

Radboud University Nijmegen

Ethnic Diversity and Support for Redistribution in the Netherlands

Master's Thesis – Economics, Behavior and Policy

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Abstract

In a time of increasing immigration and ethnic diversity, society is put under pressure. A recent report by the Dutch Scientific Council for Government Policy (2018) has shown that ethnic diversity is not only greater than previously thought in the Netherlands, but it also has some negative consequences, both economic and societal. Ethnic diversity is often linked with lower social spending and lower individual support for the welfare state. In this thesis, this link is analyzed in the Netherlands. Using two different survey datasets, individual support for redistribution is investigated and how it is affected by ethnic diversity. Several mechanisms are identified from the literature and tested. Contrary to most findings, ethnic diversity seems to increase individual support for redistribution, but it seems to be dependent on social trust. Contrary to expectation, salience of ethnic diversity seems to increase individual support for redistribution.

1. Introduction

1.1 Increasing diversity in the Netherlands

Immigration has become a more prevalent topic in politics over the last decade and has perhaps become one of the most polarizing topics. While immigration can have various positive effects on the economy and society of a country in the long run, it tends to destabilize a country in the short run (Putnam, 2007). A new wave of mass immigration as a result of tensions in the Middle East has put pressure on the political systems in European countries, resulting in populists, anti-immigration parties gaining more support. In the Netherlands too, right-winged anti-immigration parties have seen a significant increase in support over the last two decades. In the last decade, the share of non-native Dutch inhabitants has grown from 19.6% in 2008 to 23.1% in 2018 (CBS, 2018, see Figure 1). This can be contributed to mass immigration in the last decade. In 2016 alone, approximately 140,000 immigrants came to the Netherlands, making the country rank ninth on the list of OECD countries taking in immigrants (Galvin, 2018). This number becomes more impressive when one takes the size of the Netherlands into account and compares it to the eight OECD countries above it on that list¹. Looking at the number of immigrants per square kilometer, the Netherlands even tops the list².

A recent report by the Dutch Scientific Council for Government Policy (WRR) shows that ethnic diversity is increasing (Engbersen, Jennissen, & Bokhorst, 2018). It is not only the amount of non-natives relative to natives that is increasing, but also the diversity of these non-natives. In the past, non-natives were mostly laborers coming from Morocco or Turkey, or people from former Dutch colonies. However, this idea does not hold anymore. While these groups still represent the biggest groups of non-natives in the Netherlands, it has been immigrants from Eastern Europe and Syria that have come to the Netherlands the most in the last decade (Engbersen et al., 2018, p. 10 Figure 1.1).

¹ The complete top ten (in ascending order) is: Sweden, The Netherlands, Italy, Spain, Australia, France, Canada, The United Kingdom, Germany, and The United States

² Based on own calculations: $\frac{\text{number of immigrants}}{\text{land area (km}^2\text{)}}$. The number of immigrants is retrieved from Galvin (2018), land area is retrieved from the Wikipedia entry for each country respectively

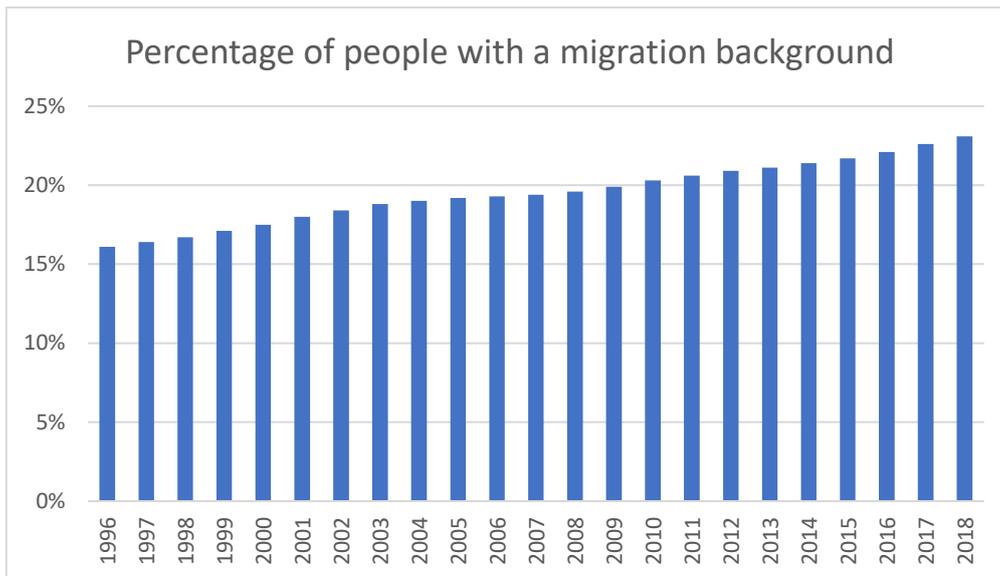


FIGURE 1: PERCENTAGE OF PEOPLE WITH MIGRATION BACKGROUND, EITHER 1ST OR 2ND GENERATION, IN THE NETHERLANDS (CBS STATLINE, 2018)

The WRR report examines some of the effects this increase has on Dutch society, looking at both economic and social effects. One of the main conclusions is that increasing diversity puts pressure on the social cohesion, and makes citizens, of all ethnic groups, feel less at home in their neighborhood if there is noticeable diversity. It makes living together more complicated (Engbersen et al., 2018, p. 6). It could furthermore affect economic growth negatively, presumably because new immigrants might not know the language or because of cultural differences. These negative effects found could be worrisome, as countries with high levels of social cohesion usually have more efficient collective decision making, more democratic institutions and show higher economic growth (Dinesen & Sønderskov, 2015). So, if social cohesion is lowered as a result of increasing diversity, these benefits to society will be lost.

1.2 Ethnic diversity in academics

This conclusion that ethnic diversity can have a negative impact on society is not uncommon. In fact, it is found often in several fields of study in the social sciences. The way ethnic diversity affects societies is still up for debate, but there are several theories. Coming from the field of Social Psychology is the idea of intergroup bias, which states people are fond of and have positive attitudes towards people like themselves, while they evaluate “others” more negatively (Ahmed, 2007; Lee & Ottati, 2002; Tajfel, 1970). Another theory is that different groups are unable to work together effectively, making it difficult to come to agreements and compromises that are needed for a society to function (Miguel & Gugerty, 2005). Culture, or cultural distance, is also frequently mentioned when discussing the effects of ethnic diversity on society (Alesina & Glaeser, 2004), because people from different cultures might have different values and norms, making it difficult to live together. Whatever the reason is one

uses to argue for this negative relationship between ethnic diversity and social cohesion, the relationship could have some very negative effect on society.

In Economics, this relationship and its effect is usually seen in the light of the supply of public goods. Combining several of the theories mentioned previously, economists state that since people evaluate “others”, in this case ethnically different people, negatively and people like themselves positively, it becomes difficult to cooperate which can decrease the supply of public goods. Alesina, Baqir and Easterly (1999) show that for cities in the US, an increase in ethnic diversity lowers the amount spent on public goods such as education or public transport. However, this was only found in the US, while in other advanced economies, primarily Western Europe, the effect of ethnic diversity was not found to be this straightforward. An argument for this difference is that the US has always been more diverse than European countries, so the effect of an increase in ethnic diversity might not be as visible in Europe. This argument raised more questions than it may have answered, as it sparked interest in the differing demographic makeups of European countries and the US and how it could (have) affect(ed) the development of the welfare state. The US never developed a welfare system that was as comprehensive as most European countries, and researchers suspected that ethnic diversity might be the reason why.

Firstly, academics started looking at social spending and its relationship with ethnic diversity, but it quickly became clear that social spending was too broad of a concept, as it could include unemployment benefits, healthcare subsidies, income transfers and many more (Stichnoth & Van der Straeten, 2013). To tackle this issue, a new measure was chosen: individual support for redistribution. As policies, including those regarding the welfare state, are (presumably) based on the preferences of the population, individual support for redistribution is argued to be a proper intermediate variable between ethnic diversity and social policies. Just as with the original question regarding public goods, the results were not clear cut. In some countries, such as the US, the relationship was clearly negative: higher ethnic diversity leads to less support for redistribution, but in other advanced economies, the results were mixed at best.

1.3 Research question

The WRR report has shown that ethnic diversity has a negative effect on social cohesion in the Netherlands, so this raises the question whether this is also true for support for redistribution. The welfare state was built on the principle of solidarity (Kymlicka, 2015), and decreasing social cohesion as a result of ethnic diversity might indicate that general solidarity of the population is also decreasing. This could lower the support for the welfare state and redistribution of income and/or wealth. So, in this thesis this relationship is investigated in the context of the Netherlands. This is done with the following research question:

What is the effect of ethnic diversity on support for redistribution in the Netherlands?

While the report from the WRR gives some interesting insights, it uses data from only one year: 2015. It compares different municipalities and their ethnic diversity. However, it is hard, if not impossible, to determine causality from a cross-sectional analysis. The WRR report is not alone in using single year analyses. A large part of the research into this topic takes a large cross-section of several countries, but only for one year. If multiple years are used, it is usually confined to two points in time to compare the difference between the two years. It would be interesting to see how the change in ethnic diversity affects individual support for the welfare state over time and what mechanisms are underlying this effect. So in this thesis, a longitudinal approach is employed. Using two survey datasets, one with biennial data from 2002 to 2016 and the other with annual data from 2008 to 2017, combined with national statistics on population and ethnicity, the relationship between ethnic diversity and support for redistribution is analyzed. In the following chapters, the literature is evaluated, methodology and data are described, followed by the results and finally conclusion and discussion.

2. Literature overview

2.1 Intergroup bias

In human history, ethnicity has always been an important factor. It has shaped regions, nations and cultures (Tonkin, McDonald, & Chapman, 1989). People like to belong, and ethnic groups provide a place for people to belong. The feeling of being part of a group is a very primal one and happens automatically and unconsciously (Ahmed, 2007). Young children already display behavior based on group affection, favoring members of their own group over others (Powlishta, Serbin, Doyle, & White, 1994). However, ethnicity is not the only factor that can induce group feelings. Since it is such a primal feeling, it can be triggered very easily. Even the flip of a coin could split a group, and people would show favoritism towards those who belong to the “heads” group. This is known as the minimal group paradigm (Stroebe, Spears, & Lodewijkx, 2007; Tajfel, 1970). In-group favoritism is a well-documented phenomenon in the social sciences, and there are multiple theories describing the reason behind this favoritism.

The most prominent one is Social Identity Theory (SIT), originating from Social Psychology. It states that people want to have a positive social identity, and to establish this identity, they find a positive feature of member in their own group that is not ostensibly present in other groups, and try to enhance that feature (Abrams & Hogg, 1988; Verkuyten, 2007). In-group differences are minimized, but intergroup differences are exaggerated. This gives people self-esteem, and the more differentiation between the in-group and outgroup, the more self-esteem it provides (Dovidio & Gaertner, 2004). This

creates intergroup bias: people evaluate members of their own group more positively than non-members (Hewstone, Rubin, & Willis, 2002).

In-group favoritism does not go hand in hand with outgroup aversion or hostility (Allport, Clark, & Pettigrew, 1954). Whereas in-group favoritism is induced automatically and unconsciously, hostility is triggered by strong emotions such as contempt, resentment, or anger. So, when an in-group member sees an outgroup member acting against the norms or values of the in-group, it could create an aversion to the entire outgroup. Also, negative actions of outgroup members are remembered in more detail than negative behavior of in-group members, which enhances the intergroup bias even further (Howard & Rothbart, 1980). While most negative actions lead to passive aversion, some might lead to in-group members actively trying to work against the outgroup.

Ahmed (2007) introduces the concept of intergroup competition as another possible reason for intergroup bias. Members of a group want to optimize the utility of their group, and they can do this by favoring other members. However, due to a constrained set of resources, groups compete for these resources. To gain as much resources as possible, it is beneficial to favor member of the in-group, not only for the group as a whole, but also for the individual members. Groups establish norms on how to behave, and by favoring fellow members, one can expect reciprocal behavior where they are favored. Conversely, it means that people do not expect reciprocity from outgroup members, and will therefore be less inclined to act favorably towards them (Everett, Faber, & Crockett, 2015).

Whereas in Psychology the focus of the intergroup bias is clearly on in-group favoritism, in Economics the discourse is much more focused on outgroup aversion and hatred (Ahmed, 2007). Alesina et al. (1999) argue that one of the reasons why public goods provision in US cities is lower when ethnic diversity increases, is that the utility that a group gains from the public good is lower when other groups are using it as well.

2.2 Ethnicity

Ethnicity is one of the most vivid attributes that contribute to establishing a group (Phinney, 1989). It is however also a difficult concept, as it is a somewhat subjective idea. This makes it hard to measure, and this is visible in the literature. Early studies into ethnic diversity and public goods used a linguistic measure for ethnicity, the ethno-linguistic fractionalization index (ELF). This index shows the chance that two random individuals in a population speak the same language. It was argued that those who speak the same language are part of the same ethnic group. There is some truth in that, and language is often a delimiter between different groups (Calhoun, 1993). However, language is not the only indicator of ethnicity: there are certain physical attributes that can also indicate that someone belongs to a ethnic group, but also culture and country of origin could play a role (Engbersen et al., 2018; Stichnoth & Van der Straeten, 2013).

The difficulty in measurement, and data availability, forces most academics to use a narrow index of diversity, such as the percentage of non-natives in a country. Some argue that this measure is appropriate for looking into the relationship between ethnic diversity and the welfare state, as it is mainly the majority's (i.e. natives') preferences that are altered by the increased diversity (Alesina, Murard, & Rapoport, 2019). However, such a measure might miss a lot of the diversity and its effects. When measuring natives versus non-natives, the assumption is made that the native population is ethnically homogenous, which is not necessarily true. Also, it raises the question as who qualifies as native and who not. There have been attempts to create richer indices, such as multidimensional cleavage structures (Selway, 2011), which takes race, language, religion, region and income into account or the Generalized Index of Fractionalization (Bossert, D'Ambrosio, & La Ferrara, 2011), which allows for several different indicators in order to calculate a measure of similarity. However, these measures are usually only constructed for a single year or for a few countries.

2.3 Redistribution

In most advanced democracies, there is at least some form of safety net for the population in the form of social benefits, health subsidies or other financial aides. The origin of the welfare state can be found in the second half of the nineteenth century, as industrialization and urbanization made the old way of family- or neighborhood centered care not viable any longer. Also, political pressure from newly formed labor unions and the threat of a revolution made the political elite realize that they needed to do something to appease them. After World War II, the welfare system was expanded drastically (Schut, Vrooman, & De Beer, 2000). It was built on the idea of collective responsibility of all citizens (Marshall, 1950). As Alesina, Glaeser and Sacerdote (2001) point out, European countries were ethnically less diverse right after World War II than they are today. Since then, the demographic makeup of these countries has been altered significantly due to immigration within Europe, as a result of the free movement of people, and from non-European countries, either for political or economic reasons.

This increase in diversity can put pressure on a society, as intergroup bias and competition increases. This makes cooperation and collective decision-making more difficult and could even lead to a polarized society (Engbersen et al., 2018; Miguel & Gugerty, 2005; Stichnoth & Van der Straeten, 2013). The welfare state and the idea of redistribution of income are based on solidarity of the population. Offe (2000) argues that a welfare state can only function if citizens have a shared sense of identity. If the population changes, it can also change the degree of solidarity in the society, as this shared identity is affected. It is argued that intergroup bias alters the political preferences of the population, which affects the optimal level of public spending (Alesina et al., 1999). This argument is based on the median voter model, which states that political parties and/or candidates maximize their chances of winning

an election by aligning their political views with those of the median voter. This way, the candidate would have the highest chance of winning, because any candidate to the right (left) on the political spectrum of them would lose voters on the left (right) (Mueller, 2003). So, if the political preferences on social spending of the median voter are altered by increased intergroup bias as a result of increased ethnic diversity, the optimal policy for winning an election would be lowering social spending.

So, if the political preference of the median voter is altered due to increasing ethnic diversity, social spending would decrease as it decreases the willingness to help others (Alesina et al., 2001). However, there is a clear counteracting effect that needs to be overcome by the changing attitude towards social spending. On average, non-natives are less wealthy than natives (Dahlberg, Edmark, & Lundqvist, 2012), and could thus be more in favor of social spending, as it would benefit them (Sumino, 2014). So, for the expected result that ethnic diversity decreases social spending, the effect it has should outweigh the positive effect a higher share of less wealthy non-natives has. In the analysis by Alesina et al. (2001), the negative effect of ethnic diversity seems to be greater than the positive effect in the United States. However, for other developed countries, this relationship does not seem as straightforward as they pose it. Looking at 19 OECD countries, Sumino (2014) finds that the relationship is not consistently negative.

While the median voter model gives some insight in how policies are established, it is built on some strong assumptions. It assumes that political preferences can be mapped onto a one-dimensional scale: left to right. It also assumes that political preferences are single-peaked, meaning that each individual only has one preferred point on the left-right scale and not several ranked preferences. Furthermore, in the model, voters vote on one issue, in this case social spending. While it might be correct to say that elections are dominated by a few topics (Kiousis, 2004), voters' preferences are based on more issues than one. With all these strong assumptions, the findings and conclusion based on the findings are questionable. Furthermore, the model does not give any insight into the mechanisms through which ethnic diversity has an effect on the voters' preferences. It assumes there to be an effect, but it does not explain how this effect works. To explain these mechanisms, researchers turned away from the relationship between diversity and social spending, and instead started looking at the relationship between diversity and the support for redistribution (Stichnoth & Van der Straeten, 2013).

As people act favorably towards members of their own group, they are also more inclined to help members of their own group (Dahlberg et al., 2012). Consequently, this implies that people are less inclined to help people of other groups, and might, in some cases, be opposed to providing help to outgroup members, for example through social benefits. However, outgroup hostility is not an automatic process like in-group favoritism. So, for in-group members to actively be opposed to helping

outgroup members, the outgroup must act against the norms or values of the in-group. Immigrants coming to Western countries have been raised in different cultures, so their norms and values might be different. Acting accordingly to their upbringing might trigger the emotional response in natives needed to induce outgroup aversion.

Deservingness is a concept that is mentioned frequently when discussing social benefits. People feel like those who receive social benefits have to earn them somehow (Larsen, 2008). This can be linked to the foundation of the welfare state: solidarity (Petersen, Sznycer, Cosmides, & Tooby, 2012). There exists a “universal” rank ordering of deservingness, with the elderly and sick or disabled people being seen as most deserving of social assistance, while the unemployed are seen as much less deserving, and immigrants as least deserving (Van Oorschot, 2006). Increases in ethnic diversity are for a large part dependent on immigration, so this could explain the negative effect ethnic diversity has on support for redistribution. If the share of immigrants increases, a larger part of society is seen as less deserving, which alters the attitude towards redistribution. Being seen as unjustly benefiting from resources of the in-group can move members of the in-group to actively try to decrease the possibilities for outgroup members to benefit from these resources (Hewstone et al., 2002). This leads to the following hypothesis:

H₁: Ethnic diversity will have a negative effect on support for redistribution

Closely related to the concept of deservingness is the perception of the immigrant’s capabilities. Education level, work experience and work ethic all influence the perception natives have of immigrants (Harell, Soroka, & Iyengar, 2016). Observing one’s capabilities can influence the degree of deservingness (Finseraas & Kotsadam, 2017). Natives’ perceptions of immigrants are more negative than they should be, as natives greatly underestimate the qualities of immigrants (Alesina, Miano, & Stantcheva, 2018). This could be due to the fact that they are evaluating their own group more positively, and creating distance between them and the outgroup to enhance self-esteem. However, non-Western immigrants are evaluated more negatively than Western immigrants, who are culturally closer to the natives. This is contradicting predictions from SIT, as it is hypothesized that people want to differentiate the most with groups close to them, because they are seen as more of a threat to the social identity of the in-group than groups who are culturally distant (Jetten, Spears, & Manstead, 1998).

2.4 Salience and interpersonal contact

Contrary to underestimating the qualities of immigrants, the number of immigrants is greatly overestimated. Alesina et al. (2018) report that participants of their experiment estimate the number of immigrants coming to their country to be double of the real number. They argue that this could be due to regular attention in the media and politics for immigration. This increases salience, which could

enhance the intergroup bias. While groups, and intergroup bias, can be induced with little effort, when people are made aware of group membership and other groups, the effect of the bias is increased significantly (Dustmann, Vasiljeva, & Piil Damm, 2018; Mullen, Brown, & Smith, 1992). This is because when group membership is made salient, the social identity of a person becomes dependent on the identity of the group as described in SIT. So, salience will trigger individuals to differentiate between the in-group and outgroup, enhancing intergroup bias (Voci, 2006). Salience does not only increase in-group favoritism, but it can also enhance outgroup stereotyping and aversion (Hilliard & Liben, 2010). Therefore, the following hypothesis is established:

H₂: Those who overestimate the number of immigrants will show lower support for redistribution

Besides regular media attention, salience of ethnic diversity can also be enhanced when one lives in an ethnically diverse neighborhood. To test this, Dustmann et al. (2018) exploit a natural experiment in Denmark. Refugees that come to Denmark are placed in specially assigned camps, which are placed across the country by the national government. Local government have little say in whether their region get such a camp, which creates exogeneity in the placement of refugees. They find that in municipalities that have been assigned to house immigrants, anti-immigration sentiments are significantly higher than in municipalities where that has not been the case. Using a similar approach, Dahlberg, Edmark, and Lundqvist (2012) find the similar results for Sweden, but instead of looking at anti-immigration sentiments, they find a negative effect of the refugee placement program on support for redistribution. The exploited exogeneity in the natural experiments in Denmark and Sweden makes it possible to find causality in the relationship between ethnic diversity and support for redistribution, but it only looks at refugees. This group is usually isolated from society, since they are placed in specially assigned housing sites.

An ethnically diverse neighborhood can also have a positive influence on the image of outgroup members. Intergroup contact theory states that when people interact with outgroup members, their negative evaluation of that group becomes more positive (Al Ramiah & Hewstone, 2013). When diversity increases, the chances of interaction between in-group and outgroup members also increases. However, depending on the nature of the interaction, it could either create a more positive image of the outgroup as predicted by intergroup contact theory, if the interaction is perceived as pleasant and positive (Finseraas & Kotsadam, 2017), but it could also significantly enhance the negative image of the outgroup (Dinesen & Sønderskov, 2015; Koopmans & Veit, 2014). Ethnicity becomes salient when one observes negative behavior from a member of the outgroup (Paolini, Harwood, & Rubin, 2010). Furthermore, the effect of negative interpersonal contact has been found to be bigger than the positive effect it could have (Barlow et al., 2012; Graf, Paolini, & Rubin, 2014), which indicates that it is hard for a negative image to be removed once established. This resonates with the idea that

negative actions of the outgroup are stored in someone's memory more vividly than positive actions (Howard & Rothbart, 1980).

Another way the magnitude of the intergroup bias is affected by interpersonal contact is through (social) trust. Trust plays a big role in interpersonal communication and transactions, and is therefore likely to have an effect on how people perceive others. Tam et al. (2009) define trust as "a positive bias in processing of imperfect information about an outgroup and a confident expectation of the outgroup's behavior towards the in-group" (Tam et al., 2009, p. 46). As this definition shows, trust counters negative effects from outgroup aversion. It goes beyond affection for the outgroup, and it enables cooperation between the in-group and the outgroup. Trust is developed by the acts of others, as the decision to trust someone is based on how that person's actions are perceived. For a trusting relationship to be established, multiple positive interactions are needed. As established earlier, negative experiences are experienced more vividly, so a single negative interaction damages a trusting relationship more than several positive ones can repair (Rothbart & Park, 1986). Due to the bridging nature of trust, the following hypothesis is constructed:

H₃: Higher levels of social trust will have a moderating effect on the relationship between ethnic diversity and the support for redistribution as described in H₁

Trust is needed to cooperate, both on a micro and macro level. It enables democratic institutions, collective decision-making and economic growth (Håkansson & Sjöholm, 2007). It is therefore a crucial aspect for the welfare state, as it enables the cooperation to establish it (Bjørnskov & Svendsen, 2013), and it is needed to maintain the welfare state, because the welfare state has a natural moral hazard problem (Stichnoth & Van der Straeten, 2013). People might try to benefit from the system without putting anything back into the system. If the number of free-riders becomes too high, the system is no longer sustainable and will fall apart. It could also crumble if the number of free-riders is overestimated. As mentioned earlier, people greatly overestimate the number of immigrants coming to their country, and in the same experiment, Alesina et al. (2018) also show that natives greatly mischaracterize the economic situation of immigrants. They are seen as poorer and having a higher chance of being unemployed than they actually are. So, this could skew the perceived number of free-riders and affect the support for redistribution negatively.

3. Methodology and Data

To study the effect of ethnic diversity on the support for redistribution, two different survey data sets will be used: the European Social Survey (ESS) from the Norwegian Centre of Research Data (European Social Survey, 2018) and the Longitudinal Internet Studies for the Social Sciences (LISS), administered by CentERdata (Tilburg University, The Netherlands). The ESS is a biennial survey, with its first wave of survey completed in 2002 and the latest one in 2016. For each wave, a new sample is randomly selected to create a representative sample of the population in a country. The LISS panel is an annual survey, with its first wave completed in 2008 and its latest in 2018 (Scherpenzeel & Das, 2010). Contrary to the ESS, the LISS panel surveys the same sample each year. These two datasets are used because both come with some pros and cons. The ESS has a longer time frame, ranging from 2002 to 2016, and documents the region where the participants live, either on NUTS-3 level (waves 1 through 4) or on NUTS-2 (waves 5 through 8). As established in the previous chapter, ethnic diversity in the neighborhood increases salience of ethnic diversity, so a longitudinal regional analysis would be best suited for the research question, with individual data for the same person over time. Unfortunately, the ESS selects a new sample for each wave. This means that any analysis with it basically becomes a cross-sectional analysis. This is where the LISS panel can add value to the analysis, as it has data on the same individuals over time. However, it does not disclose a regional variable due to privacy reasons, so only a national analysis can be done. First, the approach for the analysis using the ESS will be described and the approach with the LISS panel after that.

3.1 The European Social Survey

3.1.1 Support for redistribution

Following earlier research in this area, the dependent variable, support for redistribution, will be measured by the answers to a survey question that is asked in the ESS: *“The government should take measures to reduce differences in income levels”* (Alesina et al., 2019; Stichnoth & Van der Straeten, 2013; Sumino, 2014). It is measured on an ordered five point scale: “strongly agree” (1), “agree”, “neither agree nor disagree”, “disagree”, and “strongly disagree” (5). For the purposes of the analysis, the variable will be rescaled such that “strongly agree” has the highest score. “Don’t know”, “refusal” and “no answer” are changed into missing. It is difficult to see an attitude question as a separate opinion, as it is formed by many factors. Nonetheless, this question is a policy related question, so it asks for what the participant of the survey wants the government to do regarding redistribution of income. This shows the preferences for the policy instead of it being a moral or ethical question about fairness in society (Finseraas, 2009).

The ESS has several recurring modules in their survey. One of these is specifically designed to measure welfare attitudes. This module was implemented in waves four (2008) and eight (2016). In it, several questions are asked regarding standards of living, attitudes towards unemployment and the costs of social benefits. In order to add validity to the results, a separate analysis will be done using two questions from this module: *“Large differences in income should be acceptable to reward talents and efforts”* and *“for a society to be fair, differences in people’s standards of living should be small”*. Both are measured on an ordered five point scale from “strongly agree” to “strongly disagree”. The latter is rescaled such that “strongly agree” is the maximum value. The first one is not, as “strongly agree” suggests that the respondent thinks that it is good that there are large differences in income, indicating a negative attitude towards redistribution of income. So, by keeping the original coding of the variable, the interpretation of coefficients will be the same as for the other transformed variables. These questions represent a more ethical question regarding income differences, as they do not ask about a specific policy, but about the ideal state someone would live in. Separate analyses will be done using these two indicators as the dependent variable to create a broader picture of the attitudes towards redistribution and the welfare state in general (Alesina et al., 2019).

As table 1 shows, the three indicators are moderately correlated with each other. This is to be expected, as they all ask for different yet similar opinions. An overlap is wanted, because if they were completely independent of each other, they would each measure different attitudes, and the alternative indicators would not be useful in the analysis.

	Support for redistribution	Income differences based on merit	Fairness income differences
Redistribution	1.0000		
Merit based	0.4392* (N = 3406)	1.0000	
Fairness	0.4629* (N = 3405)	0.3841* (N = 3403)	1.0000

TABLE 1: PAIRWISE CORRELATION BETWEEN THE DIFFERENT INDICATORS FOR WELFARE SUPPORT. *P < 0.001

3.1.2 Ethnic diversity

For the independent variable, ethnic diversity, data from Statistics Netherlands (CBS, 2018) will be used. While the most commonly used indicator for ethnic diversity is the share of (non-Western) immigrants in a country (Alesina et al., 2019; Naumann & Stoetzer, 2018; Stichnoth & Van der Straeten, 2013), it has some limitations. Looking at the Netherlands, there are people from 223 different countries residing there (Engbersen et al., 2018), with all different cultures and backgrounds. By aggregating all that diversity into a dichotomous variable, native or immigrant, one loses a lot of information. For example, Engbersen et al. (2018) show that for the municipality of Amsterdam the share of the population with a migration background is 51.1%, while the chance that two random inhabitants belong to different ethnic groups is 73%. This shows that the share of non-native can greatly underestimate actual diversity in a country. Especially studies who only look at non-Western

immigrants miss a lot of the increase in diversity, as there also exists cultural, linguistic and religious diversity between Western countries (Patsiurko, Campbell, & Hall, 2011).

So, to measure diversity, a version of the Herfindahl-Hirschman Index (HHI) will be used. This index is calculated as follows: $HHI = 1 - \sum_{i=1}^k s_i^2$ with s_i being the share of ethnic group i in the population (Engbersen et al., 2018). It represents the chance that two random individuals belong to different ethnic groups (Koopmans & Veit, 2014). The HHI will be calculated on the most precise level possible, so on the first four waves on the NUTS-3 level and for the last four waves on the NUTS-2 level, which aligns with the survey data available. This approach gives the most detailed image of ethnic diversity and its effect on redistributive preferences. Ethnicity is defined by migration background. This is done for several reasons: cultural transformation takes a long time, so when someone moves to another country it can be validly assumed that they do not assimilate into the Dutch way of life immediately. Also, preferences of the country of origin have an impact on the preferences of the immigrant and its children (Luttmer & Singhal, 2011). Furthermore, while several studies use language as an indicator for ethnicity, such a measure can be noisy as people who move to another country are likely to learn the language to that land, either willingly or in order to be able to stay (Patsiurko et al., 2011). Therefore, a measure based on language might underestimate diversity as immigrants speak the language of the new country.

The data on the population and migration backgrounds are gathered from Statistics Netherlands (CBS, 2018). The regional HHI is matched with the individual participants living in the regions for which the diversity index is calculated. The data from CBS comes with some restrictions, as it does not show all the possible countries an immigrant or an immigrants parents might originate from. Instead, it reports the numbers for the most common originating countries for each continent and groups the other countries together on a continent level³. Naturally, this decreases the diversity captured by the HHI. Another possible measure could have been nationality, because the data on that is more detailed. However, under certain conditions, children of immigrants receive the Dutch nationality. This would thus underestimate diversity, as children of immigrants are ethnically still different from the native Dutch⁴.

3.1.3 Other explanatory variables

As established in the literature review, there are several factors that can influence someone's attitudes towards ethnic diversity and redistribution. The first one is salience. To measure this, a variable is

³ For a full list of the countries included, see appendix I

⁴ Calculation using nationality as indicator for ethnicity showed an average value of the HHI in the range of 0.07 to 0.10 for the period 2008-2016, while the same calculation using migration background has values between 0.20 and 0.50 for the same period. The latter are similar to ethnic diversity found in the report by Engbersen et al (2018).

calculated that shows the overestimation of immigrants in the Netherlands. As Alesina et al. (2018) show, people tend to overestimate the number of immigrants in their country. This indicates that ethnic diversity is salient for those people. In rounds one and seven of the ESS, additional questions were asked regarding immigration, one of which is: “Out of every 100 people living in the Netherlands, how many do you think were born outside the Netherlands?” To construct this measure, the share of people who are not born in the Netherlands is used (CBS, 2018). Since the question asks about country of birth, and not country of origin, it would be unwise to use people with a migration background, as that group is much bigger than those who are not born in the Netherlands. This could render the measure for overestimation useless. The measure is calculated by subtracting the actual share of people born outside the Netherlands from the perceived share of that group for each individual. Nearly 70 percent of the sample overestimates the number of people born outside the Netherlands.

As table 5 (appendix II) shows, on average people overestimate the number of inhabitants who were born outside the Netherlands by 12 percent point. The range of estimation is quite large, with some even underestimating the number. Interestingly, people who state that they are part of an ethnic minority group overestimate this number more than those who are not part of an ethnic minority. To make the coefficients better interpretable, the overestimation variable is transformed to range from 0 to 1⁵. This compresses the information of the variable slightly, but it does not alter the results significantly⁶. Also, it is multiplied by 100 which makes the odds ratio from the ordered logistic regression better interpretable.

While the question specifically asks for the estimation of the share of non-native born individuals in the Netherlands, the literature clearly states that regional characteristics and neighborhood diversity contribute to the view of non-natives. Therefore, it could be the case that the estimation of non-native born individuals is greatly influenced by the regional diversity. To see if this could be true, the individual difference between the answer given and the regional share of foreign born is also calculated. The overestimation on a national level is highly correlated with the overestimation on a regional level (correlation coefficient = 0.9651). The question of whether people project the regional diversity to a national level or the other way around is difficult to answer, and does not fall into the scope of this thesis. Due to the fact that the two measures of overestimation are highly correlated, it does not matter much which is entered into the analysis. However, the original question asks about the share of foreign born on the national level, therefore, the measure on the national level is used.

⁵ This is done as follows: $normalized\ overestimation = \frac{overestimation - \min(overestimation)}{\max(overestimation) - \min(overestimation)}$

⁶ In appendix II, two histograms are entered (figures 8 and 9). The first shows the distribution of the variable before normalization and the second after normalization

Besides overestimation, another variable is added to measure salience: the answers on the question “How would you describe the area where you currently live?” where people could answer “almost nobody from an ethnic minority group”, “some” and “many”. This question was also asked in rounds one and seven. Interestingly, correlation between this question and the measure for overestimation is low (correlation coefficient = 0.15). Based on the high correlation between national and regional overestimation, one would assume that those who report living in a highly diverse neighborhood would also overestimate the number of foreign born, but this is not the case apparently.

The other explanatory variable found in the literature is trust. To measure trust, the question “on average, how much can you trust people”, scored from 1, “not at all”, to 10, “very much”, is used often in the literature (Bjørnskov & Svendsen, 2013; Stolle, Soroka, & Johnston, 2008). The question represents social or generalized trust. Some studies which specifically look at the relationship between ethnic diversity and trust look at trust as something based upon experience in contact with others. Therefore they use question related to actions of trust instead of generalized trust. However, as this is not a study into the relationship between ethnic diversity and trust, it is measured as generalized trust. Generalized trust can be seen as trust in “most people” in a situation where an actor does not have full information availability before acting. It represents the expectation of others’ actions, as defined by Tam et al. (2009). It is hypothesized that trust will have a mediating effect on the relationship between ethnic diversity and support for redistribution, an interaction term will be included into the analysis.

3.1.4 Controls

The literature on ethnic diversity and the welfare state has already detected several factor that affect the relationship. These will be included as control variables. These are income, gender, education, political preferences, attitude towards immigration in general, part of minority group, age⁷.

Different age groups have different views and expectations of the welfare state. The elderly, and especially those who have reached the retirement age, do not have the prospects of increasing their income any further. It could safely be assumed that their income would decline as their pensions will mostly not cover their previous income. Young people, on the other hand, still have that possibility. Therefore, age is assumed to have a positive effect on support for redistribution (Ohtake & Tomioka, 2004). Age is added into the analysis as a continuous variable (min = 14, max = 97, mean = 50). Gender is often found to make a difference when it comes to intergroup bias, support for redistribution and the welfare state (Gerdes & Wadensjö, 2008; Hilliard & Liben, 2010). Dallinger argues that women tend to be more in favor of a generous welfare state as “[...] they face higher social risks in the labor market

⁷ Summary statistics are available in Appendix II

and following divorce” (Dallinger, 2010, p. 438). Gender will be measured as male/female as registered in the ESS, and entered into the analysis as a dummy variable.

Education is found to have an effect on the overestimation of immigrants. A higher education is associated with a better estimation of the number of immigrants in a country (Alesina et al., 2018), less aversion to diversity and higher levels of trust (Engbersen et al., 2018). Education is measured as a categorical variable which is coded in accordance with the International Standard Classification of Education (ISCED). Political preference is measured by the answer to the question “*where would you place yourself on the political spectrum, with 1 being the most left and 10 the most right*”. Those who place themselves on the right of the spectrum are, on average, less in favor of redistribution independent on ethnic diversity (Van Oorschot, 2006), so this has to be controlled for.

The relationship between ethnic diversity, the welfare state and income is a complicated one. On the one hand, those with lower incomes are in general more in favor of redistribution as it benefits them. However, on the other hand, they are also the ones that are faced most often with competition from immigrants over jobs, which increases salience and consequently intergroup bias (Alesina et al., 2018). For high income groups, the opposite is true: individuals with a high income are generally less supportive of redistribution, as it will probably affect them negatively, but they are not faced with ethnic diversity as much. Interestingly, Engbersen et al. (2018) find that the groups with a median or average income are affected the most by ethnic diversity, indicating an inverse u-shaped relationship. However, the ESS does not report a continuous variable for income, only an ordinal one, so it is not possible to add in a quadratic term. So, in order to check for income effects, the ordinal variable for income is included.

Another characteristic that can influence the magnitude of the intergroup bias is the general attitude towards immigrants (Voci & Hewstone, 2003). Senik, Stichnoch and Van der Straeten (2009) find that the attitude towards immigrants has an effect on support for redistribution independent of the ethnic diversity in a country. So, to control for this, answers to the question “*Is the Netherlands made a worse or a better place to live by people coming to live here from other countries?*”, with scores ranging from “worse place to live” (0) to “better place to live” (10). This, or a similar, question has been used widely in the literature as it captures a general attitude of all immigrants in a country (Finseraas & Kotsadam, 2017). Being part of a minority group can also influence the attitude towards the welfare state. As mentioned before, immigrants and member of ethnic minority groups are on average less wealthy, so their support for redistribution might be higher than majority members (Dahlberg et al., 2012). To check for this, the question “Do you belong to a minority ethnic group in the Netherlands?” is used. Only 6 percent of the entire sample reported as belonging to a minority group, while the other 94 percent claim to be part of the ethnic minority. There is some variation between the provinces, with

Drenthe having the smallest share at 0.6 percent and Flevoland reporting the highest share with 13 percent. Besides individual controls, several regional control variables are added into the analysis to control for the general economic conditions of the region. Following Alesina et al. (2019), These controls are population density, GDP per capita and the unemployment rate, gathered from Statistics Netherlands. All these variables are highly skewed, so to correct for this, the logarithm value is used.

3.1.4 Methodology

To answer the research question, a survey data analysis will be employed. The observations will be weighted using the post-stratification weights which are included in the cumulative dataset (European Social Survey Cumulative File, 2018). This is done to correct for possible sampling bias and non-response. In the Netherlands, the population is selected without clustering the population, so there is no stratification. However, the dependent variable, individual support for redistribution, is ordinal which means that an ordered logistic regression is the most appropriate (McCullagh, 1980). Logit is chosen over probit, because the coefficients are easier to interpret while providing nearly identical results to a probit regression (Northrop, 2001). The ESS select a new sample each wave, and thus a random or fixed effects model is not usable. So, in order to control for time effects, year dummies are included in the analysis. Separate analyses are run for the main variable, support for redistribution, and for the alternative variables, view on income differences and on a fair society. Note that the latter two are only included in two of the eight waves (waves four and eight) of the ESS, so the number of observations will be significantly smaller.

To look at the effect of salience, separate regressions are run with the indicators for overestimation and perceived neighborhood diversity. Just as with the alternative support for welfare indicators, these are only part of two waves of the ESS (waves 1 and 7). The control variables are added in to all regressions. Looking at table 6 (see appendix II), it can be concluded that there is no possibility for multicollinearity.

Only the observations with full data coverage are included in the analysis. Methods for including observations with missing data into the analysis can influence the results. Mean substituting could make the regression underestimate the relationships between the different variables, while regression substitution can inflate the results (Schafer & Olsen, 1998). Multiple imputation methods are highly preferable to both single imputation and complete case analysis, but it requires that the missing data is missing (completely) at random (Rubin, 1996). After performing χ^2 test to determine the conditionality of the missing data, it was found that the data is not missing at random. This makes multiple imputation not possible as it would violate most of the assumptions of this method. With the data not missing at random, it also means that complete case analysis will be biased, so this will have to be taken into account in the discussion of the results.

3.2 The LISS Panel

Besides the European Social Survey, I will be making use of the LISS (Longitudinal Internet Studies for the Social sciences) data panel, administered by CentERdata (Tilburg University, The Netherlands). The panel is a representative sample of Dutch citizens covering a variety of domains such as income, education, political views, values, and work (Scherpenzeel & Das, 2010). It surveys regular topics on a yearly basis, providing a solid longitudinal dataset, and it has a range of topical single wave studies. The first wave of survey was completed in 2008, and the latest in 2018. While it has the advantage of surveying the same sample each wave, it lacks in certain topics. The range of questions regarding ethnic diversity and immigration is not as broad and in depth as the ESS. Specifically, it does not have any indicators of salience of ethnic diversity. Therefore, the analysis of the LISS panel will not be as in depth as the ESS. Instead, it offers the possibility to track attitudinal changes of the same individual over several years, which can give more insight in the possible causal link between ethnic diversity and individual redistributive preferences.

3.2.1 Support for redistribution

In the LISS survey, each participant is asked the question: “Where would you place yourself on a scale from 1 to 5, where 1 means that differences in income should increase and 5 means that these should decrease?” This will be used as the indicator for preference for redistribution. Since it is part of the longitudinal part of the panel, data for this indicator is available since 2008. This question is not policy related, as the question in the ESS, but focusses more on the morality and ethical side of income distribution in a country. As argued earlier, this is not ideal as it does not a precise indicator for support for redistribution. However, it can provide insights in the general attitudes towards the welfare state. While it does not specifically elicit an opinion on measures for redistribution by a government, it implicitly tries to do this. Alesina and Giuliano (2011) argue that preferences for redistribution and for the welfare state in general are highly correlated, and could therefore be used as a substitute for more policy specific questions. Furthermore, it is the only question that is asked in all waves of the survey regarding redistributive preferences, allowing for a panel data approach.

3.2.2 Ethnic diversity

To measure ethnic diversity, the same method is applied as in the analysis of the ESS: the HHI will be calculated. However, the LISS panel does not register a regional variable because of privacy reasons. Therefore, a national HHI is calculated, using the same data as with the ESS⁸. By using the national HHI instead of a regional one, the results might lose some validity, as ethnic diversity on the regional level has more effect on salience (Dahlberg et al., 2012; Dustmann et al., 2018).

⁸ More detailed data on migration background is available at the national level, i.e. it reports all the countries of origin and not the most common and groups of less common countries. However, the HHI does not differ much in the calculations, so for comparability reasons, the same, somewhat less detailed dataset is used.

3.2.3 Trust

While the LISS panel lacks indicators on salience, it has one on social trust. The following question “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people? Please indicate a score of 0 to 10” will be used as the indicator for social trust. This question is also part of the core longitudinal survey, so data is available for all waves since 2008.

3.2.4 Control variables

The control variables added to the analysis of the LISS dataset are similar, but slightly different to those included in the ESS analysis. Income, political preference, age, gender and whether someone belongs to an ethnic minority group are measured in the same way as in the ESS. Education is measured slightly differently because the LISS survey is only done in the Netherlands, so the educational levels are the Dutch levels of education. This means that levels ES-ICED IIa and IIb are collapsed into one category, leaving six categories. Furthermore, the indicator for attitude towards foreigners is different, as the question used is “*There are too many people of foreign origin or descent in the Netherlands*” measured on a five-point scale. This is clearly a different question from the one asked in the ESS. The question in the LISS survey is framed one-sided: “how bad are foreigners?” whereas the ESS question is framed two-sided: “do foreigners make the country a better or worse place to live?” However, when comparing the distribution of both variables (see appendix II) it seems that the negative framing has not skewed the distribution of the LISS variable.

3.2.5 Methodology

The LISS panel will be employed to conduct a panel data approach, because it has data on the same individuals over multiple years. The data is available from 2008 to 2018. The use of a panel data approach allows individual variance over time, which makes it a useful tool to identify relationships over time. Just as with the ESS, the dependent variable is of ordinal nature, so a regular random or fixed effects model is not applicable. Instead, a random effects ordered logit model is used. In contrast to the method used on the ESS, only two separate regression will be run, one without and one with the indicator for trust included. All the control variables are included in both regressions. As most panels, the LISS panel has to deal with attrition by selecting new participants. This leads to some participants in the sample being only present for a few wave. To ensure quality of the analysis, only the participant who have been part of the survey for at least 6 waves will be included.

3.3 Validity and Restrictions

By using two different approaches, a more refined picture of the relationship between ethnic diversity and the support for redistribution can be drawn. The ESS panel, with a time frame of nearly two decades and a wide range of indicators related to ethnic diversity and welfare attitudes, allows for a thorough analysis of the relationship. Several indicators and possible influencing factors different mechanisms that could possibly affect the relationship between ethnic diversity and support for

redistribution are considered and analyzed. However, due to the fact that the ESS selects a new sample each wave, differences over time are difficult to track. To tackle this, year dummies are included. However, this is still not the same as a proper panel data approach and it is therefore difficult to separate correlation from causation. This is where the LISS panel comes in. The LISS panel, while it may lack the range of indicators that the ESS has, makes it possible to track changes in individual preferences over time. While this method is still not on the same level as a controlled experiment in determining causality, it comes closer than the yearly cross-sectional analysis of the ESS panel.

Both panels come with some drawbacks besides the ones mentioned previously. For both panels missing data is a problem. The participants of the LISS panel do not consistently give an answer to all questions, which creates gaps in the yearly data. This is probably due to the fact that the survey is done online instead of face-to-face. Random effect models are suited to tackle this issue, so these missing values are still included in the analysis. However, for the cross-sectional approach of the ESS, missing data is a more pressing issue. On most indicators, near perfect response rates are present. However, for the indicator on income, over 13 percent of the observations are missing. This could severely bias the estimates and results. However, as income is consistently found to be an important variable when it comes to both ethnic diversity and support for redistribution, it would bias the results if it would be excluded from the analysis. Therefore, it will be included in the analysis⁹.

⁹ To check for possible bias in the results, a separate analysis has been done with income excluded, and it yielded qualitatively similar results

4. Results

4.1 European Social Survey

Looking at the output of the ordered logistic regression (Table 22), it immediately becomes clear that the expected relationship has not been identified. In all three models in the table below, the coefficient of ethnic diversity is greater than 1¹⁰, indicating that an increase in ethnic diversity increases the preference for redistribution. The positive effect is not found to be statistically significant in the base model and in the model with trust included. In the model with salience variables added, the coefficient for ethnic diversity is slightly significant ($p < 0.1$). The positive coefficient is remarkable, as most studies into this relationship report a negative coefficient. However, since the effect has not, or barely, been found to be statistically significant, properly interpreting the effect is impossible.

Looking at [Fout! Verwijzingsbron niet gevonden.](#), there is not a clear pattern visible. It shows that over the years, the Dutch have been mostly in favor of redistribution, and this has increased slightly over time. The probability to be (strongly) against income redistribution by the government has decreased slightly over time, but it appears this has little to do with the increased ethnic diversity. This image is also found in [Fout! Verwijzingsbron niet gevonden.](#), where the marginal effect of ethnic diversity on the different attitudes towards redistribution is plotted. Changes in ethnic diversity do not affect the chance of answering “Disagree” or “Neither agree nor disagree”, and its effect on changes in the other three categories is minimal and constant over time.

Most of the control variables show their expected signs and effects: putting oneself on the right of the political spectrum decreases support for redistribution, those with higher income also show less support. As expected, females are slightly more in favor of redistribution, as are the elderly. Engbersen et al. (2018) found an u-shaped relation for income, but this is not found in this analysis. Looking at the graph in appendix II (figure 10), a clear negative relationship is found. The probability that someone (strongly) agrees decreases drastically when income increases and the chance of being neutral or (strongly) disagreeing increases as income increases. For political preference, this relationship is even clearer (see appendix II).

¹⁰ The values of the HHI are multiplied by 100 to make the odds ratios interpretable. When using the original values, the ordered logistic regression reported odds ratios of in the hundreds. This is probably caused by the fact that it is scaled from 0 to 1, and the odds ratio displays the odds of change with an increase of 1. By multiplying by a 100, the odds ratio represents the change of 0.01 in the HHI. The underlying coefficient has not changed by the multiplication and other variables are also not affected by this.

TABLE 2: OUTPUT ORDERED LOGISTIC REGRESSION EUROPEAN SOCIAL SURVEY

	I	II	III
Ethnic Diversity	1.065 (1.23)	1.068 (1.27)	1.056 ⁺ (1.67)
Trust		0.998 (-0.06)	
Diversity * Trust		0.971 (-0.35)	
Overestimation			1.010 ^{***} (4.20)
Neighborhood diversity			0.958 (-0.73)
Left-Right Placement	0.728 ^{***} (-28.94)	0.728 ^{***} (-28.96)	0.743 ^{***} (-13.87)
View of immigrants	1.021 (1.71)	1.023 (1.89)	1.027 (1.14)
Ethnic minority	0.962 (-0.38)	0.974 (-0.26)	1.002 (0.01)
Gender	1.089* (2.20)	1.089* (2.20)	0.955 (-0.61)
Age	1.013 ^{***} (11.09)	1.013 ^{***} (11.12)	1.011 ^{***} (4.41)
Education	0.892 ^{***} (-10.54)	0.894 ^{***} (-10.25)	0.917 ^{***} (-3.98)
Income	0.867 ^{***} (-15.52)	0.868 ^{***} (-15.36)	0.853 ^{***} (-8.56)
Population Density (log)	0.139 (-0.69)	0.145 (-0.68)	0.135* (-2.10)
Regional GDP (log)	0.855 (-0.22)	0.850 (-0.23)	0.423 (-1.22)
Unemployment rate (log)	0.906 (-0.27)	0.905 (-0.27)	281.5 (1.59)
Observations	12436	12432	3412

Dependent variable in all three models: support for income redistribution as defined in section 3.1.1. Exponentiated coefficients; *t* statistics in parentheses. Year and region dummies are omitted from the output.

⁺*p* < 0.10, * *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001

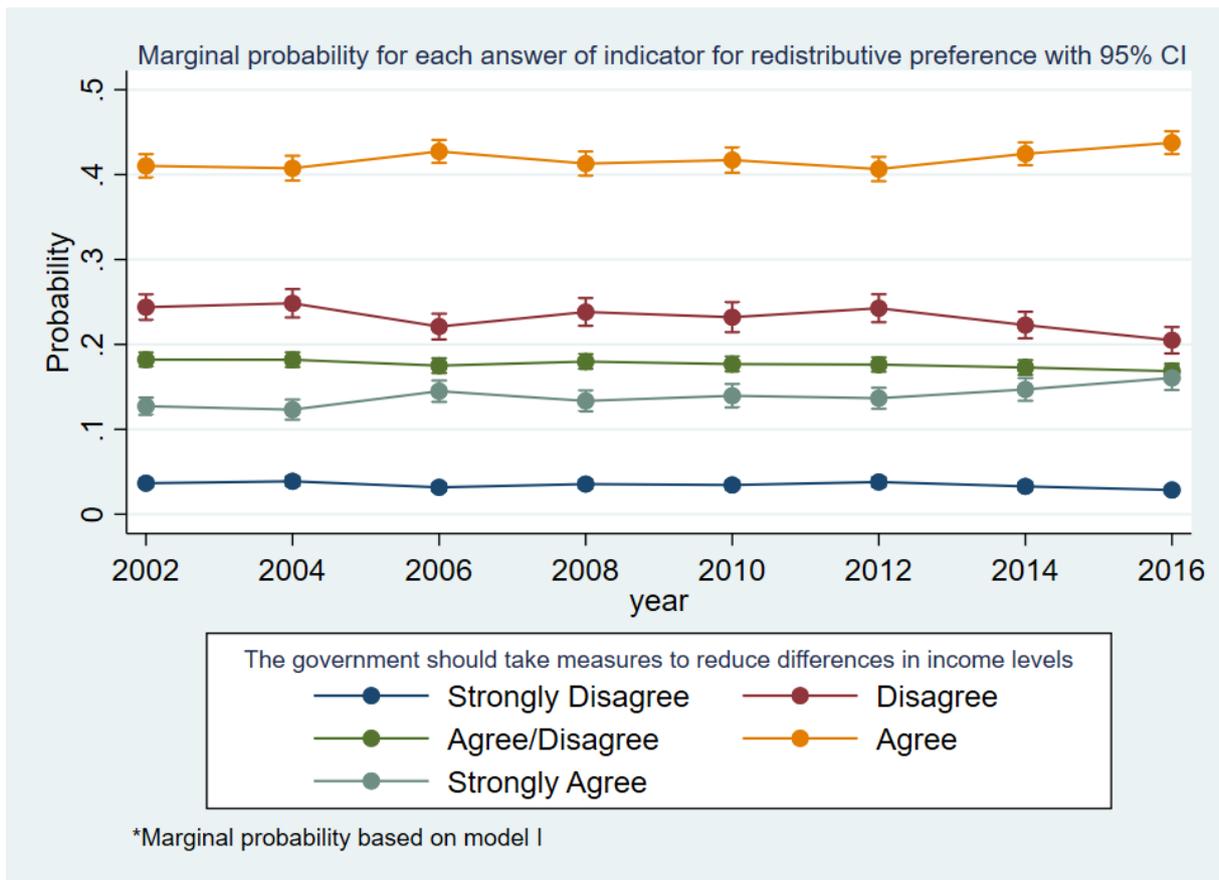


FIGURE 2: PLOT OF MARGINAL PROBABILITIES IN MODEL I. TIME ON THE X-AXIS

When substituting the dependent variable for the alternative ones, something remarkable happens (see appendix II). In the analysis with the question regarding income differences based on merits and talents, a similar pattern is found as with the original indicator. The odds ratio reported for ethnic diversity is below 1, indicating that an increase in ethnic diversity leads to a lower probability of disagreeing with this statement¹¹. The effect found is not statistically significant, so it is difficult to interpret the result properly. Interestingly, it appears that those who report belonging to an ethnic minority disagree with income differences based on talents and merit more than those belonging to the ethnic majority ($p < 0.05$). When entering the question on the fairness of income differences as the dependent variable, the effect of ethnic diversity is as expected. With an odds ratio below 1, the effect of ethnic diversity is negative and significant. All the control variables show the same pattern as in the original regression, which indicates that the model itself is still valid. So, with increasing ethnic diversity the average individual is more likely to find income differences unfair. This question was introduced as being a more moral or ethical question regarding income differences, and this result might indicate that ethnic diversity might actually be changing morality and ethical norms within Dutch society. However, this is a big claim and cannot be substantiated with data from only two years, it

¹¹ Recall that this indicator has not been rescaled, so “strongly disagree” is the maximum value

would require a longitudinal approach which also looks at cultural factors that have not been included in this analysis.

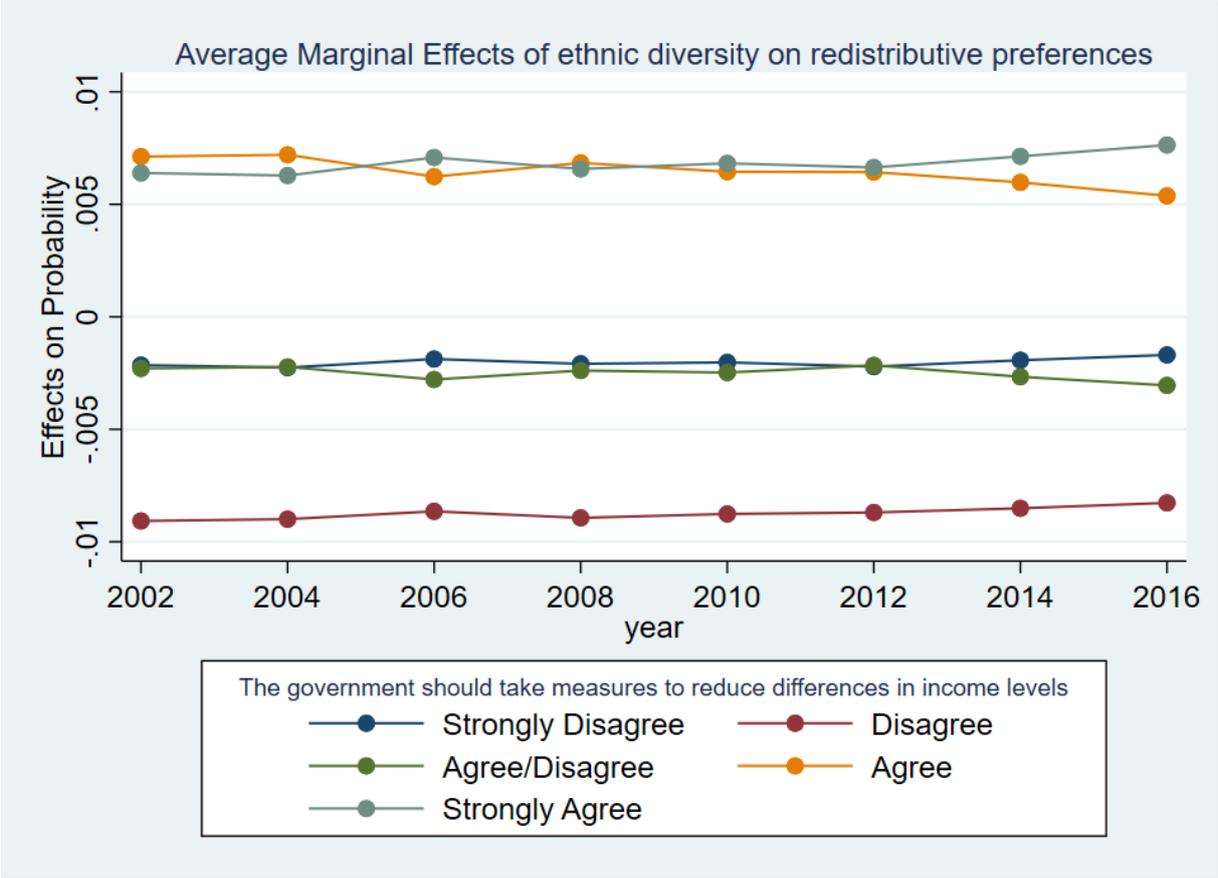


FIGURE 3: MARGINAL EFFECT OF ETHNIC DIVERSITY ON SUPPORT FOR REDISTRIBUTION

Just as ethnic diversity, trust does not seem to affect support for redistribution much. It appears it does not represent the “bridge” that is needed to overcome intergroup bias. The odds ratio for trust itself is nearly 1, indicating that it does not affect redistributive preferences at all. Furthermore, the interaction term has not been found to be significant, which suggests that the mediating effect of trust, as hypothesized, does not exist.

Perhaps the most surprising result is the coefficient of the overestimation, which is significantly positive. This suggests that those who overestimate the number of foreign born are much more in favor of income redistribution than those who correctly estimate or underestimate this number. An increase of 1 percent overestimation makes a person 1 percent more likely to be more in favor of redistribution than a similar person whose estimation has not increased. It could mean that those who overestimate this number feel threatened by foreigners. As mentioned by Longi et al. (2005), natives could be worried that immigrants that come to their country will “steal” their jobs. So, by showing more support for income redistribution, they are insuring themselves against losing their jobs. As figure 4 shows, the marginal effects of overestimation do not change much over the two years for which the

estimation indicator was available. Interestingly, perceived neighborhood diversity does not significantly affect support for redistribution, but its effect is negative.

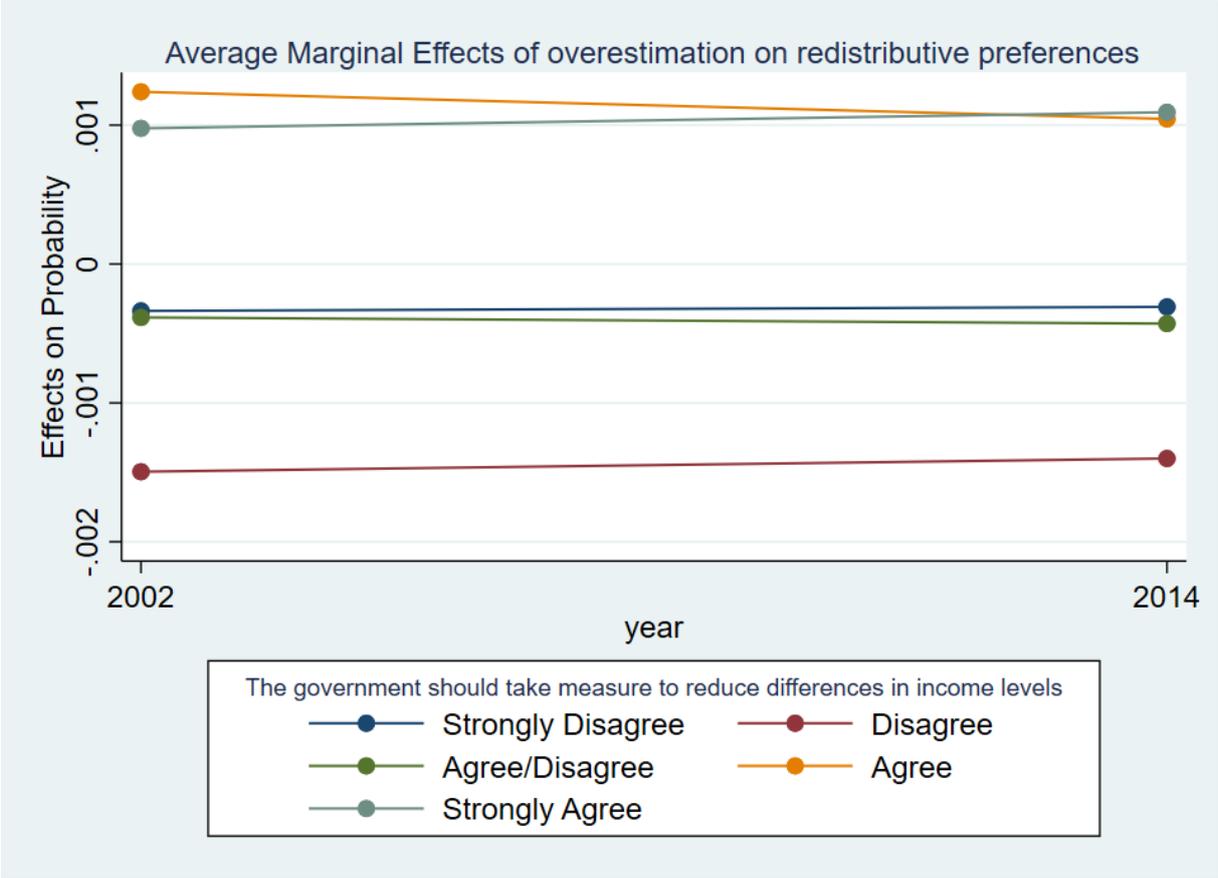


FIGURE 4: MARGINAL EFFECTS OF OVERESTIMATING THE NUMBER OF FOREIGN BORN

4.2 The LISS Panel

The analysis of the LISS panel displays some similarities with the results of the ESS, but also some noteworthy differences. All control variables show the same effects as in the ESS analysis, although gender does not seem to play such a big role anymore. The most interesting differences are in the explanatory variables. Ethnic diversity shows a positive effect and this time it is also found to be significant. This suggests that the findings in the analysis of the ESS might be correct: increasing ethnic diversity is linked with increasing support for redistribution. It is important to keep in mind that the indicator for redistributive preferences in the LISS panel is most similar to the alternative indicators in the ESS panel, as the question used does not specifically asks for attitudes towards redistribution, but on the general attitude towards income differences. The positive effect of ethnic diversity mainly seems to stem from people switching from “neither agree nor disagree” to “strongly agree” (see figure 5). The graph also shows that the participants in the LISS panel almost all agree that income differences are not okay to some degree, and that over the years, the participants became more and more opposed to income differences, seemingly as a result of increasing ethnic diversity.

When trust is included in the model, the positive effect of ethnic diversity remains similar and (slightly less) significant and the effect of trust itself is negative and significant. This is odd, as social trust has been linked with higher solidarity and higher support for welfare spending (Daniele & Geys, 2015). Besides this, the model does not change all that much.

TABLE 3: OUTPUT RANDOM EFFECTS ORDERED LOGISTIC REGRESSION LISS PANEL

Support for redistribution	I	II	III
Ethnic Diversity	1.064*** (3.64)	1.057** (3.14)	0.921 (-1.52)
Trust		0.975* (-2.10)	0.427** (-2.87)
Diversity * Trust			1.022** (2.79)
Left-Right Placement	0.706*** (-23.48)	0.696*** (-23.65)	0.696*** (-23.68)
View of Foreigners	0.970 (-1.27)	0.968 (-1.29)	0.969 (-1.25)
Gender	1.100 (1.26)	1.097 (1.18)	1.096 (1.17)
Age	1.042*** (18.89)	1.041*** (17.83)	1.041*** (17.83)
Income	0.857*** (-8.90)	0.857*** (-8.51)	0.856*** (-8.54)
Education	0.833*** (-7.32)	0.824*** (-7.45)	0.824*** (-7.45)
Ethnic Minority	1.050 (0.43)	1.040 (0.33)	1.035 (0.29)
Observations	27413	24871	24871

Exponentiated coefficients; *t* statistics in parentheses. Year dummies omitted from the output

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

However, once the interaction term is included the model is turned upside down. The negative effect of trust increases both in magnitude and statistical significance, while the positive effect of ethnic diversity becomes negative and insignificant. It appears that the effect of ethnic diversity is dependent on the level of trust. Given the fact that the interaction effect is significant, it is impossible to interpret the coefficients of ethnic diversity and trust separately. With both the effect of ethnic diversity and trust being negative, a positive interaction effect points to moderating behavior of the interaction, as was expected¹². So, when social trust of an individual increases, the negative effect of ethnic diversity

¹² The odds ratios shows for both ethnic diversity and trust are the values for when the value of the other variable is zero. This could explain the low value for trust, as the value is shown for when ethnic diversity is zero, but this

is slightly negated. Those who report higher levels of trust are less affected by the negative effect of ethnic diversity. This means that for higher levels of trust, the effect of ethnic diversity could be positive. It is difficult to say if increasing ethnic diversity also has a moderating effect on the negative effect of trust, because the coefficient is not significant. However, based on the literature regarding ethnic diversity and trust, such an effect would be strange as ethnic diversity has been linked to decreasing levels of social trust (Bahry, Kosolapov, Kozyreva, & Wilson, 2005).

The moderating effect of trust is in line with the thought that trust can function as some form of bridge to overcome possible intergroup bias. As established by Alesina et al. (2018), natives greatly overestimate the number and underestimate the economic situation of immigrants, which leads to an image of them being free-riders on the welfare system. Trust, being a positive bias (Tam et al., 2009), can negate some of the negative effects of ethnic diversity such as its effect on individual support for redistribution.

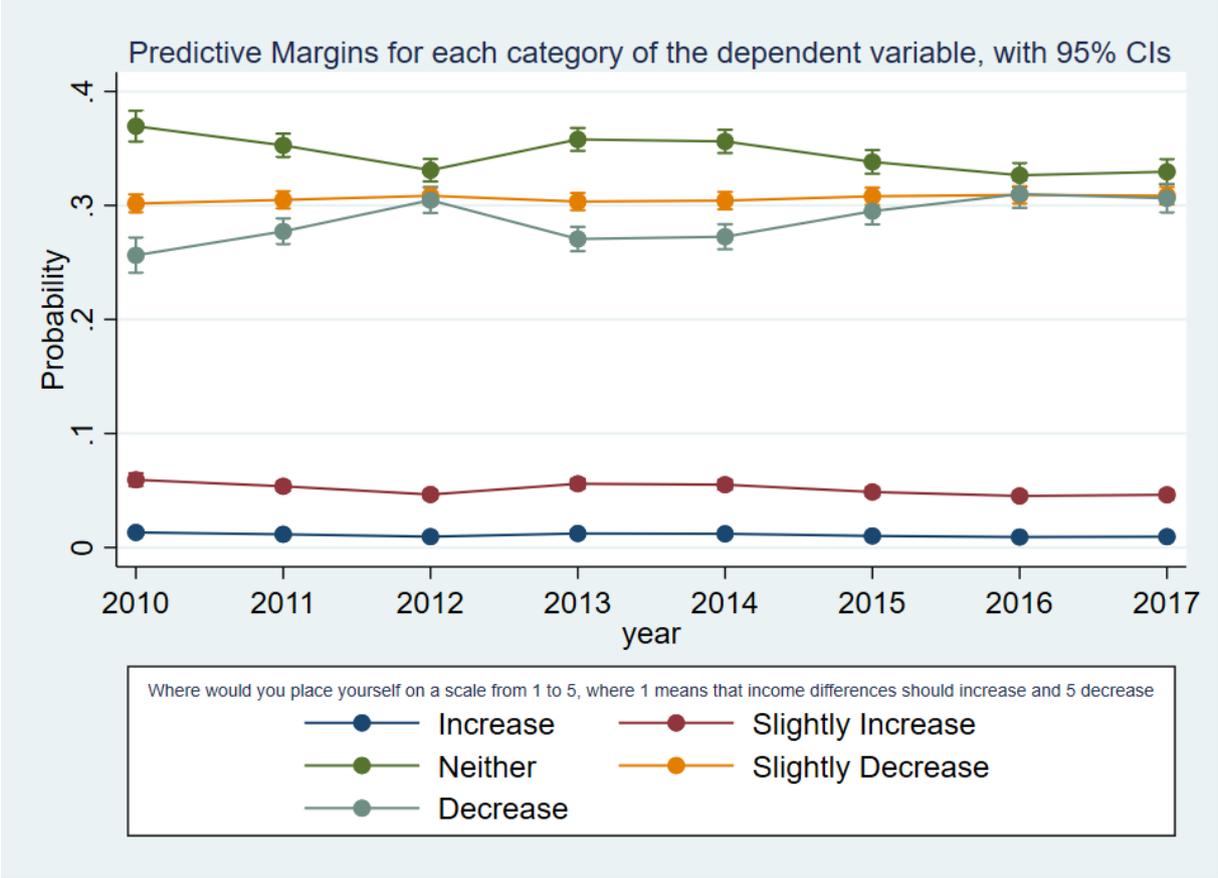


FIGURE 5: PREDICTIVE MARGINS FOR EACH ANSWER ON THE QUESTION REGARDING REDISTRIBUTIVE PREFERENCES

is not the case in any of the regions. Due to the nonlinearity of the model, predicting the actual starting value for trust is very difficult, but it is closer to one than reported in the table.

5. Conclusion and Discussion

In recent years, immigration and the resulting increased ethnic diversity has put pressure on society. It makes collective decision making harder, can polarize political debate and create distinctions in the population. Intergroup bias, both through in-group favoritism and outgroup aversion, can increase tensions in society and reduce the level of social trust and solidarity. This bias is found everywhere, even in the youngest of children (Powlishta et al., 1994). One frequently mentioned “victim” of increased ethnic diversity is the welfare state (Alesina et al., 1999; Stichnoth & Van der Straeten, 2013). Due to its inherent moral hazard problem, trust and solidarity are needed in order to maintain a stable welfare state. A recent report by the Dutch Scientific Council for Government Policy has shown that Dutch society has been negatively affected by increasing ethnic diversity (Engbersen et al., 2018), so this raised the question: what about the welfare state? How is the Dutch welfare state affected by the increasing ethnic diversity? It cannot be conclusively said, but it appears, rather surprisingly, that it has been affected in a positive way. Or, to phrase it more appropriately, the increase in ethnic diversity has been linked with people being more in favor of income redistribution. Two different analytical approaches seem to indicate that ethnic diversity has had a slight positive effect on support for redistribution in the Netherlands.

However, the reason how ethnic diversity has affected support for redistribution is still unclear, as the results point to two opposing factors: salience and trust. In the literature overview, salience emerged as a factor that increases intergroup bias and as a result would enhance the hypothesized negative effect of ethnic diversity. The data shows the opposite: individuals whose salience of ethnic diversity is high, are very much in favor of redistribution. As mentioned earlier, this could be an indication that they feel threatened, afraid to lose a job to immigrants and therefore want to insure themselves by increasing redistribution (Burgoon, Koster, & van Egmond, 2012; Longi et al., 2005). This would especially be true for those working in sectors where the exposure to immigration is very high, as the risk of losing a job to a non-native is the highest, although this claim would have to be tested.

Trust, on the other hand, shows the behavior that was expected: it has a moderating effect on the (insignificant) negative effect of ethnic diversity on individual support for redistribution. While the analysis of the ESS dataset reported no significant effect of trust or an interaction effect between trust and ethnic diversity, the LISS panel identified a clear moderating role for trust. A significant, positive interaction effect is found, meaning that for an increase of one level¹³ of trust, the negative effect of ethnic diversity is negated slightly and could even turn positive. This effect was expected due to the positive characteristic of trust for cooperation and reducing intergroup bias (Burgoon et al., 2012).

¹³ On the ten point scale used to measure trust

Based on the findings, it is difficult to give a comprehensive answer to the question how ethnic diversity affects support for redistribution. In the literature, there is usually a negative link between the two, as ethnic diversity makes cooperation difficult as a result of intergroup bias. However, the results of this thesis do not show the same results, as the coefficients found for ethnic diversity are mostly positive but insignificant. Furthermore, the two datasets tell two different stories. In the analysis of the ESS panel, salience emerges as the driving force of the effect of ethnic diversity and surprisingly, the effect is positive. Ethnic diversity and trust do not seem to play a big role in the ESS panel. However, when examining the LISS panel, it is trust that emerges. Interacting with ethnic diversity, it seems that trust has some moderating power over ethnic diversity. Measuring salience is unfortunately impossible with the indicators in the LISS panel. It could have been informing to enter an indicator for salience into the analysis of the LISS panel and see how it would have reacted to and possibly interacted with trust. This can give insight in which of the two effects is the strongest. However, inferring causal links from observational data is difficult, so testing this in a controlled environment might prove even more useful.

Overall, the results of the analysis give a peek into the mechanisms that could be working underneath the relationship between ethnic diversity and support for redistribution. It appears not to be as straightforward as some argue. The magnitude and direction of the relationship are complex and require further investigation. In this thesis, the focus was on the Netherlands, but this is not the only country facing increasing diversity. Broadening the scope to more countries can definitely shine more light on the relationship. However, it is important to not take data from only one year, as this does not tell anything about possible causal links. A longitudinal approach is needed to get a clearer picture of the effect of ethnic diversity and how it affects society.

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Appendix I: Countries or continents of origin

TABLE 4: COUNTRIES OR CONTINENTS OF ORIGIN

Afghanistan	Italy
Australia	Japan
Belgium	Cape Verde
Brazil	Morocco
Canada and other North America	Austria
China	Pakistan
Colombia	Poland
Dominican Republic	Portugal
Germany	Somalia
Egypt	Spain
Ethiopia	Surinam
Philippines	Turkey
France	United Kingdom
Ghana	United States of America
Greece	Vietnam
Hungary	South Africa
Hong Kong	Other Africa
India	Other South America
Indonesia	Other Asia
Iraq	Other Europe
Iran	Other Oceania

Appendix II: Tables and graphs

TABLE 5: SUMMARY STATISTICS ESS

Variable	Code	Obs	Mean	Std. Dev.	Min	Max
Support for redistribution	incdif	15,053	3.461171	1.080735	1	5
Ethnic diversity	bighhi	15,186	34.46435	11.82168	14.4665	60.6254
Income differences	dfincac	3,425	2.676788	1.004256	1	5
Fair society	fairsoc	3,425	3.292263	.9270161	1	5
Overestimation	over_born	4,045	.126399	.1685625	-.1160736	.8860229
Overestimation (normalized)	over_born200	4,045	24.19653	16.85625	0	100
Trust	ppltrst	15,168	5.872758	2.042575	0	10
Left-Right Placement	lrscale	14,404	5.213344	2.012586	0	10
View of Immigrants	imwbcnt	14,923	5.112042	1.921957	0	10
Ethnic Minority	blgetmg	15,162	1.94196	.2338265	1	2
Gender	gndr	15,186	1.551231	.4973848	1	2
Age	agea	15,181	49.82939	17.81186	14	97
Education	eisced	15,143	3.566334	1.954966	1	7
Income	hinctnt	13,182	6.278486	2.521265	1	10
Unemployment rate (log)	unemp	15,186	1.637059	.2559899	.832909	2.23001
GDPcap (log)	gdpcap	15,186	10.447	.2324572	9.78002	11.1534
Population Density (log)	popdens	15,186	6.391303	.6906458	4.98361	8.04109

TABLE 6: CORRELATION TABLE ESS

	incdif	bighhi	lrscale	imwbcnt	blgetmg	gndr	agea	eisced	hinctnt	ppltrst
incdif	1.0000									
bighhi	-0.0078	1.0000								
lrscale	-0.3033	-0.0220	1.0000							
imwbcnt	0.0392	0.0351	-0.1628	1.0000						
blgetmg	-0.0339	-0.1149	0.0900	-0.0962	1.0000					
gndr	0.0791	-0.0012	-0.0870	0.0027	0.0045	1.0000				
agea	0.1372	-0.0004	0.0578	-0.0382	0.1142	-0.0205	1.0000			
eisced	-0.1662	0.0914	-0.0823	0.1967	0.0211	-0.0801	-0.1836	1.0000		
hinctnt	-0.2510	-0.0080	0.0824	0.0561	0.0932	-0.1166	-0.1559	0.3576	1.0000	
ppltrst	-0.0366	-0.0103	-0.0483	0.2481	0.0812	-0.0279	-0.0067	0.2349	0.1476	1.0000

TABLE 7: SUMMARY STATISTICS LISS PANEL

Variable	Code	Obs	Mean	Std. Dev.	Min	Max
Support for redistribution	redis	54,970	3.797289	.9803152	1	5
Ethnic Diversity	bighhi	80,263	36.97612	1.827701	34.03994	39.83383
Left-right placement	pol	49,688	5.224964	2.164764	0	10
View of foreigners	forview	57,695	3.249155	1.058056	1	5
Gender	gender	80,263	1.539153	.4984678	1	2
Age	age	80,263	46.64208	18.5098	1	103
Income	income	75,479	3.111461	2.115517	0	12
Education	education	80,019	3.450893	1.555266	1	6
Minority group	minority	52,496	.1418013	.3488495	0	1

TABLE 8: CORRELATION TABLE LISS PANEL

	redis	bighhi	gender	age	income	educat*n	trust	pol	forview	minority
redis	1.0000									
bighhi	0.0186	1.0000								
gender	0.0659	0.0035	1.0000							
age	0.1882	0.0500	-0.0621	1.0000						
income	-0.1466	0.0593	-0.4011	0.1830	1.0000					
education	-0.1534	0.0738	-0.0852	-0.1791	0.3793	1.0000				
trust	-0.0290	-0.0056	0.0063	0.0464	0.1033	0.1715	1.0000			

pol	-0.3740	-0.0174	-0.0775	-0.0160	0.0666	-0.0526	-0.0879	1.0000		
forview	-0.0951	-0.0795	-0.0414	0.0331	-0.0827	-0.2293	-0.2668	0.3961	1.0000	
minority	0.0095	0.0358	0.0080	-0.0655	-0.0321	0.0317	-0.0716	-0.0777	-0.0921	1.0000

TABLE 9: OUTPUT ORDERED LOGISTIC REGRESSION WITH ALTERNATIVE INDICATORS

	Income differences	Fairness
Ethnic Diversity	0.971 (-0.47)	0.845** (-2.63)
Left-Right Placement	0.762*** (-11.60)	0.785*** (-10.12)
View of immigrants	0.985 (-0.67)	1.019 (0.75)
Ethnic minority	1.542* (2.34)	0.869 (-0.78)
Gender	1.202* (2.21)	1.118 (1.37)
Age	1.015*** (5.65)	1.020*** (8.46)
Education	0.975 (-1.07)	0.927*** (-3.35)
Income	0.937*** (-3.65)	0.878*** (-7.68)
Population Density (log)	2.757 (0.40)	556.8* (2.38)
Regional GDP (log)	0.542 (-0.27)	0.00371* (-2.25)
Unemployment rate (log)	0.209 (-0.27)	0.00000212* (-2.10)
Observations	2883	2890

Exponentiated coefficients; *t* statistics in parentheses. Year and region dummies included
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

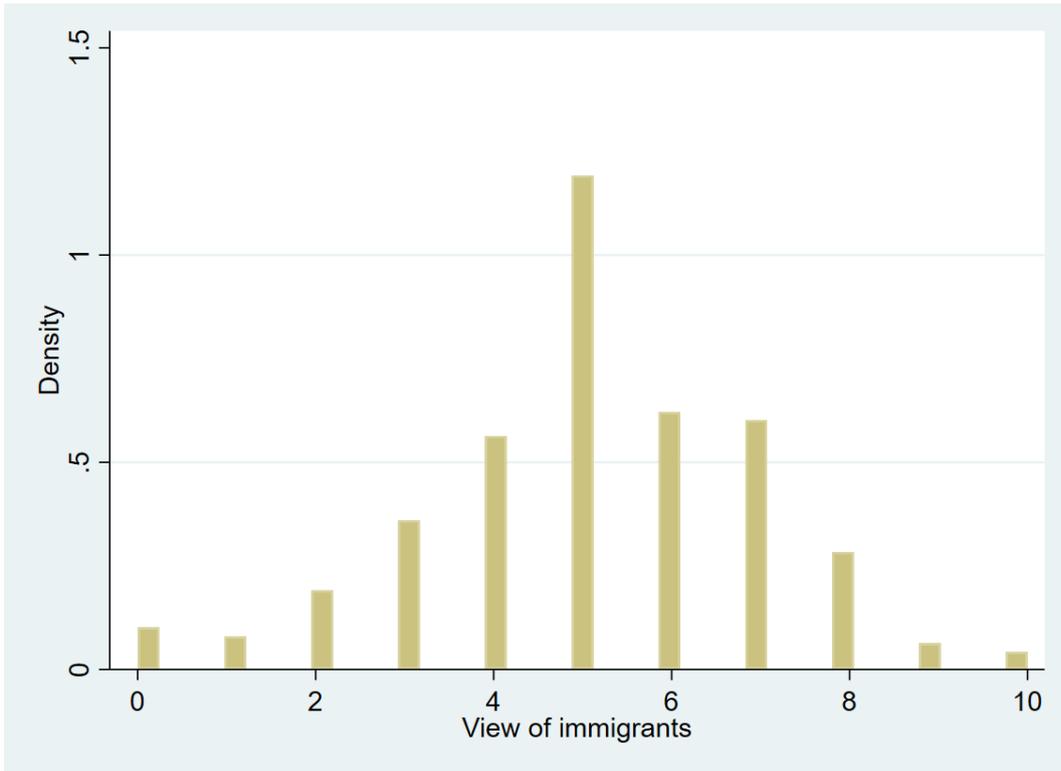


FIGURE 6: HISTOGRAM VIEW OF FOREIGNERS VARIABLE (ESS)

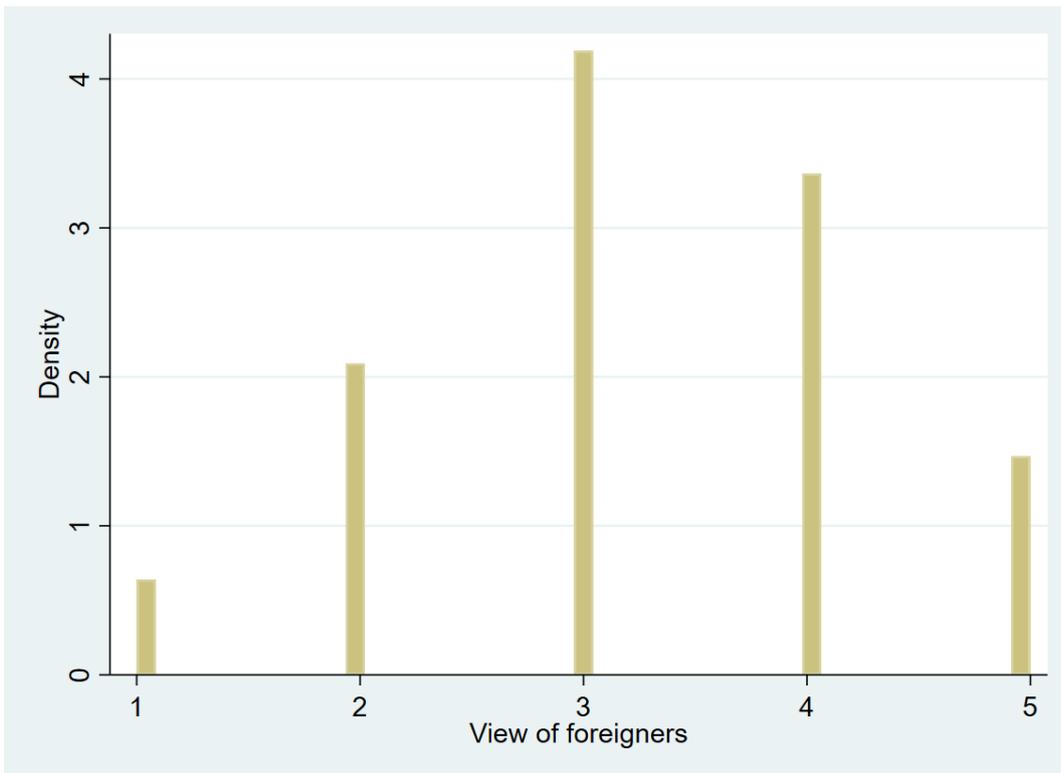


FIGURE 7: HISTOGRAM VIEW OF FOREIGNERS VARIABLE (LISS)

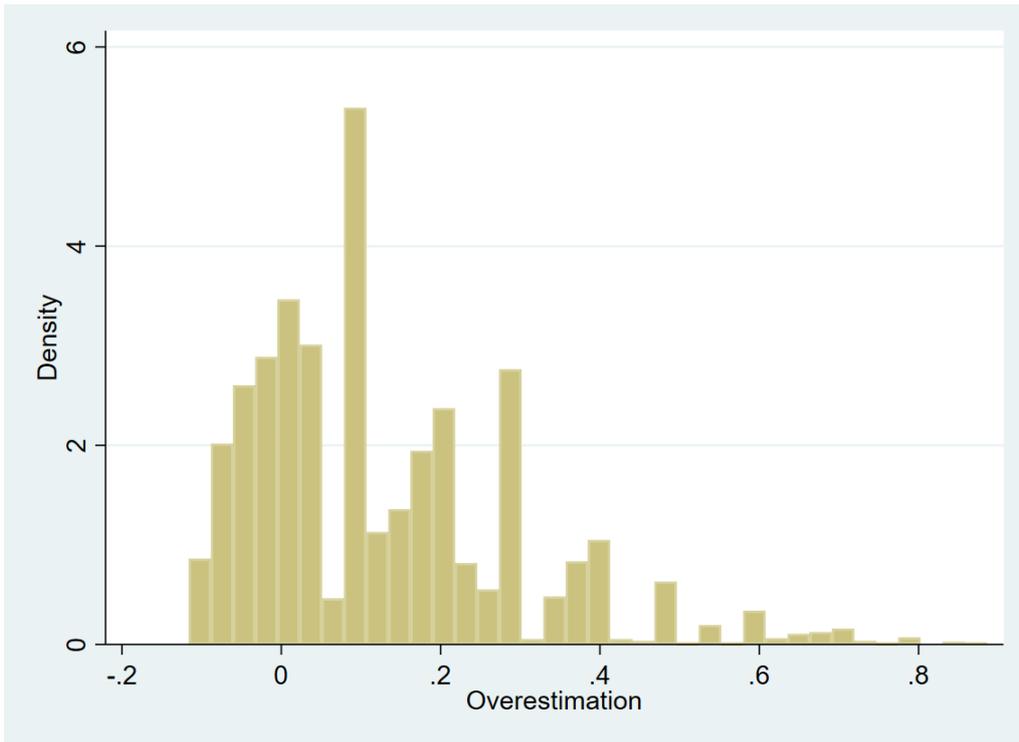


FIGURE 8: HISTOGRAM OVERESTIMATION VARIABLE BEFORE NORMALIZATION

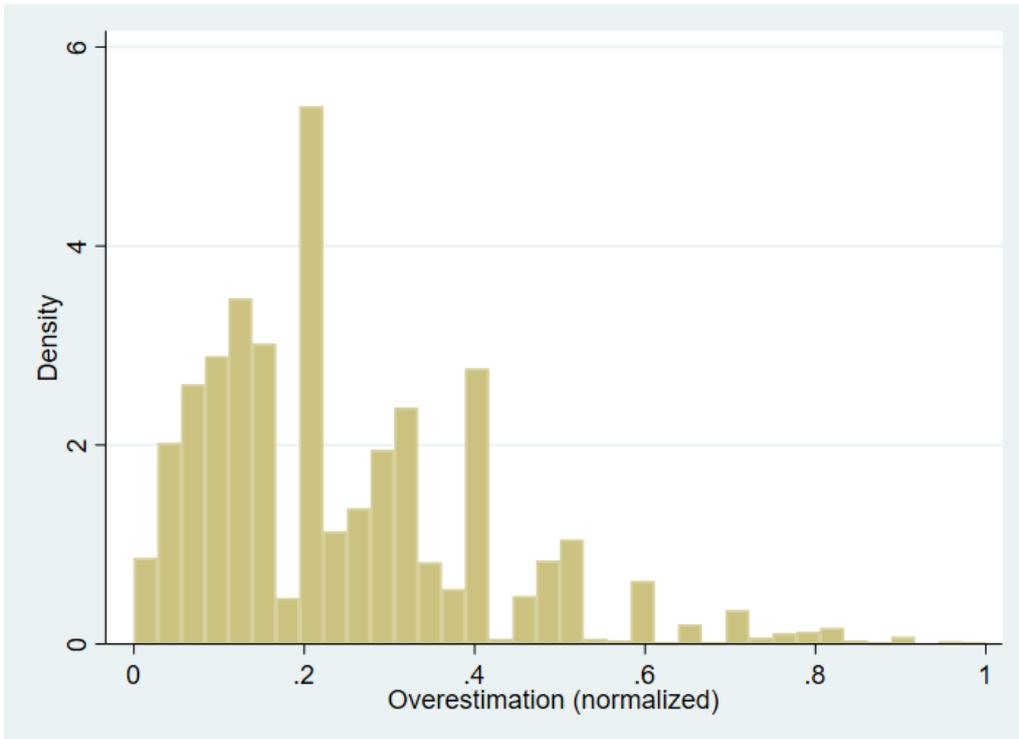


FIGURE 9: HISTOGRAM OVERESTIMATION VARIABLE AFTER NORMALIZATION

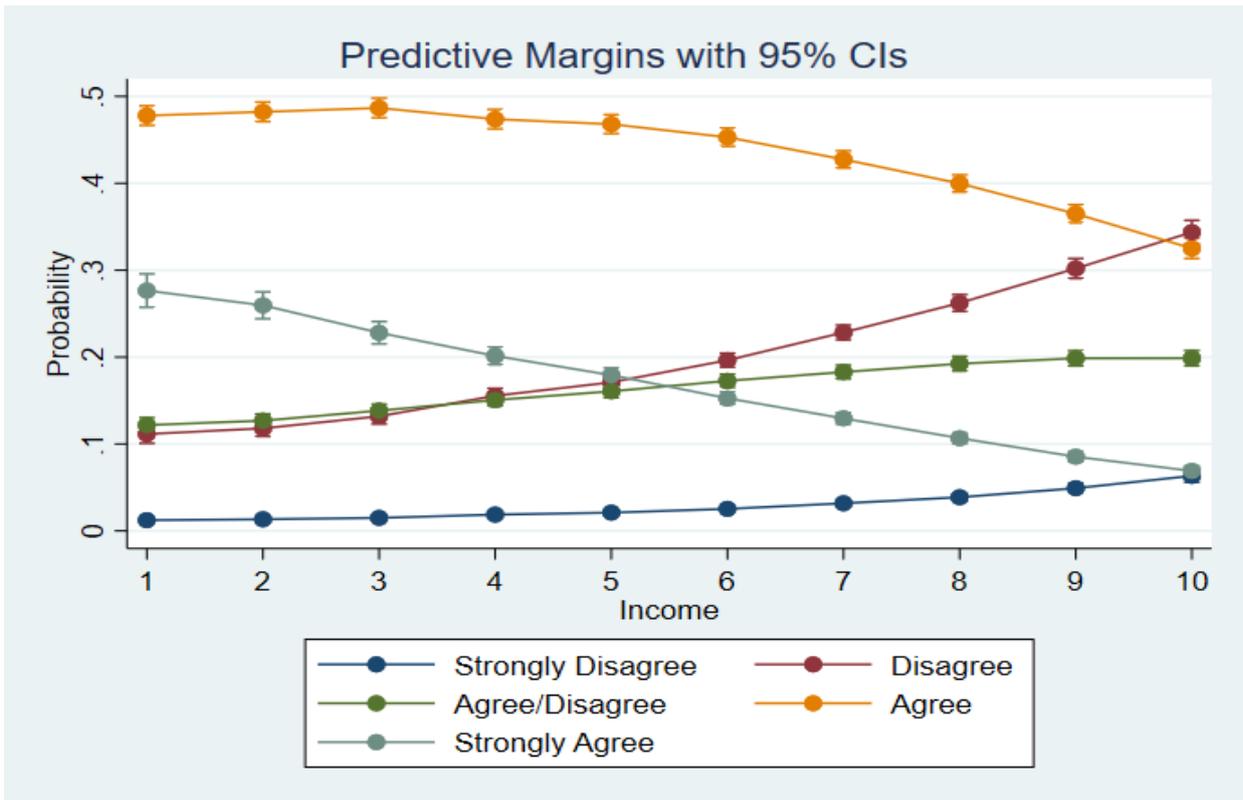


FIGURE 10: GRAPH OF MARGINAL PROBABILITIES AT EACH INCOME LEVEL

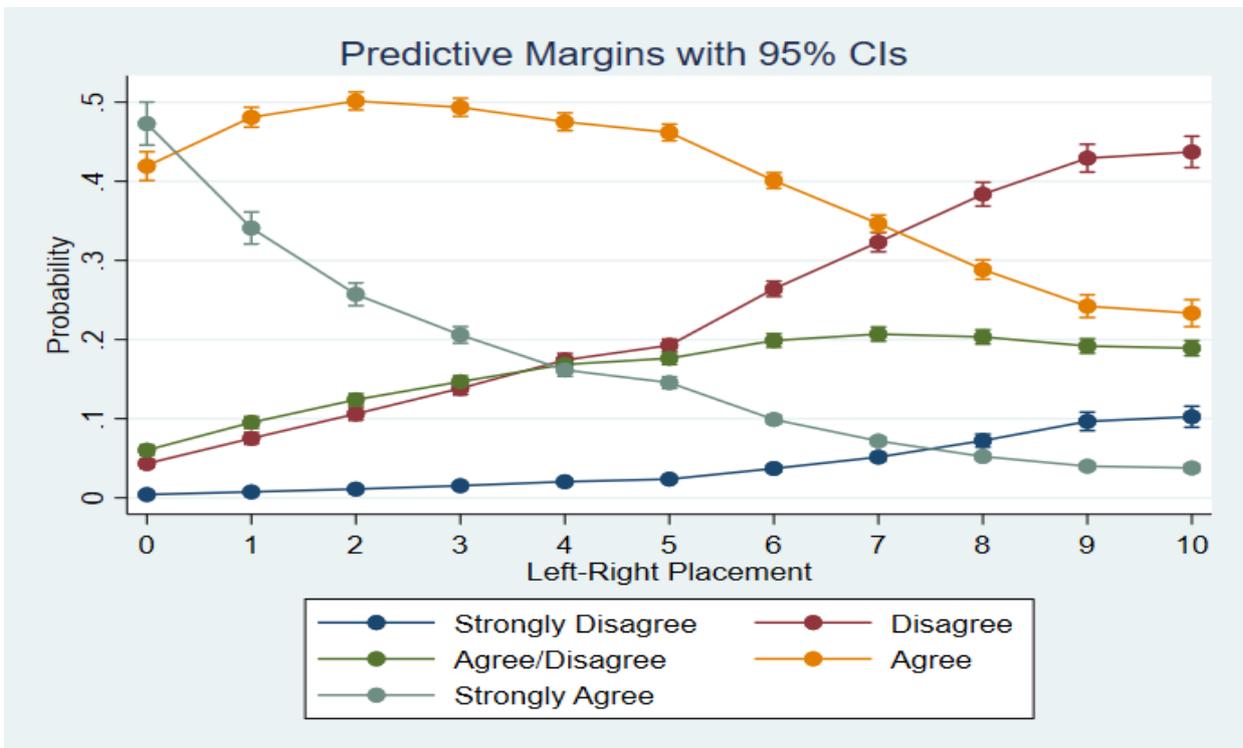


FIGURE 11: GRAPH OF MARGINAL PROBABILITIES AT EACH POLITICAL POSITION