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To Vote or Not to Vote?: The role of personality traits on voting behaviour among the immigrant population in the Netherlands.

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ABSTRACT

Political integration is a vital part of the cultural integration of immigrant populations and answering the question regarding increasing immigrant votes. Although recent literature indicates that personality traits are critical determinants for a comprehensive range of social and political behaviors, the impact of personality traits on voting behavior among the immigrant population has been neglected in sociological research. Based on the Big Five Model of personality traits, this study extends the sociological research to the voting behavior of immigrants by analyzing the effect of personality traits and comparing immigrants and native Dutch citizens in the Netherlands. Furthermore, the identification level with Dutch culture is considered as a moderator predictor of the relationship between personality traits and voting behavior among the immigrant population. The results show no significant relationship between the immigrant population's personality traits and voting behavior, while it is confirmed that the Agreeableness and Extraversion dimensions are associated with voting behavior among native Dutch citizens. The limitations of the study regarding the findings are discussed together with the recommendations for further studies. The study concluded that more comprehensive and profound sociological research of personality traits on social and political behaviors is a worthwhile avenue for future research.

Keywords: voting, immigrants, voter turnout, personality, Big Five personality traits

Introduction

In many European countries, the first wave of immigrants arrived as 'guest workers' in the 1960s and 1970s to contribute to the economy, and in the past six decades, immigrants have become a remarkable part of the European population (Bauböck, Kraler, Martiniello & Perchinig, 2006). Investigating how immigrants approach and interact with political structure in the host society is one of the central focuses of the research on integration. Integration is seen as the successful incorporation of ethnic minorities into the host society and is often reflected by participation in all aspects of civic life (Scuzzarello, 2015). Since political participation is considered a vital dimension of integrating the immigrant population into the host culture and voting is still the backbone of democracy in the Netherlands, increasing immigrant votes is a crucial subject for politicians, policymakers, and researchers to examine. Therefore, as a low-cost conventional political participation act (de Rooij, 2012) and a social behavior shaped by the impact of others' behaviors in the immediate circle, including personal networks and society (Rolfe, 2012), voting becomes one of the most practical and essential tools to examine the political integration among immigrants. This research aims to focus on immigrant voting in the Netherlands and explain the possible relationship between voting behavior and personality traits by comparing immigrant groups with natives to develop policy advice. Since there is a lack of knowledge regarding personality differences in research about immigrant voting behavior in the literature, Big Five Personality Model (e.g., Goldberg, 1993) is added to the investigation because of adaptable qualities from psychology to any other discipline (Gerber et al., 2011a).

The Big Five Model is a classification system for personalities and includes Openness to Experience, Agreeableness, Extraversion, Conscientiousness, and Neuroticism, which are used in psychology for personality measures (John, Naumann & Soto, 2008). The Big Five representation of personality traits is developed by Tupes and Christal (1961) based on the 36 dimensions that are assembled by Cattell (1957) (Goldberg, 1993). Based on the model's framework, it is possible to classify the most personal differences in personality into five broad but empirically supported domains (Gosling, Rentfrow, & Swann, 2003). Since the five dimensions' universal consistency in different cultures and languages (Allik & McCrae, 2004; Heine & Buchtel, 2009; Schmitt et al., 2007) and the model's high level of validity and reliability (Goldberg, 1993) are approved, it becomes an essential tool for bringing personality dimensions to the sociological analysis of voting among immigrants in this research.

However, the literature's structural and institutional explanations and theories for immigrant voting provide a theoretical base for this research; therefore, a summary of the literature is vital to understand where the lack of knowledge accumulates. In the literature, lower levels of voting and political engagement are found as typical among ethnic minorities because of the political norms in their origin country (Aleksynska, 2011; De la Garza, 2004; Van Londen, Phalet, & Hagendoorn, 2007). Nonetheless, comparable voter turnouts between native Dutch citizens and some ethnic communities in the Netherlands have been observed before (Dominguez Martinez et al. 2002, as cited in van Londen et al., 2007), which was explained in the literature through some institutional and discursive elements such as the political opportunity structures and the institutional arrangements of voting in the host society (e.g., Koopmans, 2004, 2005; Scuzzarello, 2015; van Londen, 2007). Unlike voting, regarding the effects of pre-immigration experiences on protest politics, it is determined that immigrants who spent even more than 30 years in a host culture still act with the reflexes brought about by the political climate in their country (Bilodeau, 2008). This can be explained with political socialization theories based on early socialization theory (e.g., Sears & Valentino, 1997) and the transferability hypothesis, which notes that immigrants adjust the values and behaviors developed in the origin culture and use them in the host culture (Black, 1987).

Since studies show the importance of considering the origin culture's voting behavior to improve voting among immigrants, the ethnic community that immigrants belong to and socialize is used as a reference point for the origin culture in the host society in previous studies. The identification with the in-group mates fosters the sense of entitlement to political rights and has a positive impact on participation in elections (Scuzzarello, 2015); also, it is one of the primary mechanisms for integration and encourages people to engage in political actions (Huddy, 2001). Knowing other in-group mates' tendency to vote impacts the decision of immigrant subjects regarding their voting behavior (Voicu & Comşa, 2014). Several studies, which use a social capital approach to immigrant voting in the Netherlands (Fennema & Tillie, 2001, 2004; Jacobs & Tillie, 2004; Van Heelsum, 2004), found dense networks within ethnic civic communities improve political trust and participation.

Also, keeping with the social norms (Newson & Richerson, 2009) and following the same pattern in the host society (e.g., Voicu & Comşa, 2004) as a part of value orientation explains the tendency to pursue the host society's voting behavior among immigrants. Through socialization, values become stable and latent directions that lead to behaviors and attitudes

(Jagodzinski, 2004). Therefore, a value orientation with a host culture is an inseparable part of the integration of immigrants. Since political behavior gives us clues about the success of integration, it is crucial to understand the personal motivation behind voting choices from the perspective of value orientation. As one of the four dimensions of political integration (e.g., Martiniello, 2006), personal identification with the host society might impact the voting decision from an individual level; briefly, an increase in identifying with the host society can mean a better political integration for minorities and a low level of integration can affect the voting decision negatively. So, as an influential factor in political behavior, exploring the immigrants' personality construction can be valuable for the literature since political integration is related to being an active member of society rather than being within the immigrant group (Voicu & Comşa, 2014).

Until this point, the literature provides a complete empirical analysis of all the forms in which institutional and structural elements can relate to immigrant voting behavior. Moreover, regarding the effects of personality, the literature has examined the relationship between voting behavior and personality traits, as conceptualized by the Big Five model in different cultural settings, which is discussed in the next section. However, there is an absence of research focusing on this relationship among immigrant populations. Since their voting decision is under other structural, institutional, and social influences than native populations, as summarized below, research that examines the relationship between voting behavior and personality traits among the immigrant population is specified as a gap in the literature.

To sum up, the Dutch society is multicultural, and political opportunity structures explain the diversity in voting behavior across immigrant populations in several disciplines; nonetheless, the literature on immigrant personality traits is limited. Therefore, this study claims that a focus on personality variances among the immigrant population in the Netherlands will support the political integration research, which is limited to structural and institutional grounds and also the policymaking regarding increasing voting in minority groups. This research aims to present a comprehensive overview by providing empirical evidence of the impact of five personality traits on immigrants' voting decisions. The overarching descriptive question of the study is formulated as "To what extent do big five personality traits impact the voting behavior of immigrant citizens?". Besides, a policy question of how immigrant voting can be increased in the Netherlands is formulated to suggest a new perspective regarding personality traits.

This study proceeds as follows; first, the position of personality in sociological research and the presented literature regarding the Big Five model will be discussed. Next, the variables and the data from the Longitudinal Internet Study for the Social Sciences (LISS), a comprehensive national survey in the Netherlands, will be introduced. Following the analysis, in the result section, the relationship between Big Five dimensions and voting behavior will be examined separately for native Dutch and immigrant populations. Finally, the results' implications will be discussed with the limitations, suggestions for further research, and practical policy advice.

Theory

Personality and Immigrants

Political and social psychology literature about personality traits among immigrant populations is restricted by theories and studies about how immigrants function in two different cultures. Even though the role of personality in decision-making for political behaviors is neglected, those theories are in line with the previous sociological research based on socialization and value orientation perspectives, giving more space to individual explanations. The model of acculturation refers to all potential individual and social changes that immigrants experience (Berry, 2006) to refer to the dual nature of the identity—combining it with the alternation model (LaFromboise et al., 1993), which suggests that individuals can be competent in two cultures simultaneously through being an active member of society. Furthermore, the dual identity, which duplicates the previous interpretation of human actions for a new culture, sometimes changes the action or reaction for adaptation, and all these processes operate through accepting or rejecting social roles (Stryker, 2007). In that case, the voting decision of immigrants in the host country can be explained by the fact that they must form a new personality based on their origin culture, and this new personality enters an adaptation process by contacting the host culture; this approach also shows resemblances with the political resocialization theory and value orientation theory summarized above. However, research about how immigrant personality traits vary and influence the voting decision is still required. Since there are no adequate studies examining the relationship between personality traits and voting among immigrant groups, a theoretical framework is developed from various studies that focus on all elements differently in this study. The previous literature that focuses on the elements of the Big Five model and political

behavior and the elements of the Big Five model, political behavior, and immigrants together is examined in this section separately, and the assumptions of the study are shaped by combining both studies.

Big Five Model in Political Behavior

According to the results of the studies that examined political acts of citizens through the Big Five Model, different dimensions of the model are related to citizen politics, such as political attitudes and predispositions, political behavior, and exposure to political information (Feldman & Huddy 2005; Mondak & Halperin, 2008). As an example of personality environment interaction, several studies have integrated Big Five traits into the individual-level examination of voting and civic engagement (Weinschenk, 2017). Studies have been conducted to determine the relationship between personality traits and several forms of political participation in the US (Anderson 2009, Gerber et al. 2011a, Mondak, 2010, Mondak et al. 2010), Finland (Mattila et al., 2011), Germany (Schoen & Schumann, 2007), Latin America (Mondak et al., 2011, 2010), Italy (Vecchione & Caprara, 2009) and South Korea (Ha, Kim, & Jo, 2013). Although results are mixed and controversial, briefly, higher scores in Conscientiousness and Neuroticism dimensions can shape attitudes in a way that leads to higher voting and also make these attitudes more effective in impacting the voting decision (Gerber et al. 2010, 2011a; Schoen & Schumann, 2007), while others (Anderson, 2009, Mondak, 2010, Mondak et al. 2010; Gerber et al. 2011b; Mondak & Halperin, 2008) suggest the opposite results. The Extraversion dimension is determined as a significant predictor of voting (Gerber et al., 2010) and is consistently associated with higher voting rates (Gerber et al., 2011a). However, based on the type of participation, the results are also varied (Mondak, 2010); mainly, the dimension of Extraversion is found to be positively related to active voting, such as attending a rally, rather than passive voting such as donating. Similarly, the Openness to Experience dimension is also detected as a significant predictor of voting (Mondak et al., 2010) and is significantly associated with higher levels of voting (Gerber et al., 2011a). In the case of lower voting levels, the dimension of Agreeableness is detected as a predictor (Gerber et al. 2011b, Mondak & Halperin 2008). However, the opposite result is also obtained in another study (Mondak et al., 2010). The problem of these inconsistent findings in the literature can be explained with different sampling frames containing participants from diverse geographic and historical contexts (Gerber et al., 2011a). On the other hand, regarding the political ideologies, there is a significant and consistent relationship between the Conscientiousness dimension and conservatism and between the Openness to

Experience dimension and liberalism (Alford & Hibbing 2007; Carney et al. 2008; Gerber et al. 2010; Gosling et al. 2003; Mondak 2010; Mondak & Halperin 2008; Van Hiel et al. 2000; Van Hiel & Mervielde 2004). In addition to this, a negative association between the Conscientiousness dimension and people who do not see the elections as an important event (Mondak et al., 2010) and those who do not believe in the power of their participation (Mondak, 2010).

In sum, since contradictory results lead researchers in different directions regarding Big Five personality traits and political participation, there is no clear basis for making precise assumptions about the influence of personality traits on voting behavior. Hence, the literature on the Big Five model among immigrant groups might provide a perspective that can be combined with some of these results to make assumptions.

Big Five Model, Political Behavior and Immigrants

Research that investigates Big Five personality traits by considering ethnic minorities in the fields of politics with a primary focus on the link between those traits and political attitudes (Gerber et al., 2010), host society's attitudes towards immigration (Dinesen, Klemmensen, & Nørgaard, 2016; Gallego & Pardos-Prado, 2014), toward equal opportunities for immigrants (Ackermann & Ackermann, 2015) and socio-cultural and political rights of minorities (Ziller & Berning, 2021). Regarding host society's attitudes towards immigrant populations, Openness to Experience and Agreeableness dimensions are reported as the main personality trait to predict prejudice (Akrami, Ekehammar, & Bergh, 2011; Ekehammar & Akrami, 2003; Sibley & Duckitt, 2008) and racism (Jackson & Poulsen, 2005; Silvestri & Richardson, 2001). However, the same dimensions are reported as predictors for permissive opinions on minority rights in another study (Ziller & Berning, 2021). In the same study, it is also indicated that the higher level of conscientiousness and neuroticism dimensions are related to lower faith in the responsiveness of government, which is explained by less willingness to endorse minority rights (Ziller & Berning, 2021).

The effects of personality traits of migrants were also studied on interregional migration decisions among Australians (Crown, Gheasi & Faggian, 2020) and international migrant decisions in Lithuanian students (Paulauskaitė, Šeibokaitė, & Endriulaitienė, 2010). Migration decision is found to be related to a higher level of Extraversion and Openness to Experience dimension (Crown, Gheasi & Faggian, 2020), while Conscientiousness and Openness to

Experience dimensions are linked to intentions of migration among students (Paulauskaitė, Šeibokaitė, & Endriulaitienė, 2010); specifically, students who have higher scores on Conscientiousness show no intention to migrate.

Finally, there is no particular study that examines the effects of personality traits on voting behavior among immigrant populations except for one study (Vitriol et al., 2020) that examined the immigrant subjects through the lens of the Big Five model to measure the reliability of Western research for immigrant groups by comparing Western and non-Western participants; their results did not give any leading clue for the purpose of this study. Thus, although several studies combine the Big Five model with political behaviors and the concept of immigration and immigrant, the knowledge is still absent about the degree of the influence of personality traits on voting behavior among immigrant populations.

Hypotheses

Openness to Experience

This dimension is related to the depth, originality, and complexity of people's mental and experiential life (John et al., 2008: Gerber et al., 2011). Higher scores on this dimension are connected to being open-minded, imaginative, sensitive, and intellectual, being open to change, new and different things, and conflict with the ideas maintaining the status quo; in contrast, low scores are related to being insensitive and traditional (Roccas et al., 2002). This dimension is linked to the higher level of voting (Gerber et al. 2011b, Mondak & Halperin 2008), and Dutch culture, which is defined as individualistic and feminine (Hofstede, 2001), promotes the related features of this dimension that are also related to a higher level of voting. On the other hand, one of the reactions to being a minority can be resilience to change among immigrants, which can show itself through being close to change and experience (Voicu & Comşa, 2014). Therefore, the first hypothesis of the study is shaped as below;

H1. The native Dutch group will have higher scores than the Immigrant group in the Openness to Experience dimension. High scores in the Openness to Experience dimension predict a higher level of voting among natives than immigrants.

Agreeableness

This dimension reflects being cooperative with others and a prosocial and communal approach toward others (John et al., 2008; Gerber et al., 2011). Higher scores in this dimension can be interpreted as being modest, compliant, and gentle (Roccas et al., 2002), which are consistent with traditional values. Because of the same reason mentioned below, since there is a more individualistic culture in the Netherlands, it is assumed that the scores for this dimension will be lower among native Dutch participants. However, coping with the alienation of being a foreigner in another country may cause immigrants to behave more harmonized with people from their own culture. Moreover, as can be seen in studies based on structural theories previously mentioned, the voting decisions of people from the same ethnic origin impact individuals (Voicu & Comşa, 2014). Because this dimension is related to the lower level of voting (Gerber et al. 2011b, Mondak & Halperin 2008) and traditional values, the second hypothesis of the study is shaped as below;

H2. The Immigrants group will have higher scores than the native Dutch group in the Agreeableness dimension. Higher scores in the Agreeableness dimension will predict a lower level of voting among immigrants than natives.

Conscientiousness

Conscientiousness is related to goal-directed behaviors and impulse control (John et al., 2008; Gallego & Oberski, 2012; Gerber et al., 2011). It can be interpreted as self-discipline to make everything in order and quality. In this dimension, high scores are associated with being responsible, meticulous, and careful, while low scores are related to being disorganized, reckless, and unscrupulous (Roccas et al., 2002). This dimension is associated with conservatism and conservative attitudes (Caprara et al. 2006; Carney et al. 2008; Gerber et al. 2010; Schoen and Schumann 2007), and previous research shows that specifically non-Western immigrants and their children tend to be more conservative compared to the Western host society (e.g., Ersanilli, 2012). Since 11.9% of the Dutch population are non-Western immigrants (e.g., Ersanilli, 2014), it is assumed that the immigrant group will likely show higher scores than the native Dutch people in this dimension. Furthermore, Except for one study (Schoen & Schumann, 2007), the Conscientiousness dimension is reported as related to a lower level of voting. Considering all of this information, the third hypothesis of the study is shaped as below;

H3. The Immigrants group will have higher scores than the native Dutch group in the Conscientiousness dimension. Higher scores in the Conscientiousness dimension will predict a lower level of voting among immigrants than natives.

Extraversion

This dimension has the most straightforward definition compared to others and is related to an enthusiastic approach toward social life and materialist aspects of life (Gerber et al., 2011). People with higher scores in this dimension are linked to being assertive, sociable, and talkative (Roccas et al., 2002). The low scores can be interpreted as the features of being introverted. Also, this dimension is compatible with the goals of stimulation values such as pursuing adventure, pleasure, excitement, or success (Roccas et al., 2002). Although there are mixed findings regarding this dimension's link with voting because the features of this dimension advocate being vocal about life and ideas, the direction of the relationship will be predicted as positive. Moreover, since higher levels of Extraversion are linked to being more likely to migrate (Crown et al., 2020; Paulauskaitė et al., 2010), the fourth hypothesis of this study is shaped as below;

H4. The Immigrant group will have higher scores than the native Dutch group in the Extraversion dimension. High scores in the Extraversion dimension will predict a higher level of voting for both natives and immigrants.

Neuroticism

The last dimension of the Big Five model is related to negative emotionality and temperedness (John et al., 2008: Gerber et al., 2011). Being insecure, anxious, and depressed are the common features of people with high scores in Neuroticism (Roccas et al., 2002), while the low scores are associated with being calm, stable, and having emotional control. Compared to the other dimensions, Neuroticism is the only dimension with a negative connotation related to higher scores. Previous studies found that Neuroticism is associated with supporting conservative candidates and ideas (Mondak 2010, Mondak & Halperin 2008). Similarly, Ziller and Berning (2021) reported that high scores in Neuroticism are related to a lower level of faith in government responsiveness, which is interpreted to be related to less willingness to approve minority rights in the study. Based on limited knowledge, it is assumed that Neuroticism can be higher among the native Dutch group. Moreover, as happens in the Conscientiousness dimension, except for one study (Schoen & Schumann, 2007),

Neuroticism is reported as related to a lower level of voting. Hence, the fifth hypothesis of the study is shaped as below;

H5. The native Dutch group will have higher scores than the Immigrant group in the Neuroticism dimension. Higher scores in the Neuroticism dimension will predict a lower level of voting for both immigrants and natives.

Identification with Dutch Culture

It is stated that identification with a country that one lives in addition to the feeling of belonging to the minority group, provides a positive perception and satisfaction for immigrants' perception of their situation, which is a crucial part of mobilizing for political actions (Klandermans, van der Toorn, & van Stekelenburg 2008). Therefore, if immigrants can position themselves to be entitled to the same political outcomes of their actions as those of the host society, this can be accepted as a positive sign of identification with the host society (Wenzel, 2000; Scuzzarello, 2015). Previously, a strong relationship between voting and a higher level of belonging to the host society is found in an example from Britain (Heath & Roberts, 2008). Therefore, since voting is a sign of political integration, which reflects a high level of cultural integration for immigrants, it is assumed that a higher level of identification among immigrant communities can predict a higher level of voting. Regarding the Big Five model, the same assumption as previous hypotheses will be used;

H6. A higher level of identification with Dutch culture will predict a higher level of voting for immigrants who have higher scores for Openness to Experience and Extraversion.

Methods

Participants

This research explores the effect of Big Five personality traits on voting behaviors among native and immigrant Dutch citizens with the impact of the level of identification with the Dutch society by using the high-quality survey data from the LISS panel (Longitudinal Internet Studies for the Social Sciences), which is the principal segment of the MESS project (LISS Panel Data, n.d.) in the Netherlands. The LISS consists of 5,000 households and approximately 8000 individuals, is based on a valid probability sample of households drawn from the population register by Statistics Netherlands, and has fielded waves monthly since

2007 (Revilla et al., 2015). Panel members that are selected to reflect a valid probability sample of the Dutch population complete online questionnaires that include a wide array of topics every month, and they are paid for each completed questionnaire to prevent non-responsiveness. As a result of these particular applications, LISS has a high level of response rates -almost 80%-, the representative power of the sample is remarkable, and the quality of responses is detected as similar to or higher than in the European Social Survey (Revilla, 2012). The 13th wave of the data was used for this research, collected in 2020 and 2021. This dataset allows researchers to analyze voting intentions and behaviors; in this study, only the variables about voting behaviors are included. The total number of participants was 10178 in the beginning. However, after excluding the participants who did not answer the questions about their origin and participants who are not eligible to vote in the Netherlands, the valid number of the participants was 7251 (71.0%).

Variables

Big Five Personality Traits

The dimensions of Openness to Experience, Extraversion, Agreeableness, Conscientiousness, and Neuroticism form the Big Five Model. In order to examine how people define themselves through these traits, 50-item International Personality Item Pool – Five-Factor Model (IPIP-FFM) was used (Appendix A), and the internal consistencies of the FFPI scales are reported as high, ranging between 0.89 and 0.82 (IPIP, n.d.). In this model, each dimension is measured by ten statements (Ehrhart et al., 2009). All statements include a personal assertion that participants can identify themselves with or not. Based on the suitability of the statement to their personality, participants give a score between 1 'Very Inaccurate' and 5 'Very Accurate.' (Goldberg et al., 2006). Also, since consecutive questions are not under the personality dimension, it is hard to figure out which trait is measured through participants' questions. Because five personality traits are measured through different questions, a final score for each personality trait is created by calculating advice on the guideline of IPIP. Based on the guideline, if the statement is keyed by a "+," the response "Very Inaccurate" is assigned a value of 1, "Moderately Inaccurate" a value of 2, "Neither Inaccurate nor Accurate" a 3, "Moderately Accurate" a 4, and "Very Accurate" a value of 5. However, for the statements are keyed by a "-," the scoring is performed in the opposite direction; the response "Very Inaccurate" is assigned a value of 5, "Moderately Inaccurate" a value of 4, "Neither Inaccurate nor Accurate" a 3, "Moderately Accurate" a 2, and "Very Accurate" a value of 1. After scoring

the statements and calculating sum scores for each dimension separately, obtained numbers represent a point in a spectrum. The people's self-placement on the spectrum combines to construct a result for each dimension (Anderson, 2009). For example, a high openness score is interpreted as being likely to take on new experiences, while a low openness score is less likely to embrace change. Higher scores for each dimension are interpreted as a higher embracing of that particular personality trait.

Voting

As a part of LISS data collection, the question regarding participation in the latest parliamentary election is asked in every wave of the research. In the data collection process for Wave 13, the question "Did you vote in the most recent parliamentary elections, held on 15 March 2017?" was asked by all participants, and the answers were varied as 'Yes,' 'No,' 'Not eligible to vote' and 'I do not know. For this study, the participants who were not eligible to vote and answered as 'I do not know' were excluded from the analysis process.

Identification with Dutch Culture

The question of "How strongly do you feel that you are Dutch?" is accepted as the moderator variable to examine the effect of identification level on the relationship between personality traits and voting behavior among immigrants. The answers vary between 1 'Very Strongly' and 4 'Not strongly at all.' The direction of the answers is recoded as 1 ‘Not strongly at all’ and 4 ‘Very Strongly’ to make it fit the other scales.

Age and Gender

Regarding the relationship between personality traits and voting, age and gender are accepted as the control variables for this study. Although extreme scores are in the age range, they are kept for the analysis since there is no warning on LISS's codebook for the data. The answers to the question about gender category are 'Male,' 'Female,' and 'Other’. In Wave 13, no participant answered 'Other.' Thus, the results only included men and women categories.

Results

As the first step, descriptive analysis was conducted for age, gender, voting in the last general election in the Netherlands in 2017, identification with Dutch culture variables, and Big Five Personality traits among natives and immigrant groups separately (Table 1). The percentage of Dutch natives was 79.9% (N= 5797) while 20,1% of participants (N= 1454) had immigrant

background. Based on the results for native groups, when it was asked Dutch participants how strongly they felt that they belonged to Dutch identity, 57.2% of them answered the question 'Very strongly' while 35.8% of them said 'Fairly strongly,' 5.2% of them said 'Not so strongly' and 1.8% of them said 'Not strongly at all.' The immigrants' answers to identification with Dutch cultures varied as 43.6% said 'Fairly strongly'; 33.6% said 'Very strongly'; 13.4% said 'Not so strongly,' and 9.4% said 'Not strongly at all.' According to the Big Five Personality Traits results, there are no remarkable differences between groups based on mean scores for one or more personality traits.

Assumptions

In the third step, the assumptions for logistic regression are examined one by one before starting the regression analysis. Regarding the assumptions of logistic regression, this study meets the criterion of the first assumption that the dependent variable should be measured on a dichotomous scale; the dependent variable in this study answers the question of whether the participants voted in the 2017 general elections in the Netherlands. According to the second assumption, the independent variables should be either continuous or categorical, which in this study, five dimensions of personality are five continuous independent variables. The model's third assumption requires a low correlation level between independent variables; the table below shows that the levels of correlation between five personality traits do not impede the further regression analysis.

Regarding the fourth assumption, the outliers are detected, and because of their low number, they are not excluded from the further analysis process (Figure 1, Appendix B). The fifth and the last assumption requires a linear relationship between the logit of the outcome and each predictor variable. Regarding the Box Tidwell transformation results, five predictor variables are not statistically significant, indicating that there is no violation of the assumption of linearity of the logit.

For the regression analysis, the dataset is split based on the origin; the results are interpreted for two groups, native and immigrant Dutch citizens. For both groups, two models of logistic regression analysis were conducted. At the same time, Model 1 examined control variables [age and gender] and independent variables [Big Five Personality Traits], and Model 2 examined the same variables together with the interaction effect between independent variables and moderator variables [the level of identification with Dutch culture].

Table 2
Correlation between Big Five Personality Traits

	N	M	SD	1	2	3	4	5
Extraversion	7251	31.98	6.69	1	.324**	.124**	.243**	.316**
Agreeableness	7251	38.41	5.30	.324**	1	.305**	.094**	.289**
Conscientiousness	7251	37.33	5.18	.124**	.305**	1	.263**	.258**
Neuroticism	7251	34.71	7.28	.243**	.094**	.263**	1	.170**
Openness	7251	34.97	5.00	.316**	.289**	.258**	.170**	1

**p<.001

Table 1
Descriptive Statistics for Participants

	Natives						Immigrants					
Variables	N	Mean	SD	Min	Max	%	N	Mean	SD	Min	Max	%
Gender	5797	1.53	.499			53.4% Female	1454	1.52	.500			52.1% Female
Age	5797	52.24	18.84	16	107		1454	46.18	17.58	16	93	
Voting	5797	1.11	.318			88.6% voted	1454	1.23	.422			76.9% voted
Identification	5797	3.48	.679	1	4		1454	3.01	.919	1	4	
Extraversion	3692	32.02	6.73	10	50		982	31.79	6.41	11	50	
Agreeableness	3692	38.62	5.23	13	50		982	37.65	5.47	18	50	
Conscientiousness	3692	37.59	5.06	16	50		982	36.51	5.42	22	50	
Neuroticism	3692	35.01	7.23	10	50		982	33.65	7.28	12	50	
Openness	3692	34.98	4.98	10	50		982	34.83	5.05	17	49	

Table 3.
Coefficients after Box-Tidwell transformation

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.676	.487		5.491	<.001
	Extraversion	.007	.021	.141	.334	.738
	Agreeableness	-.049	.040	-.765	-1.238	.216
	Conscientiousness	-.084	.046	-1.255	-1.848	.065
	Neuroticism	-.035	.021	-.739	-.1626	.104
	Openness	.013	.042	.194	.311	.756
	tr_Ext	-.001	.005	-.097	-.231	.817
	tr_Agr	.010	.009	.700	1.132	.258
	tr_Cons	.007	.005	.672	1.478	.140
	tr_Neu	-.004	.009	-.280	-.449	.654
	tr_Opn	.018	.010	1.218	1.792	.073

a. Dependent Variable: Did you vote in the most recent parliamentary elections on 15 March 2017?

The Regression Analysis Results for the Native Dutch Group

The first logistic regression analysis was performed to analyze the relationship between Big Five personality traits and voting in the 2017 general election among the native Dutch population in the Netherlands (Table 4). Among 5797 native Dutch participants, 3692 were included in the analysis; the number of missing cases was 2105 (36.3% of the population) because they did not answer the questions about the Big Five personality traits. The likelihood ratio chi-square test indicates that our full model is a significant improvement in fit over a null (intercept-only) model, $X^2(8)=93.922$, $p < .001$. The Hosmer and Lemeshow chi-square test is insignificant [$X^2(8)=6.974$, $p=.539$], which indicates a well-fitting model.

Based on *Model 1* for the Native Dutch group, the Openness to Experience dimension was a negative and significant (b= -.079, s.e.= .012, p< .001) predictor of voting among natives. The odds ratio indicates that for every one-unit increase on the Openness to Experience dimension, the voting odds decreased by 7.6% (95% CI [.902, .947]). Therefore, the first hypothesis of the study is rejected, which means higher scores in the Openness to Experience dimension do not significantly predict a higher level of voting among natives; on the contrary, it is found that higher scores in the Openness to Experience dimension significantly predict a

lower level of voting. The Agreeableness dimension was a negative and significant (b=-.026, s.e.=.012, p=.029) predictor of voting among natives. The odds ratio indicates that for every one-unit increase in the Agreeableness trait, the voting odds decreased by 2.5% (95% CI [.953, .997]). Based on the results, the second hypothesis is supported, which means higher scores in the Agreeableness dimension significantly predict a lower level of voting for natives. The Extraversion dimension was the only positive and significant (b= .023, s.e.= .009, p=. 012) predictor of voting in this group. When holding all other predictor variables constant, the odds of voting occurring increased by 2.3% (95% CI [1.005, 1.041]) for a one-unit increase in the Extraversion dimension. Based on the results, the fourth hypothesis is supported, which means higher scores in the Extraversion dimension significantly predict a higher level of voting for native Dutch groups. Conscientiousness (b= -.011, s.e.= .012, p= .358), and Neuroticism (b= -.008, s.e.= .008, p= .348) traits were negative but non-significant predictors of voting among natives. Based on the results, both the study's third and fifth hypotheses are rejected.

Regarding control variables, based on the results, age was negative and significant (b= -.018, s.e.= .003, p< .001) predictor of voting among native Dutch groups. The odds ratio indicates that for every one-unit decrease in age, the odds of voting increased by a factor of 1.8% (95% CI [.976, .989]). Gender as another control variable was positive but non-significant (b= .202, s.e.= .118, p= .087) predictor of voting among natives; lastly, the identification with Dutch culture was negative but non-significant (b= -.097, s.e.= .078, p= .214) predictor of voting among natives.

In *Model 2* for the native Dutch group**,** logistic regression was used to investigate whether the level of identification with Dutch culture might affect the relationship between five personality traits and voting. The likelihood ratio chi-square test indicates that the entire model is a significant improvement in fit over a null (intercept-only) model, $X^2(13)= 105.565$, $p < .001$. The Hosmer and Lemeshow chi-square test is insignificant [$X^2(8)= 10.334$, p=.242], which indicates a well-fitting model.

Similarly, with the first model, the Extraversion dimension was a positive and significant (b= .171, s.e.= .051, p < .001) predictor of voting among natives in this model; the odds of voting occurring increased by 18.6% (95% CI [1.074, 1.310]) for a one-unit increase in Extraversion dimension. Similarly with Model 1, the Openness to Experience dimension was negative and

significant (b= -.184, s.e.= .065, p= .004) predictor of voting among native Dutch citizens. The odds ratio indicates that for every one-unit increase on the Openness to Experience dimension, the odds of voting decreased by 16.8% (95% CI [.732, .944]).

To probe the interaction, simple effects coefficients were computed for the level of identification with Dutch culture with each personality trait, and all terms were entered into the model together. The results indicated only a negative significant interaction between the Extraversion dimension and identification with Dutch culture regarding voting behavior (b= -.042, s.e.= .014, p= .003); at high levels of identification with Dutch culture, every one unit increase in the Extraversion dimension was associated with a slightly lower, significant, decrease of voting by 4.1% (95% CI [.933, .986]). A native Dutch who identifies themselves with Dutch culture at a high level has 0.959 times the odds of voting compared to those of the same native group who identifies themselves with Dutch culture at a lower level. Lastly, The interaction results for the Agreeableness trait (b= .027, s.e.= .016, p= .082), the Conscientiousness trait (b= -.011, s.e.= .017, p= .524), the Neuroticism trait (b= .001, s.e.= .012, p= .934) and the Openness to Experience trait (b= .030, s.e.= .018, p= .097) were determined as not significant.

Table 4.
Logistic Regression Analysis for Natives Group

	Model 1					Model 2				
	B	*SE B*	*Wald χ2*	*Exp (B)*	*95% CI OR*	*B*	*SE B*	*Wald χ2*	*Exp (B)*	*95% CI OR*
Age	-.018**	*.003*	*29.105*	*.982*	*.976-.989*	*-.018**	*.003*	*29.045*	*.982*	*.976-.989*
Gender	*.203*	*.118*	*2.989*	*1.226*	*.973-1.543*	*.202*	*.118*	*2.931*	*1.224*	*.971-1.542*
Identification	*-.097*	*.078*	*1.546*	*.907*	*.778-1.058*	*-.434*	*.789*	*.302*	*.648*	*.138-3.042*
Extraversion	*.023**	*.009*	*6.331*	*1.023*	*1.005-1.041*	*.171**	*.051*	*11.375*	*1.186*	*1.074-1.310*
Agreeableness	*-.026**	*.012*	*4.781*	*.975*	*.953-.997*	*-.119**	*.055*	*4.657*	*.888*	*.797-.989*
Conscientiousness	*-.011*	*.012*	*.846*	*.989*	*.967-1.012*	*.026*	*.058*	*.200*	*1.026*	*.915-1.151*
Neuroticism	*-.008*	*.008*	*.879*	*.992*	*.976-1.008*	*-.011*	*.042*	*.071*	*.989*	*.911-1.074*
Openness	*-.079**	*.012*	*40.498*	*.924*	*.902-.947*	*-.184**	*.065*	*8.086*	*.831*	*.732-.944*
Ext*Ide						*-.042**	*.014*	*8.968*	*.959*	*.933-.986*
Agr*Ide						*.027*	*.016*	*3.017*	*1.027*	*.997-1.059*
Con*Ide						*-.011*	*.017*	*.405*	*.990*	*.958-1.022*
Neu*Ide						*.001*	*.012*	*.007*	*1.001*	*.978-1.024*
Opn*Ide						*.030*	*.018*	*2.754*	*1.031*	*.995-1.068*
Constant	*2.562**	*.660*	*15.083*	*12.959*		*3.688*	*2.802*	*1.732*	*39.950*	

**p<.001

*p <.05

The Regression Analysis Results for the Immigrants Group

The second logistic regression analysis was performed to analyze the relationship between Big Five personality traits and voting in the 2017 general election among the immigrant population in the Netherlands (Table 5). Among 1454 immigrant participants, 714 were included in the analysis; the number of missing cases was 740 (50.9% of the population). The likelihood ratio chi-square test indicates that our full model is a significant improvement in fit over a null (intercept-only) model, $X^2(8)= 38.972$, $p < .001$. The Hosmer and Lemeshow chi-square test is insignificant [$X^2(8)= 6.058$, p= .641], which indicates a well-fitting model.

Based on the results of *Model 1* for the Immigrants group, the Openness to Experience (b= -.036, s.e.= .022, p= .108), Extraversion (b= -.002, s.e.= .016, p=. 908), Agreeableness (b= -.030, s.e.=.020, p= .129), Conscientiousness (b= -.006, s.e.= .020, p= .752), and Neuroticism (b= -.005, s.e.= .014, p= .746) were negative but non-significant predictors of voting among immigrants. Based on these results, all of the hypotheses are rejected.

Regarding control variables, based on the results, age was negative and significant (b= -.025, s.e.= .006, p< .001) predictor of voting among immigrants. The odds ratio indicates that for every one-unit increase in age, the odds of voting increased by 2.5% (95% CI [.963, .987]). Gender as another control variable was positive but non-significant (b= .202, s.e.= .118, p= .087) predictor of voting among natives. Lastly, the identification with Dutch culture was negative but non-significant (b= -.097, s.e.= .078, p= .214) predictor of voting among natives.

In *Model 2* for the *Immigrants* group**,** logistic regression was used to investigate whether the level of identification with Dutch culture might affect the relationship between five personality traits and voting. The likelihood ratio chi-square test indicates that the whole model is a significant improvement in fit over a null (intercept-only) model, $X^2(13)= 41.737$, $p < .001$. The Hosmer and Lemeshow chi-square test is insignificant [$X^2(8)= 5.994$, p= .648], which indicates a well-fitting model. Once again, based on *Model 2* for the Immigrant group, there is no significant interaction between personality traits and the level of identification with Dutch culture. The sixth and last hypothesis of the study is also rejected.

Table 5.
Logistic Regression Analysis for Immigrants Group

	Model 1					Model 2				
	B	*SE B*	*Wald χ2*	*Exp (B)*	*95% CI OR*	*B*	*SE B*	*Wald χ2*	*Exp (B)*	*95% CI OR*
Age	*-.025***	*.006*	*17.121*	*.975*	*.963-.987*	*-.026***	*.006*	*17.345*	*.975*	*.963-.987*
Gender	*-.040*	*.196*	*.041*	*.961*	*.654-.1412*	*-.034*	*.197*	*.030*	*.966*	*.657-1.422*
Identification	*-.166*	*.108*	*2.386*	*.847*	*.686-1.046*	*.220*	*.982*	*.050*	*1.246*	*.182-8.541*
Extraversion	*-.002*	*.016*	*.013*	*.998*	*.967-1.030*	*.061*	*.055*	*1.232*	*1.063*	*.954-1.183*
Agreeableness	*-.030*	*.020*	*2.310*	*.971*	*.934-1.009*	*-.025*	*.069*	*.132*	*.975*	*.853-1.116*
Conscientiousness	*-.006*	*.020*	*.100*	*.994*	*.955-1.034*	*.000*	*.074*	*.000*	*1.000*	*.864-.1157*
Neuroticism	*-.005*	*.014*	*.105*	*.995*	*.968-1.023*	*-.061*	*.050*	*1.509*	*.941*	*.853-1.037*
Openness	*-.036*	*.022*	*2.578*	*.965*	*.923-1.008*	*-.016*	*.087*	*.032*	*.985*	*.831-1.167*
Ext*Ide						*-.021*	*.018*	*1.437*	*.979*	*.946-1.014*
Agr*Ide						*-.001*	*.022*	*.003*	*.999*	*.957-1.043*
Con*Ide						*-.002*	*.023*	*.010*	*.998*	*.953-1.044*
Neu*Ide						*.019*	*.016*	*1.433*	*1.019*	*.988-1.051*
Opn*Ide						*-.006*	*.027*	*.058*	*.994*	*.943-1.047*
Constant	*3.356***	*.961*	*12.188*	*28.678*		*2.177*	*3.108*	*.491*	*8.821*	

**p<.001
*p <.05

Conclusion

This study aimed to investigate the relationship between personality traits and voting behavior; it was conducted to answer the question of to what extent Big Five personality traits impact the voting of immigrant citizens in the Netherlands. Since previous research did not provide a basis for explaining this relationship, particularly among immigrant populations, six hypotheses are shaped by the several studies that examined the relationship between the personality traits and subjects such as political participation, attitudes toward immigrants, and migration decisions. All hypotheses were measured in the thirteenth wave of the LISS dataset through SPSS, and the results were explained separately for native Dutch and immigrant citizens. The discussion about the results will also follow the same structure; however, the recommendations for future research and policymakers will be given regarding general results, including both groups. Lastly, since there is no significant result for the immigrant group and none of the hypotheses regarding this group cannot be supported, the discussion will exclude the comparison between the groups.

Regarding the study's first hypothesis, it is assumed that higher scores in the Openness to Experience dimension would predict a higher level of voting. Although previous studies found a positive correlation between high scores in this dimension and voting (Gerber et al., 2011a), this study's findings for the native Dutch group reported the opposite and a negative correlation between voting behavior and the Openness to Experience dimension was detected for native Dutch group. This unexpected result can be explained by the features related to the high scores in the Openness dimension, which represent the tolerance to change, novel ideas, innovative approaches, and opposition to traditionality (Roccas et al., 2002). Since voting is a traditional way of political participation, those with higher scores in this dimension might see it as ineffective and outdated, and eventually, they prefer not to vote. Furthermore, the Openness to Experience dimension is positively linked to participating in a protest, representing active political participation (van Heelsum, 2002). This positive relationship explains that the productive opportunities, for instance, socializing with others who share the same perspective, in active political participation meet the need for intellectual stimulation, which is related to the Openness dimension (Borghans, Duckworth, Heckman & Ter Weel, 2008). From this perspective, voting cannot provide any productive opportunities, and those who seek intellectual stimulation prefer not to engage in this particular political act. Also, it is

previously reported that the Openness to Experience dimension is strongly related to lower identification with a major party (Gerber et al., 2010a). In combination with the disbelief about the effectiveness of voting, preferring not to vote might become a protesting behavior toward the major party.

Secondly, the findings for the native Dutch group showed that higher scores in the Agreeableness dimension significantly predict a lower level of voting, and the study's second hypothesis is supported. Moreover, the third hypothesis of the study is also supported, and it is found that higher scores in the Extraversion dimension significantly predict higher voting levels among the native Dutch population. On the basis of previous research (Mondak, 2010)**,** it is possible to say that the Extraversion dimension is related to being vocal about social and political issues and connected to feeling relaxed while expressing personal thoughts and perceptions. It is a communication and participation-driven concept. Therefore, not only for voting but for any other passive or active political participation act can be a good platform for those with high scores on the Extraversion dimension to share their political perspective.

Lastly, for the native Dutch group, no significant relationship between Conscientiousness, Neuroticism, and voting behavior was documented. Based on previous research, it was assumed that both dimensions would predict a lower level of voting. Conscientiousness and Neuroticism were reported as related to conservatism and conservative political ideas before (e.g., Mondak & Halperin 2008; Gerber et al. 2010), which is connected to collective motivation regarding political mobilization. Hence, both Conscientiousness and Neuroticism must be researched by collectively bonding elements such as religion, ethnic background, and neighborhood.

The results for the immigrant group showed no significant relationship between any dimension of the Big Five model and voting behavior. Although the first five hypotheses include a comparison between native Dutch and immigrant citizens regarding the relationship between voting behavior and each personality trait, insignificant results for the immigrant hindered any comparative discussion between groups. Moreover, the last hypothesis of the study, which assumed a higher level of identification with Dutch culture would predict a higher level of voting for immigrants with higher scores for Openness to Experience and Extraversion, was also rejected. These results can be explained by the rare usage of personality measurement in datasets on political participation (Mondak et al., 2011); as a

result of the limited number of datasets with personality measurements, previous findings that new hypotheses testing rely on are also limited and similar, and thus, further research must struggle with the representation problem (Mondak et al., 2010; Mondak, 2010; Gerber et al., 2011a).

Nevertheless, age, the control variable in this study, is a significant indicator of voting behavior in both native Dutch and immigrant groups; it is found that more younger people are less likely to vote. This can be explained by the variation of trust levels for the election process between different generations and the new generations' perspective on passive political participation acts.

Limitations & Recommendations for Future Studies

This research has several structural and theoretical limitations that can explain the surprising results. Firstly, the number of participants in the immigrant group is far less than the numbers in the native Dutch group; this difference might have led to problematic and insignificant results from the perspective of representation and fair comparison. Thus, a higher and equal number of participants should be assured in future research to prevent representation issues.

Secondly, the data in this study is based on a self-reported survey, which is associated with a higher response bias. Response bias refers to participants' tendencies to answer questions untruthfully or inaccurately (Helmes et al., 2015), and it is prevalent in personality self-reports (Navarro-González, Lorenzo-Seva & Vigil-Colet, 2016). Therefore, participants in this study might answer the question of personality traits in a direction they want to perceive themselves or be perceived by others. To prevent the disruptive effects of response bias on the reliability of the research, future studies should use more objective measurement tools for personality traits or guide the participants for more honest answers.

Thirdly, this study examined the level of identification with host culture via one variable that includes only four levels. However, identification with the host culture is a multilayered concept; it can be related to several elements such as ethnic group, religion, age, and job status (e.g., Scuzzarello, 2015) and differentiate through time by personal experiences. Therefore, future research can benefit from studying immigrants' constructions of identifications from a multilayered perspective and then examining its effect on the

relationship between voting and personality. Furthermore, the level of identification with a host culture can also vary between generations as a part of the adaptation and acculturation process (e.g., Albertini, Mantovani & Gasperoni, 2019). In addition, personality measures have been found reliable among native Dutch and immigrant populations in the Netherlands (see the Nijenhuis, van der Flier, & van Leeuwen, 1997); however, there is no replication and approval of the same result for different generations. Since age is a significant predictor of voting behavior and the need for a different perspective for the identification concept, it is recommended that adding the factor of generations as a variable to future research seems essential to strengthen the explanatory power of personality traits on political participation.

Lastly, voting behavior was measured based on one dichotomous question of whether the participants voted or not in the general elections in March 2017. However, there might be several reasons behind this single decision, from personal reasons such as health problems or mood to situational reasons such as the absence or presence of a political candidate that one can support. Therefore, it is recommended for future research that the longitudinal analysis can be better to see voting patterns rather than focusing on a one-year decision, which can be related to candidates, party propaganda, or any other personal or structural reason that is only associated with that year. Future research should consider the individual structure of identification and integration among immigrants as a part of personality.

Policy Advice

The study's other aim is to contribute to further policy decisions. Therefore, to come up with policy advice regarding immigrant votes, this study problematized the link between low voting levels among the immigrant population and aimed to provide a base for answering the question of how immigrant voting can be increased in the Netherlands through a policy change. However, the results indicated that a bit of solid policy advice initially requires more comprehensive research among immigrant populations by considering institutional and structural elements altogether. Specific to the Netherlands, there are preliminary studies about immigrant votes (see Fennema & Tillie, 1999, 2004). Before suggesting a theoretical framework for a new policy direction based on this study, it is recommended to conduct further research that follows the footprints of the previous studies mentioned above.

In the light of the limited findings of this study, it is recommended that a new policy should take concrete steps to break the deflector stigma around immigrant voting. Although it is an old explanation, the political quiescence thesis or the idea of passivity of immigrants, which is a consideration based on the fact that migrant workers are a-political (Martiniello, 1997), is still prominent. This political apathy was previously explained by the exclusion of first-generation migrant workers from political processes (Martiniello, 2005). In addition to this, since the immigrant status is more related to economic disruptions, tribulations of transnational families, and reconstruction of social ties, being part of the political mobilization cannot be a priority for immigrant groups (Chui, Curtis, & Lambert, 1991). Therefore, apart from the need for new extended research to improve political participation among immigrants, policymakers should form a more responsive and elaborate dialogue with different minority groups.

In addition to this, policies or laws regarding dual citizenship can be reviewed. Dual or multiple citizenship can be seen as an indicator of welcoming the immigrant population by acknowledging their ties with their origin country, and they promote political integration and participation (Bauböck, 2003, as cited in Schlenker, 2016). However, although more than three million immigrant calls the Netherlands their home today, this hospitality does not prevent the criticism about the myth of multiculturalism (e.g., Scholten, 2013); the Dutch government wants to limit dual nationality as much as possible through naturalization to prevent confusions about civic rights (Ministerie van Justitie en Veiligheid, 2021). It can be interpreted as an official rejection of their roots by some immigrants and might affect their identification with the Dutch culture and society; therefore, they can prefer to have a passive position on political processes.

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APPENDIX A

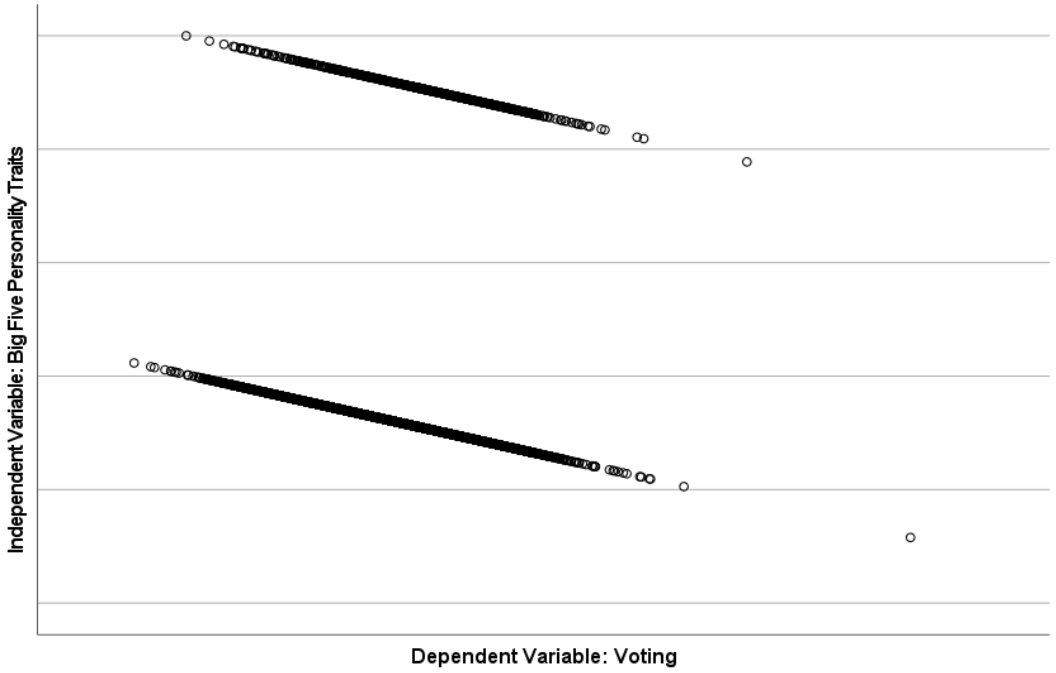
50-item Sample Questionnaire for IPIP Measures

Description: On the following pages, there are phrases describing people's behaviors. Please use the rating scale below to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. Please read each statement carefully, and then fill in the bubble that corresponds to the number on the scale.

1. Am the life of the party. (1+)
2. Feel little concern for others. (2-)
3. Am always prepared. (3+)
4. Get stressed out easily. (4+)
5. Have a rich vocabulary. (5+)
6. Don't talk a lot. (1-)
7. Am interested in people. (2+)
8. Leave my belongings around. (3-)
9. Am relaxed most of the time. (4-)
10. Have difficulty understanding abstract ideas. (5-)
11. Feel comfortable around people. (1+)
12. Insult people. (2-)
13. Pay attention to details. (3+)
14. Worry about things. (4+)
15. Have a vivid imagination. (5+)
16. Keep in the background. (1-)
17. Sympathize with others' feelings. (2+)
18. Make a mess of things. (3-)
19. Seldom feel blue. (4-)
20. Am not interested in abstract ideas. (5-)
21. Start conversations. (1+)
22. Am not interested in other people's problems. (2-)
23. Get chores done right away. (3+)
24. Am easily disturbed. (4+)
25. Have excellent ideas. (5+)
26. Have little to say. (1-)
27. Have a soft heart. (2+)
28. Often forget to put things back in their proper place. (3-)
29. Get upset easily. (4+)
30. Do not have a good imagination. (5-)
31. Talk to a lot of different people at parties. (1+)
32. Am not really interested in others. (2-)
33. Like order. (3+)
34. Change my mood a lot. (4+)
35. Am quick to understand things. (5+)
36. Don't like to draw attention to myself. (1-)
37. Take time out for others. (2+)
38. Shirk my duties. (3-)
39. Have frequent mood swings. (4+)
40. Use difficult words. (5+)
41. Don't mind being the center of attention. (1+)
42. Feel others' emotions. (2+)
43. Follow a schedule. (3+)
44. Get irritated easily. (4+)
45. Spend time reflecting on things. (5+)
46. Am quiet around strangers. (1-)
47. Make people feel at ease. (2+)
48. Am exacting in my work. (3+)
49. Often feel blue. (4+)
50. Am full of ideas. (5+)

Answers: very inaccurate [1], moderately inaccurate [2], neither inaccurate nor accurate [3], moderately accurate [4], very accurate [5]. Coding: (1) Extraversion, (2) Agreeableness, (3) Conscientiousness, (4) Neuroticism, or (5) Openness. Direction: + or -.

Figure 1.
The scatterplot for IV and DV outliers



APPENDIX C

Syntax

```
* Encoding: UTF-8.

*BIG FIVE SUM SCORES ARE COMPUTED

*MERGING DATASETS IS EXECUTED

*CODING FOR DV IS EXECUTED

RECODE voting (-9=9) (1=1) (2=2) (3=SYSMIS).
EXECUTE.

*EXCLUDING MISSING VARIABLES IS EXECUTED

USE ALL.
COMPUTE filter_$=(voting = 1 OR voting = 2 OR origin = 0
    OR origin = 101 OR origin = 102 OR origin = 201 OR origin = 202).
VARIABLE LABELS filter_$ 'voting = 1 OR voting = 2 OR '+
    'origin = 0 OR origin = 101 OR origin = 102 OR origin = 201 OR origin = 202 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.

*DESCRIPTIVE ANALYSIS FOR DEMOGRAPHICS

DATASET ACTIVATE DataSet1.
FREQUENCIES VARIABLES=gender age origin voting Identification
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN MEDIAN
  /ORDER=ANALYSIS.


*SPLITTING DATASET TO THE TWO GROUPS [NATIVES AND IMMIGRANTS]

RECODE origin (0=0) (101=1) (102=1) (201=1) (202=1) (999=SYSMIS) INTO new_origin.
VARIABLE LABELS  new_origin 'natives vs immigrants'.
EXECUTE.

DATASET ACTIVATE DataSet1.
SORT CASES  BY new_origin.
SPLIT FILE SEPARATE BY new_origin.

*DESCRIPTIVES FOR BIG FIVE PERSONALITY TRAITS

FREQUENCIES VARIABLES=Ext_Sum Agr_Sum Con_Sum Neu_Sum Opn_Sum
  /STATISTICS=STDDEV MINIMUM MAXIMUM MEAN MEDIAN
  /ORDER=ANALYSIS.

*ASSUMPTIONS CALCULATIONS
* 1) Independent variables are not highly correlated.

CORRELATIONS
  /VARIABLES=Ext_Scores Agr_Scores Opn_Scores Cons_Scores Neu_Scores
  /PRINT=TWOTAIL NOSIG FULL
  /MISSING=PAIRWISE.

* 2) Checking for outliers.

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT voting
  /METHOD=ENTER Ext_Sum Agr_Sum Con_Sum Neu_Sum Opn_Sum
  /SCATTERPLOT=(*ZRESID ,*ZPRED)
  /RESIDUALS NORMPROB(ZRESID)
  /CASEWISE PLOT(ZRESID) OUTLIERS(3)
```

APPENDIX C

Syntax

```
 /SAVE MAHAL.

*3) Box-Tidwell transformation for measuring linearity between the logit of the outcome and each predictor variable

*3.1) executing the Box-Tidwell transformation

COMPUTE tr_Ext=ln(Ext_Sum) * Ext_Sum.
EXECUTE.

COMPUTE tr_Agr=ln(Agr_Sum) * Agr_Sum.
EXECUTE.

COMPUTE tr_Opn=ln(Con_Sum) * Con_Sum.
EXECUTE.

COMPUTE tr_Cons=ln(Neu_Sum) * Neu_Sum.
EXECUTE.

COMPUTE tr_Neu=ln(Opn_Sum) * Opn_Sum.
EXECUTE.

*3.3) running logistic regression for transformed variables

LOGISTIC REGRESSION VARIABLES last_election_participation
  /METHOD=ENTER Ext_Sum Agr_Sum Opn_Sum Con_Sum Neu_Sum tr_Ext tr_Agr tr_Opn
    tr_Cons tr_Neu
  /CRITERIA=PIN(.05) POUT(.10) ITERATE(20) CUT(.5).

*RECODING THE VARIABLE OF IDENTIFICATION WITH DUTCH CULTURE

DATASET ACTIVATE DataSet1.
RECODE Identification (1=4) (2=3) (3=2) (4=1).
EXECUTE.

*COMPUTING INTERACTION VARIABLES IS EXECUTED.
COMPUTE Ext_Ide=Ext_Sum * Identification.
EXECUTE.

COMPUTE Agr_Ide=Agr_Sum * Identification.
EXECUTE.

COMPUTE Con_Ide=Con_Sum * Identification.
EXECUTE.

COMPUTE Neu_Ide=Neu_Sum * Identification.
EXECUTE.

COMPUTE Opn_Ide=Opn_Sum * Identification.
EXECUTE.

*BINARY LOGISTIC REGRESSION IS EXECUTED.

LOGISTIC REGRESSION VARIABLES voting
  /METHOD=ENTER age gender Identification Ext_Sum Agr_Sum Con_Sum Neu_Sum Opn_Sum
  /METHOD=ENTER age gender Identification Ext_Sum Agr_Sum Con_Sum Neu_Sum Opn_Sum Ext_Ide Agr_Ide
    Con_Ide Neu_Ide Opn_Ide
  /SAVE=COOK LEVER DFBETA ZRESID
  /PRINT=GOODFIT CI(95)
  /CRITERIA=PIN(0.05) POUT(0.10) ITERATE(20) CUT(0.5).
```

APPENDIX D
Ethical Approval

P.O. Box 80140, 3508 TC Utrecht The Board of the Faculty of Social and Behavioural Sciences Utrecht University P.O. Box 80.140 3508 TC Utrecht		**Faculty of Social and Behavioural Sciences** Faculty Support Office Ethics Committee **Visiting Address** Padualaan 14 3584 CH Utrecht
Our Description	22-1704	
Telephone	030 253 46 33	
E-mail	FETC-fsw@uu.nl	
Date	15 June 2022	
Subject	Ethical approval	

ETHICAL APPROVAL

Study: To what extent do big five personality traits impact the voting of immigrant citizens?

Principal investigator: G. Koç

Supervisor: Lucas Drouhot

The study is approved by the Ethical Review Board of the Faculty of Social and Behavioural Sciences of Utrecht University. The approval is based on the documents sent by the researchers as requested in the form of the Ethics committee and filed under number 22-1704. The approval is valid through 24 June 2022. The approval of the Ethical Review Board concerns ethical aspects, as well as data management and privacy issues (including the GDPR). It should be noticed that any changes in the research design oblige a renewed review by the Ethical Review Board.

Yours sincerely,

Peter van der Heijden, Ph.D.
Chair
This is an automatically generated document, therefore it is not signed