The Effects of Open Borders on Migrant Self-selection in the Netherlands

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Summary

Understanding migration is a key factor in both scientific modelling of the phenomenon and in policy regarding it. This research aims to research but one of the many factors influencing migration: Economic migrant self-selection. This research aims to establish a link between the economic success of a migrant and the country of origin of said migrant as a result of economic self-selection originating from the difficulty to migrate. Using the most recent version of the European Social Survey, no conclusive relation could be found.

Introduction

Background

Migration is a crucial subject in the field of geography, especially since the types of migration have rapidly diversified in the age of globalization (King, 2012). Understanding the factors influencing migration is useful for scientist and politician alike; the former in order to improve existing models on migration, the latter to form a more comprehensive and effective migration policy. One aspect of migration of great interest for researchers is the motivation of individuals to migrate.

Research problem

The aim of this research is to establish if there is a link between the costs of migration for the migrant and the self-selection of migrants. Essential in this analysis is then that only voluntary migration is taken into account, as involuntary migration in the form of refugees are subject to totally different mechanics as they, as the name suggest, do not desire to migrate themselves.

The case used to investigate these phenomena is migration towards the Netherlands. This nation is chosen because it is a part of the Schengen area (Schengen visa info ,2020). The Schengen area consists of 26 countries, between which the free movement of people and goods is allowed. As a result, people migrating towards the Netherlands from within this area are expected to experience a significantly lower cost of migration compared to migrants from outside this area (Chiswick, 1999). This allows for the creation of two distinct groups of migrants for this research; migrants from within the Schengen area and migrants from outside the Schengen area.

Research structure

The data used for the analysis will be the European Social Survey 2018 (European social survey, 2020), which will from now on be abbreviated as ESS9.

This setup will allow for a comparison between these groups in order to find if there is a link between the costs of migration and migrant self-selection by answering the following question: *How do the open international borders in the Schengen area affect the self-selection of migrants towards the Netherlands?*

The hypothesis is that, when controlled for a number of other significant variables relating to income, a significant positive correlation between the income and origin of an individual from outside the Schengen area can be observed.

This hypothesis will be tested by means of a linear regression on the income of respondents of ESS 9 using the country of birth, or rather if this country is within or outside the Schengen area, as one of the independent variables together with other common variables that influence income. The latter will serve as a way to control for the variance of income in order to better analyse the correlation between place of birth and income. The aforementioned control variables will be decided upon by analysing the existing literature on the topic of income and migration in the theoretical framework.

Theoretical Framework

Migrant self-selection

In his paper on favourable migrant self-selection, Chiswick (1999) bases his model of migrant self-selection on the Human Capital Model. Chiswick focusses on so called 'economic migrants'; those that migrate for economic rather than ideological reasons. Also excluded here are refugees and tied movers. The model states that the return on migration is calculated in the simplest way as the wage differential between destination and origin divided by the costs of migration. These costs of migration consist of all the total investments that are necessary to migrate as well as the earnings that are 'lost' when one does no longer work in the country of origin. The higher the cost of migration, the more difficult it is to migrate. Chiswick (1999) goes on to conclude from this that the more difficult it is to migrate, the fewer people migrate, but since the returns on migration have to be high for it to be favourable, those that do migrate have to be skilled to achieve this. This will result in a higher migrant self-selection to a certain place when it is more difficult to migrate to said place. This also leads to the conclusion that when the selection pressure is higher, economical motives for migration will dominate (Chiswick, 1999).

These hypotheses are largely backed up by empirical data. In a study conducted amongst Polish migrants after the 2004 expansion of the European Union, researchers found patterns in accordance with these concepts. When movement within the EU was made easier, or the costs of migration were lowered, the absolute number of economic migrants increased and the motivations of migrants diversified to more ideological reasons (Luthra et al. 2016). There are some other interesting results to this study, however: The researcher found that economic migrants tended to be more circular, implicating that they had a higher tendency for return migration compared to other groups of migrants. Said economic migrants also generally earned lower wages and had a lower level of education compared to those that migrated for other reasons. Economic migrants did have higher overall employment rates (Luthra et al. 2016). These results indicate that in order to analyse migrant self-selection, compensating for education level will be pertinent.

However, economic factors alone cannot sufficiently explain migratory trends. In a study on the fertility post-war Estonian female cohorts, Kulu (2015) compares four competing hypotheses regarding migrants. One of these is the *Selection hypothesis*, which states that migration is the result of a certain behaviour of a migrant, rather than the other way around. In his study on the fertility of internal migrants in France, Courgeau (1989) acknowledged that demographic motives both have a major influence on and change as a result of migration. Some have gone as far as to say that international inequality is not a sufficient explanation for international migration (De Haas et al., 2019). This all indicates that economic factors alone are not a sufficient framework for explaining (international) migration.

De Haas et al. (2019) thus stated that international migration can not sufficiently be explained by economic factors. Although this statement at first seems to discredit Chiswick's Human Capital Model, this might not be the case on closer inspection. The main argument for the former statement is that migration does not occur between the poorest and wealthiest nations, but between poor and intermediately wealthy countries as well as between these intermediately wealthy countries and rich countries (De Haas et al. 2019). Based on wage differences alone, this is unexpected, though it can also be inferred that the cost of migration

from the poorest to the richest countries is simply too high, severely limiting this migration. The two observed migrant flows do adhere to these conditions; the wage differential is significant, yet the cost of migration is no longer insurmountable.

Income factors

In order to improve both the explanatory power of the statistical model, it is useful to establish which other variables also influence the income of an individual. This way it will be possible to correct the model according to these variables. Gender is one of these. Even in developed countries, the gender wage gap is still substantial (Kunze, 2017). Gender needs to be taken into account in this research.

In a report from the European commission focussed on the intentions of people to migrate, in this case *if* one desired to migrate rather than *why*, researchers found that people with secondary education were more likely to migrate than those with a primary or tertiary education level (Migali & Scipioni, 2018). However, among those with primary education, the number of people that only had the wish to migrate was constantly higher than the number of people that were preparing to migrate or were migrating. This pattern was less clear in the cohorts of secondary and tertiary educated people (Migali & Scipioni, 2018). This further indicates that education level is an important variable to correct for.

Age is another factor that should be touched upon here. When an individual gets older, wages generally increase. Experience and (additional) education also increase with age.

Model

Based on the literature, the following model for migrant self-selection can be established.
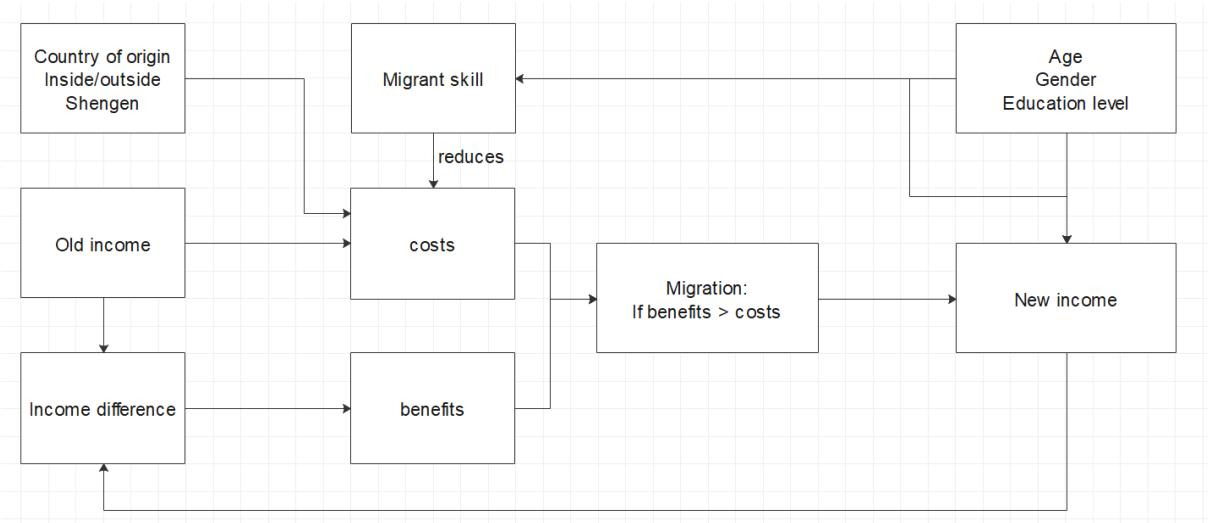

Figure 1: Migrant self-selection

According to this model, migration occurs if the benefits outweigh the costs. If a migrant comes from outside the Schengen area, the costs of migration will be significantly higher compared to those within this area. It follows logically then that the benefits of migration have to be much higher as well in order to offset these costs. The way to achieve this for a migrant is to lower the costs of migration as a result of skill, as proposed by Chiswick (1999), and maximize benefits by being able to have a high new income after migration. This can also be realized through migrant skill (figure 1). In conclusion: The higher the costs of migration,

the higher the skill of a potential migrant has to be in order for migration to be beneficial. This is the process of self-selection.

Methodology

European Social Survey

The dataset used for this experiment is a subset of ESS9 from 2018 (European Social Survey, 2020). ESS is an academic survey conducted every two years across Europe. The method used by the ESS is face-to-face interviews with cross-national samples, which are newly selected for every iteration rather than using the same respondents every time. The goals of the ESS are, according to themselves, to measure social stability and change, improve the standards for cross-regional research, provide indicators for national progress based on citizen perception and improve the database on social change (European Social Survey, 2020).

The ESS follows the ethical code of the Declaration on Professional Ethics of the International Statistics Institute, guaranteeing that the data has been collected in accordance with ethical considerations (European Social Survey, 2020) (International Statistics Institute, 2010). As for this research, the obtained ESS data was already anonymised, making sure that the following analysis does not anyone's privacy.

The specific subset of ESS 9 used here consists of all respondents from the Netherlands for a total sample size of 1673 individuals. Of these, 179 indicated that their country of birth was someplace else than the Netherlands. These people will be the subject of statistical analysis, with those born in the Netherlands serving as a control group.

Statistical Analysis

In order to test the hypothesis on migrant self-selection, a linear regression will be applied on the database in SPSS. The dependent variable used will be *Your usual [weekly/monthly/annual] net [pay/pensions/social benefits]* since this is the variable in the dataset measuring income that has the largest number of respondents.

The independent variable that will be used for the analysis is *Country of birth*, which indicates the country of origin of the respondents not born in the Netherlands

The division of the countries of origin in SPSS is as follows:
Group 1 (NL). Netherlands

Cntbrthd = NL - Missing

Group 2 (SCH).   Schengen area (Schengen visa info, 2020)

Cntbrthd = BE – DE – FR – LU – PT – ES – IT – AU - GR - DK - FI – IS – NO – SE – EE – HU - LV – LT – MT – PL – SI – SL – CZ – CH – LI

Group 3 (WRD).   Outside Schengen

Cntbrthd = other

cc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1,00	1495	89,4	89,4	89,4
	2,00	40	2,4	2,4	91,8
	3,00	138	8,2	8,2	100,0
	Total	1673	100,0	100,0	

Figure 2: Sample groups and sizes

As a second step dummy variables were created for this variable. This is done in order to guarantee that SPSS does not treat this variable as a numeric one.

The three control variables of age, gender and level of education that have been established from existing theory. For age the variable *Age of the respondent* will be used, for gender the variable *gender*. Here, the values for male and female are 0 and 1 respectively. For education the variable *Highest level of education, ES – ISCED* will be used, but this variable will be recoded into *Education category* with the values *Primary, Secondary* and *Tertiary* to decrease the number of categories. The categories are numbered 1, 2 and 3 respectively. Similar to the variable for country of origin, dummies will be created here as well to make sure SPSS treats the variable correctly.

The variables will be entered in two models. The first will only test the three previously established control variables. The second model will also include the country of birth as a variable. Collinearity statistics will be included in these models as a measure of control for multicollinearity, as well as to decrease the chance that any conclusion drawn from the resulting models is actually the result of other, here invisible variables.

Limitations

Even though this research strives for the most representative test to analyse the stated hypothesis, there are nonetheless some limitations that restrict the explanatory power of the model. The most problematic of these limitations is the independent variable used to group the individual respondents. The variable *country of birth* Only indicates where the respondent was born and as such does not allow for distinguishing between economic migrants, refugees and other forms of migration. As a result, the results might become influenced, since other types of migration are measured as economic migration. This variable was nonetheless selected, because the dataset did not contain any variable indicating the motivations behind migration towards the Netherlands.

Another limitation is the limited sample size for individuals that migrated from inside of the Schengen area. After excluding all missing and invalid cases, only forty individuals from this group remained (figure 2). This group is still large enough to perform statistical analysis on, yet the chances that any significant relation will be found is reduced as a result.

Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,207[a]	,043	,039	6880,627
2	,208[b]	,043	,037	6886,712

a. Predictors: (Constant), Education_categories=3.0, Gender, Age of respondent, calculated, Education_categories=2.0

b. Predictors: (Constant), Education_categories=3.0, Gender, Age of respondent, calculated, Education_categories=2.0, country_category=SCH, country_category=WRD

Figure 3.1: Model summary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1955595189	4	488898797,2	10,327	,000[b]
	Residual	4,359E+10	921	47343028,71		
	Total	4,554E+10	925			
2	Regression	1973318088	6	328886347,9	6,935	,000[c]
	Residual	4,357E+10	919	47426803,19		
	Total	4,554E+10	925			

a. Dependent Variable: Your usual [weekly/monthly/annual] net [pay/pensions/social benefits]

b. Predictors: (Constant), Education_categories=3.0, Gender, Age of respondent, calculated, Education_categories=2.0

c. Predictors: (Constant), Education_categories=3.0, Gender, Age of respondent, calculated, Education_categories=2.0, country_category=SCH, country_category=WRD

Figure: 3.2: ANOVA

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	3180,474	1217,904		2,611	,009		
	Age of respondent, calculated	25,959	12,074	,070	2,150	,032	,994	1,006
	Gender	-2454,866	452,828	-,175	-5,421	,000	,998	1,002
	Education_categories=2.0	2148,697	883,567	,152	2,432	,015	,266	3,764
	Education_categories=3.0	2635,663	911,087	,181	2,893	,004	,265	3,772
2	(Constant)	3190,879	1225,352		2,604	,009		
	Age of respondent, calculated	25,825	12,087	,069	2,137	,033	,993	1,007
	Gender	-2437,940	454,077	-,174	-5,369	,000	,994	1,006
	Education_categories=2.0	2140,423	887,516	,152	2,412	,016	,264	3,791
	Education_categories=3.0	2642,637	914,983	,182	2,888	,004	,263	3,797
	country_category=SCH	-946,070	1561,235	-,020	-,606	,545	,991	1,009
	country_category=WRD	-93,309	883,218	-,003	-,106	,916	,991	1,009

a. Dependent Variable: Your usual [weekly/monthly/annual] net [pay/pensions/social benefits]

Figure 3.3: Linear regression results.

Firstly, when looking at the model in its entirety (figure 3.1), it becomes clear that with an R squared of 0,043, the model is far from capable of explaining income variance. Although only 4,3 percent of this variety is captured, it should be noted that it is notoriously difficult to capture most of the variance in the field of social sciences. Models on income like this one are especially poor in capturing variance as a result of the large number of potential variables influencing income. The ANOVA (figure 3.2) shows a promising significance of 0,000, which is well below the threshold of 0,05 and corresponds to a more than 99,9 percent chance that the model as a whole represents actual correlation rather than accidental patterns. The adequate significance of the model allows for analysis of the coefficients.

When looking at model number 1 (figure 3.3), it becomes clear that all of the proposed control variables of age gender and level of education are indeed significant, as was expected from the literature. However, the collinearity statistics show relatively low tolerances and high VIF values for the level of education. These values are not outside acceptable parameters, with tolerance above 0.2 and VIF below 4, but they are remarkable as they differ so much from the other collinearity results. All the other collinearity results are excellent, with tolerances of more that 0.99 and VIF scores close to 1. These values are all well within the acceptable parameters

The most interesting result here is found in model number 2 (figure 3.3). No significant correlation is found between the country of origin and the income of an individual for both inside and outside of the Schengen area. This is in contrast to the hypothesis for this research, but it has to be said that it does not go against previous literature found, since the absence of any significant correlation in this research does not automatically translate into a rejection of the theory. The results found here might be the result of either one of the two limitations mentioned before in the methodology. If there is no distinction between economic migrants and other types of migrants in the dataset, the effect of the economic migrants might be offset by any other significant group of migrants. The limited sample size of the category of people that have migrated from within the Schengen area also limits the possible significance of any correlation. However, the fact that both groups were not significant compared to the control group (those born in the Netherlands), indicates that the former effect is more prominent than the latter.

To conclude with the research question: No relation could be found between the open borders of the Schengen area and the effect of migrant self-selection.

Conclusions

As has become clear in the results section, no significant correlation between the type country of origin of the respondents, categorised in the Netherlands, inside the Schengen area and outside the Schengen area on the one hand and income on the other can be found. This is different from other literature, like Platt et al. (2016) that found clear indicators for a change in the types of migration based on open borders, as well as some economic effects. The results found in this research, or rather the lack thereof, once again illustrates that migration is a complex and multifaceted phenomenon that defies simple explanations.

The limited scope of this research and the inconclusiveness of the results are an invitation for further research. There are two kinds of research that could fill up existing gaps in the current literature. The first is a comprehensive study on the motivations of migrants in the Netherlands, specially over a longer period of time. This could enlighten the scientific community on the types of migrants based on motivations, as well as the change over time in motivation. The second recommendation is further research on the specific topic of self-selection and income or other forms of economic success.

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