The Determinants of Individual Attitudes towards Migration in the Netherlands

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Abstract

This paper investigates the determinants of individual attitudes towards migration by means of a literature review and an empirical research, which focuses on the case of the Netherlands. Compared to other economic facets of globalization like trade and investment flows, migration seems to be less important. Some argue that this is the result of restrictive migration policies of the governments of the destination countries. The migration policies are a result of the individual attitudes towards migration of the inhabitants of the destination country, who express these attitudes through the voting system. This paper is interested in investigating the factors that determine the individual attitudes towards migration of the inhabitants of the receiving country. The literature review presents two main channels through which immigrants can affect the natives of the receiving country: the labour market and the welfare state channel. Several academic papers argue that the welfare state can work as a 'magnet' for immigrants. Economic reasoning also states that immigrants take a part of the natives' jobs, and wages are expected to decrease as a result of the inflow of immigrants, while the overall economy, reflected in Gross Domestic Product, will be better off.

The main objective of the empirical analysis is to investigate whether or not the number of immigrants living in a Dutch municipality has an effect on the natives' voting behaviour, which is used as a proxy for the individual attitudes towards migration. The empirical analysis does find a significant and positive effect of the number of immigrants on the relative number of votes for anti-immigrant parties.

This paper has contributed to the existing literature about immigration by drawing a direct link between the number of immigrants in a region and the individual attitudes towards migration, reflected in the number of votes for anti-immigrant parties.

Key words

Immigration, globalization, individual attitudes, migration policy, labour market, welfare state.

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Content

"Recognize yourself in he and she who are not like you and me."

Carlos Fuentes, *author*

1. Introduction

During the past decades the world has experienced a process of rapid globalization. When analysing the economic implications of this phenomenon, the academic literature has pointed out trade, investment flows and labour flows as the three main economic components of globalization. Globalization can be defined as 'the on-going process of greater economic interdependence among countries, which is reflected in the increasing amount of cross-border trade in goods and services, the increasing volume of international financial flows and increasing flows of labour' (Fischer, 2003, p. 3). Even though all three types of flows have been increasing during the past years, the mobility of labour is still the least important part of the three components of globalization. Countries all over the world have been liberalizing their trade policies and flows of imports and exports increased. Economic theories have pointed out trade as economically beneficial for countries. Developing countries like India and China have experienced rapid economic growth and poverty reduction while opening up to international trade. Multinational companies have been increasing their foreign direct investment flows. The third aspect of globalization, the migration of labour, is still rather limited – both in relative size and attention received by governments in globalization policies – compared to trade and investment flows. Facchini and Mayda (2008) argue that the limited flows of migration are a result of the restrictive migration policies that are implemented by governments. This paper investigates why migration has been undervalued and what drives governments to limit immigration, by examining the individual attitudes of natives towards immigration.

During the past years and still today, anti-immigration attitudes have been rising in Europe. The case of Great Britain represents an example of this trend. In September 2012 David Cameron announced his plans to decrease immigration to Great Britain. This is in contrast with the relatively high tolerance of Great Britain towards immigrants in the past. Some may argue that there is a link between the anti-immigration tendency and the current economic crisis. During economic crises, populist parties 'pop up' to gain votes for upcoming elections. An example of an individual opinion in Great Britain towards immigration can be found in this part of an article from The Economist:

'On a personal level, he has no problem with the Iraqi (or possibly Iranian, it's hard to tell, isn't it?) asylum-seekers next door. Yet he suspects they are getting easier access to state handouts than he is. Nor has he anything but respect for the couple of thousand Poles who have arrived in Ipswich in recent years: "Fair play to them, they're hard workers." But for Phil, his neighbours and almost every resident of the four Ipswich streets Mr Gummer was canvassing, that is part of the problem. Immigrants, they said, were taking their jobs, their benefits and their children's future. Some also correctly divined the hand of the reviled European Union in this—the accession of Poland and other eastern European countries to the common market having helped drive a decade-long surge in immigration to Britain.'

The Economist, March 30th, 2013.

Given the developments that are occurring in today's society, this paper investigates the underlying causes of the current anti-migration tendency within Europe, by analysing the factors that determine individual attitudes towards migration. The global phenomenon of anti-immigration attitudes will be analysed on a national and local level in the Netherlands. This paper empirically analyses how the number of immigrants living in a municipality is influencing the individual attitudes towards migration of citizens of the municipalities in the Netherlands. The results of elections in the Netherlands will be used as proxies for the individual attitudes. The main research question of this paper is *'which factors determine the individual attitudes towards immigration of the inhabitants of the receiving country?'* More specifically, the empirical analysis focuses on the question '*does the number of immigrants living in the municipalities of the Netherlands influence the voting behaviour during national elections in the Netherlands?'*

The paper is structured as follows. First, an extensive literature review will be provided, where several theories and articles regarding immigration will be described. Second, an empirical analysis will be performed using data from elections in the Netherlands between 1998 and 2010. Finally, a conclusion will be drawn based on the empirical results.

2. An introduction to the concept of immigration

This section introduces the concept of immigration by providing its definition, causes, and a brief overview of the important numbers and history of immigration. The section starts with a description of the broader phenomenon 'globalization' since immigration can be considered as one of the aspects of globalization.

2.1 Globalization

The Introduction of this paper provided one of the many definitions of the concept 'globalization'. The economic academic literature has focused on the following three international flows that characterize globalization: trade flows, capital flows, and flows of migrants. In general, when one compares the different flows of globalization, one finds that migration has played a smaller role in the process of globalization than trade and financial integration (UNCTAD, 2012).

Globalization can be characterized economically as the flow of production factors, like labour and capital, between countries. Mundell (1957) argues that trade and factor flows (capital and labour) are substitutes. On the contrary, Markusen (1983) argues that trade and factor mobility can also be complements and trade thus leads to the movement of capital and/or labour. Despite the efforts of Mundell (1957) and Markusen (1983), labour, in the form of international migration, and trade flows have not been applied to the same extent by governments. Apparently, individual's attitudes towards trade and immigration differ. Mayda (2006) compares individual preferences on trade and immigration. Both trade and immigration affect the labour market conditions and the factor returns of the destination country. Trade and immigration similarly affect the labour market; as a result, Mayda (2006) expects a correlation between individual's attitudes towards trade and international migration. Based on an empirical analysis, Mayda (2006) finds that most countries prefer trade to immigration. One explanation can be that international migration has a more direct impact on the society and culture of the destination country than international trade.

2.2 Definition and causes of immigration

Immigration occurs when a person moves to a foreign country with the intention to stay permanently in that country. This paper will not focus on migration within countries, but on migration *between* countries. Therefore, in this paper the concepts 'migration' and 'immigration' point out migration between countries. The concepts 'immigrant' or 'migrant' in this paper represent a person coming from a foreign country. The process of immigration and its causes have been analysed from economic, geographic, demographic and sociologist perspectives. One way to find out what causes international migration is applying the trade gravity model to the case of migration.

The typical trade gravity model is presented below (Lewer and Van den Berg, 2008):

$$Trade_{ij} = f\left[\frac{\left(GDP_i \times GDP_j\right)}{DIST_{ij}}\right] \tag{1}$$

The variables that are used in the trade gravity model are the distance between the origin and destination country and the Gross Domestic Product (GDP) levels of the two countries. Variables indicating whether or not the origin and destination country have common languages and if there has been a colonial relationship between the two countries are often added to the trade gravity model. Since these variables influence the flows of trade, they might also influence the size of migration flows between countries. In this context, Lewer and Van den Berg (2008) present an immigration gravity model.

The immigration gravity model by Lewer and Van den Berg (2008) can be presented as follows:

$$\begin{aligned} Imm_{ij} &= a_0 + a_1(pop_i \text{ x } pop_j) + a_2(rely_{ij}) + a_3(dist_{ij}) + a_4(stock_{ij}) \\ &+ a_5 LANG_{ij} + a_6 CONT_{ij} + a_7 LINK_{ij} + u_{ij} \end{aligned} \tag{2}$$

The variable 'imm_{ij}' represents the log of immigration to destination country i from source country j (Lewer and van den Berg, 2008). a_0 Is the intercept, and a_1 until a_7 represent the coefficients for the different variables. The variable $(pop_i \times pop_j)$ includes the population

sizes of country i, the destination country, and country j, the source country. The sign of the coefficient is expected to be positive, because a larger population in the destination country means that there is a larger labour market, and a larger population in the source country means that more people are likely to migrate. Furthermore, the variable '$rely_{ij}$' represents the ratio of the per capita incomes of the destination to the source country. The sign of the coefficient a_2 is expected to be positive, since a larger gap between the per capita incomes of the two countries will lead to more migration from the source to the destination country, if the latter country has a higher per capita income. The variable '$dist_{ij}$' stands for the physical distance between the two countries. If two countries are geographically closer located to each other, it is more likely that people will migrate between these countries. Thus the larger the distance, the less likely people will migrate, and hence, a negative sign of the coefficient a_3 is expected. The variable '$stock_{ij}$' represents the number of immigrants from the country of origin already living in the destination country. The expected sign of the coefficient a_4 is positive, since a high number of immigrants already living in a destination country can work as a 'pull factor' for other immigrants who come from the same source country.

The other three variables are dummy variables; '$LANG_{ij}$' stands for a common language between the destination country and the country of origin. The variable '$CONT_{ij}$' indicates whether or not the two countries share a contiguous border and the variable '$LINK_{ij}$' indicates whether or not there has been a colonial link between the country of origin and the destination country (Lewer and Van den Berg, 2008). The expected signs of the coefficients of the three dummy variables are positive, since a common language, a contiguous border and a colonial link between two countries make it 'easier' for people to migrate between the two countries. Lewer and Van den Berg (2008) use natural logs for the variables in equation (2) and used panel data from sixteen OECD countries as destination countries for ten years. Note that the model is bilateral and estimates the variables affecting immigration flows between two countries. Estimating the model of equation (2), Lewer and Van den Berg (2008) find positive and significant coefficients for all variables at a five percent significance level, except for distance, which has a negative and significant coefficient and the dummy variable for a contiguous border, which is not significant (Lewer and Van den Berg, 2008).

Another way to look at what causes migration is by identifying the supply and demand factors that determine international migration flows. According to this perspective, migration is supplied by migrants and demanded by the destination country. The supply side is constituted by the migrant's decision to move to a foreign country, which will be explained in Section 3. The demand side is affected by the destination country's policies towards immigration (Mayda, 2005). The immigration policies of destination countries are an outcome of individual attitudes towards immigration, the structure of the government system and pressures of interest groups (Mayda, 2005). Furthermore Mayda (2005) defines 'push' and 'pull' factors that cause migration. Pull factors are the expected improvements a migrant can make in his/her income when he/she decides to live and work abroad permanently. Pull factors positively affect the size of migration flows in spite of the restrictive immigration policies by the destination countries. An example of a push factor is the declining level of income faced by a worker in his/her home country, which 'pushes' him/her to migrate to a foreign country. Testing the effects of these push and pull factors with data from fourteen OECD countries for the period 1980-1995 results in positive and significant coefficients for the pull factors, but insignificant results for the push factors (Mayda, 2005). One interpretation of this result might be the fact that the country's policies towards migration affect the push and pull factors.

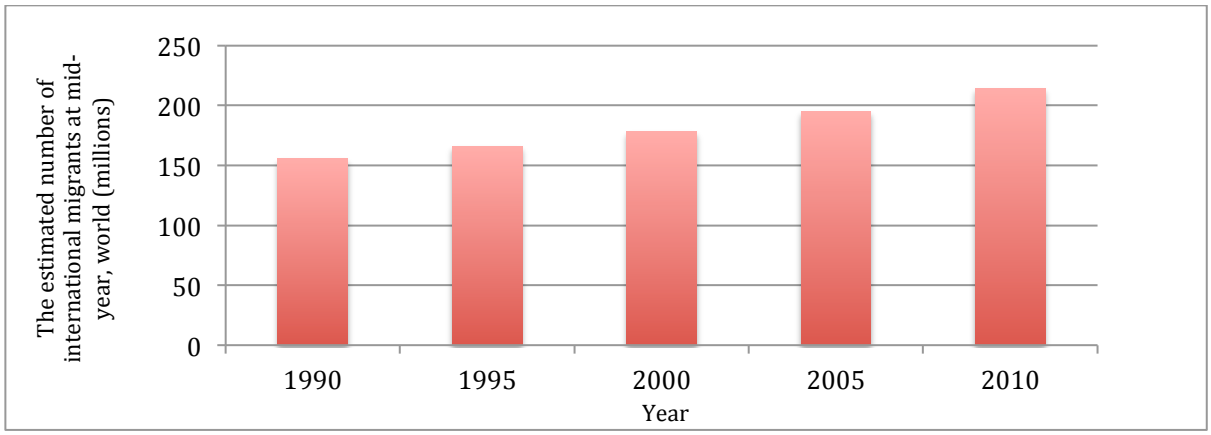
According to Massey (1994) there are two main misconceptions about the causes of immigration as an economic process. The first misconception is based on macroeconomic theory, stating that immigrants move from a country where labour is abundant and wages are relatively low, towards a country where the labour is scarce, and wages are relatively high. In this process, immigration functions as an equilibrating mechanism between the two countries. However, Massey (1994) points out that the wage differential between the two countries does give an incentive for immigration, but is not a necessary condition for immigration. The decision to immigrate is typically made by families or individuals based on a large variety of reasons, ranging from different political thoughts to the emergence of natural disasters. The misconception lies in the fact that the wage differential argument has been overemphasized (Massey, 1994). The second misconception is the belief that the push factors for emigration come from the lack of economic development in the sending countries. Massey (1994) argues that economic development can also cause migration because social and economic systems change as a result of economic development.

When analysing the causes of international migration, one also has to take non-economic factors into account, like demographic and cultural factors. The fact that a large number of people from their home country already live in a destination country can ‘pull’ immigrants towards that country through networks effects. Also push factors in the home country can cause people to migrate. Political turmoil, the fear of political persecution, and the threat of war in the home country lead to the decision to leave the home country and to flee to a foreign country. In 2010 the number of refugees worldwide was 15.4 million, accounting for 7.6 percent of the total number of migrants in the world (International Organization for Migration, 2013). Many countries have specific policies for immigrants who are refugees. The government in the Netherlands makes a distinction between the types of immigrants when deciding whether or not to gratify them with an asylum. Also in the programs of the political parties a distinction has often been made between ‘refugees’ and ‘economic migrants’.

2.3 Numbers and history

This subsection provides an insight in the numbers and history behind the concept immigration. The total number of immigrants worldwide was 241 million in 2010. 3.1 percent of the total world population is migrant, and lives in a country where he/she is not born (United Nations, 2013). The estimated number of migrants worldwide has increased during the past twenty years, which is visible in Figure 1 below. The percentage of refugees of the total number of international migrants has decreased from 11.9 percent in 1990 to 7.6 percent in 2010. In Europe, the estimated number of immigrants was about 69.8 million in 2010. The estimated number of immigrants in the Netherlands was about 1.7 million in 2010. As a result, the group of immigrants accounted for 10.5 percent of the total population of the Netherlands (United Nations, 2013).

Figure 1. The estimated number of international migrants at mid-year, world, 1990-2010.

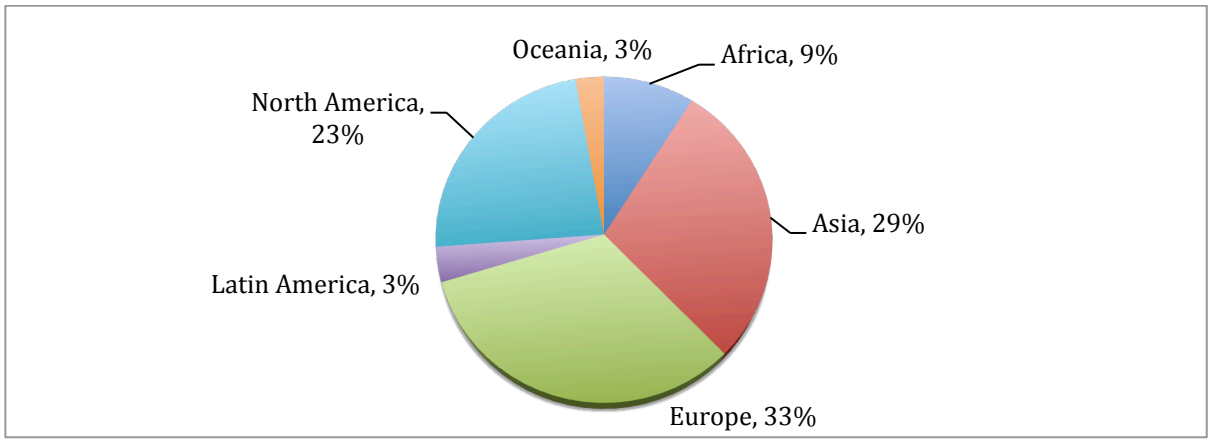


Source: own calculations based on data from United Nations (2013).

After the Second World War immigrants traditionally came from Europe and moved to Australia, New Zealand, the United States, and Canada (UNCTAD, 2012). During the 1950s and 1960s, Western European countries recruited migrant workers to work in the mining, construction and manufacturing sectors (Martin, 2006). The governments of Western European countries like the Netherlands and Germany introduced guest worker programs, focusing on the employment and short stay of male migrants in their countries. After the recruitment of foreign guest workers came to an end in the 1970s, the number of migrants rose as a result of the unification of the families of the guest workers (Martin, 2006). Since the 1990s, after the fall of the 'Iron Curtain', Western European countries started to receive immigrants from the former Soviet Union and Eastern European countries (UNCTAD, 2012). Figure 2 below shows that most immigrants live in Europe, i.e. thirty-three per cent of the total number of migrants in the world. However, one has to take into account that this

percentage also includes migration within Europe. About fifty percent of the immigrants worldwide live in Asia and North America. Relatively few migrants worldwide live in Latin America, Oceania and Africa.

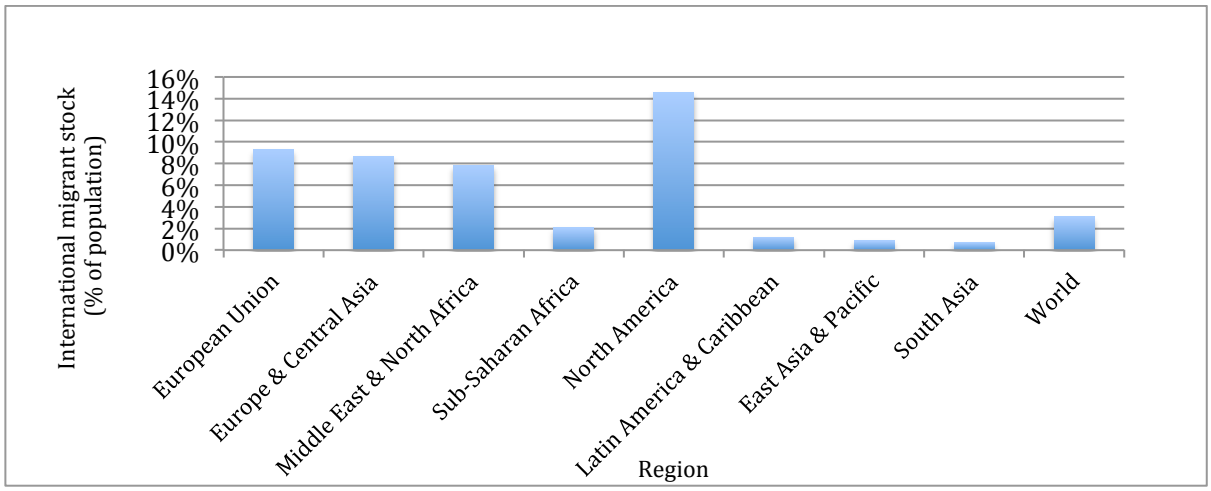
Figure 2. The estimated number of international migrants at mid-year, as a percentage of the world total, in 2010.



Source: own calculations based on data from United Nations (2013).

The stock of migrants living in a region as a percentage of the population of that region is represented in Figure 3. This figure shows that fifteen percent of the total population in North America is migrant. In the European Union, immigrants represent nine percent of the total population. For East Asia and Pacific, South Asia, Sub-Saharan Africa and Latin America, these percentages are relatively low.

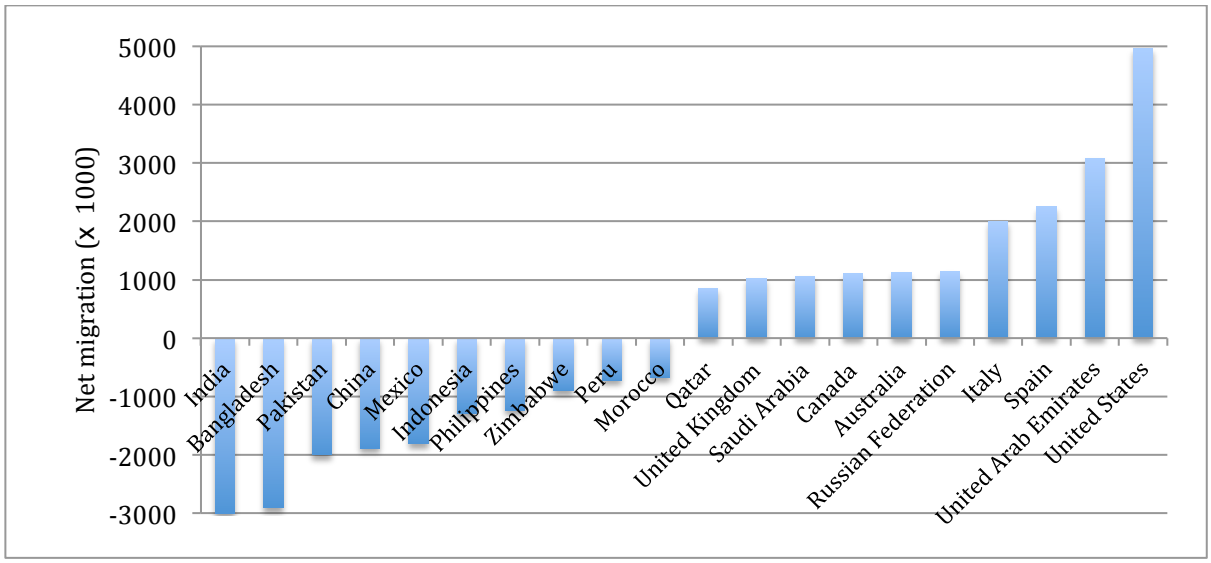
Figure 3. The international stock of migrants as a percentage of the population of the destination region, for nine regions worldwide in 2010.



Source: own calculations based on data from the Worldbank database (2013).

Some countries experience a net outflow of migrants. Figure 4 shows the ten countries that experienced the highest negative net migration flows in absolute terms in 2010. India had the highest negative net migration rate. Figure 4 also shows the ten countries with the highest positive net migration rates in absolute terms in 2010. Again, the United States is on the top op the list.

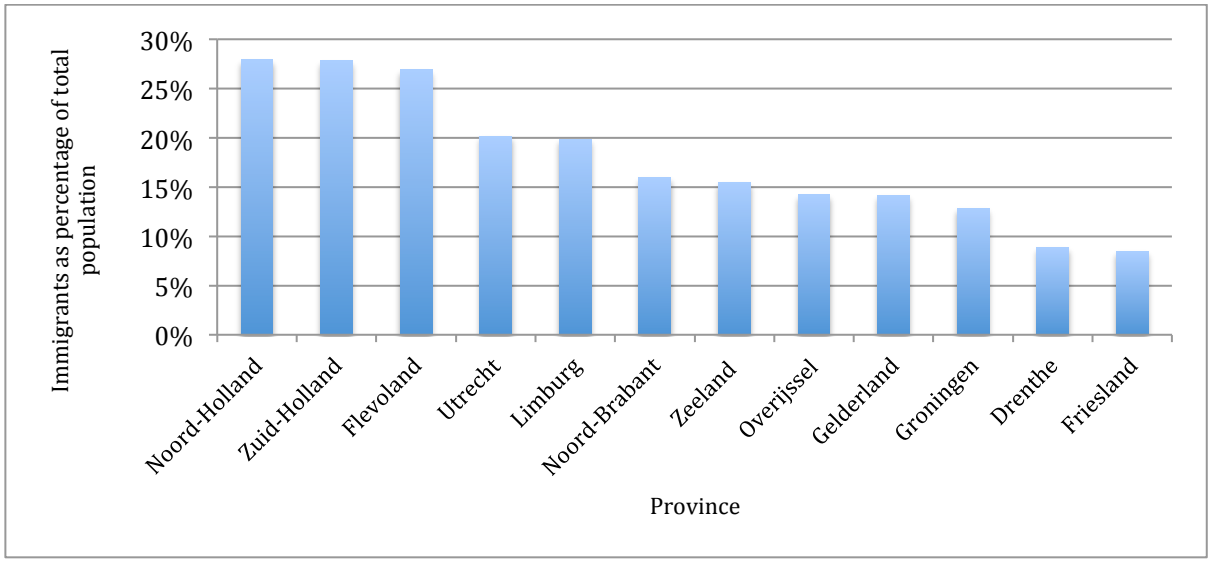
Figure 4. The net migration rate for the ten countries that have the highest negative and the ten countries that have the highest positive net migration rates in absolute terms worldwide in 2010.



Source: own calculations based on data from the Worldbank database (2013).

Also within countries, the number of immigrants differs. Figure 5 shows the differences in the relative number of foreign migrants between the twelve provinces of the Netherlands in 2010. The northern provinces, Groningen, Friesland and Drenthe, have low percentages of immigrants compared to the other provinces. Flevoland, Noord-Holland and Zuid-Holland are the provinces that have the highest percentages of immigrants. Noord-Holland and Zuid-Holland are the two provinces that are more urbanized, account for a large part of the economic activity in the Netherlands, and have relatively high income per capita rates compared to the provinces in the Netherlands (CBS Statline, 2013). In the provinces Overijssel, Gelderland, Zeeland and Noord-Brabant, about fifteen percent of the total population is immigrant. In Limburg and Utrecht, this percentage is about twenty percent.

Figure 5. The percentage of immigrants of the total population, per province in the Netherlands, in 2010.



Source: own calculations based on data derived from the CBS Statline database (2013).

3. The decision to migrate: the Roy-Borjas Model

Before analysing in depth the determinants of individual attitudes towards migration, this section will provide an insight in the characteristics of immigrants in order to understand what causes immigration on an individual level by investigating what influences a person's decision to move to a foreign country.

The Roy-Borjas model is one of the models that attempt to explain an individual's decision to migrate. Using the model by Roy (1951), the decision of an individual to migrate is determined by the sign of the following function (Borjas, 1991):

$$I = \ln\left(\frac{w_1}{w_0 + C}\right) \approx \left[X(\delta_1 - \delta_0) - \pi\right] + (\varepsilon_1 - \varepsilon_0) \tag{3}$$

Where I is the decision to migrate, w_1 represents the earnings distribution faced by individuals in the receiving country (Foreign), and w_0 the earnings distribution of individuals in the country of origin (Home). The variable C is the level of mobility costs, which varies among individuals due to direct transportation costs and time costs associated with migration. X is a vector of socioeconomic characteristics with value δ_0 in the country of origin, and δ_1 in the receiving country (Borjas, 1991). The variable π represents a "time-equivalent" measure of the costs of migration and is equal to C/w_0, to capture the fact that the level of migration costs is likely to vary among individuals. The time costs of migration will be higher for individuals who face higher opportunity costs, in this model a higher w_0. On the other hand, persons with a higher w_0 are likely to face higher transportation costs, as they might have to move a larger family or more household belongings. Thus, π captures the relation between the expenses of moving a family and household goods and an individual's earnings distribution at the country of origin, w_0. The disturbances ε_0 and ε_1 are random variables, which are normally distributed with mean zero and variance σ^2. Equation (3) is based on the following two earnings distributions:

$$\ln w_0 = X\delta_0 + \varepsilon_0 \tag{4}$$

$$\ln w_1 = (1 - M)X\delta_n + MX\delta_1 + \varepsilon_1 \tag{5}$$

Equation (4) on the one hand, represents the earnings distribution of the residents of the home country. Equation (5) on the other hand, represents the earnings distribution of individuals in the receiving country. M is a dummy variable which indicates whether or not an individual is born in the home country or in the receiving country. δ_n Is a vector that indicates the value that the receiving country's labour market attaches to the socioeconomic characteristics of the potential migrants (Borjas, 1991). The $\approx$ sign in equation (3) indicates that one's decision to migrate depends on one's earnings in the home country, one's expected earnings in the receiving country, and the costs of migration, and these variables are in turn dependent on socioeconomic characteristics and their valuation, the "time-equivalent" measure of migration costs and the random variables from equation (4) and (5). Immigration from the country of origin, Home, to the receiving country, Foreign, occurs when the sign of equation (1) is positive, i.e. $I > 0$ (Borjas, 1991). An individual will decide to migrate when his/her expected earnings in Foreign are higher than the expected earnings at Home plus the costs he/she would make when migrating (C).

4. The effects of immigration on the destination country

This section provides an overview of the positive and negative effects of immigration on the society and economy of the destination country as a whole. The perceived effects of immigration are the basis of what drives people's individual attitudes towards migration.

In the debate about immigration policy, the effect of immigration on the labour market has received a lot of attention. It is often argued that the inflow of immigrants increases competition in the labour market, which leads to a decrease in wages or to the displacement of natives by immigrants, leading to more unemployment among the native workers. Furthermore, natives often argue that immigrants come to utilize the wide range of social security benefits that the destination country offers. These two effects of immigration, that are mainly economic, will be extensively analysed in Section 5. A third negative effect of migration for the destination country might be the 'loss' of the domestic culture and societal values. When the number of immigrants in a country rises, immigrants often decide to cluster together in cities or districts as a result of network effects. The clustering of immigrants would lead to less integration of the immigrants into the society of the destination country. Nannestad (2007) describes the integration of immigrants as a public good, benefitting both immigrants as natives. Furthermore when immigrants have a different religion, natives often feel threatened by the inflow of new (religious) convictions, expressions and habits. In the Netherlands, the Party of Freedom, for instance, explicitly points at the (potential) threat of the Islam coming from the presence of Turkish and Moroccan immigrants (PVV, 2010).

However, the multicultural society that evolves from the inflow of immigrants can also be viewed as a positive development. In the United States, the concept of 'Melting Pot' emerged, describing the new culture that evolved from the different cultures of the immigrants. Also on an economic level, greater diversity as a result of the inflow of immigrants can be seen as a benefit for the destination country. Firstly, immigrants can complement the native factors of production (Friedberg and Hunt, 1995). Immigrants may have different specializations in education, or a different working experience, which can complement the existing knowledge of the native population. For example, a country or business may decide to attract workers from India who are specialized in Information Technology because there is a lack of specialized workers in the home country. Countries often implement special visas when they aim at attracting a specific type of educated or specialized immigrants. Secondly, Friedberg

and Hunt (1995) suggest that immigrants affect the domestic per capita growth in income. For example, the inflow of immigrants increases the number of consumers, leading to an increase in domestic consumption. The inflow of immigrants also increases the GDP of the receiving country through the incomes earned by the immigrants, which will be explained in Section 5. More recently, in the debate of the ageing population in Europe, it has often been argued that the inflow of immigrants can provide a solution to the decreasing workforce and the increasing number of elderly people in need of health care. In rich countries, people increasingly live longer; fertility rates are lower; the number of people in the workforce is declining; and demand for retirement and health benefits are increasing. The United Nations has introduced migration as a solution to the problems that come from the ageing population. This mechanism is called 'replacement migration'. However, the academic literature has provided mixed results about the applicability of this solution. Birmingham (2001) criticizes the proposed solution by the United Nations because the number of immigrants that has to flow into a country has to be very large in order to provide a solution to the problem of an aging population.

The fourth benefit of immigration is the mechanism that reallocates employment within a country or a currency area like the European Union. A recent development within Europe is the increasing flow of unemployed workers between the member states in order to find employment in another country. For example, unemployed youths in Spain have learned the German language and moved to Germany in order to work there. On the 21st of May 2013 Germany signed an agreement to provide young unemployed Spanish workers with jobs (The Economic Times, 2013). A fifth benefit is confined to the characteristics of immigrants. In the United States, immigrants are often the ones who start up new enterprises. The presence of entrepreneurs has a positive effect on the destination country because it leads to an increase in employment opportunities. Saxenian (2000) states that immigrants who become entrepreneurs in the destination country are fostering economic development through job creation and bringing knowledge about their countries of origin, which could promote flows of investments and trade between the destination country and the country of origin. The organization 'Innovate for America' states that forty-four per cent of the start-up enterprises in Silicon Valley is founded by immigrants (innovateforamerica.org, 2013).

5. Determinants of individual attitudes towards migration

The policies by Western European governments that aim at restricting the number of immigrants are a result of the individual attitudes against migration of the citizens in these countries. This section of the literature review evaluates the theories that aim to explain the factors that drive individual attitudes towards migration.

5.1 The role of the welfare state

The first approach to explain what drives individual attitudes of natives towards migrants is to find out who 'gains' and who 'loses' from migration. If the distribution of gains from migration is not symmetric, there are winners and losers from migration. A mechanism through which gains are (re-) distributed in a country is the welfare system. Nannestad (2007, p. 514) defines the welfare system as a system 'comprising of income transfers (cash benefits) and of certain benefits in kind (health, education, child care and care for the elderly)'. It is difficult to provide a more specific definition of the welfare state, because each country can implement the welfare system in a different way. Welfare states can differ in the activities of the state and in the way welfare is delivered (Barr, 1992). The role of the government in a welfare state is to intervene and provide benefits like health care and education (Barr, 1992). By providing subsidies and imposing taxes, the government can intervene and redistribute welfare. When immigrants settle in a country, they will be part of the welfare system in that country, implying that they will pay taxes and receive subsidies and other benefits like education and unemployment benefits.

Some argue that the welfare state works as a 'magnet' that attracts immigrants. On the one hand, immigrants will benefit from the welfare that is provided by the governments in Western countries. On the other hand, they can provide a contribution to the welfare state by paying taxes to the government. Nannestad (2007) reviews the empirical literature that has been written about the welfare magnet hypothesis. The evidence that has been found has not been distinctively confirming the hypothesis. For the case of the United States, network effects have dominated the flows of immigrants. For the European case, countries that can be defined as the most generous welfare states should act as magnets for immigrants. The effect of the welfare state as a pull factor can be dominated by the effects of other pull factors, like a higher wage level in the destination country. The immigration policy of the destination

country strongly influences the number of immigrants that is allowed to move to the country. Given these other factors it is hard to draw a conclusion about the welfare magnet hypothesis.

When determining what influences individual attitudes towards migration, it is more interesting to see whether or not immigration into the welfare state leads to an asymmetric distribution of benefits between immigrants and natives. It can be expected that immigrants will be more dependent on welfare benefits because they need to make an investment before they are able to enter the labour market. Immigrants need to learn a new language, habits and skills to adapt to the new environment. Integration costs time and money. The welfare system might create an incentive for immigrants to not integrate in the host society and labour market, because alternative benefits are offered by the welfare system when the immigrant does not get an income at all, or a relatively low income, as a result of a lack of skills. This situation can be described as a 'moral hazard problem' as the welfare system leads to a weakening of the incentive to integrate (Nannestad, 2007).

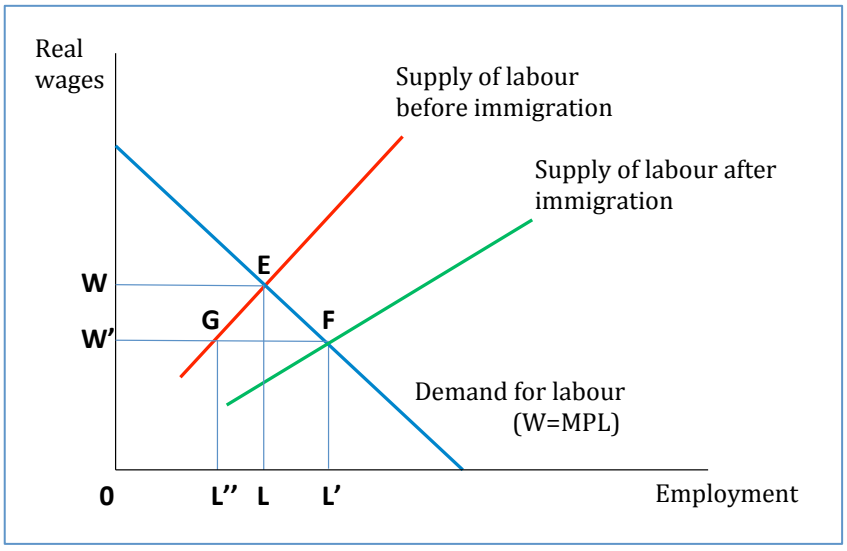
Other papers have further examined the effect of the welfare state on individual attitudes towards migration. For example, Brücker et al. (2002) found that an increase in immigration flows may increase the demand for unemployment benefits in the most generous welfare states and found evidence for the most generous welfare states to be acting as magnets for immigrants. Facchini and Mayda (2009) analyse the effect of the welfare state on individual attitudes towards migration by distinguishing between two types of welfare-state models, a 'tax adjustment model' and a 'benefit adjustment model'. In the first case, migration will lead to changes in the tax rate, while leaving the per capita benefits unchanged. In the latter case, migration will lead to changes in the per capita benefits, while leaving tax rates constant. Furthermore, they make a distinction between skilled and unskilled migration and low-income and high-income natives. Facchini and Mayda (2009) found that in countries where the welfare state can be characterized by tax adjustment, people with high incomes are opposing the inflow of unskilled immigrants, since these unskilled immigrants would be a net burden to the welfare state and taxes would rise. In the case of benefit adjustment, low-income natives would oppose the inflow of unskilled immigrants, because in this case taxes would remain constant, but per capita benefits would decrease. Hanson et al. (2007) focus on the impact of public finance regimes on individual preferences and country's policies towards migration. They find that also public-finance considerations play a role in determining people's opinions with regards to migration. Hanson et al. (2007) support Facchini and Mayda's (2009)

conclusion by stating that the more skilled natives of the United States are more likely to oppose migration when they are being exposed to fiscal pressures coming from immigration.

5.2 The labour market channel

The second channel through which migration can create winners and losers amongst natives and immigrants is the labour market channel. Immigrants can affect the natives through the labour market channel in two ways. First, the inflow of migrants increases the supply of labour and creates more competition in the labour market. As a result, the price of labour – the wage level – will decrease. The second effect of migration on the labour market of the destination country is the substitution of labour from natives to immigrants. This would lead to an increase in the number of unemployed workers amongst natives. Both effects have been investigated in the academic literature. The economic mechanism behind the two effects of migration on the labour market will be explained first. Figure 6 below shows the initial equilibrium in the labour market, point E.

Figure 6. The labour market, real wage and unemployment level before and after immigration of the destination country.



Source: own graph based on Burda and Wyplosz (2009).

The slope of the demand of labour is equal to the marginal product of labour, the wage level. After immigration, the supply of labour curve shifts to the right, and its slope slightly decreases because a lower wage will attract fewer immigrants in the future (Burda and Wyplosz, 2009). As a result of immigration, employment has increased from *L* to *L'*. At the new equilibrium, point F, the real wage level has decreased from *W* to *W'*. The price of labour, *W*, decreases due to an increase in the supply of labour, while demand remains

constant. GDP, the sum of the marginal products of labour, has increased as a result of immigration, due to increased employment. The increase in GDP is the area (*EFLL')* in the figure. The income that was initially earned by domestic workers is equal to the employment of domestic workers times the real wage level, represented as the area (*WEL0*) in Figure 6. The immigrants take a part of the income earned by domestic workers, and receive a total income equal to the area (*GFL'L"*). The supply of labour by domestic workers decreased from *L* to *L"* because wages have decreased from *W* to *W'*. The income earned by domestic workers decreases from area (*WEL0)* to area (*W'GL"0)* as a result of the inflow of immigrants (Burda and Wyplosz, 2009). To conclude, this mechanism shows that the wage level is expected to decrease as a result of the inflow of immigrants, and that they will take a part of the jobs of the natives. However, note that the economy as a whole benefits from the inflow of immigrants since GDP increases.

Friedberg and Hunt (1995) state that a distinction between a closed and open economy model is required when analysing the effect of migration on the natives' wages. Consider a model with two production factors, labour (L), and capital (K), and output is a function of the two production factors, leading to the following simple production function:

$$Y = f(K, L) \tag{6}$$

In an economy where only one good is being produced, and immigrants are perfect substitutes of the production factors of the natives, the prices of those production factors will decrease as a result of immigration. This is the case described in Figure 6 above: due to the inflow of immigrants, the supply of labour increases, and as a result the wages will decrease. However, if the production factors capital and labour are complements, the price of one of the factors will increase. This is the case when production requires both capital and labour. When the supply of labour increases, a producing firm is able to increase its output because one of the production factors, labour, is now more available. Since it is assumed that in this case labour and capital are complements, the demand for capital would increase as well, resulting in an increase in the return to capital (Friedberg and Hunt, 1995). When one considers an open economy model, for example, the Heckscher-Ohlin model, an adjustment will take place through the exports or imports of labour as embodied in goods. Assuming identical

technologies among countries, the production of goods that are more labour intensive would increase and factor prices would remain the same (Friedberg and Hunt, 1995).

Furthermore, Friedberg and Hunt (1995) conclude that the impact of immigration on the wage levels in the labour market is dependent on the relative human capital levels of the immigrants. This relation has been investigated in other academic papers. Okkerse (2008) has surveyed the empirical evidence on the effect of immigration on the labour market. A general conclusion of the empirical research in this field is that immigration does have a negative impact on wages of low-skilled native workers. In addition, David Card (2001) argues that the flows of immigrants in the United States during the 1980s had a negative impact on the relative wages of less-skilled workers in cities with a large number of immigrants. Antonji and Card (1991) analyse the inflows of immigrants per city in the United States between 1970 and 1980, distinguishing between cities with a relatively high share of immigrants and cities with a low share of immigrants. 'Less-skilled' natives are defined as persons who studied less than thirteen years and completed their education. Antonji and Card (1991) find a negative relation between the increase in the fraction of immigrants and the wage level of less-skilled native workers. To draw a conclusion about the relation between migration and the wage levels of native workers, the academic literature has found existing, but relatively small negative effects of immigrant inflows on the wages of natives. More specifically, the negative effect of immigration on the wages of less-skilled workers has been emphasized in the academic literature.

The second mechanism through which the inflow of immigrants might have a negative impact on the labour market situation of natives is the possibility of substitution. A native worker can be substituted by an immigrant, which could lead to more unemployment amongst native workers. Young and low-skilled workers are more vulnerable to the unemployment effects of a large inflow of immigrants. The reason for this statement is that young workers have similar levels and years of experience as immigrants. The skill levels of immigrants are similar to the skill level of low-skilled workers. As a result, immigrants become substitutes to young and low-skilled workers in the labour market. However, Okkerse (2008) finds a low probability that immigrants affect the unemployment rate in the short run. Okkerse (2008) concludes that this probability is even zero in the long run. Altonji and Card (1991) report some evidence for the displacement of native workers out of industries that can be characterized as 'low-wage immigrant intensive industries'. However, they find little evidence for the relation between

inflows of immigrants and unemployment rates of low-skilled natives. To summarize, one can say that the effect of immigrants on the labour market position of natives is small. Nevertheless, there are some groups of workers that are more vulnerable to those effects, like young workers and those with a relatively low level of education.

When measuring the effect that migration has on the labour market of the destination country, one has to control for the fact that native workers might migrate within the country itself. Borjas (2006) argues that it is difficult to measure the true impact of immigration on the native wage level because natives may decide to migrate within the country as a response to a flow of immigrants. Furthermore, the labour market institutions in the destination country can influence the effect that immigration has on the labour market conditions. Institutions and policies that reduce the flexibility on the labour market are intended to protect the workers, but will very likely increase the negative impact of international migration on the domestic labour market (Angrist and Kugler, 2003). Angrist and Kugler (2003) performed an empirical research for European countries and analysed the effect of immigration flows on the job opportunities of the native workers. They found a negative relation between the increase in the share of foreign workers and the employment of native workers.

Both the generosity level of the welfare state and the labour market channel are economic factors determining the natives' attitudes towards immigration. Empirical analysis of the case of the United Kingdom shows that the concerns about welfare play a more important role than concerns about the labour market in determining individual attitudes towards international migration by natives in the United Kingdom (Dustmann and Preston, 2007). However, one has to take into account the natives' income levels and the immigrants' education levels when analysing the effects of the labour market channel and the welfare state on individuals' opinions towards migration. Facchini and Mayda (2009) state that a person's skill and income level have opposite effects on their migration attitudes. Because an individual's income level and skills level are positively correlated with each other, the effects of the labour market and the welfare state might partially offset each other. In addition, Facchini and Mayda (2012) conclude from a cross-country analysis that the respondents prefer skilled migration to unskilled migration. They find that economic factors like the labour market channel and the role of the welfare state described above play a role in shaping the preference for high-skilled immigrants. Non-economic factors, like the attachment to traditions and security, also play a significant role in shaping these attitudes. One has to take into account that there are also

natives who are not active on the labour market and form an opinion about immigration. According to O'Rourke and Sinnott (2004), for natives who are not part of the labour force, not the economic factors that have been described in this section, but non-economic factors influence their attitudes towards migration. The next section will describe the non-economic factors that determine individual attitudes towards migration.

5.3 Non-economic factors

Not only the labour market and the welfare state channels influence individual attitudes towards migration, but also non-economic factors like a country's culture and values. As mentioned earlier in this paper, the skill and education level of the native and immigrant population have an impact on the way the inflow of immigrants is being perceived by natives. Apart from the economic component of relative skill, namely competition on the labour market, there is also a social or cultural component attached to the level of education. Hainmueller and Hiscox (2007) find that natives of European countries, who are highly educated, are more likely to be in favour for international migration, regardless the skill level of the immigrants. This finding does not stem from the competition on the labour market between natives and immigrants, but from the effect of education on the way the cultural differences between natives and immigrants are being perceived. Persons with a higher education level are more likely to support the presence of immigrants because they value cultural diversity more than less educated persons, and they are less likely to have racist opinions than their less educated counterparts. Furthermore Hainmueller and Hiscox (2007) find that anti-immigrant sentiments in Europe seem to stem from beliefs of national identity and cultural values, rather than from economic threats from immigrants. Dustmann and Preston (2007) also emphasize the importance of racial and cultural concerns in determining individuals' opinions towards immigration. When the immigrants are ethnically more distant from the majority of natives, the cultural and racial channels become even more important. Using data from the United Kingdom, Dustmann and Preston (2007) find that about two-thirds of the respondents of the survey are opposing the further settlement of ethnically different immigrants. Another factor that plays a role in the attitudes of natives towards the inflow of immigrants is ideology. Nationalist sentiments and patriotism have a strong positive effect on anti-immigrant attitudes (O'Rourke and Sinnott, 2004). These results show that not only economic factors influence people's opinions regarding the integration of the global economy, and in specific immigration.

6. Migration and public policy

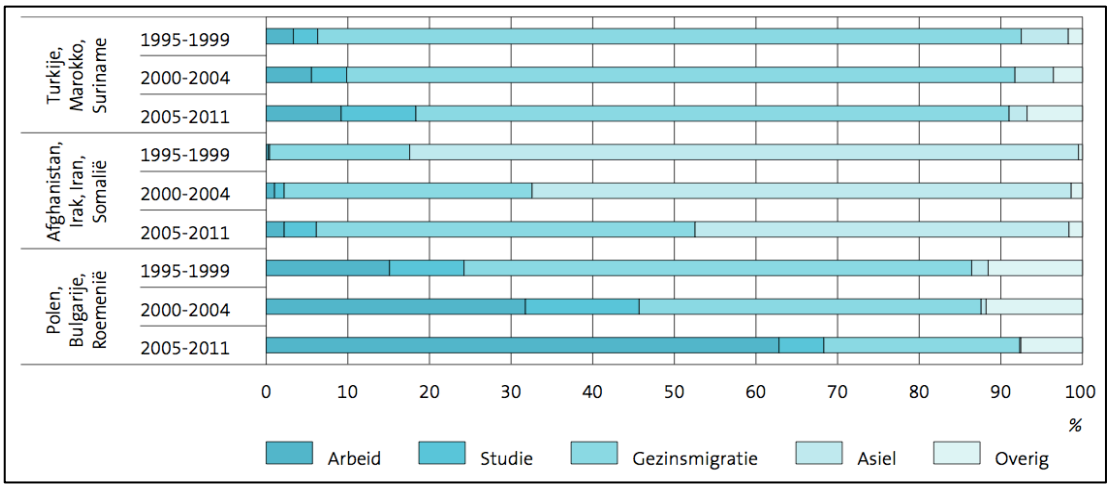
As mentioned in the introduction of this paper, in the process of globalization, migration numbers are rather small compared to trade and FDI flows. Facchini and Mayda (2008) argue that the restrictive migration policies that are implemented by destination countries are the main determinants of the limited flows of migration. In a democratic system these public policies are the outcomes of the voters' attitudes towards migration. Facchini and Mayda (2008) find the evidence that, on average, in the majority of the destination countries voters are opposing migration. As a result, the public policies with regards to immigration are restrictive in these destination countries. Despite of voters' anti-migration attitudes, governments still allow a number of immigrants to enter their countries. Facchini and Mayda (2008) state that this is the result of the existence of pro-immigration pressure groups, who lobby at the government in order to impose higher immigration levels than the voters want.

This paper draws a link between individual attitudes towards migration and people's voting behaviour. The empirical analysis will use the voting behaviour of natives as a measure for anti-immigration attitudes in the Netherlands. According to Facchini and Mayda (2008), only 3.7 percent of the Dutch population is in favour of increasing the number of immigrants flowing into the Netherlands. For example, Canada is more open to immigrants: twenty-nine percent of its population is in favour of increasing the number of immigrants. In order to understand the situation underlying the data that has been used in the empirical analysis, the following subsection provides a brief overview of migration in the Netherlands and its recent public policy with regards to immigration.

6.1 The Netherlands

On the first of January 2012, the total number of immigrants in the Netherlands was 3.5 million, accounting for twenty percent of the total population. In 2011 the Netherlands experienced an enormous growth in the inflow of immigrants, who mainly came from European Union member states, for example Poland (CBS, 2012). Figure 7 shows the increase of immigration from Poland, Bulgaria and Romania to the Netherlands with the motive of employment between 1995 and 2011.

Figure 7. Immigration according to motive, country of origin, in three periods: 1995-1999, 2000-2004, and 2005-2011. Motives (from left to right): employment, study, family migration, asylum, other.



Source: CBS (2012).

In the past, many non-western immigrants who moved to the Netherlands came from Turkey, Morocco and Suriname. These immigrants came to the Netherlands with the motive for employment during the 1960s/1970s as a result of the government's guest worker policy. They built their lives in the Netherlands and had children. These immigrants, who were born in a foreign country and have at least one parent with a non-Dutch nationality, are defined as the 'first generation of immigrants'. The children of these immigrants, who have at least one non-Dutch parent, but are born in the Netherlands, are defined as the 'second generation of immigrants'. The second generation of immigrants is expanding. Furthermore, family members of the Moroccan, Suriname and Turkish immigrants are a major inflow of immigrants coming to the Netherlands nowadays. This trend is visible in Figure 7. In 2011, about seventy percent of the immigrants coming from Turkey, Morocco and Suriname had the motive of family reunification (CBS, 2012). The immigrants mainly move to urban areas in the Netherlands.

In the Netherlands, the 'Immigration and Naturalization Service' (in Dutch '*Immigratie en Naturalisatie Dienst*', abbreviated as 'IND') evaluates the requests for residence permits individually. Immigrants who have the nationality of a member state of the European Union have to register at the IND if they plan to stay in the Netherlands longer than three months (www.rijksoverheid.nl, 2013). European citizens, except for citizens from Bulgaria and Romania, do not need a residence permit. A non-EU immigrant has to satisfy a number of conditions in order to receive an 'Authorization for Temporary Stay' ('*Machtiging tot*

Voorlopig Verblijf'). For example, immigrants have to proof that they receive an income, by showing their employment contract. Non-EU immigrants who plan to stay for a longer term in the Netherlands are obliged to integrate within the Dutch society and pass an integration exam. On the first of January 2013, the Dutch government has tightened the regulations for integration. The current government of the Netherlands plans to tighten the regulations with regards to immigration, for example by making the presence of immigrants without a residence permit in the Netherlands illegal (www.rijksoverheid.nl, 2013). These restrictive migration policies are a result from the people's voting behaviour, which will be analysed further in the empirical part of this paper. In the Netherlands, elections take place on a local and national level. The elections for the Parliament take place every four years in general. During the past six elections, from 1998 to 2012, the number of votes for anti-immigrant parties increased from about thirty percent in 1998 to fifty percent in 2012. Not only the voters changed their attitudes, but also the programs of a number of political parties became more anti-immigrant during these years.

7. Empirical Analysis

Sections 7 and 8 will describe the empirical analysis that has been performed for this paper. The main research question, *'which factors determine the individual attitudes towards immigration of the inhabitants of the receiving country?'* will be analyzed with the use of data of 403 municipalities in the Netherlands. The dependent variable is the percentage of votes for political parties that have anti-immigrant standpoints during the last five elections of the Dutch Parliament. Specifically, the main interest is analyzing whether or not the number of immigrants living in a municipality affects one's voting behavior. Therefore, the sub question of the empirical part is: *'Does the number of immigrants living in the municipalities of the Netherlands influence the voting behavior during national elections in the Netherlands?'*. In order to analyze the main question and the sub question, three dependent variables and several models for each variable will be estimated. Before the models will be tested, first a description of the data is provided in Section 7.1. Secondly, Section 7.2 describes the methodology and the models that will be used. Section 8 gives an overview and an interpretation of the results.

7.1 Data description

This section provides an overview of the data that will be used in the empirical analysis. The data selection contains the municipalities *('gemeentes')* of the Netherlands of the year 2010 from the CBS Statline database. The municipalities reform over time; they get combined or split up. As a consequence, some municipalities have to be omitted from the dataset. The list of municipalities that existed in 2010 has been used. In 2010 there were 431 municipalities in the Netherlands (CBS Statline, 2013). Twenty-eight municipalities that had a lack of data for the sample period, for example as a result of a reform, have been omitted from the dataset. As a result, 403 municipalities are left for the analysis. Table 11.1 in the Appendix presents a list of the municipalities, with an indication of which municipalities have been omitted from the dataset. The empirical analysis will contain the years 1998, 2002, 2003, 2006 and 2010, the years in which elections for the Parliament *('Tweede Kamer')* were held in the Netherlands. The elections of the year 2012 are not included; at the time of writing, a large part of the data was not available for the year 2012. The independent variables have been selected based on the suggestions of the papers that have been analysed in the literature review. Table 1 provides an overview of the dependent and independent variables that have been used in the empirical analysis.

Table 1 – An overview of the variables

Name	Description	Type	Source
VOTE 1	Votes for anti-immigration parties as a percentage of total valid votes	Percentage	Verkiezingsuitslagen.nl
VOTE 2	Votes for anti-economic immigration parties as a percentage of total valid votes	Percentage	Verkiezingsuitslagen.nl
VOTE 3	Votes for the party PVV as a percentage of total valid votes	Percentage	Verkiezingsuitslagen.nl
IMM	The number of immigrants as a percentage of the total population	Percentage	CBS Statline
NWIMM	The number of non-western immigrants as a percentage of the total number of immigrants	Percentage	CBS Statline
WIMM	The number of western immigrants as a percentage of the total number of immigrants	Percentage	CBS Statline
FIRST	The first generation of immigrants as a percentage of the total population	Percentage	CBS Statline
INC	Average disposable income, per capita. Equal to the gross income minus taxes of the preceding year	Number (x 1000 €)	CBS Statline
WW	The number of unemployment benefits as a percentage of the total population	Percentage	CBS Statline
LOWEDUC	The number of persons with a low education level as a percentage of the total labour force	Percentage	CBS Statline
HIGHEDUC	The number of persons with a high education level as a percentage of the total labour force	Percentage	CBS Statline
ABOVE65	The number of persons of 65 years or older as a percentage of the total population	Percentage	CBS Statline
FERT	Fertility rate: the number of live births per thousand women	Number (pro mille)	CBS Statline
CRIM	Criminality rate: the number of crimes per thousand persons	Number (pro mille)	CBS Statline
TMIMM	The number of Turkish and Moroccan immigrants as a percentage of the total population	Percentage	CBS Statline

7.1.1 Dependent variables

The dependent variables, the voting results of the elections for the Parliament, are the percentages of votes for parties that are anti-immigrant (source: www.verkiezingsuitslagen.nl). *VOTE 1* has been constructed by dividing the number of votes for anti-immigrant parties by the total number of votes per municipality. A more elaborate list of the political parties, their participation in the Parliament elections, and whether or not they are considered as 'anti-immigrant' can be found in Table 11.2 in the Appendix.

$$VOTE\ \ 1_{i,t} = \frac{\text{Votes for anti-immigration parties}_{i,t}}{\text{Total votes}_{i,t}}$$

Since the political parties differ in their opinions about migration, three different y-variables will be used. *VOTE 1* represents the percentage of votes for parties that are against immigration in general. For each year, the following political parties are considered as anti-immigrant, based on the content of their political programs:

Table 2 – The 'anti-immigrant' political parties for each election year

Year	Political party					
1998	VVD	SP*	SGP*			
2002	VVD	SP*	SGP*	CU*	LPF*	DN*
2003	VVD	SP*	SGP*	CU*	LPF*	
2006	VVD	SP*	SGP*	CU*	LPF*	EenNL
2010	VVD	SP*	SGP*	CU*	PVV*	ToN

The parties with a * are also against economic immigration in general.

'VVD' stands for 'People's Party for Freedom and Democracy', and is a liberal party that has been established in 1948 (VVD, 2013). The party program of the VVD states that it wants to implement a restrictive and fair immigration policy. The VVD wants to actively invite people who are highly educated, so-called 'knowledge workers', to come to the Netherlands and strengthen its economy (VVD, 2013a). 'SP' is the Socialist Party, and states that it is very reserved towards economic immigration (SP, 2013). The party 'SGP' is a reformed party that argues that the inflow of disadvantaged immigrants into the Netherlands should be limited (SGP, 2013). 'CU' stands for 'Christian Union', and states that the Netherlands does not benefit from large-scale immigration (CU, 2013). The CU party also states that the Netherlands cannot infinitely absorb the inflow of immigrants with economic motives. The LPF, 'Lijst Pim Fortuyn', states that the Netherlands is not an immigration country, and that immigration should be limited (LPF, 2002).

'DN' stands for 'Sustainable Netherlands'. This party argues that the Netherlands should not accept the inflow of economic immigrants anymore, but should offer refugees more help, like offering them a permanent resident permit (DU, 2002). 'EenNL' proposes a strict immigration policy. Refugees are only allowed to stay in the Netherlands when it is not possible to stay in their own region. EenNL proposes a Greencard-system, which only allows for temporary economic immigration (EenNL, 2006). The 'PVV' stands for the 'Party of Freedom', and advocates for an immigration stop for non-western immigrants (Moroccan and Turkish immigrants) for five years. Furthermore, the PVV argues that immigrants should not have the

right to receive benefits during the first ten years of their stay in the Netherlands (PVV, 2010). 'ToN' stands for 'Proud of the Netherlands'. This party states that 'economic fortune seekers' will be expelled, and the presence of immigrants without a residence permit should become illegal (ToN, 2013). However, 'ToN' states that immigration should be allowed whenever it is beneficial for the Dutch economy.

VOTE 2 represents the percentage of votes for parties that are against economic immigration. The political parties that are against economic immigration in general will be included in this variable. The VVD and ToN are excluded from this variable since these parties are pro immigration of persons that can benefit the country. Also the votes for the party EenNL are excluded, since it is pro temporary economic migration.

$$VOTE\ \ 2_{i,t} = \frac{\text{Votes for anti-economic immigration parties}_{i,t}}{\text{Total votes}_{i,t}}$$

The dependent variable *VOTE 3* represents the percentage of votes for the political party PVV, which participated in the elections of 2010. It is interesting to consider the percentage of votes for the PVV separately as an independent variable, because it gives the opportunity to analyse a direct relation between the number of immigrants living in a municipality and one's voting behaviour. In its party program of 2010, the political party PVV explicitly presented plans that limit the immigration and integration of Islamic immigrants in the Netherlands. Islamic immigrants in the Netherlands are mainly Moroccan and Turkish immigrants. For example, the PVV states that the inflow of Islamic immigrants should be stopped for five years, and that it should be prohibited to build new mosques and Islamic schools for five years. The PVV also wants to prohibit wearing headscarves (PVV, 2010). The models with the dependent variable *VOTE 3* will test the effect of the relative number of Moroccan and Turkish immigrants on the percentage of votes for the PVV.

$$VOTE\ 3_{i,t} = \frac{\text{Votes for PVV}_{i,t}}{\text{Total votes}_{i,t}}$$

7.1.2 Independent variables

This subsection describes the independent variables that will be used in the analysis. The percentage of immigrants living in a municipality *IMM* has been obtained by dividing the number of immigrants by the total population of a municipality in that year.

$$IMM_{i,t} = \frac{\text{Total number of immigrants}_{i,t}}{\text{Total population}_{i,t}}$$

The data has been obtained from the database of CBS Statline. The total population is the number of persons who is registered in a municipality on the first of January of that year. Illegal immigrants are not registered in the population registry and therefore excluded from the dataset. A native *('autochtoon')* is defined as a person of whom both parents are born in the Netherlands. An immigrant *('allochtoon')* is defined as a person of whom at least one parent is born in a foreign country. This variable includes both the first generation of immigrants and the second generation of immigrants.

The percentage of non-western immigrants, *NWIMM*, represents the number of immigrants that comes from a non-western country, as a percentage of the total number of immigrants. Non-western immigrants come from countries in Africa, Latin America, Asia (excluding Indonesia and Japan), or Turkey (CBS Statline, 2013).

$$NWIMM_{i,t} = \frac{\text{Non-western immigrants}_{i,t}}{\text{Total number of immigrants}_{i,t}}$$

The percentage western immigrants, *WIMM*, reflects the percentage of immigrants that comes from a western country of the total number of immigrants. Western immigrants come from countries in Europe (excluding Turkey), North America, Oceania, Indonesia, and Japan (CBS Statline, 2013). Indonesia is being classified as a western country because of the colonial ties between the Netherlands and Indonesia. People that are born in former Netherlands Indies and moved to the Netherlands are classified as western immigrants. Immigrants from Japan are classified as western immigrants because they are most of the time employees of Japanese companies with their families. Since *NWIMM* and *WIMM* are perfectly correlated, only the variable *NWIMM* will be used in the analysis.

The percentage of the first generation of immigrants, *FIRST*, is calculated by dividing the number of first generation immigrants by the total population of a municipality in a given year. The first generation of immigrants accounts for the persons who are born in a foreign country and have at least one parent who is also born in a foreign country.

$$FIRST_{i,t} = \frac{\text{Total first-generation immigrants}_{i,t}}{\text{Total population}_{i,t}}$$

The average disposable income, *INC*, is the gross income minus taxes. Gross income comes from employment, entrepreneurship, payments of income insurances, and payments of social services (child bonus excluded). The variable *INC* that is used for the empirical analysis is the average disposable income (per capita) of the *preceding year* of persons with 52 weeks of income, in 1000 euros. The data is only available for the years 2002, 2003, 2006 and 2010.

The unemployment benefits are the benefits that have been paid by the administration of the UWV[1] according to the Unemployment Law *('Werkeloosheidswet')*, abbreviated 'WW' in Dutch. The number does not represent the number of persons receiving one or more unemployment benefits, but the total number of unemployment benefits *('Werkeloosheidswet uitkeringen')* that has been paid in a municipality. To account for the number of persons living in a municipality, the number of unemployment benefits is divided by the total population of the municipality, see the formula below.

$$WW_{i,t} = \frac{\text{Unemployment benefits}_{i,t}}{\text{Total population}_{i,t}}$$

The variable *LOWEDUC* represents the percentage of the labour force that has a relatively low education level. If a person has a low education level, he or she has completed primary education and the first phase of secondary education[2]. The labour force is constituted by the persons who are between 15 and 65 years old, who work at least twelve hours a week, or accepted a job which enables them to work at least twelve hours a week, or who are willing to

[1] The UWV is the institute that carries out the employment insurances in the Netherlands.
[2] Forms of secondary eduation in the Netherlands are: LBO, VB, VMBO, MULO, MAVO, and the first three years of HAVO and VWO.

work at least twelve hours a week and are engaged in activities that enable them to find a job for at least twelve hours a week.

$$LOWEDUC_{i,t} = \frac{\text{Persons with a low education level}_{i,t}}{\text{Total labour force}_{i,t}}$$

The variable *HIGHEDUC* represents the percentage of persons that is part of the labour force that has a high education level. The same definition of labour force has been used as for the *LOWEDUC* variable. If a person has a high education level, he or she has completed higher vocational- (HBO) or university education. The group between the low-level education group and the high-level education group has completed the second phase of secondary education; this 'middle education level' group has been excluded from the dataset.

$$HIGHEDUC_{i,t} = \frac{\text{Persons with a high education level}_{i,t}}{\text{Total labour force}_{i,t}}$$

The variable *ABOVE65* is the percentage of persons that are 65 years old or older, divided by the total population of a municipality. The age is calculated as the number of years that have been passed since the date of birth of a person on the first of January of the observation year, minus one year, the year of birth.

$$ABOVE65_{i,t} = \frac{\text{Persons above 65 years}_{i,t}}{\text{Total population}_{i,t}}$$

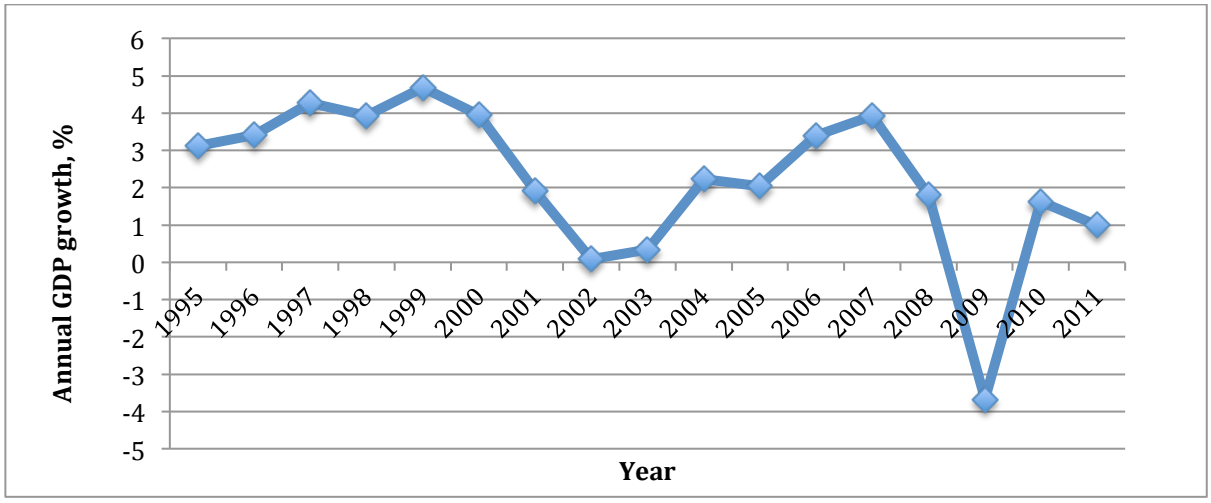
The fertility rate, *FERT*, is the number of live births per thousand women between the age of 15 and 50 years old in a certain period. The fertility rate has been standardized in order to be able to compare the rates between regions. Standardization has been done by setting the age distribution of women between 15 and 50 years old of a certain region equal to the age distribution of the Netherlands as a whole (CBS Statline, 2013). The variable *CRIM* represents the number of crimes registered at the police per 1000 inhabitants of a municipality. Only the crimes that have been registered at the police are included in the dataset.

For the analysis of the models with the dependent variable *VOTE 3* the independent variable *TMIMM* will be used. *TMIMM* is the percentage of Turkish and Moroccan immigrants of the total population of a municipality:

$$TMIMM_{i,t} = \frac{\text{Turkish and Moroccan immigrants}_{i,t}}{\text{Total population}_{i,t}}$$

Finally, the analysis will include dummy variables for each election year in order to investigate whether or not there is an effect of a severe economic crisis on the dependent variables. In 2009, the annual GDP growth rate in the Netherlands was -3.7%, which is visible in Figure 8 below (Worldbank, 2013). The economic slowdown of 2009 might have an effect on people's voting behaviour during the elections in 2010. The annual GDP growth rate in 2010 was 1.6%, but the economic outlook for the following years was still not bright. A dummy variable for the year 2010 will be used to capture the negative annual GDP growth rate of the preceding year. During the years 2002 and 2003, the GDP annual growth rates were 0.08% and 0.34% respectively; even though the economic downturn was less severe than in 2009-2010, the investigation of an effect of the crisis situation in 2002 and 2003 is of interest, by using period fixed effects.

Figure 8. The annual GDP growth rate in percentages for the Netherlands, 1995-2011.



Source: own calculations based on data from the Worldbank database, 2013.

Before analysing the models of interest, a selection of the variables has to be made. The independent variables that will be included in the different models that will be described in Subsection 7.2.2 will be selected on the basis of two aspects. First, there is a chance that some variables are correlated, which means that there is multicollinearity. Second, for some variables, data is missing for a number of municipalities or for a number of years. The missing data and solutions will be described in Subsection 7.1.3. Table 3 below shows a correlation matrix for the independent variables for the models that will be tested for *VOTE 1* and *VOTE 2*.

Table 3 – The correlation matrix for the x-variables

Variable	*IMM*	*FIRST*	*NW IMM*	*W IMM*	*INC*	*WW*	*LOW EDUC*	*HIGH EDUC*	*ABOVE 65*	*FERT*	*CRIM*
IMM	1										
FIRST	0.98	1									
NW IMM	0.54	0.60	1								
W IMM	-0.54	-0.60	-1.00	1							
INC	0.11	0.13	-0.01	0.01	1						
WW	0.34	0.25	0.01	-0.01	-0.49	1					
LOWEDUC	-0.25	-0.25	-0.03	0.03	-0.35	0.05	1				
HIGHEDUC	0.39	0.40	0.20	-0.20	0.50	-0.07	-0.76	1			
ABOVE65	-0.01	-0.03	-0.36	0.36	0.14	0.16	-0.12	0.06	1		
FERT	-0.48	-0.45	-0.10	0.10	0.19	-0.40	-0.05	-0.11	-0.17	1	
CRIM	0.76	0.73	0.55	-0.55	-0.01	0.36	-0.21	0.39	-0.12	0.47	1

This correlation matrix contains the x-variables of the models of *VOTE 1* and *VOTE 2*.

Table 3 shows that many independent variables are correlated with each other. The independent variables *IMM* and *FIRST* are highly correlated. The reason is that *IMM* includes both the first and the second generation of immigrants. The variable *FIRST* is thus equal to the variable *IMM* minus the number of second-generation immigrants. *NWIMM*, *FIRST* and *IMM* are different variables that measure the relative number of immigrants, and therefore a correlation between the variables is expected. The table shows that *NWIMM* and *IMM* and *NWIMM* and *FIRST* are relatively high correlated. The table also shows the perfect multi-collinearity between the variables *NWIMM* and *WIMM*. Therefore, only the variable *NWIMM* will be included in the analysis. The variable *CRIM* is highly correlated with the three immigration variables. *LOWEDUC* and *HIGHEDUC* are not perfectly correlated, because there is a third education level, the middle education level. However, the level of correlation between *LOWEDUC* and *HIGHEDUC* is relatively high.

There is also a correlation between *INC* and *WW*. Because of the correlation between the variables, it is recommended not to use all the correlated variables in one model. This will be taken into account during the estimation of the models.

Table 4 below reports the statistical description of the variables. The table shows that the variables *INC*, *CRIM* and *FERT* are the only variables that are not percentages. *CRIM* has a relatively small number of observations, due to the fact that the data is only available for two years. The difference in values of the three dependent variables is also visible when one considers their mean, minimum and maximum values. *VOTE 1* includes on average a higher percentage of total votes than *VOTE 2* and *VOTE 3*.

Table 4 – Summary statistics of the individual-level variables

Variable	Observations	Mean	Std. Dev.	Min	Max
VOTE 1	2007	0.41	0.10	0.13	0.72
VOTE 2	2006	0.21	0.12	0.01	0.70
VOTE 3	402	0.15	0.05	0.06	0.39
IMM	1999	0.12	0.07	0.02	0.53
FIRST	1999	0.06	0.04	0.01	0.37
NWIMM	1999	0.36	0.14	0.03	0.78
WIMM	1999	0.64	0.14	0.22	0.97
INC	1209	17.91	1.96	14.10	31.50
WW	1999	0.01	0.01	0.00	0.07
LOWEDUC	1521	0.28	0.06	0.12	0.56
HIGHEDUC	1377	0.27	0.09	0.11	0.66
ABOVE 65	2000	0.14	0.03	0.00	0.28
FERT	1998	53.12	7.60	16.90	105.80
CRIM	763	57.31	22.04	17.20	153.80

7.1.3 Missing data

As mentioned earlier in this section, for some municipalities there is a significant lack of data. The causes for the missing data are mainly the reform of the municipalities. As a result, 28 out of 431 municipalities have to be omitted from the dataset. A municipality has to be removed from the dataset when it has missing data for at least two years, and in total at least three variables missing. A list of included and omitted municipalities can be found in Table 11.1 in the Appendix. For some municipalities the data is only missing for the year 1998, therefore these municipalities are not omitted from the dataset. For the variables *LOWEDUC* and *HIGHEDUC*, many municipalities have a lack of data. In the case where only one out of five years is missing, the missing data is being 'filled' by taking the average of the other four

years. In case where more than one year is missing for *LOWEDUC* and *HIGHEDUC*, these data cells are kept empty. The data for the variable *INC*, the average per capita disposable income, is only available for the years 2002, 2003 and 2006. When this variable is included in the model, only these three years are used in the estimation. The data for the variable *CRIM*, the number of crimes that have been committed per 1000 persons, is only available for the list of municipalities of the year 2012. Therefore, it lacks data for a number of municipalities. In addition, the *CRIM* variable is only available for the years 2006 and 2010.

7.2 Methodology

This section describes the methodology of the empirical research and the models that are estimated. In order to analyse the main question of this paper, several models will be tested. However, before the models will be presented and estimated, the dataset that has been described in the previous section has to be further analysed.

7.2.1 Dataset

The dataset is an annual panel dataset, containing two dimensions: 403 municipalities, the cross-sections, and the time dimension contains five years. In total the dataset contains 2015 observations, on a time range of 1998, 2002, 2003, 2006 and 2010. Note that the dataset is unbalanced, which means that for some years and some variables data is missing.

The dataset has a feature that is important for the analysis: it has a relatively large sample size (N) and a relatively small time range (t). The dataset contains a time range of only five years. Contrastingly the number of cross-sections is much larger: there are 403 municipalities. These municipalities differ. For example, large cities like Amsterdam or Rotterdam will have different numbers of immigrants than small villages; it is very likely that this number will differ persistently over the estimated years. The fact that larger cities tend to have a larger percentage of immigrants is visible in the Tables 5 and 6 below. The municipality Vaals is the only exception; it has a large percentage of immigrants because it is located near the Belgian and German border. For the election years 1998-2006 the percentage of immigrants has been above 50% in Vaals, which made it the municipality with the largest percentage of immigrants of the Netherlands. Amsterdam had the second largest percentage of immigrants during all the election years; 42.7% in 1998, 46.4% in 2002, 47.2% in 2003 and 48.4% in 2006. On the contrary, Staphorst and Urk have been on the bottom of the list during all the election years, with a percentage of immigrants around two per cent. Because of the structural

differences between municipalities it is required to control for these differences. The use of '*White cross-section standard errors'* gives the opportunity to control for heteroskedasticity between the cross-sections. In order to control for heteroskedasticity between the time series as well, this paper will use *'White diagonal standard errors'*. The models analysed below will control for cross-section heteroskedasticity and time series heteroskedasticity with the use of '*White diagonal standard errors'*.

Table 5 – The top five municipalities with the highest percentage of immigrants of the total population in 2010.

Rank	Municipality	Inhabitants	Immigrants	Non-western immigrants	Western immigrants
1	Amsterdam	767457	49.9%	70%	30%
2	Vaals	9870	48.3%	7.5%	92.5%
3	's Gravenhage	488553	48.0%	69.9%	30.1%
4	Rotterdam	593049	47.7%	77.4%	22.6%
5	Diemen	24685	38.3%	66.5%	33.5%

Source: own calculations based on data from CBS Statline, 2013.

Table 6 – The bottom five municipalities with the lowest percentage of immigrants of the total population in 2010.

Rank	Municipality	Inhabitants	Immigrants	Non-western immigrants	Western immigrants
431	Staphorst	16153	2.8%	45.6%	54.4%
430	Urk	18310	2.8%	49.7%	50.3%
429	Grootegast	12141	3.1%	25.3%	74.7%
428	Achtkarspelen	28088	3.1%	32.8%	67.2%
427	Dantumadiel	19283	3.2%	35.1%	64.9%

Source: own calculations based on data from CBS Statline, 2013.

The next subsection will give an overview of the models that will be estimated. Each model will be analysed using Ordinary Least Squares (OLS) estimation, Fixed Effects, and a Tobit regression. For the OLS estimation, '*White diagonal standard errors'* will be used to account for heteroskedasticity between the cross-sections and between the time series. The Fixed Effects estimation will have *'Cross-section fixed effects'* in order to make sure that the outcome of the estimation is real and not a spurious result. When using *'Cross-section fixed effects'*, one makes up for the differences between the cross-sections by creating dummy variables for the individual entities. Also '*Period fixed effects'* in combination with *'Cross-section fixed effects'* will be used in order to create dummies for each year and to control for the differences between the several election years. When using the Fixed Effects estimation, the '*White diagonal standard errors'* will also be used.

Thirdly, a 'censored regression model' or 'Tobit model' will be used to estimate the models. This model is generally used when the dependent variable is continuous, but its range is constrained (Verbeek, 2012). When the voters in a municipality do not vote for any of the anti-immigrant parties, the percentage will be zero for the dependent variables. Therefore, the dependent variables in this paper are restricted to have a value between zero and one. When running the Tobit regression, '0' is plugged in as the left dependent variable censoring point, and for the right point '1'. In addition, robust Huber/White covariances are being used when using the Tobit estimation in order to control for heteroskedasticity between the cross-sections.

7.2.2 The models

The analysis consists of three different dependent variables: *VOTE 1*, *VOTE 2*, and *VOTE 3*. For each dependent variable several models will be tested.

The first dependent variable, *VOTE 1*, is the percentage of votes for political parties that are against the further inflow of immigrants in general. This paper is interested in analysing the effect of the number of immigrants living in a municipality on the voting behaviour of the people living in that municipality. Therefore, the independent variable of first interest is the number of immigrants living in the municipality, *IMM*. Second, a distinction can be made between the first generation and the second generation of immigrants. Since the first generation of immigrants represents the people that are born in a foreign country, a different effect of these persons is expected relative to the total number of immigrants. Model 1.1 will include *VOTE 1* as the dependent variable, *IMM* and *FIRST* as the independent variables and all variables described in the data section of this paper as the control variables.

$$\begin{aligned} VOTE\ \ 1_{i,t} &= \beta_0 + \beta_1 IMM_{i,t} + \beta_2 FIRST_{i,t} + \beta_3 NWIMM_{i,t} + \beta_4 WW_{i,t} + \beta_5 INC_{i,t} \\ &+ \beta_6 LOWEDUC_{i,t} + \beta_7 HIGHEDUC_{i,t} + \beta_8 ABOVE65_{i,t} + \beta_9 FERT_{i,t} + \beta_{10} CRIM_{i,t} \\ &+ \beta_{11}(IMM \times CRIM)_{i,t} + \varepsilon \end{aligned} \quad \textbf{(1.1)}$$

Note that Model 1.1 does not include the variable *WIMM*, since *NWIMM* and *WIMM* are perfectly correlated; the sum of both variables is one. Therefore, only one of the two variables can be used at the same time. The goal is to find out whether or not there is an effect of *IMM* on *VOTE 1*. The sign of the coefficient of the variable *IMM* is of main interest. On the one

hand, one could expect a stronger positive relation between *FIRST* and *VOTE 1* than between *IMM* and *VOTE 1*, because the first generation of immigrants is born in a foreign country and might therefore differ more from the native population. On the other hand, the first generation of immigrants consists in general of a group of people that has been living in the Netherlands for a long time, and therefore has adjusted to the Dutch society and labour market. *NWIMM* is expected to positively affect the dependent variable, because the immigrants coming from non-western countries are more likely to have different cultural values, habits and religions than the natives. If the variable *WW* has an estimated positive coefficient, this could be a result of the fact that natives who receive unemployment benefits argue that the inflow of immigrants has influenced their unemployment. On the other hand, these persons might also have voted for anti-immigrant political parties for other reasons. If the estimated coefficient has a negative sign, this implies that the more WW is being handed out in a municipality, the less people will vote for anti-immigrant parties in this municipality. The coefficient of the variable *INC* represents the relation between the income level in the municipality and the number of votes for anti-immigrant parties in that municipality.

The sign of the coefficient of *LOWEDUC* is expected to be positive. If there are more people with a lower education level, more votes for anti-immigrant parties are expected, because low educated persons are more likely to be negatively affected by immigrants on the labour market, as described in the literature review. As mentioned previously in this paper, higher educated persons are more likely to value the cultural diversity that immigrants bring to society and the specialized knowledge they bring to the labour market (Hainmueller and Hiscox, 2007). Low-educated natives are more likely to be affected by the inflow of immigrants on the labour market than high-educated natives. As a result, the coefficient of *HIGHEDUC* is expected to be negative.

Facchini and Mayda (2009) suggest analysing the effect of the age structure and fertility rates on people's attitudes towards migration. It is interesting to see if there is an effect of *ABOVE65* on the dependent variable. In the Netherlands, people above the age of 65 are not part of the labour force any more. Most likely, they are not affected by immigrants through the labour market channel themselves. On the other hand, they might observe the effect of immigrants on other people who are active on the labour market. Furthermore, people above the age of 65 are dependent on pensions and other benefits of the welfare state. Since persons above 65 are more dependent on the welfare state, it can be argued that, taking into account

the welfare state channel, the coefficient of *ABOVE65* is expected to have a negative sign. When the population of a municipality is not growing as a result of low fertility rates, natives might positively value the inflow of immigrants. However, also the fertility of immigrants is included in the fertility rate. If the fertility rate is high due to a large rate of births in immigrant families, natives might feel threatened and are more likely to have anti-immigrant attitudes. Finally, the variable *CRIM* is expected to have a positive effect on the dependent variable. In the Netherlands, some people argue that a large part of crimes is committed by second-generation immigrant youths. Some political parties tap into this belief and incorporate it into their political programs as an argument against immigration. For example, the political party VVD states in its party program that 'the inflow of low educated migrants has led to problems in society, at schools, the labour market and in the field of criminality' (VVD, 2013a).

Model 1.2 will estimate the same equation as Model 1.1, but excluding the variables *INC*, *CRIM* and *(IMM×CRIM)*, because these variables do not include data of all the election years. Omitting those three variables will result in more observations for Model 1.2. Also *FIRST* and *NWIMM* have been omitted, since these variables are highly correlated with the variable *IMM*.

(1.2)
$$VOTE\ \ 1_{i,t} = \beta_0 + \beta_1 IMM_{i,t} + \beta_2 WW_{i,t} + \beta_3 LOWEDUC_{i,t} + \beta_4 HIGHEDUC_{i,t} + \beta_5 ABOVE65_{i,t} + \beta_6 FERT_{i,t} + \varepsilon$$

Model 1.2 will also be estimated with period fixed Effects. Using period fixed effects, a dummy for each year will be included. In this way, the effect of an economic crisis on the dependent variable can be estimated. During times of economic crisis, unemployment rates increase and people might feel threatened by immigrants. Governments have to cut their budgets, and the benefits of the welfare state are at risk. As a result, it is expected that people's attitudes towards immigrants might change in times of economic crisis.

In order to estimate the effect that the education level of natives has on the individual attitudes towards migration, two more models will be estimated using interaction terms. In the literature review of this paper, the relation between skill or education level of immigrants and

people's attitudes towards migration has been described. The following two models will be estimated to analyse the relationship between education level and attitudes towards migration:

(1.3)
$$VOTE\ \ 1_{i,t} = \beta_0 + \beta_1 IMM_{i,t} + \beta_2 (IMM_{i,t} \times LOWEDUC_{i,t}) + \beta_3 WW_{i,t} + \beta_4 LOWEDUC_{i,t} + \beta_5 HIGHEDUC_{i,t} + \beta_6 ABOVE65_{i,t} + \beta_7 FERT_{i,t} + \varepsilon$$

(1.4)
$$VOTE\ \ 1_{i,t} = \beta_0 + \beta_1 IMM_{i,t} + \beta_2 (IMM_{i,t} \times HIGHEDUC_{i,t}) + \beta_3 WW_{i,t} + \beta_4 LOWEDUC_{i,t} + \beta_5 HIGHEDUC_{i,t} + \beta_6 ABOVE65_{i,t} + \beta_7 FERT_{i,t} + \varepsilon$$

The second dependent variable, *VOTE 2*, represents the percentage of votes for political parties that are against economic immigration. This dependent variable measures more accurately individuals' opinions towards migration as a result of the economic drivers described in the literature review of this paper than the dependent variable *VOTE 1*. Therefore, the four models described above will be estimated for the dependent variable *VOTE 2* as well.

The final dependent variable, *VOTE 3*, represents the percentage of votes for the political party PVV, which participated in the elections of 2010. The party program of 2010 of the PVV was strongly pointing at Moroccan and Turkish (Islamic) immigrants. Therefore, Model 3.1 will estimate the relation between the number of Moroccan and Turkish immigrants and people's voting behaviour. The variable *TMIMM* is the number of Turkish and Moroccan immigrants as a percentage of the total population of a municipality. The variable *INC* is excluded due to its limited number of observations. Model 3.2 will exclude the variables *FIRST* and *NWIMM* to take into account the correlation between the variables. The variable *CRIM* is also excluded from the model due to a lack of observations.

(3.1)
$$VOTE\ \ 3_{i,t} = \beta_0 + \beta_1 IMM_{i,t} + \beta_2 FIRST_{i,t} + \beta_3 NWIMM_{i,t} + \beta_4 WW_{i,t} + \beta_5 LOWEDUC_{i,t} + \beta_6 HIGHEDUC_{i,t} + \beta_7 ABOVE65_{i,t} + \beta_8 FERT_{i,t} + \beta_9 CRIM_{i,t} + \beta_{10} TMIMM_{i,t} + \varepsilon$$

(3.2)
$$VOTE\ \ 3_{i,t} = \beta_0 + \beta_1 IMM_{i,t} + \beta_2 WW_{i,t} + \beta_3 LOWEDUC_{i,t} + \beta_4 HIGHEDUC_{i,t} + \beta_5 ABOVE65_{i,t} + \beta_6 FERT_{i,t} + \beta_7 TMIMM_{i,t} + \varepsilon$$

8. Results

This section will give an overview of the results of the estimations that have been performed. There are three dependent variables, for which several models have been tested, using OLS, Fixed Effects and Tobit estimations.

8.1 The dependent variable *VOTE 1*

Table 7 below provides the estimated coefficients, standard deviations in brackets and significance levels of the OLS, period fixed effects (P FE), cross-section fixed effects (CS FE) and the period fixed effects and cross-section fixed effects combined (P CS FE) estimations of Model 1.1 and 1.2.

Table 7 - Model 1.1 and 1.2: the estimated coefficient estimates

Variables	Model 1.1				Model 1.2			
	OLS	P FE	CS FE	P CS FE	OLS	P FE	CS FE	P CS FE
Constant	0.178*** (0.056)	0.178** (0.056)	-	-	0.561*** (0.041)	0.440*** (0.030)	-0.143*** (0.041)	0.442*** (0.040)
IMM	0.772*** (0.150)	0.761*** (0.150)	-	-	0.244*** (0.043)	0.268*** (0.030)	1.320*** (0.122)	-0.401*** (0.119)
FIRST	-1.122*** (0.258)	-1.094*** (0.260)	-	-	-	-	-	-
NWIMM	0.074*** (0.027)	0.072*** (0.027)	-	-	-	-	-	-
WW	-1.126 (0.847)	-1.168 (0.850)	-	-	-9.804*** (0.518)	-6.384*** (0.389)	-9.756*** (0.477)	-0.147 (0.526)
INC	0.013*** (0.002)	0.013*** (0.002)	-	-	-	-	-	-
LOWEDUC	0.170** (0.084)	0.169** (0.084)	-	-	-0.143** (0.062)	0.167*** (0.043)	-0.298*** (0.052)	-0.133*** (0.031)
HIGHEDUC	-0.154*** (0.053)	-0.155*** (0.053)	-	-	-0.101** (0.048)	-0.050 (0.034)	0.199*** (0.052)	-0.091*** (0.035)
ABOVE 65	-0.014 (0.103)	-0.016 (0.103)	-	-	0.883*** (0.088)	0.029 (0.063)	3.900*** (0.128)	0.671*** (0.165)
FERT	-0.001 (0.001)	-0.001 (0.001)	-	-	-0.002*** (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
CRIM	0.000* (0.000)	0.000* (0.000)	-	-	-	-	-	-
IMMxCRIM	-0.001 (0.001)	-0.001 (0.001)	-	-	-	-	-	-
1998	-	-	-	-	-	-0.090	-	-0.126
2002	-	-	-	-	-	-0.014	-	-0.008
2003	-	-0.058	-	-	-	-0.069	-	-0.095
2006	-	0.000	-	-	-	0.023	-	-0.001
2010	-	-	-	-	-	0.125	-	0.088
Adjusted R-squared	0.320	0.323	-	-	0.259	0.725	0.785	0.921
Observations	268	268	-	-	1268	1268	1268	1268
Cross-sections included	267	267	-	-	299	299	299	299
Time range	2003-2006	2003-2006	-	-	1998-2010	1998-2010	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

The results differ between the different types of estimations; the OLS, period fixed effects (P FE), cross-section fixed effects (CE FE) and period and cross-section fixed effects combined (P CS FE). The reason for this is the fact that with the use of cross-section fixed effects a dummy has been added for each cross-section, in order to control for differences between the cross-sections. With period fixed effects, a dummy for each year has been added, in order to control for differences between the election years. Due to the small number of cross-sections and observations included in Model 1.1, it is not possible to estimate a cross-section fixed effects model. Table 11.3 and Table 11.4 in the Appendix provide the estimated coefficients, standard deviations in brackets and significance levels of the Tobit estimations of the models with the dependent variable *VOTE 1*. The estimated coefficients of the Tobit estimations are almost equal to the results of the OLS regressions. Therefore, the results will not be dealt with separately and can be found in the Appendix.

Model 1.1 has the lowest number of observations, due to the variables *CRIM* and *INC*, which are only available for a limited number of years. Model 1.2 captures the full time range of five election years. The estimated coefficients of Model 1.2 are in general more significant than the coefficients of Model 1.1. All models were checked for normality, with the use of a Jarque-Bera test statistic. The estimations report relatively high Jarque-Bera test statistics, implying that the errors of these models are not normally distributed.

The estimated coefficient of the variable *IMM* is positive and highly significant in five out of six regressions. This means that a larger number of immigrants in a given municipality will lead to more people voting for political parties who are against immigration in general. The sign of the estimated coefficient *IMM* is negative in case of the period and cross-section fixed effects together ('P CS FE' in Table 7). This can be explained by the fact that, when using period fixed effects and cross-section fixed effects together, only the changes within the variables over time, for example the changes of *IMM* over time, are taken into account. One can explain the negative sign by the fact that in municipalities with a larger number of immigrants, more immigrants will vote themselves and there will be a relatively lower percentage of votes for anti-immigrant parties. Another explanation can come from the fact that during the period 1998-2010, the number of political parties that included anti-immigrant statements in their programs has increased. At the same time, the Dutch voters have increased the relative number of votes for anti-immigrant parties during this period. These two

phenomena might explain the negative sign for *IMM* in case of the period and cross-section fixed effects.

The variable *FIRST* has a negative impact on *VOTE 1*. The reason for the negative relation could be the fact that first generation immigrants generally have been living for a longer period in the Netherlands. During this period, they have adapted to and integrated in the Dutch society. Therefore, the natives are more likely to 'accept' these immigrants. In addition, there is also a possibility that the first generation of immigrants has voted during the Dutch elections. The variable *NWIMM* is highly significant in the OLS regression of Model 1.1. The positive sign of the coefficient β_3 implies that the more non-western immigrants are living in a municipality, the more votes there will be for anti-immigrant parties.

The variable *WW* was not significant in Model 1.1. In all types of estimations of Model 1.2 the coefficient of *WW* has a negative sign, implying that the more WW is being distributed in a municipality, the less people vote for anti-immigrant parties. The reason for this result could be the fact that anti-immigrant parties also had plans that would be harmful for unemployed persons in their political program. The variable *INC* has only been included in Model 1.1, because its data was only available for the years 2002, 2003 and 2006. *INC* has a positive and significant estimated coefficient, implying that the higher the average income in a municipality, the more people vote for anti-immigrant parties. The reason for this result could be the role of the welfare state: people with higher incomes pay relatively more taxes than people with lower incomes, and therefore they might feel like they are paying for the benefits that immigrants possibly receive.

The signs and significance levels of the variables *LOWEDUC* and *HIGHEDUC* differ for the different models and regression methods. In three out of six estimations, *LOWEDUC* has a negative sign. In the other three estimations, the estimated coefficient of *LOWEDUC* has a positive sign. This result is in line with the findings in the literature review, stating that lower educated natives will be affected more by the presence of immigrants, both through the welfare state channel and the labour market channel. The signs of *HIGHEDUC* also vary a lot between the different types of estimations. Note that both variables are highly correlated with each other. Therefore, it is difficult to draw a strong conclusion on the effect of these variables on the dependent variable *VOTE 1*.

The variable *ABOVE65* has a negative but insignificant estimated coefficient in Model 1.1. However, the variable has a positive and significant estimated coefficient in three out of four results of Model 1.2. This implies that, when there are more people above the age of 65 in a municipality, it is likely that more people will vote for anti-immigrant parties. The reasons for this result can be the fact that elderly people are dependent on pensions and other social benefits, and because they value their cultural habits and traditions more. The variable *FERT* is insignificant in five of the six estimations. In the case in which it has a significant coefficient, its sign is negative, implying that higher fertility rates lead to fewer votes for anti-immigrant parties. The variable *CRIM* is only included in model 1.1, because the inclusion of *CRIM* decreases the observations of the model. The estimated coefficient of the variable *CRIM* is positive and significant at a ten percent significance level. One can say that the more crimes are committed in a municipality, the more people would vote for anti-immigrant parties, which is in line with the expectation. The inclusion of an interaction term between the relative number of immigrants and the number of crimes in Model 1.1 leads to an insignificant estimated coefficient.

The dummies for the election years have been added in Model 1.2, giving a positive effect of the years 2006 and 2010 with period fixed effects (P FE) only. This implies that, in 2010, the economic downturn leads to more votes for anti-immigrant parties. However, the year 2006 cannot be characterized as a year with a severe economic crisis. The reason for the positive coefficient might be the fact that this is the first year that the PVV, a political party that is strongly against immigrants, participated in the elections. The dummies for the other years have negative signs. When both period and cross-section fixed effects are included, only the estimated coefficient of 2010 becomes positive, which is in line with the expectation of a positive effect of a severe economic crisis on the number of votes for anti-immigrant parties. The probability-values of the Period F and Period Chi-square test statistics in Table 8 below show that the period dummies in Model 1.2 are jointly significant. The probability-values of 0.000 indicate that the null hypothesis of no period effects can be rejected. Contrarily, the period dummies of Model 1.1 are not significant.

Table 8 – Redundant Fixed Effects Tests for Model 1.1 and 1.2

Model	Estimation	Effects Test	Statistic	Prob.
1.1	P FE	Period F	2.283	0.132
		Period Chi-square	2.389	0.122
1.2	P FE	Period F	533.885	0.000
		Period Chi-square	1258.936	0.000
1.2	P CS FE	Period F	414.029	0.000
		Period Chi-square	1272.022	0.000

The goal of the estimation of Model 1.3 is to capture the effect of the presence of immigrants on the attitudes of natives with a low education level. As one can see in Table 9 below, the coefficient of the interaction term (*IMM x LOWEDUC*) is only significant in the cross-section fixed effects estimation of Model 1.3. In this case, the estimated coefficient has a negative sign, implying that the more low-educated natives and the more immigrants in a municipality, the lower the percentage of votes for parties that are against migration.

Table 9 – Model 1.3 and 1.4: the estimated coefficient estimates

Variable	**Model 1.4**			**Model 1.5**		
	OLS	CS FE	P CS FE	OLS	CS FE	P CS FE
Constant	0.567***	-0.198***	0.455***	0.487***	-0.080*	0.398***
	(0.044)	(0.044)	(0.040)	(0.045)	(0.048)	(0.042)
IMM	0.176	1.766***	-0.489***	0.658***	0.816***	0.105
	(0.168)	(0.161)	(0.148)	(0.107)	(0.252)	(0.187)
IMM x LOWEDUC	0.245	-2.315***	0.393	-	-	-
	(0.245)	(0.626)	(0.431)			
IMM x HIGHEDUC	-	-	-	-1.475***	1.299**	-1.429***
				(0.312)	(0.529)	(0.376)
WW	-9.809***	-9.976***	-0.075	-9.835***	-9.903***	-0.003
	(0.518)	(0.463)	(0.541)	(0.511)	(0.475)	(0.551)
LOWEDUC	-0.170**	-0.015	-0.179***	-0.117*	-0.298***	-0.127***
	(0.085)	(0.092)	(0.057)	(0.063)	(0.051)	(0.031)
HIGHEDUC	-0.092*	0.163***	-0.088**	0.176**	0.003	0.109*
	(0.053)	(0.053)	(0.035)	(0.077)	(0.093)	(0.063)
ABOVE65	0.876***	4.005***	0.628***	0.827***	3.990***	0.447***
	(0.088)	(0.133)	(0.164)	(0.087)	(0.136)	(0.158)
FERT	-0.002***	-0.000	-0.000	-0.002***	-0.000	-0.000
	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Adjusted R-squared	0.260	0.789	0.921	0.270	0.787	0.923
Observations	1268	1268	1268	1268	1268	1268
Cross-sections included	299	299	299	299	299	299
Time range	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

The purpose of the estimation of Model 1.4 is to capture the effect of the presence of immigrants on the attitudes of natives with a high education level. The estimated coefficient of the interaction term (*IMM x HIGHEDUC*) is significant at 1 percent significance level and has a negative sign in the OLS and period and cross-section fixed effects estimations of Model 1.4. Based on the literature review, the expected sign is negative. The higher the number of high-educated natives in a municipality, and the higher the number of immigrants, the less votes for anti-immigrant parties in that municipality. However, the sign is positive in the cross-section fixed effects estimation. Therefore, it is hard to draw a conclusion about the effect of the interaction term (*IMM x HIGHEDUC*) on *VOTE 1*. The Jarque-Bera statistics indicate non-normality for all of the types of estimations of Model 1.3 and Model 1.4.

8.2 The dependent variable *VOTE 2*

Table 10 below reports the estimated coefficients, standard deviations in brackets and significance levels of the estimations using OLS, period fixed effects (P FE), cross-section fixed effects (CS FE) and the period fixed effects and cross section fixed effects combined (P CS FE) of Model 2.1 and 2.2. Table 11. 5 in the Appendix shows the results of the Tobit estimations.

Again, Model 2.1 has the smallest number of observations due to the inclusion of the variables *CRIM* and *INC*. As a result a large number of estimated coefficients is not significant at a 1 percent significance level. Model 2.2 provides more significant results and has in general the same signs as the signs of the estimated coefficients of Model 1.2. In general, one can say that the estimated coefficients of the models with the dependent variable *VOTE 2* are more significant than the estimated coefficients of the models with the dependent variable *VOTE 1*. One reason for this can be the fact that *VOTE 2* represents more accurately people's attitudes towards economic migration, allowing a more accurate estimation of the relation between economic factors and individual attitudes. The Jarque-Bera statistics of the estimations of the Models 2.1 and 2.2 also imply non-normality.

Table 10 – Model 2.1 and 2.2: the estimated coefficients

Model 2.1					**Model 2.2**			
	OLS	P FE	CS FE	P CS FE	OLS	P FE	CS FE	P CS FE
Constant	0.341*** (0.062)	0.343*** (0.061)	-	-	0.469*** (0.054)	0.220*** (0.027)	-0.158*** (0.047)	0.250*** (0.039)
IMM	0.783*** (0.195)	0.755*** (0.192)	-	-	0.214*** (0.049)	0.149*** (0.025)	2.052*** (0.160)	-0.312** (0.124)
FIRST	-1.204*** (0.370)	-1.131*** (0.356)	-	-	-	-	-	-
NWIMM	0.057* (0.032)	0.053* (0.031)	-	-	-	-	-	-
WW	-1.013 (0.958)	-1.121 (0.945)	-	-	-9.171*** (0.622)	-1.404*** (0.368)	-18.195*** (0.582)	0.346 (0.554)
INC	-0.010*** (0.003)	-0.010*** (0.003)	-	-	-	-	-	-
LOWEDUC	0.289*** (0.100)	0.294*** (0.099)	-	-	-0.191** (0.079)	0.244*** (0.041)	-0.491*** (0.061)	-0.162*** (0.029)
HIGHEDUC	-0.050 (0.065)	-0.052 (0.064)	-	-	-0.300*** (0.058)	-0.133*** (0.029)	0.103* (0.058)	-0.092*** (0.033)
ABOVE65	0.009 (0.124)	0.003 (0.124)	-	-	0.826*** (0.114)	-0.159*** (0.053)	3.345*** (0.143)	0.610*** (0.154)
FERT	0.000 (0.001)	0.000 (0.001)	-	-	-0.003*** (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
CRIM	0.000 (0.000)	0.000 (0.000)	-	-	-	-	-	-
IMMxCRIM	-0.000 (0.001)	-0.000 (0.001)	-	-	-	-	-	-
1998	-	-	-	-	-	-0.172	-	-0.150
2002	-	-	-	-	-	0.032	-	0.063
2003	-	-0.149	-	-	-	-0.070	-	-0.049
2006	-	0.001	-	-	-	-0.068	-	0.073
2010	-	-	-	-	-	0.110	-	0.098
Adjusted R-squared	0.291	0.317	-	-	0.173	0.796	0.762	0.933
Observations	268	268	-	-	1267	1267	1267	1267
Cross-sections included	267	267	-	-	299	299	299	299
Time range	2003-2006	2003-2006	-	-	1998-2010	1998-2010	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

The period dummies of the period fixed effects are jointly significant, which is visible in Table 11 below. Also the two period dummies of Model 2.1 are jointly significant. An important difference with the *VOTE 1* estimations is the fact that now the dummy for the year 2002 is also positive. This supports the expectation of a positive effect of an economic crisis on the number of anti-immigrant votes, since in 2002 the annual GDP growth rate was 0.08 percent in the Netherlands.

Table 11 – Redundant Fixed Effects Tests for Model 2.1 and 2.2

Model	Estimation	Effects Test	Statistic	Prob.
2.1	P FE	Period F	10.693	0.001
		Period Chi-square	11.009	0.001
2.2	P FE	Period F	966.403	0.000
		Period Chi-square	1780.815	0.000
2.2	P CS FE	Period F	621.041	0.000
		Period Chi-square	1620.503	0.000

Table 12 below reports the estimated coefficients of the Models 2.3 and 2.4. Again, the signs of the interaction terms are negative in the majority of the models, but the significance levels are lower compared to the significance levels of the interaction terms in Model 1.3 and 1.4. The results of the Tobit estimations can be found in Table 11.6 in the Appendix.

Table 12 – Model 2.3 and 2.4: the estimated coefficients

Variable	**Model 2.3**			**Model 2.4**		
	OLS	CS FE	P CS FE	OLS	CS FE	P CS FE
Constant	0.444***	-0.232***	0.239***	0.446***	-0.136**	0.227***
	(0.056)	(0.050)	(0.038)	(0.057)	(0.057)	(0.042)
IMM	0.463***	2.644***	-0.235*	0.341***	1.873***	-0.036
	(0.177)	(0.216)	(0.137)	(0.118)	(0.330)	(0.203)
IMM x LOWEDUC	-0.898	-3.079***	-0.341	-	-	-
	(0.637)	(0.873)	(0.400)			
IMM x HIGHEDUC	-	-	-	-0.453	0.460	-0.778**
				(0.358)	(0.677)	(0.357)
WW	-9.150***	-18.488***	0.283	-9.181***	-18.247***	0.424
	(0.621)	(0.549)	(0.572)	(0.621)	(0.578)	(0.577)
LOWEDUC	-0.091	-0.115	-0.122**	-0.183**	-0.491***	-0.159***
	(0.103)	(0.109)	(0.054)	(0.080)	(0.061)	(0.030)
HIGHEDUC	-0.333***	0.056	-0.094***	-0.215**	0.034	0.018
	(0.063)	(0.059)	(0.033)	(0.091)	(0.111)	(0.060)
ABOVE65	0.852***	3.484***	0.647***	0.809***	3.377***	0.488***
	(0.116)	(0.151)	(0.152)	(0.115)	(0.155)	(0.148)
FERT	-0.003***	-0.000	-0.000	-0.003***	-0.000	-0.000
	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Adjusted R-squared	0.173	0.767	0.934	0.173	0.762	0.934
Observations	1267	1267	1267	1267	1267	1267
Cross-sections included	299	299	299	299	299	299
Time range	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

8.3 The dependent variable *VOTE 3*

The political party PPV participated in the elections of 2010 with a political program that points out immigrants with an Islamic religion as threatening for the Dutch society. The majority of the Islamic immigrants in the Netherlands have a Turkish or Moroccan background. Therefore it is interesting to analyse if there is an effect between the number of Turkish and Moroccan immigrants as a percentage of the total population in a municipality (represented in this paper as the variable *TMIMM*) and the percentage of votes for the PVV. For the estimation of Model 3.1 and 3.2 only OLS has been used, since only one period is included in these models.

Table 13 presents the OLS (using White diagonal standard errors) results. In model 3.1, the independent variable *TMIMM* does not have a significant effect on the dependent variable *VOTE 3*. The variable *NWIMM* does have a negative and significant effect on *VOTE 3*.

Table 13 – Model 3.1 and 3.2: the estimated coefficients

Variable	**Model 3.1**	**Model 3.2**
	OLS	OLS
Constant	0.196***	0.144**
	(0.040)	(0.048)
IMM	1.247***	0.340***
	(0.119)	(0.062)
FIRST	-1.684***	-
	(0.196)	
NWIMM	-0.102***	-
	(0.028)	
WW	0.0944	1.407*
	(0.721)	(0.792)
LOWEDUC	0.369***	0.359***
	(0.085)	(0.093)
HIGHEDUC	-0.142***	-0.160**
	(0.042)	(0.049)
ABOVE65	-0.154**	0.080
	(0.076)	(0.089)
FERT	-0.002***	-0.002***
	(0.000)	(0.001)
CRIM	0.000	-
	(0.000)	
TMIMM	-0.166	-0.462***
	(0.127)	(0.129)
Adjusted R-squared	0.608	0.465
Observations	271	267
Time range	2010	

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

Since *NWIMM* includes Turkish and Moroccan immigrants, the variable is correlated with the variable *TMIMM*, which is visible in Table 14 below. Therefore, model 3.2 estimates the same model, but with the exclusion of the variable *NWIMM*. Now *TMIMM* does have a significant negative effect on the variable *VOTE 3*. The reason for this effect can be the fact that Turkish and Moroccan immigrants have voted themselves, and that natives become more tolerant towards immigrants when living close to them.

The variables *LOWEDUC* and *HIGHEDUC* have significant estimated coefficients in both models. *LOWEDUC* has a positive effect on *VOTE 3*, implying that when there are more low-educated persons in a municipality, the relative number of votes for the PVV increases. The estimated coefficient of *HIGHEDUC* has a negative sign, implying that there is a negative relationship between the number of high-educated persons in a municipality and the relative number of votes for the PVV.

Table 14 – correlation matrix for four x-variables

	TMIMM	*IMM*	*NWIMM*	*FIRST*
TMIMM	1			
IMM	0.671	1		
NWIMM	0.724	0.479	1	
FIRST	0.646	0.973	0.515	1

9. Conclusion

This section provides a short summary of the main results of this paper. In addition, the limitations to the research and suggestions for further research will be presented. This paper analyses the determinants of individual attitudes towards migration by means of a literature review and an empirical research. The motivation for this research comes from the relatively low importance of migration compared to other aspects that characterize today's globalising world. Globalization is characterized economically by increasing trade and FDI flows, but immigration flows are staying behind. This paper analyses what drives the individual attitudes toward immigration, because these attitudes affect the government policies through the voting system. Therefore the individual attitudes towards migration might indirectly be the reason for the relatively low importance of migration compared to the other aspects of globalization. The goal of this paper is to analyse what drives individual attitudes towards migration. The main question is: *'Which factors determine the individual attitudes towards immigration of the inhabitants of the receiving country?'* This main question is analysed by means of a literature review and an empirical analysis.

The literature review starts with a definition and the causes of immigration. The phenomenon immigration can be explained in several ways. This paper uses the 'immigration gravity model' by Lewer and van den Berg (2008) in order to explain what causes migration. According to this model, factors like a common language, the distance between the two countries, the number of immigrants already living in the destination country and the relative difference in per capita income can be defined as factors causing migration between two countries. Second, people's decision whether or not to migrate has been explained by means of the Roy-Borjas model (Borjas, 1991). This model states that the expected earnings in the destination country and the expected costs of migration are two factors influencing one's decision to migrate. Third, an overview of the positive and negative effects of immigration on the destination country has been presented. Fourth, the two main channels determining individual's attitudes towards migration, the welfare state and the labour market channel, have been described. Many researches that have been performed in this field find that low-educated (or –skilled) natives are affected negatively by the presence of immigrants, for example on the labour market.

The second part of this paper is the empirical analysis. The models of the empirical analysis are derived from the results in the literature review, and applied to the case of the Netherlands. The natives' attitudes towards migration are reflected in the relative number of votes for political parties that are against immigration during the past five elections (the elections of 2012 excluded). The analysis of several models allows the investigation of which determinants significantly affect the voting behaviour. The influence of the number of immigrants living in a municipality on the voting behaviour is of main interest, reflected in the independent variables '*IMM*', '*FIRST*', '*NWIMM*' and '*TMIMM*'. The sub-question for the empirical part is: *'Does the number of immigrants living in the municipalities of the Netherlands influence the voting behaviour during national elections in the Netherlands?'*
The answer to this sub-question is 'yes', when taking into account that the estimated coefficient of *IMM* was positive and significant in five out of six regressions, implying that the higher the number of immigrants, the higher the percentage of votes for anti-immigrant parties in these municipalities. Only in the case when period and cross-section fixed effects are combined, the sign of *IMM* is negative. The reason for the negative sign can be the fact that the relative number of votes for anti-immigrant parties has increased during the years 1998-2010. The independent variable of interest in the Model 3.2, *TMIMM*, has a significant but negative estimated coefficient. This means that the higher the number of Turkish and Moroccan immigrants in a municipality, the lower the percentage of votes for the political party PVV in this municipality, which is in contrast to the relationship between *IMM* and *VOTE 1*.

The empirical analysis of this paper has some limitations that are important to mention. First, the analysis is not based on individual data. As a result, the dependent variable is based on the voting results of the municipalities in the Netherlands. This has a second limitation, namely the fact that a person's voting behaviour is not only affected by his/her opinion towards migration, but also by other factors. A political party has a party program containing a variety of standpoints, amongst others about migration. Therefore a person might have voted for a party, not because he/she was agreeing with the party's standpoint with regards to migration, but because he/she was agreeing with another standpoint that was of more importance to him/her. Therefore, a suggestion for further research is to gather data of individuals' attitudes towards migration by a survey, in order to obtain individual data. A second suggestion is to find out if there is a link between people's attitudes towards migration and their voting behaviour.

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11. Appendix

Table 11.1 – The municipality list of 2010

The table below shows the 431 municipalities that are included in the list of municipalities that existed in 2010 in the Netherlands. This list has been extracted from the CBS Stateline database. Due to missing data, the twenty-eight municipalities in red and italic are omitted from the dataset.

Table 11.1 – The municipalities of the Netherlands in 2010

Aa en Hunze	Doesburg	Houten	Nunspeet	*Teylingen*
Aalburg	Doetinchem	Huizen	Nuth	Tholen
Aalsmeer	Dongen	Hulst	Oegstgeest	Tiel
Aalten	Dongeradeel	IJsselstein	Oirschot	Tilburg
Abcoude	Dordrecht	*Kaag en Braassem*	Oisterwijk	Tubbergen
Achtkarspelen	Drechterland	Kampen	*Oldambt*	*Twenterand*
Alblasserdam	Drimmelen	Kapelle	Oldebroek	Tynaarlo
Albrandswaard	Dronten	Katwijk	Oldenzaal	Tytsjerksteradiel
Alkmaar	Druten	Kerkrade	Olst-Wijhe	Ubbergen
Almelo	Duiven	*Koggenland*	Ommen	Uden
Almere	*Echt-Susteren*	Kollumerland en Nieuwkruisland	Onderbanken	Uitgeest
Alphen aan den Rijn	Edam-Volendam	Korendijk	*Oost Gelre*	Uithoorn
Alphen-Chaam	Ede	Krimpen aan den Ijssel	Oosterhout	Urk
Ameland	Eemnes	Laarbeek	Oostflakkee	Utrecht
Amersfoort	Eemsmond	Landerd	Ooststellingwerf	*Utrechtse Heuvelrug*
Amstelveen	Eersel	Landgraaf	Oostzaan	Vaals
Amsterdam	Eijsden	Landsmeer	Opmeer	Valkenburg aan de Geul
Andijk	Eindhoven	Langedijk	Opsterland	Valkenswaard
Anna Paulowna	Elburg	*Lansingerland*	Oss	Veendam
Apeldoorn	Emmen	Laren (NH.)	Oud-Beijerland	Veenendaal
Appingedam	Enkhuizen	Leek	*Oude Ijsselstreek*	Veere
Arnhem	Enschede	Leerdam	Ouder-Amstel	Veghel
Assen	Epe	Leeuwarden	Ouderkerk	Veldhoven
Asten	Ermelo	Leeuwarderadeel	Oudewater	Velsen
Baarle-Nassau	Etten-Leur	Leiden	Overbetuwe	Venlo
Baarn	Ferwerderadiel	Leiderdorp	Papendrecht	Venray
Barendrecht	Franekeradeel	Leidschendam-Voorburg	*Peel en Maas*	Vianen
Barneveld	Gaasterlân-Sleat	Lelystad	Pekela	Vlaardingen
Bedum	Geertruidenberg	Lemsterland	Pijnacker-Nootdorp	Vlagtwedde
Beek (L.)	Geldermalsen	*Leudal*	Purmerend	Vlieland
Beemster	Geldrop-Mierlo	Leusden	Putten	Vlissingen
Beesel	Gemert-Bakel	Liesveld	Raalte	Vlist
Bellingwedde	Gennep	Lingewaal	Reeuwijk	Voerendaal
Bergambacht	Giessenlanden	*Lingewaard*	Reimerswaal	Voorschoten
Bergeijk	Gilze en Rijen	Lisse	Renkum	Voorst
Bergen (L.)	Goedereede	Lith	Renswoude	Vught
Bergen (NH.)	Goes	Littenseradiel	Reusel-De Mierden	Waalre
Bergen op Zoom	Goirle	Lochem	Rheden	Waalwijk
Berkelland	Gorinchem	Loenen	Rhenen	Waddinxveen
Bernheze	Gouda	Loon op Zand	Ridderkerk	Wageningen
Bernisse	Graafstroom	Lopik	Rijnwaarden	Wassenaar
Best	Graft-De Rijp	Loppersum	Rijnwoude	Waterland
Beuningen	Grave	Losser	*Rijssen-Holten*	Weert
Beverwijk	s-Gravenhage	Maarssen	Rijswijk (ZH.)	Weesp
het Bildt	Groesbeek	Maasdonk	Roerdalen	Werkendam
De Bilt	Groningen	Maasdriel	Roermond	Wervershoof
Binnenmaas	Grootegast	*Maasgouw*	De Ronde Venen	West Maas en Waal
Bladel	Gulpen-Wittem	Maassluis	Roosendaal	Westerveld
Blaricum	Haaksbergen	Maastricht	Rotterdam	Westervoort
Bloemendaal	Haaren	Margraten	Rozenburg	*Westland*
Boarnsterhim	Haarlem	De Marne	Rozendaal	Weststellingwerf

Bodegraven	Haarlemmerliede en Spaarnwoude	Marum	Rucphen	Westvoorne
Boekel	Haarlemmermeer	Medemblik	Schagen	Wierden
Ten Boer	Halderberge	Meerssen	Schermer	Wieringen
Bolsward	Hardenberg	Menaldumadeel	Scherpenzeel	Wieringermeer
Borger-Odoorn	Harderwijk	Menterwolde	Schiedam	Wijchen
Borne	Hardinxveld-Giessendam	Meppel	Schiermonnikoog	Wijdemeren
Borsele	Haren	Middelburg (Z.)	Schijndel	Wijk bij Duurstede
Boskoop	Harenkarspel	Middelharnis	Schinnen	Winsum
Boxmeer	Harlingen	***Midden-Delfland***	Schoonhoven	Winterswijk
Boxtel	Hattem	Midden-Drenthe	Schouwen-Duiveland	Woensdrecht
Breda	Heemskerk	Mill en Sint Hubert	Simpelveld	Woerden
Breukelen	Heemstede	Millingen aan de Rijn	Sint Anthonis	De Wolden
Brielle	Heerde	Moerdijk	Sint-Michielsgestel	Wormerland
Bronckhorst	Heerenveen	***Montferland***	Sint-Oedenrode	Woudenberg
Brummen	Heerhugowaard	Montfoort	Sittard-Geleen	Woudrichem
Brunssum	Heerlen	Mook en Middelaar	Skarsterlân	Wûnseradiel
Bunnik	Heeze-Leende	Muiden	Sliedrecht	Wymbritseradiel
Bunschoten	Heiloo	Naarden	Slochteren	Zaanstad
Buren	Den Helder	***Neder-Betuwe***	***Sluis***	Zaltbommel
Bussum	Hellendoorn	Nederlek	Smallingerland	Zandvoort
Capelle aan den Ijssel	Hellevoetsluis	Nederweert	Sneek	Zederik
Castricum	Helmond	Neerijnen	Soest	Zeevang
Coevorden	Hendrik-Ido-Ambacht	Niedorp	Someren	Zeewolde
Cranendonck	Hengelo (O.)	Nieuwegein	Son en Breugel	Zeist
Cromstrijen	‘s-Hertogenbosch	Nieuwkoop	Spijkenisse	Zevenaar
Cuijk	Heumen	Nieuw-Lekkerland	Stadskanaal	Zijpe
Culemborg	Heusden	Nijefurd	Staphorst	Zoetermeer
Dalfsen	Hillegom	Nijkerk	Stede Broec	Zoeterwoude
Dantumadiel	Hilvarenbeek	Nijmegen	Steenbergen	Zuidhorn
Delft	Hilversum	Noord-Beveland	***Steenwijkerland***	***Zuidplas***
Delfzijl	Hof van Twente	Noordenveld	Stein (L.)	Zundert
Deurne	Hoogeveen	Noordoostpolder	Strijen	Zutphen
Deventer	Hoogezand-Sappemeer	Noordwijk	Terneuzen	Zwartewaterland
Diemen	Hoorn	Noordwijkerhout	Terschelling	Zwijndrecht
Dinkelland	Horst aan de Maas	Nuenen, Gerwen en Nederwetten	Texel	Zwolle
Dirksland				

Source: own table based on the list of CBS Statline.

Table 11.2 – The political parties in the Netherlands

The table below shows the participating parties in the elections for the Parliament of 1998, 2002, 2003, 2006 and 2010. The X shows if the party participated in the elections of that year. XX indicates that the party got at least one seat in the Chamber as a result of the election outcome. The sixth column states whether or not the party is ‘anti-immigrant’. If the party has explicitly stated in its programme that it is against further inflow of immigrants, the final column states ‘YES’, and classifies the party as ‘anti-immigration’. The final column states whether or not the party is against economic immigration.

Table 11.2
The participating parties in the Second Chamber elections of 1998, 2002, 2003, 2006 and 2010

Party	1998	2002	2003	2006	2010	Anti-immigration	Anti- Economic Migration
PvdA	XX	XX	XX	XX	XX	No	No
VVD	XX	XX	XX	XX	XX	YES	No
CDA	XX	XX	XX	XX	XX	No	No
D66	XX	XX	XX	XX	XX	No	No
GL	XX	XX	XX	XX	XX	No	No
SP	XX	XX	XX	XX	XX	YES	YES
RPF	XX		X		X	No	No
SGP	XX	XX	XX	XX	XX	YES	YES
GPV	XX					No	No
CD	X					No	No
AOV/Unie55+	X					No	No
Nederland Mobiel	X					No	No
Senioren 2000	X					No	No
Nederlandse Middenstands Partij	X					No	No
De Groenen	X					No	No
Natuurwetpartij	X					No	No
Katholiek Politieke partij	X					No	No
Vrije Indische Partij	X	X				No	No
Nieuw Solidair Ouderen Verbond	X					No	No
Nieuw Communistische Partij	X		X			No	No
Idealisten/Jij	X					No	No
Het Kiezers Collectief	X					No	No
Christen Unie		XX	XX	XX	XX	YES	YES
Leefbaar Nederland		X	X			No	No
Verenigde Senioren Partij		X		X		No	No
Duurzaam Nederland		X	X			YES	YES
Partij van de Toekomst		X				No	No
Nieuwe Midden Partij		X				No	No
Republikeinse Volkspartij		X				No	No
PvdD			X	XX	XX	No	No
Lijst Ratelband			X			No	No
De Conservatieven.nl			X			No	No
VIP Vooruitstrevende Integratie Partij			X			No	No
Alliantie Vernieuwing en Democratie			X			No	No
Lijst Veldhoen			X			No	No
Een NL				X		YES	No
Lijst Pim Fortuyn		XX	XX	X		YES	YES
Ad Bos Collectief				X		No	No
Partij voor Nederland				X		No	No
Lijst Potmis				X		No	No
Nederland Transparant				X		No	No
Groen Vrij Internet Partij				X		No	No
Liberaal Democratische Partij				X		No	No
Lijst Poortman				X		No	No
Continue Directe Democratie Partij				X		No	No
LRVP – het Zeteltje				X		No	No
Solide Multiculturele Partij				X		No	No
Tamara's Open Partij				X		No	No
Trots op Nederland					X	YES	No
MenS					X	No	No
Piratenpartij					X	No	No
Lijst 17					X	No	No
Partij een					X	No	No
Nieuw Nederland					X	No	No
Heel NL					X	No	No
Evangelische Partij Nederland					X	No	No
PVV					XX	YES	YES

X = participation, XX = obtained at least 1 seat in the Chamber. Source: the party programs of the political parties.

Table 11.3 and 11.4 – The estimated coefficients for *VOTE 1*

The tables below provide the estimated coefficients for the OLS, period fixed effects (P FE) and Tobit estimation results for the Models 1.1, 1.2 and 1.3.

Table 11.3 – Model 1.1 and 1.2

Variable	**Model 1.1**		**Model 1.2**	
	OLS	Tobit	OLS	Tobit
Constant	0.178*** (0.056)	0.178*** (0.056)	0.560*** (0.041)	0.561*** (0.041)
IMM	0.772*** (0.150)	0.772*** (0.150)	0.244*** (0.043)	0.244*** (0.043)
FIRST	-1.122*** (0.258)	-1.122*** (0.258)	-	-
NWIMM	0.074*** (0.027)	0.074*** (0.027)	-	-
WW	-1.126 (0.847)	-1.126 (0.847)	-9.804*** (0.518)	-9.804*** (0.518)
INC	0.013*** (0.002)	0.013*** (0.002)	-	-
LOWEDUC	0.170** (0.084)	0.167** (0.084)	-0.143** (0.062)	-0.143** (0.062)
HIGHEDUC	-0.154*** (0.053)	-0.154*** (0.053)	-0.101** (0.048)	-0.101** (0.048)
ABOVE65	-0.014 (0.103)	-0.014 (0.103)	0.883*** (0.088)	0.883*** (0.088)
FERT	-0.001 (0.001)	-0.001 (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
CRIM	0.000* (0.000)	0.000* (0.000)	-	-
IMMxCRIM	-0.001 (0.001)	-0.001 (0.001)	-	-
Adjusted R-squared	0.320	-	0.259	-
Observations	268	268	1268	-
Cross-sections included	267	-	299	
Time range	2003-2006	2003-2006	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

Table 11.4 - Model 1.3 and 1.4

Variable	**Model 1.3**			**Model 1.4**		
	OLS	P FE	Tobit	OLS	P FE	Tobit
Constant	0.567***	0.474***	0.567***	0.487***	0.352***	0.487***
	(0.044)	(0.033)	(0.044)	(0.045)	(0.033)	(0.045)
IMM	0.176	-0.076	0.176	0.658***	0.767***	0.658***
	(0.168)	(0.153)	(0.168)	(0.107)	(0.082)	(0.107)
IMM x LOWEDUC	0.245	1.240**	0.245	-	-	-
	(0.609)	(0.552)	(0.609)			
IMM x HIGHEDUC	-	-	-	-1.475***	-1.774***	-1.475***
				(0.312)	(0.263)	(0.312)
WW	-9.809***	-6.340***	-9.809***	-9.835***	-6.427***	-9.835***
	(0.518)	(0.386)	(0.518)	(0.511)	(0.384)	(0.511)
LOWEDUC	-0.170**	0.032	-0.170**	-0.117*	0.199***	-0.117*
	(0.085)	(0.071)	(0.085)	(0.063)	(0.044)	(0.063)
HIGHEDUC	-0.092*	-0.004	-0.092*	0.176**	0.283***	0.176**
	(0.053)	(0.035)	(0.053)	(0.077)	(0.057)	(0.077)
ABOVE65	0.876***	-0.011	0.0876***	0.827***	-0.043	0.827***
	(0.088)	(0.060)	(0.088)	(0.087)	(0.059)	(0.087)
FERT	-0.002***	-0.000	-0.002***	-0.002***	-0.000	-0.002***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)
Adjusted R-squared	0.259	0.727	-	0.270	0.741	-
Observations	1268	1268	1268	1268	1268	1268
Cross-sections included	299	299	-	299	299	-
Time range	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

Table 11.5 and 11.6 – The estimated coefficients for *VOTE 2*

The tables below provide the estimated coefficients for the OLS, period fixed effects (P FE) and Tobit estimation results for the Models 2.1, 2.2 and 2.3.

Table 11.5 – Model 2.1 and 2.2

Variable	**Model 2.1**		**Model 2.2**	
	OLS	Tobit	OLS	Tobit
Constant	0.341*** (0.062)	0.341*** (0.062)	0.469*** (0.054)	0.469*** (0.054)
IMM	0.783*** (0.195)	0.783*** (0.195)	0.214*** (0.049)	0.214*** (0.049)
FIRST	-1.204*** (0.370)	-1.204*** (0.370)	-	-
NWIMM	0.057* (0.032)	0.057* (0.032)	-	-
WW	-1.013 (0.958)	-1.013 (0.958)	-9.171*** (0.622)	-9.171*** (0.622)
INC	-0.010*** (0.003)	-0.010*** (0.003)	-	-
LOWEDUC	0.289*** (0.100)	0.289*** (0.100)	-0.191** (0.079)	-0.191** (0.079)
HIGHEDUC	-0.050 (0.065)	-0.050 (0.065)	-0.300*** (0.058)	-0.300*** (0.058)
ABOVE65	0.009 (0.124)	0.009 (0.124)	0.826*** (0.114)	0.826*** (0.114)
FERT	0.000 (0.001)	0.000 (0.001)	-0.003*** (0.001)	-0.003*** (0.001)
CRIM	0.000 (0.000)	0.000 (0.000)	-	-
IMMxCRIM	-0.000 (0.001)	-0.000 (0.001)	-	-
Adjusted R-squared	0.291	-	0.173	-
Observations	268	268	1267	1267
Cross-sections included	267	-	299	-
Time range	2003-2006	2003-2006	1998-2010	-

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.

Table 11.6 – Model 2.3 and 2.4

Variable	**Model 2.3**			**Model 2.4**		
	OLS	P FE	Tobit	OLS	P FE	Tobit
Constant	0.444***	0.230***	0.444***	0.446***	0.187***	0.446***
	(0.056)	(0.030)	(0.056)	(0.057)	(0.028)	(0.057)
IMM	0.463***	0.048	0.463***	0.341***	0.336***	0.341***
	(0.177)	(0.110)	(0.177)	(0.118)	(0.066)	(0.118)
IMM x LOWEDUC	-0.898	0.365	-0.898	-	-	-
	(0.637)	(0.383)	(0.637)			
IMM x HIGHEDUC	-	-	-	-0.453	-0.665***	-0.453
				(0.358)	(0.223)	(0.358)
WW	-9.150***	-1.408***	-9.150***	-9.181***	-1.420***	-9.181***
	(0.621)	(0.368)	(0.620)	(0.621)	(0.366)	(0.621)
LOWEDUC	-0.091	0.205***	-0.091	-0.183**	0.256***	-0.183**
	(0.103)	(0.062)	(0.103)	(0.080)	(0.041)	(0.080)
HIGHEDUC	-0.333***	-0.119***	-0.333***	-0.215**	-0.008	-0.215**
	(0.063)	(0.031)	(0.063)	(0.091)	(0.050)	(0.091)
ABOVE65	0.852***	-0.171***	0.852***	0.809***	-0.186***	0.809***
	(0.116)	(0.053)	(0.116)	(0.115)	(0.052)	(0.115)
FERT	-0.003***	-0.000	-0.003***	-0.003***	-0.000	-0.003***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)
Adjusted R-squared	0.173	0.796	-	0.173	0.798	-
Observations	1267	1267	1267	1267	1267	1267
Cross-sections included	299	299	-	299	299	-
Time range	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010	1998-2010

Using White diagonal standard errors. Significance levels: *** 1%. ** 5%, * 10%.