		<b>Western Europe</b>		<b>German-speaking countries</b>		<b>Other European countries</b>		<b>Africa, Asia and Latin America</b>	
	For	Against	For	Against	For	Against	For	Against	For	Against	For	Against
Standard of living	48.4	9.6	37.5	4.6	51.7	6.4	45.6	4.6	43.6	12.9	60.1	4.8
Wage level	62.9	4.7	39.9	8.0	58.1	10.1	59.7	6.5	79.0	4.8	71.6	2.4
Taxation	60.9	2.1	34.6	3.4	53.0	3.4	57.0	1.5	67.7	3.2	68.6	1.4
Health care	5.9	31.4	13.1	7.3	15.4	20.1	16.4	10.7	3.2	35.5	5.8	34.6
Old-age care	0.8	26.4	4.1	6.3	1.3	16.8	2.7	12.9	0.0	27.4	1.0	29.8
Public pensions	0.8	23.6	3.2	3.9	1.3	16.1	0.8	10.7	0.0	27.4	0.0	23.6
Other transfers	0.8	20.5	2.2	4.4	1.7	13.4	3.0	8.4	1.6	22.6	1.9	18.8

*Source: Survey and register data*

**Table 7b.** *Economic and public service considerations for women according to destination*

Considerations related to:	English-speaking countries		Other Nordic countries		Western Europe		German-speaking countries		Other European countries		Africa, Asia and Latin America	
	For	Against	For	Against	For	Against	For	Against	For	Against	For	Against
Standard of living	31.3	14.1	29.3	2.7	34.9	10.2	31.1	4.3	30.6	18.4	47.2	9.0
Wage level	30.3	14.5	24.2	6.7	26.1	19.0	35.1	10.5	14.3	22.5	34.8	9.0
Taxation	33.3	4.2	21.7	2.0	25.3	1.9	27.1	1.5	16.3	2.0	25.8	2.3
Health care	5.2	30.8	6.9	5.1	13.7	15.7	18.2	6.8	4.08	22.5	6.7	23.6
Old-age care	1.0	27.7	2.4	3.6	1.7	15.4	1.9	10.5	0.0	24.5	0.0	20.2
Public pensions	0.1	26.3	1.6	2.9	1.1	14.0	1.2	8.9	2.0	24.5	0.0	14.6
Other transfers	1.2	19.7	1.8	2.2	0.8	9.6	0.9	5.9	2.0	12.2	0.0	11.2

Source: Survey and register data

#### 4. Preferences for Redistribution

There is a body of both theoretical and empirical economic literature trying to address the problem of the formation of preferences for redistribution.

The standard approach is to concern purely pecuniary factors as determining individual preferences for redistribution. The basic political economic model of this type was first provided by Meltzer and Richards (1981). The static model was extended by Benabou and Ok (2001), whose dynamic model allows for social mobility. Whereas in the former model the individuals only care about their current income, they take also their future income into account in the latter. In case of long-lasting redistributive policies, future income prospects matter in determining current preferences for redistribution.

Further extension is to assume that individuals do not only care about their own consumption, but that there instead is some measure of income distribution as an argument in the utility function. Alesina and Giuliano (2008) distinguish between two cases. First, some measure of income distribution can be in the utility function indirectly. In this case individuals do not care about inequality per se but only about its effect on one's own consumption. Externalities in education and crime have been proposed as channels through which people in the upper end of the income distribution could be negatively affected by inequality for selfish reasons. On the other hand, it can be argued that more inequality creates incentives to exercise more effort, and this can work in favour of society as a whole. Second, a measure of income distribution can be in the utility function directly. In that case, individuals have preferences on distribution of income per se instead of caring only how it affects their own consumption. A topic for empirical study can then be to investigate what determines individual's ideal level of distribution or justifiable level of inequality.

In the preliminary analysis presented here we use a sample of Danish emigrants who had been living in an English-speaking country for at least five years when the survey took place to examine determinants of their preferences for redistribution in Denmark. The group of English-speaking countries was picked for this preliminary analysis be-

cause the findings by Poutvaara and others introduced in the previous section make the country group particularly interesting. Variable on preferences for redistribution in Denmark is based on the following question from the survey: “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?” The scale used in the survey was from 1 to 5 so that 1 means “Strongly in favor” and 5 means “Strongly against”. There was also option 6, “Prefer not to answer / don’t know”. In the preliminary analysis presented here the question was recoded so that a higher number means one is more favorable to redistribution, and answers to option “Prefer not to answer / don’t know” were set missing.

Individual characteristics used as explanatory variables so far include gender, age and age squared (to allow for concavity), educational level and set main purpose of emigration, and two variables concerning individual beliefs and attitudes that can be supposed to be related to individual preferences for redistribution. The first variable concerns one’s beliefs on determinants of material success. As Alesina and Giuliano (2008) note, views on acceptable level of inequality can be related to ones moral judgements on whether income distribution is fair. If one believes that material success is mostly determined by own effort, one might be less favourable to redistribution of income than someone who believes that individual success is mainly determined by luck. Measure of beliefs about determinants of material success is based on the following question from the survey: “Which of the following describes your standpoint when it comes to determinants of material success?” The scale used in the survey was 1 “Success is mainly determined by own work and choices”, 2 “Success is about equally determined by own work and choices as well as luck or parental background”, 3 “Success is mainly determined by luck”, and 4 “Success is mainly determined by parental background.” Since only six respondents picked options 3 or four, the analysis uses an indicator variable *effort* to indicate that one has picked option 1 “Success is mainly determined by own work and choices”. The second of the two variables concerning beliefs and attitudes is a measure of individual’s beliefs on trustworthiness of people in general. It is easy to come up with hypothetical channels through which beliefs on trustworthiness might be related to ones preferences for redistribution that are related to the social insurance nature of income redistribution. For instance, if one has low trust on people in general, one might think that people would tend to take advantage of more generous policies, and this would make one less favorable to redistribution. On the other hand, low trust on people in general might make one more against redistribution if one for instance thinks that redistribution is needed as an insurance against untrustworthy people. The variable measuring beliefs on trustworthiness of people is based on the following question from the survey: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” The options in the survey were 1 “Most people can be trusted”, 2 “Need to be very careful”, and 3 “Don’t know”. In the specification applied here an indicator variable *low\_trust* for option 2 was used.

For educational level we use indicator variable *short\_higher* for short and medium higher education or bachelor’s degree and *long\_higher* for master’s degree or higher. For main purpose of emigration we use an indicator variable *work\_related* for work related reasons for emigrating.

For estimation we proceed to an ordered logit regression, since the variable to be explained is discrete and ordinal. Estimation results are reported in the table below. Pre-

dicted probabilities for each outcome and marginal effects at the mean values of explanatory variables are reported in the appendix, and the predicted probabilities are compared to the sample frequencies of each outcome.

**Table 8.** *Ordered Logit Regression*

redist_de	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
female	.760729	.1028202	7.40	0.000	.5592052	.9622528
age	-.297371	.0802193	-3.71	0.000	-.4545979	-.1401441
agesqr	.0038118	.0009941	3.83	0.000	.0018635	.0057601
short_higher	-.2834369	.1211084	-2.34	0.019	-.520805	-.0460689
long_higher	-.3518336	.122835	-2.86	0.004	-.5925857	-.1110814
effort	-.685147	.0964763	-7.10	0.000	-.8742371	-.4960569
low_trust	-.3206359	.1294659	-2.48	0.013	-.5743845	-.0668873
work_related	-.448556	.1072206	-4.18	0.000	-.6587045	-.2384075
Number of obs	=	1491				
Pseudo R2	=	0.0418				

The regression results suggest that gender is a significant determinant of preferences for redistribution. The result that women are more in favor of redistribution is well known from this kind of analysis, although the relative size of the coefficient is surprisingly big. The result is consistent with the finding that men regarded taxation as a consideration in favor of emigrating more often than women. Younger individuals are also more supportive to redistributive policies.

Coefficients for the education dummies are also in line with earlier findings and theoretical considerations. For instance Alesina and Giuliano (2008) find significant negative coefficient for educational level dummies even after controlling for household income. The survey data contains also information on income, but since the variable is expected to be noisy it is not used in the regression at hand. Education should be picking some of the effect of income level, although as the finding by Alesina and Giuliano suggests, the relationship between education and preferences for redistribution is more complex. It should also be noted that when more educational categories were included in the model the relationship between education and preferences for redistribution appeared to be less straightforward. The survey data allows using occupation instead of education, and this is something that should be tried in the future.

Since staying abroad for at least five years suggests a relatively high likelihood of permanent emigration, effects such variables related to ones earnings potential are of particular interest. If individual preferences for redistribution in Denmark are determined by income or related variables even when one is not planning to move back, it might indicate that purely pecuniary concerns are only part of the explanation.

The coefficient for belief on own work and choices as main determinants of material success has the expected negative sign, and so does the coefficient for low trust on people. The results are consistent with those of Alesina and Giuliano (2008), Alesina and La Ferrara (2005) and Fong (2001). Work related reasons as a main reason for emigrating has a significant coefficient with a negative sign. This suggests that emigration decisions of individuals are related to their preferences for redistribution.

The survey data allows use of a number of interesting explanatory variables and models can be estimated separately for different destination country groups. A drawback

of the approach of using survey data on emigrants is that emigrants cannot be directly compared to those who stay in Denmark. However, the World Values Survey contains questions on tastes for redistribution and information on social and economic characteristics of the respondents, so at least some informal comparisons can be made. Further, the survey on the emigrants who have returned to Denmark can be used to study differences between temporary and permanent migrants.

## References

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## Appendix A. Survey.

The stayers survey was designed with several steps. First, Statistics Denmark contacted parents and siblings for those who in the summer of 2007 were emigrated in one of the years 1987, 1988, 1992, 1993, 1997, 1998, 2001, 2002 registered being abroad at least 3 months. Emigrants are not registered less than three months. In the CPR-register there is information about destination country, and year of emigration. From the CPR-register it is possible to track emigrants through their parents and siblings, if parents and siblings still live in Denmark. Statistics Denmark has also a register with people who have returned from abroad. On the basis of this register and the eight selected years were all non-returned persons between 18-59 years drawn from the register. This selected group was then compared and connected to the CPR-register. Thereafter it was possible to contact at least one parent. If the two parents were not living together they were both contacted by Statistics Denmark. They mailed a letter containing information about the investigation to 16,000 parents and 500 siblings and obtained contact information for around 10,500 emigrants. Parents could either use the internet, mailbox or an attached stamped envelope to send the information about their children, now grown up adults living abroad. However we had only valid email addresses for 7,075 people. In the final set up only 6,889 were available. Through email they were asked to fill out a web based questionnaire constructed by us. 4,260 persons answered the web scheme from June 2008 to August 2008. Three reminders were sent out to obtain the best data quality. The response rate on 61 percent was quite high compared to similar kinds of investigations.

The three tables below report response rates in percentages according to gender, country of residence, and year of emigration. Overall, the rates are remarkably similar. Therefore, the respondents are highly representative of the target population in the dimensions of gender, country of residence, and year of emigration.

**Table A1.** Response rates of men and women

	Men	Women
Overall response rate	61	61

**Table A2.** Response rates of men and women in main destination countries

Country	Men	Women
USA	65	57
Great Britain	62	64
Norway	59	66
Sweden	54	62
Germany	63	62
Switzerland	70	68
Australia	66	53
France	66	52
All other countries	59	61

**Table A3.** Response rates of men and women according to the year of emigration

Year	Men	Women
1987	61	56
1988	62	62
1992	61	63
1993	59	56
1997	60	58
1998	62	62
2001	60	64
2002	63	63

## Appendix B. Predicted probabilities and marginal effects.

Variable	Obs	Mean	Std. Dev.	Min	Max
redist_dum~1	1491	.2481556	.4320875	0	1
redist_dum~2	1491	.2032193	.4025294	0	1
redist_dum~3	1491	.1086519	.3113064	0	1
redist_dum~4	1491	.2642522	.4410821	0	1
redist_dum~5	1491	.175721	.3807103	0	1
p1ologit	1491	.2482127	.1204247	.0517561	.5966518
p2ologit	1491	.2049686	.0396493	.0786314	.2473921
p3ologit	1491	.1097192	.0118968	.0658552	.1212978
p4ologit	1491	.2625836	.0657054	.0957364	.3388165
p5ologit	1491	.174516	.0904405	.035547	.4997247

Marginal effects after ologit

y = Pr(redist\_de==1) (predict, outcome(1))  
= .22870388

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]	X
female*	-.1346943	.01838	-7.33	0.000	-.17072 -.098668	.513078
age	.0524558	.01416	3.71	0.000	.024707 .080204	39.7626
agesqr	-.0006724	.00018	-3.83	0.000	-.001016 -.000328	1620.61
short_~r*	.0509031	.02215	2.30	0.022	.007481 .094325	.380282
long_h~r*	.063466	.02269	2.80	0.005	.018988 .107944	.37894
effort*	.1242217	.01802	6.89	0.000	.088897 .159546	.419852
low_tr~t*	.0598764	.02548	2.35	0.019	.009928 .109825	.156942
work_r~d*	.0823105	.02044	4.03	0.000	.04225 .122371	.32998

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

mfx, predict(outcome(2))

Marginal effects after ologit

y = Pr(redist\_de==2) (predict, outcome(2))  
= .22019722

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]	X
female*	-.0515118	.00783	-6.58	0.000	-.066852 -.036172	.513078
age	.0211105	.006	3.52	0.000	.009356 .032865	39.7626
agesqr	-.0002706	.00007	-3.63	0.000	-.000417 -.000124	1620.61
short_~r*	.0193246	.00806	2.40	0.016	.003531 .035118	.380282
long_h~r*	.0236939	.00802	2.95	0.003	.007971 .039416	.37894
effort*	.0444835	.00686	6.49	0.000	.031048 .057919	.419852
low_tr~t*	.0199319	.00706	2.82	0.005	.00609 .033774	.156942
work_r~d*	.0289043	.00669	4.32	0.000	.015802 .042007	.32998

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

. mfx, predict(outcome(3))

Marginal effects after ologit

y = Pr(redist\_de==3) (predict, outcome(3))  
= .12125308

variable	dy/dx	Std. Err.	z	P> z	[ 95% C.I. ]	X
female*	.002108	.00225	0.94	0.348	-.002296 .006512	.513078
age	-.0006871	.00092	-0.74	0.457	-.002497 .001123	39.7626
agesqr	8.81e-06	.00001	0.75	0.456	-.000014 .000032	1620.61
short_~r*	-.0012198	.00117	-1.05	0.296	-.003506 .001066	.380282
long_h~r*	-.0016881	.00141	-1.20	0.232	-.004456 .00108	.37894
effort*	-.0036789	.00218	-1.69	0.092	-.007953 .000595	.419852
low_tr~t*	-.0028049	.00217	-1.30	0.195	-.007049 .001439	.156942
work_r~d*	-.0030183	.00181	-1.66	0.096	-.006574 .000537	.32998

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

```
. mfx, predict(outcome(4))
```

```
Marginal effects after ologit
```

```
  y = Pr(redist_de==4) (predict, outcome(4))
    = .27453325
```

variable	dy/dx	Std. Err.	z	P> z	[	95% C.I.	]	X
female*	.0844744	.01205	7.01	0.000	.060852	.108097		.513078
age	-.0338669	.00939	-3.61	0.000	-.052268	-.015466		39.7626
agesqr	.0004341	.00012	3.73	0.000	.000206	.000663		1620.61
short_~r*	-.0326608	.01419	-2.30	0.021	-.060467	-.004855		.380282
long_h~r*	-.0406065	.01446	-2.81	0.005	-.068944	-.012269		.37894
effort*	-.0781128	.01176	-6.64	0.000	-.101162	-.055063		.419852
low_tr~t*	-.0380259	.01594	-2.38	0.017	-.069276	-.006776		.156942
work_r~d*	-.0522883	.013	-4.02	0.000	-.077773	-.026804		.32998

```
(*) dy/dx is for discrete change of dummy variable from 0 to 1
```

```
. mfx, predict(outcome(5))
```

```
Marginal effects after ologit
```

```
  y = Pr(redist_de==5) (predict, outcome(5))
    = .15531256
```

variable	dy/dx	Std. Err.	z	P> z	[	95% C.I.	]	X
female*	.0996237	.01383	7.20	0.000	.072511	.126737		.513078
age	-.0390123	.01061	-3.68	0.000	-.059806	-.018219		39.7626
agesqr	.0005001	.00013	3.80	0.000	.000242	.000758		1620.61
short_~r*	-.0363471	.01523	-2.39	0.017	-.066188	-.006506		.380282
long_h~r*	-.0448653	.0153	-2.93	0.003	-.074858	-.014872		.37894
effort*	-.0869135	.01219	-7.13	0.000	-.110812	-.063015		.419852
low_tr~t*	-.0389774	.0146	-2.67	0.008	-.067599	-.010356		.156942
work_r~d*	-.0559082	.01283	-4.36	0.000	-.081045	-.030772		.32998

```
(*) dy/dx is for discrete change of dummy variable from 0 to 1
```