Influence of socioeconomic status on settlement location of EU migrants in the Netherlands

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Abstract

The population of the Netherlands is ageing, and it will continue to do so for at least another decade. Additionally, the aged-dependency ratio will rise by 5 per cent until 2050. The damage of an ageing population can possibly be limited by migration through increasing the working population. The European Union has created an interesting context for inter European migration. With the 'borderless' Europe, migrants can cross borders of the Schengen countries without restraint. This creates an interesting situation and a possible solution for the ageing population of the Netherlands.

This quantitative study examines the existence and strength of the relationship between the socioeconomic status and settlement location of immigrants with an EU background living in the Netherlands. Socioeconomic status is defined by income, level of education and occupation. Data from the European Social Survey (ESS) is used to create a multinomial logistic regression model with the settlement location as the dependent variable. The variables which determine socioeconomic status are used as the independent variables. Additionally, the results are controlled for by age and gender of the respondents.

The results show that socioeconomic status is only a partial predictor of the settlement location of EU migrants in the Netherlands, as only income affects the settlement location. The model showed that immigrants with low and medium incomes are less likely to live in any other region than the big city compared to immigrants with a high income. The results correspond partly with the existing literature. It was expected that migrants with lower socioeconomic status were more dependent on the network effect, which is the strongest in the big cities.

Keywords: EU migration, settlement location, socioeconomic status

Content

1.0 Introduction

1.1 Background and research problem

According to the research of Nijhoff (2018), the possibility of free movement of citizens of the European Union (EU) created a new contemporary context regarding migration. The labour markets of the EU member states are now accessible to all citizens of the Schengen Area. Furthermore, border control on mutual borders of the members of the Schengen Area has been removed. These changes, combined with the increase of cheap and fast transportation and more accessible communication, have given migrants the opportunity to be more variable in their migration choices. This 'borderless' Europe created a migration context that differs from the international context (Nijhoff, 2018).

Moreover, the Dutch population is ageing and will continue to do so for at least another decade (CBS, 2021c). This ageing results from an increase in life expectancy and a lowering fertility rate (Kuné, 2009). Causing relatively more retirees and fewer workers to support them. A measure to quantify this effect is using the aged-dependency ratio; it is the retired population (65 years and older) relative to the labour force population (15 to 64 years of age) (Withers, 2002). In 1990, the aged-dependency ratio of the Dutch population was 12.8 per cent (CBS, 2021c). Until 2020, this ratio rose to 19.5 per cent (CBS, 2021c). According to Kuné's (2009) research, the Dutch aged-dependency ratio will rise to 24 per cent of the total population in 2050. This population ageing raises concerns about the fiscal sustainability of public pension schemes, healthcare systems and other social services.

It is frequently researched if migration can counteract ageing in developed countries (Sobotka, 2009; Strozza, 2010). Incoming migrants will enlarge the working population of the host country, resulting in a smaller imbalance between the working population and the retired population. Thus, putting less stress on public pension schemes, healthcare systems and other social services. According to the research of Withers (2002) on the ability of immigration to counteract population ageing in Australia, immigrants in Australia would be able to reduce the aged-dependency ratio up to 5 per cent and possibly even more. The effect on the Netherlands would be more negligible as the relative migration towards the Netherlands is less, compared to the migration towards Australia (Simon-Davies, 2018; CBS, 2021b). Nonetheless, migration could be part of the solution to the ageing population.

However, according to the most recent annual report on integration in the Netherlands, people with a migration history are in a less favourable situation than to people with a Dutch background (CBS, 2020b). On average, people with a migration background have a lower level of education, lower level of income, a lower self-rated health level, and are more likely to be unemployed compared to people without a migration background (CBS, 2020b). This gap in socioeconomic status is the largest between migrants with non-western background and native Dutch people. Nevertheless, migrants with an EU background also have a lower socioeconomic status than people with a Dutch background (CBS, 2020b).

Wells (2009) argues that immigrant segregation is an undermined phenomenon. There is extensive literature about racial and ethnic segregation, but immigrant segregation is studied less. Nonetheless, the conditions of segregation are similar. For example, minority race/ethnicity and immigrant status are two factors that society in the United States uses to confer advantages (or disadvantage) (Wells, 2009). Furthermore, when individuals from marginalised and non-marginalised groups are separated from each other, the outcomes regarding education can be unequal and unjust (Orfield & Gordon, 2001). Wells (2009) says that these are why most of the concepts and implications of racial and ethnic segregation are also applicable in the discussion of immigrant segregation.

The combination of the earlier mentioned 'borderless' Europe and the dependency of the Netherlands on migration to counteract ageing makes the inter-European Union immigrants an interesting group

to research. As in the past two decades, the migration situation in the European Union has changed significantly. With the 2004 and 2007 enlargements of the European Union, a new flow of Eastern- and Middle European immigrants have come to Western Europe (Favell, 2008). The financial crisis of 2008 has amplified this effect. The number of immigrants from Southern Europe also increased. More particular, between 2004 and 2015, the number of Middle and Eastern Europeans in the Netherlands quadrupled. The number of Southern Europeans increased by a third throughout the same period. (CBS, 2020b).

Based upon the analysis of the CBS (2021b), migrants with an EU background are unevenly spread over the Netherlands. There are small concentrations of immigrants with an EU background, in municipalities near the border, in cities and near intensive agricultural regions, such as the Noordoostpolder (CBS, 2020). With these settlement patterns in mind, it is a challenge for the policymakers to avoid ghettoisation, promote equity and use the potential of migrants to its fullest.

In sum, immigrants are important or even essential for the Netherlands to counteract population ageing. To ensure that policies are implemented effectively and efficiently, the policymakers must know the settlement behaviour of immigrants. And especially if their settlement location can be predicted by their socioeconomic status. What is their motivation to move to either the urban or rural region in the Netherlands? Can these migrants be distinguished by their socioeconomic status? To shed light on these questions, the following main research question is formulated for this research:

How does socioeconomic status influence the settlement location of immigrants with an EU background living in the Netherlands?

The following sub-questions are derived out of the main research question:

- *What is the socioeconomic status of immigrants with an EU background moving towards the rural in the Netherlands?*
- *What is the socioeconomic status of immigrants with an EU background moving towards the urban in the Netherlands?*

1.2 Thesis structure

In section 2, this paper will define the variables by which socioeconomic status is measured. The variables are used to determine the existence and strength of the relationship between the socioeconomic status and settlement location of immigrants with an EU background in the Netherlands. Additionally, in section 2, the status quo is explored in the literature on the settlement behaviour of migrants in the Netherlands. The methodology of this research is described in section 3 to ensure the reproducibility of this research. In section 4, the sub-questions and the main research question are answered by conducting a quantitative analysis. Furthermore, the results are compared with the status quo discussed in the theoretical framework. Ultimately, the conclusion of the research can be found in section 5.0.

2.0 Theoretical framework

2.1.1 Determinants of socioeconomic status

In this study, the possible relationship between socioeconomic status and the settlement location of EU immigrants will be examined. Socioeconomic status is a combined economic and sociological complete measure of a person's job experience and their economic and social status. It is often used to compare individuals or different groups of society. Socioeconomic status is measured with three different variables: income, education and occupation, as these variables are suggested to be the most reliable ones (Grundy & Holt, 2001). The variable income refers to the wages, loans, salaries, profits, rents, and any other flow of earnings received. Secondly, the variable education refers to the highest educational level completed. Lastly, the variable occupation refers to whether the person in question is working a paid job or not.

2.1.2 Spatial distribution of immigrants

Contemporary studies on the location choice behaviour of immigrants often focus on the location choice at arrival (Zavodny, 1999). These studies often show that the primary determinant of the location of choice for immigrants is the presence of other immigrants at the destination. Bartel (1989) also argues that immigrants in the United States are more spatially concentrated compared to locals, and they tend to cluster in cities with high concentrations of individuals with similar ethnicity. This spatial clustering is also visible for immigrants with an EU background living in the Netherlands. There is a larger relative migrant population living in the cities compared to the rural municipalities, as shown in Figure 1. More recent studies (Carrington et al. 1996; Chau 1997; Winters et al. 2001; Bauer et al. 2002, 2005; Heitmueller 2003), argue that the two main determinants which cause this spatial concentration are the characteristics of the housing market and the network effect among immigrants. Spatial concentration of immigrants enables them to form a social network that may reduce migration costs and provide income prospects (Edin et al., 2003; Zhu et al., 2014). This network effect is seen as the most influential factor for the location choice of immigrants. In the case study on immigration towards Belgium, Jayet et al. (2016), separated the network effect from the location choice of immigrants. This study showed that location-specific features such as labour market opportunities and housing are the predominantly drivers of the spatial distribution of Belgian immigrants. Surprisingly, the positive influence of social networks is usually overshadowed by the genuine attractiveness of municipalities. In contrast to the network effect, the impact of these location-specific characteristics varies significantly across nationalities, particularly in terms of public amenities in wealthy versus developing

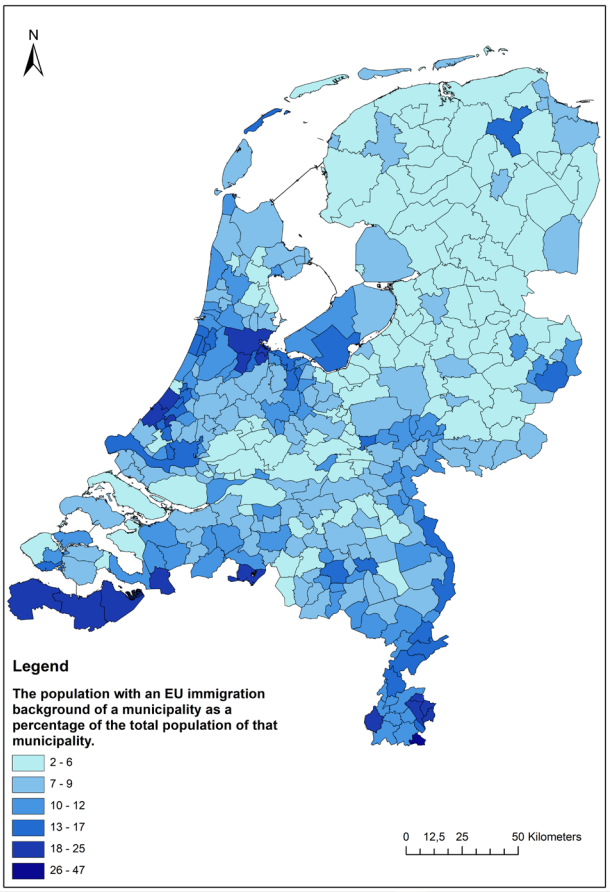

Figure 1: The population with an EU immigration background of a municipality as a percentage of the total population of that municipality (Geoproccesed Hoorn, W., van: data retrieved from CBS, 2021b).

countries of origin (Jayet et al., 2016). On the other hand, Zavodny (1999), Kaushal (2005) and Aslaud (2005) argue that factors such as local labour market conditions and welfare generosity are playing a more minor role in determining the destination of the migrant.

According to a case study on Belgium, distance to the border is a significant determinant for immigrants of neighbouring countries (Jayet et al., 2016). In Belgium, there is a strong concentration of Dutch, French and German immigrants along the board with their country of origin. In Figure 1, it is shown that this settlement behaviour can also be recognised within the distribution of EU immigrants in the Netherlands. There is a concentration of immigrants with an EU background near the border; this concentration is especially high in the South and South-East of the Netherlands.

Furthermore, the research of Zorlu and Mulder (2008), showed that the settlement behaviour of labour migrants is most likely to be sensitive to their socioeconomic status and the local economic prospects. This theory can explain the concentration of migrants with an EU background in areas with intensive agriculture, such as the municipality of Zeewolde in the Flevopolder (as can be seen in Figure 1). Additionally, this research suggested that the settlement behaviour of family migrants is more influenced by the current location of their family in the destination country (Zorlu & Mulder, 2008). The third factor of influence for the location choice can be the highly regulated Dutch housing market. According to the research of Zorlu and Mulder (2008), this significantly restricts the voluntary character of location choice as the immigrants have a relatively low socioeconomic status. This could mean that the immigrants with a higher level of socioeconomic status have more freedom of choice in their settlement location than immigrants with a lower socioeconomic status. Additionally, highly educated immigrants tend to have higher mobility and are less concentrated than lower-educated immigrants (Zorlu & Mulder, 2008).

2.1.3 Consequences of spatial clustering

Earlier in the theoretical framework, it was mentioned that immigrants tend to cluster together as this would lead to more opportunities because of the network effect (Edin et al., 2003; Zhu et al., 2014). According to the research of Shavit and Williams (1985) and Yogev and Ilan (1987), this spatial clustering has a positive effect on the socioeconomic status of the immigrants. Because segregated groups are not forced to compete with the majority, they have a better self-image and educational and occupational goals. Furthermore, higher percentages of immigrants may be associated with lower course failure rates for immigrant students, according to research on school immigrant composition (Crosnoe & Lopez-Gonzalez, 2005). On the other hand, Crosnoe and Lopez-Gonzalez (2005) also argue that the positive outcomes of the spatial clustering of the immigrants are only likely to exist in the short term or for students in specific locations (Rivera-Batiz, 1996).

However, when considering all children of immigrants, there are significant, long-term detrimental implications for such individuals in society (Wells, 2009). These implications could be visible in different aspects such as learning the native language (Arias, 2007), quality of the school and education (Ruiz-de-Velasco et al., 2000) and less access to college and job opportunities (Suárez-Orozco & Todorova, 2003). The research of Goldsmith (2004) combined multiple theoretical perspectives and argued that segregated schools *"isolate students from information about what is required for academic and occupational success; and they have many students who lack skills in using school feedback to establish realistic expectations"* (pp. 127). In addition, immigrant students have lower college enrolment rates than non-immigrant students, and they are also more likely to earn associate's or certificate degrees rather than bachelor's degrees. (Erisman & Looney, 2007).

2.1.4 Effect of spatial clustering on socioeconomic status

In sum, immigrants tend to spatially cluster as their social network gives them better opportunities regarding their income and occupation. Therefore, it suggests that spatial clustering increases their socioeconomic status. However, other literature suggests that the spatial clustering worsens the opportunities of the immigrants as they have less contact with the native population and less able to integrate. This suggests that the spatial clustering lowers their socioeconomic status. Furthermore, spatial clustering mostly happens in cities and, if applicable, near the border of their country of origin. The effect of spatial clustering on the socioeconomic status of the immigrant is researched quite thoroughly. However, not so much research is done regarding the socioeconomic status of immigrants and the link with location choice. Hopefully, some light can be shed on this topic with this research, and maybe a link can be found between these two variables.

2.2 Conceptual framework

In Figure 2, the conceptual framework of this research can be found. It is intended to be read from left to right. Starting with the three variables which define the socioeconomic status of immigrants with an EU background. Afterwards, it is researched if the socioeconomic status influences the location choice, especially the strength and direction of this influence.

Figure 2: Conceptual framework of this research (author, 2021).

2.3 Hypothesis

Based upon the de discussed literature, hypotheses are derived for the sub-questions and the main research question. These hypotheses are tested in the analysis of the data. According to the literature discussion, the following hypothesis has been formulated for the first sub-question: *"Migrants with higher socioeconomic status are less dependent on the network effect. Thus they are less likely to spatially cluster. In the rural areas in the Netherlands, there is a low clustering of immigrants with an EU background. As a consequence, it is expected that migrants with an EU background who are living in the rural have a higher socioeconomic status."*

Secondly, based upon the literature discussion, the following hypothesis has been formulated for the second sub-question: *"Migrants with a lower socioeconomic status are more dependent on the network effect. Thus they are more likely to spatially cluster. In the urban areas in the Netherlands, there is a higher clustering of immigrants with an EU background. As a consequence, it is expected that migrants with an EU background who are living in the urban have a lower socioeconomic status."*

3.0 Methodology

3.1 Database

In this study, data from the European Social Survey (ESS) is used to answer the research question. The ESS is a biannual survey held on a European level and asks questions about people's attitudes and behaviour in Europe (Schnittker, 2020). By using a cross-sectional probability sample, it aims to be representative of all the people aged 15 and older living within private households of the participating countries (Schnittker, 2020). Depending on the countries' population size, the minimum number of respondents differ. Countries with a population smaller than 2 million people require 800 respondents. For countries with a larger population than 2 million, the cut-off mark has been set at 1500 respondents. The number of respondents is set to ensure that adequate sample size is obtained. Face-to-face interviews are conducted to collect the data. The survey is divided into two sections: one is the core, which is the same for each round, and the other is a thematic section, which has a different emphasis on each round (European Social Survey, 2021a). For this research, only the data from the core section is used as this contained all the data necessary for the research. The data from the thematic section has not been used.

For this research, the country-specific data file for the Netherlands has been used. This data file only contains the data from the survey part, which is held in the Netherlands. From this sample, all the respondents with an EU migration background have been selected. Because of the earlier mentioned 'borderless' Europe, the decision has been made to select all the respondents of the Schengen Area, as these immigrants are free to relocate and work anywhere within the Schengen Area. These countries include: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and Switzerland (Migration and Home Affairs, 2021). This selection has been made by filtering all the respondents born in a country of the Schengen Area, but logically, excluding the respondents born in the Netherlands. The descriptive statistics of the respondent's country of origin can be found in Table 1. To ensure that there are enough respondents to gain statistically significant results and enlarge the test's statistical power, the sample has been enlarged. This has been done by combining the waves 7 (2014), 8 (2016) and 9 (2018) of the ESS.

Country of birth	N	%
Austria	5	4,3
Belgium	16	13,8
Bulgaria	4	3,4
Germany	37	31,9
Denmark	4	3,4
Spain	5	4,3
Finland	2	1,7
France	5	4,3
Greece	4	3,4
Hungary	5	4,3
Italy	1	0,9
Latvia	1	0,9
Malta	1	0,9
Poland	20	17,2
Portugal	3	2,6
Slovakia	2	1,7
Total	**115**	**100**

Table 1: Descriptive statistics of the respondent's country of birth.

3.2 Analysis

The detection of the existence and strength, of the relationship between the socioeconomic status of immigrants with an EU background and their living environment is needed to answer the sub-questions and, afterwards, the main research question. Their socioeconomic status is measured in the level of education, income, and occupation. Their living environment is measured with the description of their domicile environment. All four variables are categorical variables, living environment and occupation are nominal variables, and level of education and income are ordinal variables. Additionally, two control variables have been added to the model, age and gender of the respondent. The control variables have been added to enhance the internal validity of the study by limiting the influence of confounding and other extraneous variables (Burt et al., 2009). All variables will be further explained in section 3.3. As all four variables are categorical variables, a Multinomial Logistic Regression is used

to determine the relationship between these variables. With this test, a relationship can be determined between a categorical dependent and multiple categorical independent variables.

The ESS recommends using a weighted sample when performing statistical tests with the dataset. Using a weighted sample will compensate for the sample design (oversampling or disproportionate stratification) and non-response by adding more weights to these under-represented cases, thus making the sample more balanced and representative of the general population. Among researchers, there is a general consensus that a weighted sample should be used for descriptive statistics to realistically describe the population (Solon et al., 2013; Kish & Frankel, 1974). However, in a regression analysis, conducting a weighted sample is a disputed because the weighted sample will multiply certain responses in the sample, this can increase the biasedness of the model topic (Gelman, 2007; Kott, 2007; Winship & Radbill, 1994). Because of these reasons, the choice is made to not use a weighted sample in this research.

3.3 Variables

The model has been setup with the respondent's description of the living environment being the dependent variable and the level of education, income and occupation being the independent variables. Answers from the ESS have been recoded into new variables to perform the Multinomial logistic regression. A detailed description of all variables can be found in the sections below.

3.3.1 The dependent variable

The dependent variable in the multinomial logistic regression is the living environment of the respondent. To determine this, the respondent's description of the domicile environment has been used. Which had the following possible answers: '1 = A big city', '2 = Suburbs or outskirts of big city', '3 = Town or small city', '4 = Country village', '5 = Farm or home in countryside', '7 = Refusal', '8 = Don't know' and '9 = No answer'. The answers' refusal', 'don't know', and 'no answer' are treated as missing values and left out of the analysis. In the sample, there were no observations of missing values. Something noticeable about the sample is that none of the respondents reported to be living on a farm or home in countryside. The descriptive statistics of this variable can be found in Table 2.

Category	N	%
A big city	30	26,1
Suburbs or outskirts of big city	18	15,7
Town or small city	30	26,1
Country village	37	32,2
Farm or home in countryside	0	0,0
Total	**115**	**100**

Table 2: Descriptive statistics of the respondent's description of the domicile environment.

3.3.2 The independent variables

The three independent variables are used to describe the respondent's socioeconomic status. Based upon the literature, the best variables to describe the socioeconomic status are income, level of education and occupation.

Income

The variable to determine the income describes the household's total net income from all sources. The possible answers range from 'first decile' to 'tenth decile', where 'first decile' is the lowest income, and 'tenth decile' is the highest income. This variable has been recoded into six new categories. The first, second, and third deciles have been recoded into the new variable named 'Low income'. The fourth, fifth, sixth, and seventh deciles were recoded into the 'medium income' variable. The eighth, ninth and tenth decile have been recoded into the new variable 'high income'. The categories' refusal', 'don't know', and 'no answer' have not been recoded. A table of how the variables have been recoded can be found in Appendix A. Furthermore, 132 respondents answered the question, of which ten answered 'refusal', and ten answered 'don't know'. These answers will be considered missing. The descriptive statistics of this variable can be found in Table 3.

	Category	N	%
Valid	Low income	20	17,4
	Medium income	42	36,5
	High income	35	30,4
	Total	**97**	**84,3**
Missing	Refusal	8	7
	Don't know	10	8,7
	Total	**18**	**15,7**
Total		**115**	**100**

Table 3: Descriptive statistics of the household's total net income, all sources.

Level of education

The variable to determine the level of education reports the respondent's highest level of education achieved and used the International Standard Classification of Education (ISCED). The ISCED is a statistical framework to make a fair comparison between countries' different educational systems (Catalin-Ionut et al., 2018). The possible answers range from 'ES-ISCED I' being the lowest level of education and 'ES-ISCED V2' being the highest level of education. Additionally, there is a specific category for education levels that cannot be harmonised into ES-ISCED. The original twelve variables for education level have been transcoded into seven new variables. 'ES-ISCED I' and 'ES-ISCED II' have been recoded into the new variable 'low educated'. 'ES-ISCED IIIa', 'ES-ISCED IIIb' and 'ES-ISCED IV' have been recoded into the new variable 'medium educated'. 'ES-ISCED V1' and 'ES-ISCED V2' have been recoded into the new variable 'high educated'. The category for education levels, which could not be harmonised into ES-ISCED and the category other, was recoded into the new variable 'other'. The original variables' refusal', 'don't know', and 'no answer' have not been recoded and kept the same. A table of how the variables have been recoded can be found in Appendix A. In the sample, there were no cases that could not be transferred into ES-ISCED. Neither were their respondents who answered 'other', 'refusal', 'don't know' or 'no answer'. Thus, no responses will be considered missing. The descriptive statistics for this variable can be found in Table 4.

Category	N	%
Low Educated	33	28,7
Medium Educated	39	33,9
High Educated	43	37,4
Total	**115**	**100**

Table 4: Descriptive statistics of the respondent's highest level of education achieved.

Occupation

The variable used to determine the occupation of the respondent is main activity, last 7 days. There were nine different possible answers in this case, and the categories reported as missing answers, being 'not applicable', 'refusal', 'don't know', and 'no answer'. The nine categories have been recoded into six new categories. The category 'paid work' has not been recoded and remained unchanged. The categories 'education',

	Category	N	%
Valid	In paid work	58	50,4
	Not in paid work	56	48,7
	Total	**114**	**99,1**
Missing	Don't know	1	0,9
	Total	**1**	**0,9**
Total		**115**	**100**

Table 5: Descriptive statistics of the respondent's main activity, last seven days.

'unemployed looking for a job', 'unemployed not looking for a job', 'permanently sick or disabled', 'retired', 'community or military service', 'housework, looking after children, others' and 'other' have been recoded into one new category named 'Not in paid work'. The categories 'not applicable', 'refusal', 'don't know', and 'no answer' have not been recoded and kept the same. The recoding of this variable can also be found in Appendix A. In the sample, 131 respondents answered the question, and one respondent answered 'don't know', this case will be considered missing. The descriptive statistics of this variable can be found in Table 5.

3.3.3 Control variables

Two variables have been used in the model as a control variable, namely, the age and gender of the respondent.

Age

The age of the respondent has been used as a control variable in the model. Age is a continuous variable, the answers from the ESS have not been recoded into new variables. The descriptive statistics of this variable can be found in Table 6.

Category	N	Minimum	Maximum	Mean	Std. Deviation
Age of respondent	115	15	90	47,36	15,649

Table 6: Descriptive statistics of the respondent's age.

Gender

The gender of the respondents has been used as a second control variable in the model. Gender is a nominal variable, the answers from the ESS have not been recoded into new variables. The descriptive statistics of this variable can be found in Table 7.

Category	N	%
Male	40	34,8
Female	75	65,2
Total	**115**	**100,0**

Table 7: Descriptive statistics of the respondent's gender.

3.4 Ethical considerations

Secondary data was employed in this study, implying the researcher had no direct interaction with the respondents. Instead, the data used in this research is collected by the ESS. The ESS has agreed to and respects the International Statistical Institute's Declaration on Professional Ethics (European Social Survey, 2021c). During data collection, all respondents are informed about all survey components, including how the obtained data will be used. One important point raised, is that it will be impossible to track down the respondent based on the data. As a result, the ESS has ensured that the data acquired is utilised appropriately and that the data is kept secret and anonymous (European Social Survey, 2021b). Furthermore, the data for this study is kept on a password-protected computer that is only available to the researcher at all times. The ultimate outcome of this research, a bachelor thesis, will be shared with the thesis supervisors and made available online to students at the University of Groningen's Faculty of Spatial Sciences.

4.0 Results

4.1 Statistical analysis

In this part of the paper, the results of the multinomial logistic regression are used to answer the first and second sub-questions of the research. First of all, the results overall model will be analysed. Afterwards, each of the categories of the categories of the dependent variable (respondent's description of the domicile environment) are discussed separately. As a conclusion, the relationships of all the categories are compared, and the results are compared to the literature discussed in the theoretical framework.

4.1.1 Analysing the results of the multinomial logistic regression

The first set of results of the multinomial logistic regression represents the comparison between the respondents in the category 'Suburbs or outskirts of big cities' and 'A big city'. The results of this test can be seen in Table 9. In this set of results, only the 'Level of Income' categories are significant predictors. It is significant, with a confidence interval of 95%, for both 'Low Income' (Sig. = 0.027) and 'Medium Income' (Sig. = 0.034). With 'Low Income' having a coefficient of -2.981, it means that people with a low income are much less likely, compared to people with a high income, to live in the suburbs or outskirts of a big city than in a big city. The coefficient of 'Medium Income' is -1.846; this means that the people with a medium income are less likely, compared to people with a high income, to live in the suburbs or outskirts of a big city than in a big city. The significance is stronger, and the coefficient is higher for the predictor 'low income' than for the predictor 'medium income'. Thus, the effect is stronger for migrants with a low income. None of the other independent or control variables were statistically significant.

Respondents' description of the domicile environment	Variable	Category	B	Std. Error	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	95% Confidence Interval for Exp(B) Upper Bound
Suburbs or outskirts of big city (ref. A big city)	Level of Education (ref. High Educated)	Low Educated	-0,562	1,328	0,672	0,57	0,042	7,706
		Medium Educated	0,381	0,785	0,628	1,463	0,314	6,82
	Level of income (ref. High Income)	Low Income	-2,981	1,348	0,027	0,051	0,004	0,712
		Medium Income	-1,846	0,871	0,034	0,158	0,029	0,87
	Occupation (ref. not in paid work)	In paid work	-0,952	0,738	0,197	0,386	0,091	1,639
	Gender (ref. Female)	Male	0,174	0,772	0,821	1,191	0,262	5,409
	Age		-0,029	0,031	0,349	0,971	0,913	1,033

Table 8: The results of the Multinomial logistic regression of the category Suburbs or outskirts of big city.

There are no significant predictors in the second category 'Town or small city' model if we assume the 5% significance. However, if the 10% significance is assumed, the category 'Low Income' is significant (Sig. = 0.061). The results of the statistical tests of this coefficient can be found in Table 10. With a coefficient of -1.873, people with a low income are less likely than people with a high income to live in a town or small city than in a big city.

Respondents' description of the domicile environment	Variable	Category	B	Std. Error	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
Town or small city (ref. A big city)	Level of Education (ref. High Educated)	Low Educated	0,84	0,888	0,344	2,316	0,407	13,186
		Medium Educated	0,652	0,719	0,365	1,92	0,469	7,863
	Level of income (ref. High Income)	Low Income	-1,873	0,999	0,061	0,154	0,022	1,089
		Medium Income	-1,344	0,823	0,102	0,261	0,052	1,308
	Occupation (ref. not in paid work)	In paid work	-1,044	0,64	0,103	0,352	0,1	1,234
	Gender (ref. Female)	Male	0,078	0,645	0,903	1,081	0,306	3,825
	Age		-0,007	0,026	0,777	0,993	0,944	1,044

Table 9: The results of the Multinomial logistic regression of the category town or small city.

Regarding the last and third set of results of the category 'Country village', there are two significant predictors if the 5% significance is assumed. The results of this test can be seen in Table 11. These predictors are 'Low Income' (Sig. = 0.016) and 'Medium Income' (Sig. = 0.008). The predictor 'Low income' has a coefficient of -2.275; this means that the people with a low income are much less likely than people with a high income to live in a country village than in a big city. The predictor 'Medium Income' has a coefficient of -2.160; this means that the people with a medium income are much less likely than people with a high income to live in a country village than in a big city. If the significance of 10% is assumed, the predictor 'low educated' (Sig. = 0.082) is also significant. With a coefficient of 1.541, people with low education are more likely, compared to people with high education, to live in a country village than to live in a big city.

Respondents' description of the domicile environment	Variable	Category	B	Std. Error	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
Country village (ref. A big city)	Level of Education (ref. High Educated)	Low Educated	1,541	0,887	0,082	4,67	0,821	26,563
		Medium Educated	0,891	0,716	0,213	2,438	0,6	9,908
	Level of income (ref. High Income)	Low Income	-2,275	0,948	0,016	0,103	0,016	0,659
		Medium Income	-2,160	0,809	0,008	0,115	0,024	0,563
	Occupation (ref. not in paid work)	In paid work	-0,512	0,626	0,413	0,599	0,176	2,042
	Gender (ref. Female)	Male	-0,382	0,622	0,539	0,682	0,201	2,311
	Age		0,028	0,026	0,278	1,028	0,978	1,082

Table 10: The results of the Multinomial logistic regression of the category country village.

4.1.2 Comparing the predictors

Furthermore, in Figure 3, a comparison can be found between the coefficients of the predictor 'Low Income' for each category of the domicile environment. It shows that the coefficient of all the regions is negative. This means that migrants with a low income tend to concentrate more in big cities than in any other region. This effect is the weakest for immigrants living in a town or small city, but this effect is also significant if the 10% significance is assumed.

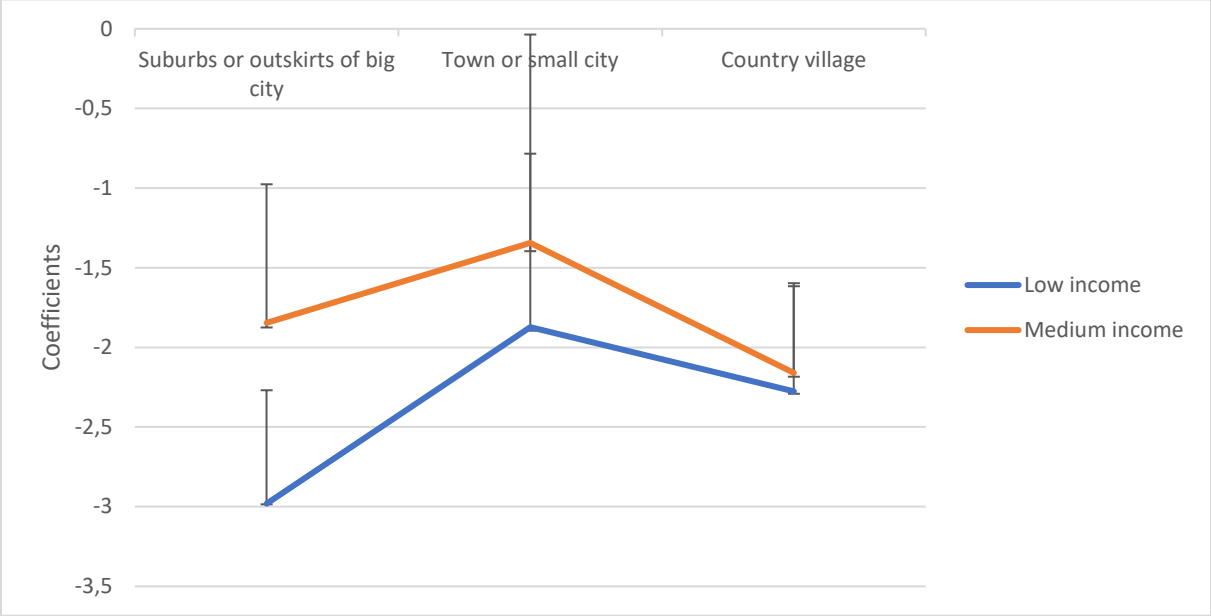

Figure 3: Plotted unstandardised coefficients and confidence intervals (Y-axis) of the living environments (X-axis).

A second comparison is made between the coefficients of the predictor 'Medium Income' for all regions. Again, the coefficients of the regions are negative. This means that immigrants with a medium income tend to concentrate more in big cities than in any other region. This can be seen in Figure 3. The coefficient patterns are similar between immigrants with low and medium income as the effect is the weakest for the immigrants living in a town or small city. This comparison is only made for the predictors 'Low Income' and 'Medium Income' as these were the only predictors for which most of the results were significant. It is noticeable for both predictors that the lower bound confidence interval is much smaller than the upper bound confidence interval.

Furthermore, for all categories of the dependent variable both control variables were not significant. It means that both age and gender do not have a significant influence on the settlement location of immigrants with an EU background living in the Netherlands. It ensures that the effect is not indirectly influenced by any of the control variables. Additionally, with a bit more certainty, it can be said that the settlement location is determined by the significant predictors in the model.

4.1.3 Discussing the hypotheses

The results show that income level is the only statistically significant predictor of the settlement location of migrants with an EU background in the Netherlands. Both occupation and highest achieved level of education (with one exception) are not statistically significant predictor of the settlement location of migrants with an EU background in the Netherlands. It showed that immigrants with low and medium-income tend to concentrate more in big cities than in any other region. This partly corresponds with the hypothesis of sub-question two, as this argued that migrants living in an urban area have a lower socioeconomic status. On the other hand, if the 10% statistical significance is assumed, immigrants with low education level are more likely to live in a country village than

immigrants with high education level. The results support the lower socioeconomic status on the dimension of income but not on occupation. It even partly contradicts the hypothesis on the dimension of the level of education.

Furthermore, migrants with a low and medium income tend to concentrate more in big cities, as a consequence, migrants with a high income are relatively more often present in the other regions than the big city. The effect of socioeconomic status on settlement location can only be determined on the dimension of income. With this information, the first sub-question can also be partly accepted. Nonetheless, if the 10% statistical significance is assumed, migrants with a low level of education, compared to migrants with a high level of education, are more likely to live in a country village than to live in a big city. Thus, it partly confirms and partly rejects the hypothesis of the first sub-question. As it confirm the hypothesis on the dimension of income but rejects the hypothesis on the dimension of education level.

4.1.4 Discussion

Comparing the results of the research with the literature discussed in the theoretical framework, some of the theories can be recognised in the results of this research. The research of Zorlu and Mulder (2008) argue that local economic prospects can influence the settlement behaviour of labour migrants. One of the largest groups of labour migrants in the Netherlands is the migrants working in intensive agriculture. This could be one of the theoretical explanations that low educated migrants are more likely to live in country villages than to live in the big city, compared to high educated migrants. Because low educated migrants are more likely to find labour opportunities in country villages where this intensive agriculture is taking place.

Secondly, it is argued that the network effect causes immigrants to spatially cluster as this will give the immigrants more labour and income opportunities (Edin et al., 2003; Zhu et al., 2014). In the theory, it is argued that this is primarily valid for immigrants with low socioeconomic status, as these migrants are more dependent on the network effect to start a life in a new country. The results of this research could be seen as support for this theory as the results show that immigrants with low and medium income, compared to immigrants with a high income, are more likely to live in the city than to live in any other region. Additionally, this is further supported by the fact that the most concentrated places with migrants with an EU background are cities in which the migrants live with the lowest incomes, and these are the migrants most dependent on the network effect.

Furthermore, the literature argues that the network effect does not positively influence the socioeconomic status of the migrants and their children. As these clustered groups have little contact with the non-marginalised population, they have difficulty with integration. Although these implications are visible in different dimensions such as language skill and school grades, overall, it will not improve their socioeconomic status. Possibly, this theory could also be supported with the results of this research. If the network effect would increase the socioeconomic status, then there would not be a high concentration of immigrants with a low and medium income in the regions where the network effect is the strongest.

5.0 Conclusion

In the research for this paper, an analysis was conducted to answer the main research question: *"How does socioeconomic status influence the settlement location of immigrants with an EU background living in the Netherlands?".* Based upon the results of this research, it can be said that the socioeconomic status only has a partial influence on the settlement location of immigrants with an EU background living in the Netherlands. Only income has a statistically significant influence; education level and occupation do not significantly influence the settlement location. Furthermore, these effects have been controlled for by age and sex. Both control variables do not influence the settlement location.

The effect of income level on the settlement location of immigrants is the strongest for immigrants with a low income. They are more likely to live in the city than in any other region, compared to immigrants with a high income. This effect is similar for immigrants with a medium income, but the effect is less strong. Immigrants with low and medium incomes are thus more spatially clustered in cities compared to immigrants with a high income. This finding supports the literature, as it suggests that immigrants with low and medium incomes are more dependent on the network effect to have a sustainable income.

5.1 Limitations

Because the main conclusions and interpretation have previously been reviewed, it is necessary to critically examine the strengths and shortcomings of the data and methods used. This research' main shortcoming would be the sample size, a sample size of 115 respondents and 18 missing values, resulting in a usable sample size of 97 respondents. It resulted in a few small groups in the statistical model, which could lead to variability and eventually resulting in a biased result. Increasing the sample size would result in more representative research for the total population. A second consequence of the small sample size is that the categories of the independent variables have been recoded into fewer variables. Fewer categories decrease the accuracy of the results. With a larger sample, recoding would not have been required, resulting in a higher accuracy of the results. A third consequence of the small sample size is an risk for a type II error. As there is a chance that there is actually a relationship between socioeconomic status and the settlement location of immigrants with an EU background, but that this research is not able to prove this relationship because of the small sample size.

Additionally, the dependent variable (the respondents' description of the domicile environment) is subjective, it is up to the respondent's interpretation to validate its environment as a city or a town. Especially in the international immigration context, this is a vulnerability as the size of Dutch cities is smaller compared to the international situation.

Ultimately, the main recommendation for future research would be using a larger sample by using a different survey or combining more waves of the ESS. Furthermore, it would be interesting to add geographical location data to the research. With the use of geographical location data of each respondent, it can be researched if specific urban and rural areas attract immigrants with a specific socioeconomic status. Additionally, this would add the possibility to use objective categorisation of the respondents living environment. This objective categorisation can be done by using the address density of the living environment.

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Appendixes

Appendix A: Recoding of the independent variables.

Variables	Old categories	New categories
Highest level of education, ES - ISCED	1 = ES-ISCED I , less than lower secondary	1 = Low Educated
	2 = ES-ISCED II, lower secondary	
	3 = ES-ISCED IIIb, lower tier upper secondary	2 = Medium Educated
	4 = ES-ISCED IIIa, upper tier upper secondary	
	5 = ES-ISCED IV, advanced vocational, sub-degree	
	6 = ES-ISCED V1, lower tertiary education, BA level	3 = High Educated
	7 = ES-ISCED V2, higher tertiary education, >= MA level	
	0 = Not possible to harmonize into ES-ISCED	4 = Other
	55 = Other	
	77 = Refusal	77 = Refusal
	88 = Don’t know	88 = Don’t know
	99 = No answer	99 = No answer
Household's total net income, all sources	1 = J - 1st decile	1 = Low Income
	2 = R - 2nd decile	
	3 = C - 3rd decile	
	4 = M - 4th decile	2 = Medium Income
	5 = F - 5th decile	
	6 = S - 6th decile	
	7 = K - 7th decile	
	8 = P - 8th decile	3 = High Income
	9 = D - 9th decile	
	10 = H - 10th decile	
	77 = Refusal	77 = Refusal
	88 = Don't know	88 = Don't know
	99 = No answer	99 = No answer
Main activity, last 7 days. All respondents. Post coded	1 = Paid work	1 = In paid work
	2 = Education	2 = Not in paid work
	3 = Unemployed, looking for job	
	4 = Unemployed, not looking for job	
	5 = Permanently sick or disabled	
	6 = Retired	
	7 = Community or military service	
	8 = Housework, looking after children, others	
	9 = Other	
	66 = Not applicable	66 = Not applicable
	77 = Refusal	77 = Refusal
	88 = Don’t know	88 = Don’t know
	99 = No answer	99 = No answer