Immigration on the ballot

The impact of immigrant presence on support for the far-right in the Netherlands

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Abstract

This thesis studies the impact of migrant presence on far-right voting behaviour in the Netherlands. This is done using a series of panel data regressions, including both regional and year fixed-effects. Data on immigrant presence and voting behaviour is on the municipal level and spans five election years, from 2003 up to 2017. It is found that the presence of non-western migrants is positively related to the share of votes going towards extreme-right wing parties in the Netherlands. This effect is less pronounced in smaller municipalities, which lends some support to the contact theory. Further, support is found for the negative relationship being caused by concerns over compositional amenities and concerns over labour market competition, which lends support to the context theory.

Contents

1. Introduction

Throughout Europe, anti-immigrant sentiments are on the rise. Groups like PEGIDA (*Europeans Against the Islamisation of the West*) organize marches and protests throughout Europe. Voters across the continent are increasingly placing their support behind populist right-wing parties with strong anti-immigration sentiments. In Germany, the extreme right-wing party *Alternative for Germany* (AfD) shot up to be the third biggest party in its national elections of 2017. In Austria, the *Freedom Party of Austria* (FPÖ) attracted a quarter of the total vote, earning them the third place in the national elections as well. Even more successful is Hungary's Fidesz, which currently has 117/199 seats. The party is led by Victor Orbán, Hungary's current prime minister, who in 2016 stated: *"Mass migration is like a slow and steady current of water which washes away the shore. It appears in the guise of humanitarian action, but its true nature is the occupation of territory; and their gain in territory is our loss of territory."* (Orbán, 2016). In Italy, the far-right *League* (L) and *Brothers of Italy* (FdI) obtained a total of 24,5% of the vote, which enabled them to form a majority coalition with the centre-right *Forza Italia* (FI) and *Us with Italy* (NcI). In the United States, Donald Trump was able to win the presidential election with promises of a border wall to keep Mexican immigrants out.

The Netherlands is not immune to this phenomenon: its populist freedom party (PVV) obtained 20 of the 150 seats in its House of Representatives (Tweede Kamer) during the 2017 elections, thereby becoming the second largest party in the Netherlands (Kiesraad, 2018). Its leader, Geert Wilders, is known for speaking of '*a tsunami of immigrants*' and leading chants against Dutch Moroccans. Furthermore, its new far-right competitor *Forum for Democracy* (FvD) won two seats in that same election, after only being established one year prior.

Since support for these anti-immigration parties seems to be rising around the world, it is interesting to study what causes this. Considering populist parties share strong nationalistic, xenophobic and racist sentiments (Mudde, 1996), an obvious explanation for increased support for the radical right-wing is sought in increased immigration. As figure 1, created by Halla, Wagner & Zweimüller (2017), shows, there is a correlation between the immigrant share in a country in and the share of votes to anti-immigration parties.

A first look at voting behaviour and immigration in the Netherlands over the past fifteen years suggests a similar relationship (figure 2A-B). There is an apparent correlation between the

number of immigrants entering the Netherlands in a given year and the percentage of votes going towards anti-immigration parties.

Coeff.(s.e.) = 1.64(0.26), R2=0.29

Figure 1: Immigration and far-right voting in the EU-15 countries, Norway, and Switzerland, 1970–2013. This scatter plot accounts for country fixed effects (i.e., both variables are centred around the respective country-specific mean) and is based on 103 general election years in EU-15 countries, Norway, and Switzerland in the period between 1970 and 2013; only democratic periods are used. Elections from countries, which do not have any far-right party throughout the whole sample period are excluded. The inclusion of these 33 elections would give the following result: coeff.(s.e.) = 0.53(0.14), R2 = 0.09. Sixty-five elections could not be included due to missing information on the number of residents without citizenship in the particular country years. Share of immigrants is defined as the number of residents without citizenship relative to all residents. Data on the total number of residents are from the database of Eurostat. Information on the number of residents without citizenship is from various national sources; details are available upon request. Data on election results are obtained from the Comparative Political Data Set I (23 OECD Countries) provided by Klaus Armingeon, Sarah Engler, Panajotis Potolidis, Marléne Gerber, and Philipp Leimgruber (see http://www.ipw.unibe.ch/research/datasets/index_eng.html). Information on founding years is from Wikipedia.

Reprinted from "Immigration and Voting for the Far Right", by M. Halla, F. Wagner & J. Zweimüller, 2017, Journal of the European Economic Association, 15(6), p. 1343. Copyright [2017] by The Authors

However, literature provides conflicting theories which predict the relationship between immigrant presence and xenophobic attitudes. More specifically, the existing literature identifies two main theories explaining this relationship. Contact theory states a closer geographical proximity to ethnic minority groups will lead to increased social contact, which in turn leads to less hostility towards these groups (Rothbart & John, 1993; Allport, 1954). Context (or conflict) theory however, dictates an increase in minority population will lead to an increase in perceived threats to the local way of life, leading to an increase in xenophobic sentiments (Sherif & Sherif, 1953). Within context theory, there are two mechanisms that can drive this positive relationship between migrant presence and xenophobia: economic concerns and concerns regarding compositional amenities (Card, Dustmann & Preston, 2012).
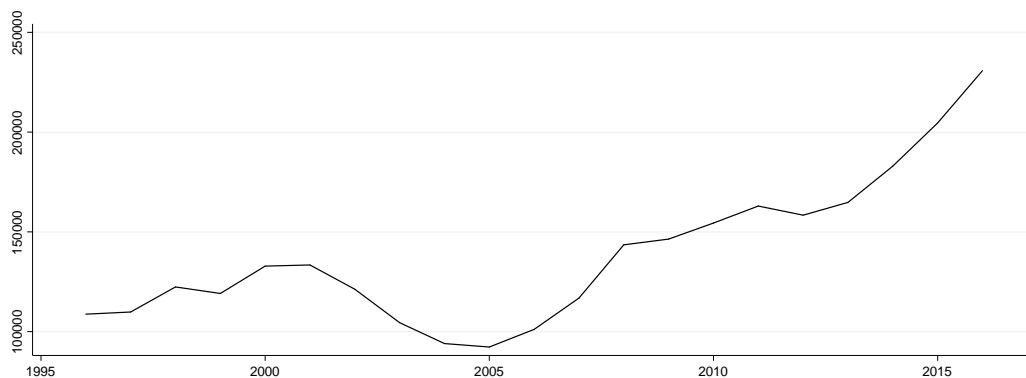

Figure 2.A: Number of immigrants entering the Netherlands in the period 1995-2017. Data is obtained from the Central Bureau of Statistics (CBS, 2018).
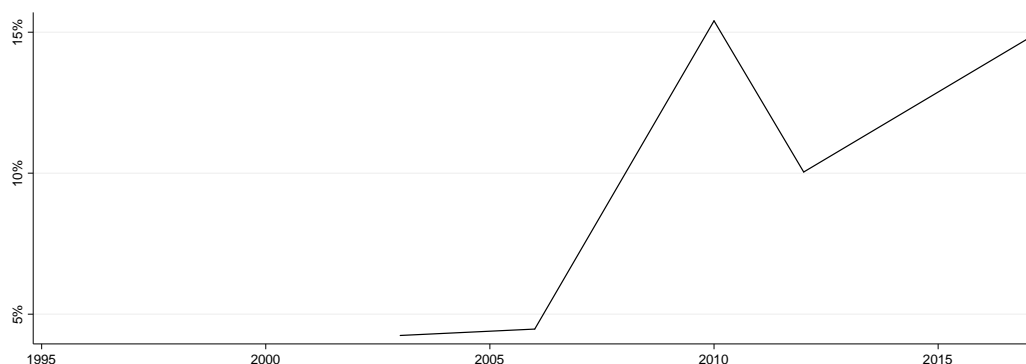

Figure 1.B: Percentage votes for anti-immigration parties in the Dutch national elections of 2003, 2006, 2012 and 2017 Anti-immigration parties are defined as the Pim Fortuyn List (LPF), Freedom Party (PVV) and Forum for Democracy (FvD). Data is obtained from De Kiesraad (2018).

This thesis examines the impact of local immigration shares on right-wing vote shares in the Netherlands through a series of fixed effects regressions. It will start with a review of the available literature on this topic. Next, a theoretical framework will be established. This will be followed by a short description of extreme right-wing parties in the Netherlands, as well as of the data used in this research. Following this, there will be a section outlining the methodology used, after which the results of the regressions will follow. After this, the possibility of and testing for reverse causality will be discussed. Finally, there will be a conclusion and limitations that apply to this research will be discussed.

2. Literature review

Research shows mixed support for both the contact and context theory. Dustmann & Preston (2001) use an *Instrumental Variable* (IV) approach to find a positive relationship between ethnic minority share of local population and xenophobic attitudes in Great Britain. Likewise, Barone, D'Ignazio, de Blasio & Naticchioni (2016) find local immigration leads to a sizable causal increase in votes for the centre-right coalition in Italy, which has a political platform unfavourable to immigration. They also find the main immigration concern of locals to be perceived threat to the local culture, labour market competition and the degradation of public services. Halla, Wagner & Zweimüller (2017) find similar results for Austria: they find the inflow of immigrants has a significant positive effect on votes for the FPÖ. Interestingly, they find evidence of some rationality behind this negative attitude: it is found in communities with larger immigrant inflows fewer day-care facilities are available and Austrian children have on average longer commutes to school. Comparable results are found in a study of Denmark, which uses historical housing stock as an instrumental variable: a positive relationship between immigration and support for anti-immigration parties is found, both in municipal and parliamentary elections (Harmon, 2015). Dustmann, Vasiljeva & Damm (2016) find similar results using historical settlement patterns as an instrumental variable. Furthermore, they find response heterogeneity, with a stronger effect of migration on election results in less urban municipalities, more affluent municipalities with high pre-policy immigrant shares and urban municipalities with high unemployment. In a research focussed on Hamburg, using both a district level fixed effects analysis and instrumental variable analysis based on historical settlement patterns, a positive relationship between immigration and voting for extreme right-wing parties is found as well. Further, it is found this is largely caused by concerns over compositional amenities, as well as over welfare implications (Otto & Steinhardt, 2014). Brunner & Kuhn (2014) use both immigrant shares in local labour markets and historical

migration patterns as instrumental variables and find a positive effect between immigrant share and voting for anti-immigration parties for Switzerland. Paauw & Flache (2010) find a positive effect of non-western migrant presence to votes going towards the extreme right-wing Freedom Party (PVV) in the Netherlands during the 2006 elections. Furthermore, they find a lower level of segregation leads to more PVV support, which provides evidence for the conflict theory over the contact theory. In other words, they find a higher level of intergroup contact will lead to a higher level of conflict and negative experiences, hence leading to increased xenophobia.

Contrary to these findings, Steinmayr (2016) discovers a negative relationship between refugee presence within a community and voting for the far-right in Austria. She further finds communities with high refugee shares are more optimistic about the integration of these newcomers. She hypothesises the reason for this is that she takes a more short-term approach, whereas Halla et al. (2017) take a more long-term view. This could imply that at least in the case of Austria, the initial contact with immigrants led to more optimism about their integration, whereas scepticism wins on the long-run, providing support for the context hypothesis.

Furthermore, literature shows not all immigrants are created equal. Cultural proximity plays an important role in determining the effect of immigrant presence on local attitudes. In a study comparing regional differences in response to increased migration across Europe, Markaki & Longhi (2018) find there is a stronger negative reaction to immigrants coming from outside of the EU. Schneider (2008) finds similar results measuring the economic and cultural threat from immigration in Europe. The percentage of non-western immigrants within a country is a stronger prediction of negative attitudes towards immigrants than the fraction of low educated immigrants. In their research of the effects of immigration on voting for extreme right-wing parties in Switzerland, Brunner & Kuhn (2014) find in the presence of culturally similar immigrants to hardly affect voting behaviour at all, whereas the share of culturally different immigrants has a significant positive effect on anti-immigration voting.

3. Theoretical framework

In the introduction and literature review, both the term *extreme-right wing parties* and *anti-immigration parties* were used. Since the exact definitions of these two concepts vary and have considerable overlap across the literature they will be used interchangeably in this study.

As stated previously, the relationship between immigrant presence and natives' attitudes towards immigrants could go either way according to theory. Immigration and support for extreme right-wing (ERW) parties could be negatively related, following the contact theory, which predicts increased contact between immigrants and natives leads to a decrease in stereotypes and hostility (Allport, 1954). Immigration and support for the far right could also be positively related, following the context theory, which predicts increased contact between immigrants and natives leads to an increase in conflicts and perceived cultural threat (Sherif & Sherif, 1953). This would be caused by economic concerns and/or a fear of degradation of compositional amenities (Card et al, 2012; Otto & Steinhardt, 2014). Figure 3 shows a simplified version of these possible mechanisms.
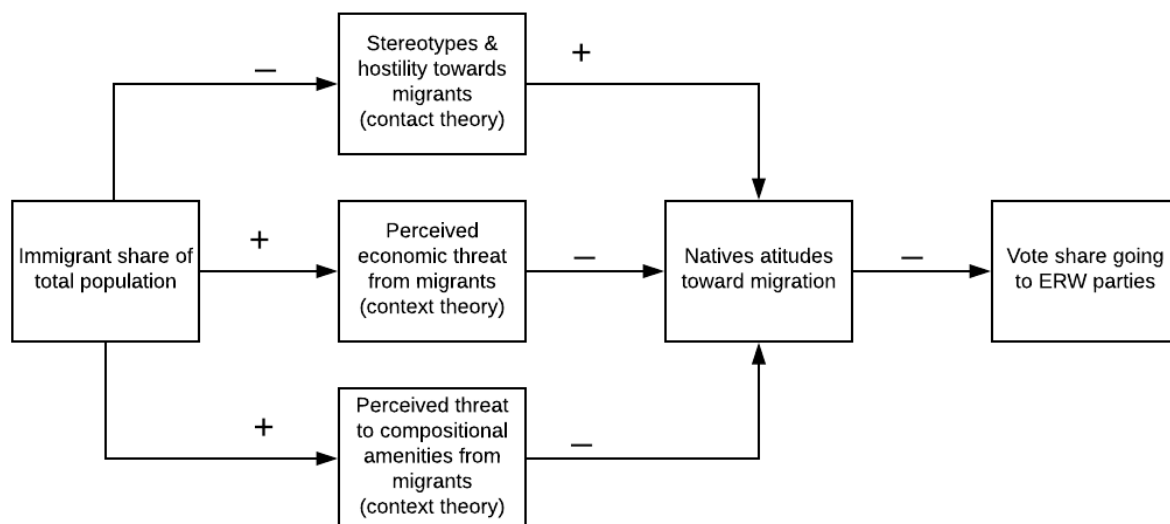

Figure 2: Simplified relationship model of the possible effect of a change in the total immigrant share on voting behaviour.

It is highly likely both context and contact theory effects take place simultaneously in the Netherlands. This thesis will first seek to establish the overall impact of immigration on right-wing vote share (and whether this effect is positive or negative).

Second, a number of sub regressions will be done to gauge the credibility of each of the hypothesized impacts in the second column of figure 3 taking place. To test if increased contact between natives and migrants will lead to a reduction in hostility and negative stereotypes, the impact of an increase in immigrant share between large and small municipalities is compared. The frequency of contact between these two groups is expected to be higher in small municipalities, since there is less possibility for ethnic minorities to form separate communities within these municipalities. Hence according to the contact theory, the effect of migrant share

on voting for ERW-parties will be relatively more positive in small municipalities than in large municipalities.

Further, an estimation is done to assess the likelihood of a perceived threat to compositional amenities influencing voting behaviour. This is done by testing the impact of non-western versus western migrant shares on voting behaviour, since the relatively larger cultural distance of non-western migrants will likely lead to more of an increase in perceived cultural threat, thus leading to a higher vote share going towards ERW parties compared to western migrants (Brunner & Kuhn, 2014; Fetzer, 2000; Markaki & Longhi, 2018; Schneider, 2008). Further, the voting response between municipalities with a low- and high ratio of non-western migrant children to all children will be compared. If a fear for compositional amenities indeed plays a role, the voting response to an increase in migrant share should be more pronounced and positive in municipalities where this ratio is high (Card, Dustman & Preston, 2012).

To assess the likelihood of a perceived economic threat caused by an increase in migrant share influencing voting behaviour, the voting response to immigration in communities with a relatively low- and high share of unemployment people will be compared. Further, the voting response of municipalities with a relatively low- and high share of low educated individuals will be compared, since the chance of immigrants being equally or more skilled than the natives is higher in relatively low-skilled municipalities, causing more intensive labour market competition (Fetzer, 2000; Facchini & Mayda, 2009; Mayda, 2006; Halla et al., 2017).

4. Background and data

3.1. Anti-immigration parties in the Netherlands

The first anti-immigration party to obtain a seat in the Dutch parliament in after World War II was the *Centre Party* (CP) in 1982. Their breakaway party *Centre Democrats* (CD) had some electoral success as well in the 1989 and 1994 elections. However, in this period anti-immigration parties were still relatively fringe, and neither party obtained more than three parliamentary seats in parliament at once (Lucardie, 2000).

This changed in 2002 with the dramatic breakthrough of new party *Pim Fortuyn List* (LPF), who obtained a sweeping 26 seats in parliament (Aarts & Bélanger, 2006). Charismatic leader and founder Pim Fortuyn had been fired from his previous party, Leefbaar Nederland, due to his controversial anti-immigration stance. However, due to the murder of Pim Fortuyn nine days prior to the election, the party was missing a leader and internal conflicts ran high (van

Holsteyn & Irwin, 2011). This led to the fall of the cabinet, and the LPF only obtained 5.7% of the votes in the subsequent election in 2003, earning them eight parliamentary seats. During the 2006 election, their support had further dwindled and the renamed *List 5 Fortuyn* did not obtain any seats in parliament.

In that same election however, the in the 2005 established anti-immigration party PVV obtained almost 6% of the vote share, or nine parliamentary seats. Founded by former liberal party (VVD) member Geert Wilders, the PVV ran on a platform of small government, traditional cultural values and anti-Islam (Partij voor de Vrijheid, 2006). Though the PVV is still doing well electorally, in 2015 a new populist party emerged: *Forum for Democracy* (FvD). The party ran largely on anti-establishment sentiments, and with the proclaimed goal to '*break the party cartel*'. However, another important aspect of their party program was the preservation of Dutch cultural values, strict immigration policy, more restrictive asylum policy and less generous social security for immigrants (Vossen, 2017). During the 2017 elections, FvD earned 1.78% of the vote, good for two seats in parliament.
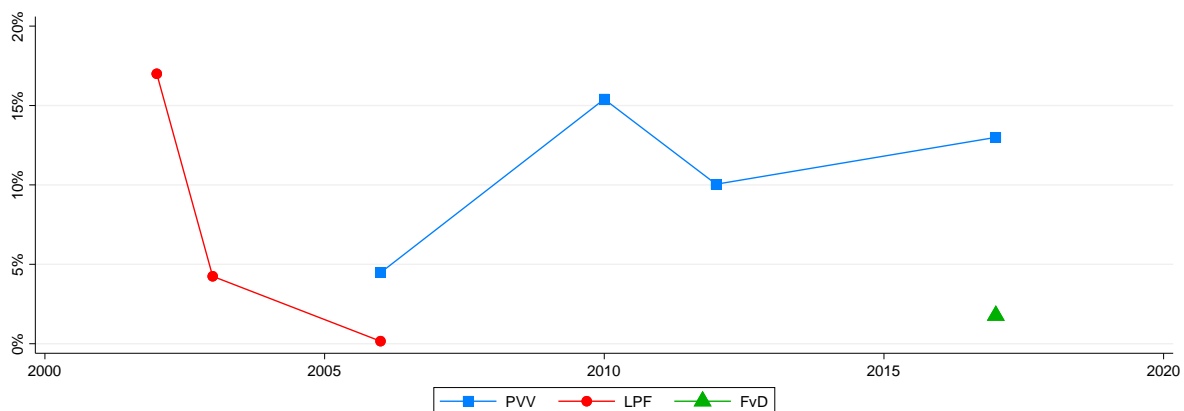

Figure 3: Vote share going towards anti-immigration parties Netherlands in the period 2002-2017 (De Kiesraad, 2018).

3.2 Data

The data used is derived from two primary sources: *De Kiesraad*, an independent governing body responsible which functions as a Central Voting Bureau during the Dutch parliamentary elections, and the *Centraal Bureau voor de Statistiek (*CBS), a Dutch governmental institution which gathers statistical information about the Netherlands.

The dependent variable, share of votes going to anti-immigration parties, is obtained from *De Kiesraad.* The election years included in this research are 2003, 2006, 2010, 2012 and 2017. The anti-immigration parties taken into consideration are LPF, PVV and FvD, who all obtained

at least one parliamentary seat in the beforementioned election years. All other data is obtained from the CBS.

The sample consists of all Dutch municipalities included in both the 2002 and 2017 municipal classification. This provides a balanced panel, since data on education level and unemployment level is only available according to the municipal classification in 2017. The municipal classification changes over time, since municipalities regularly merge or undergo name changes. Data on the elections in years prior to 2017 has been manually updated to reflect the municipal division of 2017. This means if two municipalities merged, the data on the number of voters and number of votes for extreme right-wing parties within these two municipalities have been summed under the name of the new municipality. In a few cases, municipalities have dissolved and been divided over multiple other municipalities. Municipalities which received fractions of these former municipalities have been removed from the sample.[1] Lastly, three municipalities are removed due to a lack of data availability.[2] This creates a dataset of 338 municipalities. Table 1 below provides a summary of the variables taken into consideration in the research.

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[1] The municipalities which are excluded from the sample are De Fryske Marren, Heerenveen, 's-Hertogenbosch, Horst aan de Maas, Leeuwarden and Oss.
[2] These municipalities are Rozendaal, Schiermonnikoog and Vlieland. On data source CBS statline, the number of people with low and high education levels are counted in thousands of individuals. Since the population of these three municipalities is 1498, 941 and 1085 respectively (2017), this brings the value within each category to 0, thus making it impossible to calculate the share. Furthermore, since the regressions are weighted on population size, the impact of removing the three smallest municipalities from the sample will be relatively small.

Variable name	Explanation
Share ERW votes	The share of the vote which goes towards extreme right-wing parties, defined as LPF, PVV and FvD.
Share Immigrants	The share of the total population of a municipality with a first-generation migration background on January first of the election year.
Share Non-Western Immigrants	The share of the total population of a municipality with a non-western first-generation migration background on January first of the election year. Non-western is defined as African, Latin-American, Asian (excluding Indonesia and Japan[3]) or Turkey.
Share Western Immigrants	The share of the total population of a municipality with a western first-generation migration background. Equal to the total share of immigrants minus the share of non-western immigrants.
Population	Total population of municipality on January first of the election year.
Share Female	The share of women within the municipality on January first of the election year.
Share 18-35 y/o	The share of the population between 18-35 years old on January first of the election year.
Share 65+ y/o	The share of the population above 65 years old on January first of the election year.
Share Low Educated	The share of the municipal population between 15-75 years old with a low education level in the year prior to the election (with the exception of 2003, where data from the year of the election is used). A low education level means VMBO, first three years of HAVO/VWO or assistant education (MBO-1).
Share High Educated	The share of the municipal population between 15-75 years old with a high education level in the year prior to the election (with the exception of 2003, where data from the year of the election is used). A high education level means HBO or WO educated.
Income	The average standardized income per household, meaning disposable income corrected for differences in size and composition. This correction is done based on equivalency factors. Data is from the year prior to election year, with the exception of the elections of 2017: since data for 2016 was not available, data from 2014 is used, which is the nearest available year.
Share Unemployment	The unemployment rate in the year prior to the election. Data on the unemployment rate in 2002 was not available, hence for the 2003 elections the unemployment rate for 2003 is used.
Crime rate	The number of registered criminal cases within a municipality per 1000 inhabitants in the year prior to the election.

Table 1: Description variable names

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[3] Indonesia and Japan are excluded based on their socio-economic and socio-cultural position. Many immigrants from these regions are individuals who were born in former Dutch East Indies and employees of Japanese companies with their families. Definitions have been adopted from CBS.

5. Methodology & Results

4.1. Methodology

This section will provide an overview of the methods used in this thesis. Two estimation models will be used to test the relationship between immigrant share and voting behaviour. First, a simple linear OLS model will be estimated. Second, a regression including fixed effects to account for time trends and regional variation will be estimated.

A Hausman test is performed, which confirms the assumption that a fixed effects model is preferable over a random effects model. Furthermore, to account for a nationwide time trend (such as the surge of the PVV in 2010), a time fixed-effect is added.

When including municipality level fixed-effects to the estimation, the independent variables show a high degree of multicollinearity. Since the level of variation within a community over time is relatively small for many of the controls included in the model, including a community fixed-effect absorbs much of the variation of the predictor and control variables. Furthermore, including municipality fixed-effects creates a significant risk of overfitting (Babyak, 2004).

To reduce multicollinearity while controlling for possible community-fixed effects in the model, a fixed-effect on the Corop-region level is included. Corop-regions are geographic areas created by the Coordination Committee Regional Research Program (Coördinatiecommissie Regionaal Onderzoeksprogramma) based on nodal areas derived from commuter flows. Regional economic shocks thus affect the entire Corop-region, and other unobserved variables (such as xenophobic attitudes) are likely shared across municipalities within each Corop-region due to the high level of intragroup contact (Central Bureau for Statistics, 2018). These regions thus provide an excellent tool to reduce omitted variable bias, while maintaining some of the variation which is lost when using municipality fixed-effects. 39 out of the 40 Corop-regions are included as fixed effects, since all municipalities from the Corop-area "Zuidwest-Friesland" are excluded as a result of data availability (see previous section). This leads to the model below:

$$ERW_{it} = \alpha_0 + \alpha_1 Migrants_{it} + \beta X_{it} + C_t + T_i + u_{it}$$

Where ERW_{it} stands for the share of votes going towards anti-immigration parties in municipality i in year t, $Migrants_{it}$ is equal to the share of first-generation migrants in municipality i in year t and X_{it} is a vector of control variables. Also included in the model are Corop-area fixed effect C_t, time fixed effect T_i, the constant α_0 and finally error term u_{it}.

Furthermore, it is interesting to observe what happens when adding population weights to the model. In estimation 4.1 Amsterdam (population in 2017: 844.947) counts for an equal amount as Ameland (population in 2017: 3.633). To account for this difference and obtain estimates which more accurately reflect the impact of immigrant presence on the full Dutch population, population weights are added.

Lastly, the regression is estimated on a number of different subsamples, to further investigate the separate impacts of a perceived economic threat, cultural threat and fear over compositional amenities.

One possible weakness of this identification method is the risk of reverse causality. Migrants might be less likely to settle in a community in which negative attitudes towards migration are common. Another risk is that natives with xenophobic positions will move away if the migrant share in their municipality increases. These would both lead to a downward bias in the estimates. To mitigate this risk, a number of reverse causality tests will be executed in section 5.

4.2. Results

4.2.1. Total migrant share

Column (1) of table 2 shows the results of a pooled OLS model including controls. It estimates a positive and significant coefficient of 0.303, meaning a one percentage point increase in immigrant share would lead to a 0.303 percentage point increase in votes for anti-immigration parties. When adding a year fixed-effect in column (2), the estimate decreases slightly, indicating the estimate in column (1) has an upward omitted variable bias. When adding a regional fixed effect to the regression (column 3), the coefficient for immigrant share becomes insignificant and turns negative. This indicates that like the pooled OLS estimate, the regression including only year fixed-effects suffers from an upward omitted variable bias. Not included in the table is a regression including a combined fixed effect for Corop-region and year (entailing the dependent variable share votes for ERW-parties is demeaned based on the yearly variation within each Corop-region). Although this could further reduce omitted variable bias, the regression ultimately runs a high risk of overfitting, which would cause the estimates to be unreliable.

In column (4), population weights are added. Further, the sample is split into two subsamples: column (4B) shows the estimates for municipalities with a population below 50.000

inhabitants, while column (4C) describes the results for a subsample of all municipalities with at least 50.000 inhabitants. Across all three regressions, the coefficient measuring the impact of immigrant share on the share of ERW votes is insignificant. Since the estimates in column (4C) might suffer from overfitting due to the smaller sample size of the subsample of large municipalities, in column (5) this regression is executed once more, but with a fixed-effect on the province level rather than the Corop-area level[4]. Here a positive significant relationship is found between the share of immigrants and the share of votes going towards anti-immigration parties. However, since all regressions which include both a year and Corop-area fixed effect give an insignificant estimate, this does not provide conclusive results on the effect of immigrant presence on voting behaviour.

The behaviour of the control variable coefficients provides interesting leads for future research. With the exception of the subsample of small municipalities (column 4B), population size has a consistent significant negative effect on the likelihood of voting for anti-immigration parties. However, this effect is small: an increase in the population size of 100.000 people, would lead to a decrease in votes going to anti-immigration parties of approximately 0,5% (column 4A). To illustrate: Amsterdam, the largest city in the Netherlands, has a population size of approximately 800.000.

Furthermore, the share unemployment has a consistent positive estimate when accounting for regional fixed-effects, for all estimates beside the subsamples in column (4B), (4C) and column (5). This indicates *perceived* labour market competition likely plays a role in the decision to vote for ERW parties regardless of immigrant presence. Section 4.2.3 will further research the possibility of a labour market competition effect.

Furthermore, for small municipalities (<50.000 inhabitants), a significant negative effect on voting for ERW-parties is found when the share of older (65+) individuals in a municipality increase (column 4B). For large municipalities (≥50.000 inhabitants) the opposite effect is found (column 4B and column 5). This could indicate older individuals who live in large municipalities are more likely to vote for anti-immigration parties, whereas 65+ citizens living in small municipalities are less inclined to do so. However, further research would be needed to allow for definite statements.

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[4] Not included in table 2 are the estimations of the small municipalities subsample with province rather than Corop-area fixed effects, which in line with the estimate of column (4B) yields insignificant results.

The share of young people (18-15 years old) has a negative impact on the vote share going to ERW parties across most of the estimates in table 2 (column 2, 3, 4A & 4B). This contradicts the findings of Lubbers, Gijsberts & Scheepers (2002), who find younger voters are more likely to vote for ERW-parties. Furthermore, a negative effect of the presence of highly educated individuals on voting for ERW parties is found across all six estimation models, as well as a small negative effect of average income. Contrary to results of Arzheimer & Carter (2006), Lubbers et al. (2002) and Werts, Scheepers & Lubbers (2013), no significant difference is found for municipalities with a relatively high or low percentage of female voters. Crime rate does appear to have a positive impact on vote share going towards anti-immigration parties, but the effect is small. More research would need to be done to determine a definite link between these control variables and voting behaviour.

In conclusion, a causal link between the share of immigrants living in a municipality and the share of votes going to anti-immigration parties is not proven. However, this does not mean such a relationship does not exist. It is possible that the different positive and negative effects hypothesized in figure 3 cancel each other out, which would explain the lack of a discernible effect.

	(1) Pooled OLS	(2) Year Fixed-Effect	(3) Year & Corop Fixed-Effect	(4) Weighted Year & Corop Fixed-Effect			(5) Weighted Year & Province Fixed-Effect
				(A) All municipalities	(B) Small municipalities	(C) Large municipalities	Large municipalities
Share immigrants	0.303***	0.263***	-0.0188	0.0140	-0.0394	-0.00485	0.0861**
	(0.0558)	(0.0473)	(0.0356)	(0.0381)	(0.0408)	(0.0543)	(0.0411)
Population	-7.90e-09	-5.27e-08***	-4.96e-08***	-5.21e-08***	9.00e-08	-4.00e-08***	-4.01e-08***
	(3.40e-08)	(2.14e-08)	(1.05e-08)	(8.08e-09)	(9.94e-08)	(1.44e-08)	(9.38e-09)
Share female	-1.218***	0.182	-0.0289	-0.0722	-0.170	-0.0401	0.0540
	(0.197)	(0.146)	(0.129)	(0.137)	(0.160)	(0.271)	(0.119)
Share unemployment	0.355**	-0.285**	0.279**	0.330*	0.158	0.245	0.215
	(0.143)	(0.142)	(0.134)	(0.192)	(0.199)	(0.249)	(0.193)
Share low educated	-0.157***	0.0387	-0.00406	-0.0283	0.00204	-0.0414	-0.0369
	(0.0402)	(0.0260)	(0.0211)	(0.0271)	(0.0277)	(0.0431)	(0.0397)
Share high educated	-0.242***	-0.106***	-0.0744***	-0.126***	-0.0662***	-0.139***	-0.151***
	(0.0315)	(0.0214)	(0.0149)	(0.0167)	(0.0165)	(0.0354)	(0.0341)
Crime rate	-0.000282	0.000374	0.000325*	0.000247*	0.000203	0.000313***	0.000402***
	(0.000245)	(0.000240)	(0.000178)	(0.000132)	(0.000237)	(0.000113)	(9.84e-05)
Share 18-35 y/o	0.000358	-0.259***	-0.132***	-0.0735*	-0.143***	-0.0506	-0.0858
	(0.0397)	(0.0400)	(0.0324)	(0.0383)	(0.0383)	(0.0700)	(0.0614)
Share 65+ y/o	0.234***	-0.211***	-0.0632*	0.0318	-0.0869**	0.178**	0.140*
	(0.0475)	(0.0439)	(0.0330)	(0.0515)	(0.0364)	(0.0869)	(0.0712)
Income	0.00664***	-0.00141*	-0.00344***	-0.00245***	-0.00375***	-0.00404**	-0.00236
	(0.00127)	(0.000831)	(0.000541)	(0.000635)	(0.000697)	(0.00157)	(0.00147)
Constant	0.570***	0.0919	0.153**	0.142**	0.234***	0.147	0.0747
	(0.121)	(0.0674)	(0.0604)	(0.0673)	(0.0710)	(0.127)	(0.0748)
Observations	1,690	1,690	1,690	1,690	1,360	330	330
R-squared	0.363	0.710	0.853	0.863	0.859	0.909	0.896

Table 2: The results of regressing the total immigrant share on the share of votes going to anti-immigration parties. Column (1) shows the estimates resulting from a simple pooled OLS. Column (2) displays the results including only a year fixed-effect, while in column (3) both a year fixed-effect and a fixed effect at the Corop-region level are included. Column (4) presents the findings when including weights based on population sizes, as well a separate estimate for small (<50.000 inhabitants) and large (≥50.000 inhabitants) municipalities. Column (5) displays the result of a weighted regression which includes a Province rather than a Corop-region fixed-effect, as well as a year fixed-effect. *** p<0.01, ** p<0.05, * p<0.1

4.2.2. Non-western immigrant share

Theory predicts the perceived cultural threat experienced by natives (or fear of degradation of compositional amenities) to be greater when their cultural distance from the immigrant community is large (Markaki & Longhi, 2018; Schneider, 2008; Brunner & Kuhn, 2014). It is therefore expected that the positive effect of non-western immigrant share on voting for extreme-right-wing parties is larger than that of total immigrant share.

Table 3 shows the results of estimating the regressions in column (3), (4) and (5) of table 2 again, now using non-western immigrant share as predictor variable. Furthermore, the share of western immigrants is included as a control variable. An OLS regression including fixed effects on Corop-area and year finds no significant impact (column 1). However, a change occurs when weights are added to account for differences in population size (Column 2A). When cities with a large population are given a higher weight, a positive effect of the non-western immigrant share on the share of votes for ERW parties is found at the 10% significance level. For western immigrants, the opposite effect is found: an increase of one percentage point in the share of western migrants leads to a decrease in the share of votes going to anti-immigration parties of 0.098 percentage points. Further, it is found that an increase of one percentage points in the share of non-western immigrants in a given municipality, leads to an increase of almost 0,1 percentage point in the share of votes going to anti-immigration parties. Since this relationship appears only once population weights are added, this means the relationship between immigrant presence and right-wing extremism is stronger in larger cities.

Column (2B) and (2C) further explore the difference in the impact of non-western immigration on small and large municipalities. In line with the findings of the weighted fixed effects regression, the positive effect of immigration on voting for anti-immigration parties is larger when only considering municipalities with a population of over 50.000 inhabitants (column 2C). Here it is found an increase in the immigrant share of one percentage point leads to an increase in voting for extreme right-wing parties of 0,223 percentage points. To ensure the results from column (2C) are not the result of overfitting, a second regression is estimated over de subsample of large cities, now including fixed effects on the year and province level.[5] Once more a significant positive effect is found, confirming there is likely a positive relationship between non-western migrant presence in large cities and voting for anti-immigration parties.

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[5] As in table 2, not included in table 3 are the estimations of the small municipalities subsample with province rather than Corop-area fixed effects, which in line with the estimate of column (2B) yields insignificant results.

	(1) FE Year & Corop	(2) Weighted Fixed-Effects Year & Corop			(3) Weighted FE Year & Province
		(A) All municipalities	(B) Small municipalities	(C) Large municipalities	Large municipalities
Share non-western immigrants	0.0183 (0.0500)	0.112** (0.0553)	-0.0410 (0.0652)	0.223*** (0.0675)	0.239*** (0.0601)
Share western immigrants	-0.0387 (0.0400)	-0.0982* (0.0505)	-0.0385 (0.0494)	-0.361*** (0.114)	-0.157 (0.0943)
Population	-5.54e-08*** (1.13e-08)	-6.50e-08*** (1.02e-08)	9.04e-08 (1.01e-07)	-6.55e-08*** (1.21e-08)	-5.74e-08*** (8.95e-09)
Share female	-0.0534 (0.128)	-0.111 (0.137)	-0.169 (0.159)	0.145 (0.276)	0.0411 (0.116)
Share unemployment	0.248* (0.135)	0.277 (0.169)	0.159 (0.203)	0.150 (0.177)	0.133 (0.168)
Share low educated	-0.00334 (0.0209)	-0.0287 (0.0263)	0.00199 (0.0274)	-0.0510 (0.0395)	-0.0458 (0.0389)
Share high educated	-0.0741*** (0.0149)	-0.121*** (0.0160)	-0.0662*** (0.0165)	-0.129*** (0.0332)	-0.134*** (0.0309)
Crime rate	0.000322* (0.000176)	0.000216* (0.000124)	0.000203 (0.000237)	0.000265*** (8.54e-05)	0.000360*** (0.000106)
Share 18-35 y/o	-0.133*** (0.0321)	-0.0709* (0.0375)	-0.143*** (0.0391)	-0.0439 (0.0662)	-0.0718 (0.0574)
Share 65+ y/o	-0.0587* (0.0326)	0.0397 (0.0475)	-0.0870** (0.0364)	0.165* (0.0831)	0.149** (0.0693)
Income	-0.00341*** (0.000548)	-0.00231*** (0.000656)	-0.00375*** (0.000697)	-0.00365*** (0.00129)	-0.00184 (0.00133)
Constant	0.165*** (0.0597)	0.158** (0.0666)	0.233*** (0.0722)	0.0540 (0.127)	0.0755 (0.0681)
Observations	1,690	1,690	1,360	330	330
R-squared	0.853	0.865	0.859	0.916	0.901

Table 3: The results of regressing the total non-western immigrant share on the share of votes going to anti-immigration parties. Column (1) presents the estimates of a fixed-effect regression, which includes fixed-effects on both the Corop-region and year level. Column (2) presents the findings when including weights based on population sizes (2A), as well a separate estimate for small (<50.000 inhabitants, 2B) and large (≥50.000 inhabitants, 2C) municipalities. Column (3) displays the result of a weighted regression which includes a Province rather than a Corop-region fixed-effect, as well as a year fixed-effect. *** p<0.01, ** p<0.05, * p<0.1

The share of western immigrants in large municipalities is found to be negatively related to right-wing voting (column 2C), but this is not sustained in column (3). For small municipalities (column 2B), no discernible effect is found.

These results thus offer support to both the context and contact hypothesis. The context theory is supported, since a higher non-western migrant share leads to a higher vote share going towards anti-immigration parties, which is likely caused by concerns over compositional amenities. In other words, the increase in non-western migrants likely leads to an increase in perceived cultural threat, which influences voting behaviour. However, in smaller municipalities there is likely more direct contact between natives and migrants, which could explain why no significant effect is found within this subgroup (column 2B).

4.2.3. Heterogeneous effects across subgroups

To provide a further deep-dive into the sub-effects which steer a possible positive link between immigration and voting for anti-immigration parties (as mentioned in figure 3), the sample is split on a number of criteria, with the estimate for the bottom 50% of the sample in column (1), and the top 50% in column (2) of table 4. Column (3) provides the t-statistic of a two-sample t-test, comparing the mean of the explanatory variable across the two subsamples. It is found to be significantly different in each of the four subsample comparisons.

Panel A of table 4 provides the result of the estimates for the subsample of municipalities whose unemployment rate is in the bottom 50% and top 50% of the full sample. No significant effect is found. Hence no evidence for perceived labour market competition influencing voting decisions is found here.

Panel B splits the sample up according to the share of low educated residents within each municipality. Here a significant and opposite effect is found across subsamples. In the group with the lowest level of individuals with low educational attainment, an increase of one percentage point in the share of immigrants is predicted to decrease the share of votes going towards anti-immigration parties with 0,07 percentage points, thus providing support for the contact hypothesis. In the subgroup containing the municipalities with the highest shares of low educated individuals, there is a stronger likelihood that immigrants coming in have equal or higher educational attainment than the native population (Fetzer, 2000; Facchini & Mayda, 2009; Mayda, 2006; Halla et al., 2017), thereby causing more intense labour market competition. This labour market competition effect thus outweighs the effect of increased contact, causing a one percentage point increase in immigrant share to result in an increase of

0,17 percentage point of the vote share going to anti-immigration parties. Hence the results of panel B provide support for both the contact hypothesis and the labour market competition component of the context hypothesis.

Sample split criterion	(1) Below 50th percentile	(2) Above 50th percentile	(3) t-statistic for the test (1) = (2)
Panel A: Unemployment rate			
Share of immigrants	0.084	-0.012	0.039
	(0.073)	(0.044)	(0.002)
Mean of dep var	0.079	0.086	
Mean of split var	0.040	0.053	
Panel B: Low educational attainment			
Share of immigrants	-0.070***	0.170***	0.010
	(0.026)	(0.064)	(0.002)
Mean of dep var	0.076	0.089	
Mean of split var	0.325	0.380	
Panel C: Ratio of immigrant children to all children			
Share of immigrants	0.008	0.013	0.049
	(0.036)	(0.024)	(0.002)
Mean of dep var	0.082	0.083	
Mean of split var	0.017	0.036	
Panel D: Ratio of non-western immigrant children to all children			
Share of non-western immigrants	-0.011	0.129**	0.031
	(0.132)	(0.058)	(0.001)
Mean of dep var	0.083	0.081	
Mean of split var	0.010	0.011	

Table 4: Summary subsample estimates. Panel A splits the sample across the municipalities with the highest (column 2) and lowest (column 1) unemployment rates. Panel B splits the sample across the share of the population with a low educational achievement, whereas panel C splits the sample into subgroups based on the ratio of immigrant children to all children. Panel D does the same, but based on the ratio of non-western immigrant children. The estimates in this panel include a control for the share of western immigrants. All regressions include community effects and Corop-area level and year fixed effects. Further, all regressions include population weights. The subsample split is based on the value of the split variable in 2003. When looking at the ratio of (non-western) migrant kids to all kids (Panel C & D), both children with a first-generation migration background and the children of first-generation migrants are considered. *** p<0.01, ** p<0.05, * p<0.1

In panel C estimates are shown for the municipalities with the highest ratio of immigrant children to all children. This could potentially provide evidence for concerns over compositional amenities playing a motivating role in anti-immigration voting behaviour, since a larger share of immigrant children could lead to less investment being made into education and other childcare facilities, as well as change the culture and composition of children within the classroom (Card, Dustman & Preston, 2012). However, there is no significant result found in either subgroup, thus this theory cannot be proven. Since concerns over compositional amenities are likely higher when the cultural distance between the immigrant children and the rest of the population is larger, two more subsamples are created in Panel D, now accounting for the share non-western immigrant children. Furthermore, non-western immigrant share is

used as the explanatory variable, rather than total immigrant share. Here a significant positive effect is found in the subgroup with the highest ratio of non-western migrant children to all children, indicating an increase in the share of non-western immigrants of one percentage point to result in a 0.13 percentage point increase in the share of votes going towards anti-immigration parties. This thus offers support for the context hypothesis.

6. Reverse causality & settlement response natives

6.1. Reverse causality

Endogeneity is a concern in the estimates. If immigrants are aware in which municipalities xenophobic sentiments are most prevalent, they might choose not to live in these cities, thus leading to an underestimation of the relationship between immigrant presence and extreme right-wing voting (Card, Dustman & Preston, 2001; Harmon, 2015). Similar to the methodology of Halla et. Al (2017) two tests are performed to test if reverse causality is an issue in this dataset.

	(1) 2-year difference in share of immigrants	(2) 5-year difference in share of immigrants	(3) 8-year difference in share of immigrants
Panel A: Total immigrant share			
Share of ERW votes	0.212** (0.092)	0.380* (0.211)	0.354 (0.323)
Panel B: Non-western immigrant share			
Share of ERW votes	0.256** (0.114)	0.702** (0.274)	0.739* (0.424)
Number of observations	1,352	1,352	1,004
ERW-vote share measured in	2003, 2006, 2010, 2012	2003, 2006, 2010, 2012	2003, 2006, 2010

Table 5: Summary of estimated effect of initial vote share for anti-immigration parties on changes in the share of immigrants in these communities in the following two, five or eight years. All regressions include municipality population weights, as well as the full vector of controls and both a year and Corop-region fixed effect. To run regression (3), several municipalities had to be excluded, since they were dissolved on January 1st 2018. The excluded municipalities are Bellingwedde, Franekeradeel, het Bildt, Hoogezand-Sappemeer, Leeuwarderadeel, Littenseradiel, Menterwolde, Rijnwaarden, Slochteren and Vlagtwedde. *** p<0.01, ** p<0.05, * p<0.1

First, a pooled OLS regression is estimated to assess if immigrants are less willing to settle in cities where a large fraction of the population voted for anti-immigration parties in previous elections. The results of this test can be found in table 5. Unexpectedly, there is a significant positive effect of high ERW vote shares on future migration patterns, which would mean migrants are actually more likely to settle in municipalities with high vote shares going to

ERW-parties in the past. This effect persists, even when accounting for Corop-area and time fixed-effects as well as the set of controls used in table 2 and 3. An explanation for this positive relationship could be that municipalities which already have a large share of immigrants in their population could be more prone to voting for ERW-parties, while also being more likely to attract more immigrants, since immigrants are most likely to settle in area's which already have a large immigrant presence (Otto & Steinhardt, 2014). However, when adding a control variable for the share of immigrants during each election year, the strength and significance of the coefficients hardly changes.

Another possibility is the difference between large and small municipalities. In the period under investigation, there was a trend in the Netherlands, where (especially) young people and immigrants move to larger cities (Manting, 2013; De Jong & Van Duin, 2009). Since there is a general tendency in larger cities to vote for anti-immigration parties (the average vote share going to anti-immigration parties is 0,082 in municipalities with a population below 50.000, and 0,084 in municipalities at least 50.000 residents), this could lead to a type I error in the estimates. To test for bias in the estimates in table 5, the regressions are estimated for a subsample of municipalities with a population below 50.000 in 2017. When doing so, all coefficients are insignificant, which confirms growth-regions likely the cause the significant positive relationship found in table 5. Furthermore, since the results of table 6 are not significantly negative, no evidence found that a high vote share going towards ERW-parties in a certain municipality deters immigrants from settling there in the two to eight following years.

Subsample: small municipalities	(1) 2-year difference in share of immigrants	(2) 5-year difference in share of immigrants	(3) 8-year difference in share of immigrants
Panel A: Total immigrant share			
Share of ERW votes	0.135 (0.138)	0.173 (0.275)	0.116 (0.428)
Panel B: Non-western immigrant share			
Share of ERW votes	0.0416 (0.196)	0.0792 (0.397)	-0.427 (0.665)
Number of observations	1088	1088	806
ERW-vote share measured in	2003, 2006, 2010, 2012	2003, 2006, 2010, 2012	2003, 2006, 2010

*Table 6: Reverse causality test for the subsample of small municipalities (<50.000 inhabitants). Estimated effect of initial vote share for anti-immigration parties on changes in the share of immigrants in these communities in the following two, five or eight years. All regressions include municipality population weights, as well as the full vector of controls and both a year and Corop-region fixed effect. To run regression (3), several municipalities had to be excluded, since they were dissolved on January 1st 2018. The excluded municipalities are Bellingwedde, Franekeradeel, het Bildt, Hoogezand-Sappemeer, Leeuwarderadeel, Littenseradiel, Menterwolde, Rijnwaarden, Slochteren and Vlagtwedde. *** p<0.01, ** p<0.05, * p<0.1*

As a final check, the coefficients are estimates once more, now on the subsample of large municipalities (population ≥ 50.000). Since the sample size for large municipalities is smaller than for small municipalities, including fixed effects on the Corop-region level might lead to overfitting. To account for this risk, all regressions are estimated twice: once including fixed-effects on the Corop-region level, and once including fixed-effects on the provincial level. The results can be found in table 7. The effect of the share of ERW votes on overall immigrant presence two- and five years in the future is significant and positive when including fixed effects on the province level, which the more reliable measure of the two (the outcomes of the regression at the Corop-region level are included to allow direct comparability with the small municipality subsample regressions[6]). Furthermore, when estimating the effect of the share of ERW votes on the change in the share of non-western immigrants, the results are significant for the two- and five-year change in immigrant share as well when including province fixed effects. Hence, support is found for omitted variable bias leading to the significant positive estimates of table 5.

Subsample: Large municipalities	(1) 2-year difference in share of immigrants		(2) 5-year difference in share of immigrants		(3) 8-year difference in share of immigrants	
	Corop fixed-effect	Province fixed-effect	Corop fixed-effect	Province fixed-effect	Corop fixed-effect	Province fixed-effect
Panel A: Total immigrant share						
Share of ERW votes	0.229	0.276*	0.429	0.513*	0.354	0.274
	(0.187)	(0.142)	(0.319)	(0.287)	(0.394)	(0.417)
Panel B: Non-western immigrant share						
Share of ERW votes	0.220	0.306*	0.660*	0.767*	0.737	0.696
	(0.150)	(0.160)	(0.382)	(0.414)	(0.509)	(0.587)
Observations	264	264	264	264	198	198
ERW-vote share measured in	2003, 2006, 2010, 2012		2003, 2006, 2010, 2012		2003, 2006, 2010	

*Table 7: Reverse causality test for the subsample of large municipalities (≥50.000 inhabitants). Estimated effect of initial vote share for anti-immigration parties on changes in the share of immigrants in these communities in the following two, five or eight years. All regressions are run twice, once using a fixed effect on the Corop-region level, and once using a fixed effect on the province level. All regressions include municipality population weights, as well as the full vector of controls and a year fixed-effect. To execute regression (3), several municipalities had to be excluded, since they were dissolved on January 1st 2018. The excluded municipalities are Bellingwedde, Franekeradeel, het Bildt, Hoogezand-Sappemeer, Leeuwarderadeel, Littenseradiel, Menterwolde, Rijnwaarden, Slochteren and Vlagtwedde. *** p<0.01, ** p<0.05, * p<0.1*

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[6] The coefficients for the subsample with small municipalities (table 6) remain insignificant when including province- rather than Corop-region fixed effects.

Second, a test is performed to assess the effect of longstanding local racial prejudices on immigrant's settlement patterns. To gauge if this impact is present, a test is performed using data on the share of votes going towards the NSB (the Dutch collaboration party of Hitler's NSDAP) in the parliamentary elections of 1937 to predict immigrant settlement patterns in 2003. In 1937, support for the NSB was on the decline, after it started spreading propagating a more extremist fascist and racist message (Slaa & Klijn, 2011). Hence their vote share in this year forms a good proxy, since most moderate supporters had already left the NSB. Table 8, panel A shows the results when running a simple OLS regression. Since extreme-right-wing voting behaviour does not seem related over time within a municipality (column 1, panel A), there is no proof of longstanding local racial prejudices. A possible explanation for the positive relationship between NSB-voting and immigrant share in 2003 could be the high levels of NSB support in Drenthe and Noord-Holland, which was caused by the previous popularity of *Landbouw en Maatschappij* (Agriculture and Society), which was a populist party defending farmers rights, which had a positive attitude towards the NSB. Furthermore, the propaganda of the NSB was largely targeted towards farmers (De Ru, 1980). Since there is still a lot of agricultural activity in that area, a large number of labour immigrants might have settled here to work in the greenhouses. However, no evidence is found to support the influence of longstanding local racial prejudices influencing migration settlement patterns.

Since many individuals were displaced during WWII, there is an argument to be made that the disruptions this caused within communities led to a fundamental change in municipality cultures. Therefore, a second proxy is used to test longstanding anti-immigrant views within communities. Between the era of the NSB and the rise of Pim Fortuyn, few extremist anti-immigration parties managed to get foot on ground within Dutch politics. However, there is one exception: in 1982, the extremist right-wing party *Centrum Party* (CP) was able to obtain one seat in the House of Representatives (Lucardie, 2000). Panel B of table 8 shows the results of regressing the share of votes going towards ERW parties in 2003 on the share of votes going to the CP in 1982, as well as of the immigrant share. As expected, there is a strong positive correlation between voting for CP in 1982 and voting for an ERW party in 2003. This shows that there are indeed long-term racial biases present within Dutch municipalities, which were not shown in panel A. This means anti-immigrant sentiments remain strong in the same communities over a more than 20-year period. Just as with the previous regression however, there is again a highly significant positive relationship between the share of votes going to the CP in 1982, and the share of immigrant in each municipality 21 years later.

	(1) Effect on share of ERW votes 2003	**(2)** Effect on share of immigrants 2003
Panel A: Share NSB-votes 1937		
Share NSB-votes	-0.023 (0.031)	0.2367* (0.121)
Number of observations	314	314
Panel B: Share CP-votes 1982		
Share CP-votes	3.367*** (0.245)	3.563*** (0.539)
Number of observations	325	325

Table 8: Results of an OLS regression of the share NSB votes 1937 and share CP votes 1982 on the share of votes going to ERW parties and the immigrant share in 2003. Community characteristics are included in all regressions, and all standard errors are robust. *** p<0.01, ** p<0.05, * p<0.1

To investigate the causes of this unexpected positive relationship, the estimate is done once more over a subsample of large and small municipalities, using both NSB vote share in 1937 and CP vote share in 1982 as the independent variable. For the NSB, the positive effect remains pronounced for small municipalities. This is in accordance with the hypothesis that this is due to the agricultural sector, since agricultural activity is strongest is small municipalities. The consistently highly significant positive estimate of the effect of share of votes going to CP in 1982 and share of immigrants living in a municipality in 2003 is less straightforward. When using the 1982 data to predict the vote- and immigrant share in 2017, the result remains positive and highly significant, and this does not change when splitting the sample up into subgroups. However, what should be noted here is that a simple OLS is a less precise estimator than a pooled OLS with year and panel fixed effects. Hence it is likely that these results are caused by omitted variable bias not included in the set of controls. In any case, the expected negative link between racist local attitudes (proxied by NSB and CP vote share) and migration settlement patterns is not proven here, thus somewhat negating the endogeneity concerns.

	(1) Effect on share of ERW votes 2003		(2) Effect on share of immigrants 2003	
	Small municipalities	Large municipalities	Small municipalities	Large municipalities
Panel A: Share NSB-votes 1937				
Share NSB-votes	0.000646	-0.247	0.230*	0.425
	(0.0313)	(0.161)	(0.125)	(0.389)
Number of observations	262	52	262	52
Panel B: Share CP-votes 1982				
Share CP-votes	3.478***	3.149***	3.027***	4.041***
	(0.320)	(0.311)	(0.654)	(0.801)
Number of observations	269	56	269	56

Table 9: Results of subsample OLS regressions of the share NSB votes 1937 and share CP votes 1982 on the share of votes going to ERW parties and the immigrant share in 2003. Subsamples are based on small (<50.000 inhabitants) and large (≥50.000 inhabitants) municipalities. Community characteristics are included in all regressions, and all standard errors are robust. *** p<0.01, ** p<0.05, * p<0.1

6.2. Settlement response natives

Another possible source of bias is the possibility that natives who have a negative attitude towards immigrants might respond to an increase in the immigrant share in their city by moving to a municipality with a relatively higher share of natives. To assess the likelihood of this effect taking place, an OLS regression using year and corop-fixed effects is done in the style of Halla et al. (2017) (table 10). This regression shows a strong positive relationship between the change in immigrant share and the change in the number of natives. When adding the standard vector for controls (column 2), the estimate becomes more pronounced.

	(1) FE w/o controls	(2) FE including controls
Change immigrant share	11.73***	13.90***
	(2.896)	(2.965)
Observations	1,264	1,252
R-squared	0.512	0.580

Table 10: The effect of a change in immigrant share on the change in the share of natives, according to the methodology of Halle et al. (2017).Hence the change in the share of migrants is defined as $[\#Immigrants_t - \#Immigrants_{t-1}]/[\#Natives_{t-1} + \#Immigrants_{t-1}]$, while the change in the share of natives is defined as $[\#Natives_t - \#Natives_{t-1}]/[\#Natives_{t-1} + \#Immigrants_{t-1}]$. The periods considered are 2001, 2006, 2011 and 2016. The second estimation (column 2) includes controls for population size, share female, share low and share high educated, crime rate, share of population below 25 y/o and share of population above 65 y/o. Both regressions include both year- and Corop-area fixed-effects. *** p<0.01, ** p<0.05, * p<0.1

A possible explanation for this phenomenon could be the previously mentioned presence of growth-regions in the Netherlands. According to De Jong & Van Duin (2009), there are both 'growth-regions' and 'shrink-regions' in the Netherlands. These growth regions are generally

large or middle-large cities, which attract large groups of immigrants and young people, drawn to economic opportunity. Opposite to that, there are also shrink-regions in the Netherlands, which experience outflows of people moving to the growth-regions. Since shrink regions experience a decrease in both population and immigrant share, and growth regions experience an inflow of both immigrants and natives, the strong positive effect found is likely a type I error.

Since a positive coefficient is unlikely to be the result of a causal relationship between an increased immigrant presence and an increase in natives, it is unlikely that natives respond - Hence an underestimation of the impact of migration on voting behaviour due to an internal migration response is unlikely.

7. Conclusion

This thesis examined the effect of local migrant presence on extreme right-wing voting. The expectation was that migrant share and vote share for anti-immigration parties might be positively related through natives perceiving an economic threat from the migrant population and/or natives fearing for degradation of compositional amenities. Further, it predicted a possible negative relationship through an increase in contact between natives and migrants leading to increased understanding and reduced stereotypes of migrants from natives (figure 3). The methodology of choice was a combination of OLS and fixed effects regressions. The main regression, which estimates the impact of total migrant share on the share of votes going to extreme right-wing parties, did not yield significant results. This is likely due to the different hypothesized effects working in opposite directions. Sub regressions did yield some evidence for all three of the hypothesised sub-effects.

First, evidence is found for both components of the context theory. The first component, a concern of compositional amenities is shown in table 3. Here a negative relationship between non-western immigrant share and ERW-voting and a positive relationship between western immigrant share and ERW-voting is shown. Since the cultural distance between non-western immigrants and natives is larger, this could point to the impact of a perceived cultural threat on voting behaviour. Further, Table 4, Panel D, shows the positive relationship between non-western migrant share and voting for ERW parties is the strongest in municipalities with a relatively high ratio of non-western migrant children to all children. This points to concerns over compositional amenities shaping the positive relationship between migrant share and votes share going towards anti-immigration parties as well. The second component, perceived

economic threat facilitating a positive relationship between immigrant share and voting for ERW parties is also partly supported. Within municipalities with a high share of low-educated individuals the positive impact of immigrant share on right-wing voting behaviour is positive, whereas the effect in communities with a low share of low-educated individuals the effect is positive. This provides support to the economic threat argument, because perceived labour market competition from migrants is likely to be largest for those which are low-educated.

Second, some preliminary evidence is found for the contact hypothesis, which states that a higher immigrant share will lead to increased contact between migrants and natives, thereby increasing mutual understanding and reducing negative stereotypes. This effect could explain the negative relationship between total migrant share and the share of votes going towards right-wing parties in table 4, Panel B, Column (1). Furthermore, it could explain the lack of a significant relationship between non-western migrant share and ERW-voting in small municipalities since there is likely to be more contact between natives and migrants within this subgroup.

8. Limitations

A number of limitations apply to the findings of this thesis. First, since the data used does not distinguish citizens with voting power and people from individuals just living in the Netherlands, it is impossible to estimate the number of votes when controlling for the share of the voting population in the Netherlands which has an immigration background themselves. Hence the results do not reflect the response of natives to an increase in immigrant share, but the response of the full population, including migrants, on a change in immigrant share. Hence when interpreting these results as the response of natives, this will be an underestimation of the actual effect. Furthermore, data is only available on those immigrants who stay in the country legally. This could lead to imprecision in the estimates. Another possible source of omitted variable bias is the omission of time-varying local variables. For example, a negative economic shock could drive down house prices, thereby attracting more immigrants, while simultaneously driving up the support for anti-immigration parties. This would cause an upward bias in the estimates. Lastly, though the endogeneity tests performed did not provide a direct reason for concern, the significant positive relationship found across estimations could point to the presence of omitted variable bias.

	2003	2006	2010	2012	2017
Anti-immigration	**4,55%**	**4,72%**	**11,61%**	**7,49%**	**12,05%**
FvD					1,45%
LPF/Fortuyn	4,55%	0,00%			
PVV		4,72%	11,61%	7,49%	10,60%
Left-wing	**32,64%**	**38,65%**	**30,57%**	**32,51%**	**28,95%**
50PLUS				1,40%	2,53%
DENK					1,67%
GL	4,11%	3,69%	5,02%	1,73%	7,41%
PvdA	21,79%	17,00%	14,76%	18,45%	4,63%
PvdD	0,00%	1,47%	0,98%	1,44%	2,59%
SP	5,05%	13,30%	7,38%	7,17%	7,38%
Right-wing	**41,70%**	**35,86%**	**32,17%**	**33,57%**	**38,95%**
CDA	22,88%	21,27%	10,24%	6,32%	10,05%
CU	1,69%	3,19%	2,44%	2,32%	2,75%
D66	3,26%	1,58%	5,22%	5,97%	9,93%
SGP	1,24%	1,25%	1,31%	1,55%	1,69%
VVD	14,31%	11,77%	15,41%	19,74%	17,28%
Turnout rate	80,04%	80,35%	75,40%	74,57%	81,57%

Table 11: Vote share going to each party during the 2003-2017 elections. Only parties which obtained at least one seat during one of the included election years are considered. Data obtained from De Kiesraad (2018). Left-wing / right-wing party division obtained from www.kieswijzer.nl, based on the 2012 elections.

	Number of Observations	Mean value	Standard deviation	Minimum value	Maximum value
Share ERW votes	1,690	0.082	0.043	0.015	0.307
Share immigrants	1,690	0.066	0.046	0.010	0.368
Share non-western immigrants	1,690	0.034	0.031	0.003	0.21
Share western immigrants	1,690	0.032	0.024	0.004	0.341
Population	1,690	42315.86	67701.15	3475	844947
Share female	1,690	0.503	0.009	0.467	0.535
Share unemployment	1,690	0.046	0.011	0.029	0.113
Share low educated	1,690	0.353	0.055	0.214	0.545
Share high educated	1,690	0.231	0.070	0	0.515
Crime rate	1,690	10.103	5.243	1.970	69.785
Share low age	1,690	.0256	0.048	0.129	0.487
Share high age	1,690	0.211	0.042	0.099	0.384
Income	1,690	23.163	3.085	15.8	41.5

Table 12: Summary descriptive variables

	2003	2006	2010	2012	2017
Share ERW votes	0.043	0.048	0.120	0.076	0.125
	(0.014)	(0.019)	(0.036)	(0.024)	(0.032)
Share immigrants	0.063	0.062	0.064	0.066	0.074
	(0.044)	(0.044)	(0.046)	(0.047)	(0.049)
Share non-western immigrants	0.033	0.032	0.033	0.034	0.039
	(0.029)	(0.030)	(0.031)	(0.031)	(0.031)
Share western immigrants	0.030	0.029	0.031	0.032	0.035
	(0.025)	(0.024)	(0.023)	(0.024)	(0.026)
Population	40848.38	41458.96	42337.79	42866.46	44067.7
	(64652.39)	(65287.45)	(67064.25)	68978.87	72575.97
Share female	0.503	0.503	0.503	0.503	0.503
	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)
Share unemployment	0.042	0.052	0.039	0.044	0.053
	(0.009)	(0.012)	(0.007)	(0.008)	(0.010)
Share low educated	0.390	0.371	0.347	0.350	0.306
	(0.054)	(0.053)	(0.047)	(0.046)	(0.039)
Share high educated	0.193	0.216	0.238	0.242	0.267
	(0.064)	(0.068)	(0.064)	(0.065)	(0.066)
Crime rate	11.211	11.966	9.954	9.746	7.640
	(5.824)	(5.414)	(4.912)	(4.921)	(3.905)
Share low age	0.287	0.264	0.245	0.242	0.243
	(0.043)	(0.045)	(0.046)	(0.046)	(0.045)
Share high age	0.180	0.190	0.208	0.222	0.255
	(0.030)	(0.031)	(0.032)	(0.034)	(0.037)
Income	20.660	20.978	24.275	24.206	25.694
	(1.913)	(2.196)	(2.528)	(2.286)	(2.789)

Table 13: Summary descriptive variables per election year.

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