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Who voted for Brexit? The sociodemographic profile of “Leave“-voters

Bachelor’s Thesis

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/Kerli Kivilaan/

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ABSTRACT

The United Kingdom's vote to leave the European Union, known as Brexit, has been the subject of various debates and analyses over the past year. Many of those are in search of causality, trying to explain the voters’ decision. This paper analyses the connections between sociodemographic factors and voting patterns. In order to identify the main sociodemographic factors affecting voting decision in the European Union referendum, this study uses data from the British Election Study 9th Wave panel research that was conducted after the EU referendum. The study develops a sociodemographic profile of a person voting rather “Leave” than “Remain”. The results suggest that the “Leave”-voters differ from others in the following aspects: they are older citizens of England who are less educated, earning a smaller income, identifying themselves as being in the working class, rather religious and with a White British ethnicity background. In contrast with previous studies, which tend to concentrate on the data of EU referendum and therefore develop a narrower profile of a voter, this thesis concentrates on a wider range of attitudes towards European integration amongst British people.
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INTRODUCTION

On the 23rd of July 2016, the voters of Great Britain voted to leave the European Union. The percentage of those who voted for leave was 51.9%, while 48.1% voted to stay in the European Union. The referendum turnout was 72.2%, with more than 33 million people voting (The Electoral Commission, 2016). The referendum was a unique event, as this is the very first time in history that a member country has chosen to leave the European Union. The decision was a consequence of tensions and conflicts that had accumulated over the decades. Moreover, Great Britain has been the most Eurosceptic country since joining the EU in 1973 and leading politicians in the Conservative Party have been strongly opposed to belonging in the union (Hobolt, 2016).

The division did not occur only on government level, but the people were clearly separated into two camps as well. Several polls conducted just before the referendum indicated a “Leave” majority, some a slight lead for the “Remain” side, however most of them revealed a very close race for both opinions (Hobolt, 2016). Available research suggests that one of the main factors influencing the voters’ decision are sociodemographic factors. Education, amongst other sociodemographic variables, has become a significant factor for supporting European Union. (Hakhverdian et al., 2013). People that are more adaptive to globalization - young people leading a good life, living in centres - prefer more open borders, immigration and international cooperation. However, older people in the working class with lower education levels are less adaptive to globalization and therefore opposed to integration policies (Gabel and Palmer, 1995).

The objective of this thesis is to identify which sociodemographic factors might have affected people’s voting decision the most in the British Referendum. In order to reach the aim, a statistical analysis of individual-level survey data will be conducted. The analysis will be conducted using data from the British Election Study Wave 9, a post-referendum survey with 30,036 respondents. Previous studies (Hobolt, 2016; Lord Ashcroft Polls, 2016; YouGov, 2016; British Election Study, 2016) have examined how different sociodemographic factors affected the results of the EU referendum in retrospect. This thesis, however, concentrates on
a wider range of attitudes towards European integration amongst British people and helps us to understand how certain sociodemographic factors are related to the theoretical side and therefore to the outcome of the referendum.

The thesis is structured as follows. The first part offers a theoretical framework and provides an overview of the results of previous research in regards to attitudes towards European integration. Also, a set of hypotheses will be developed based on the theoretical framework. The second part of the paper is an empirical analysis. In this part, data, methods and operationalisation of variables will be explained. Descriptive statistics will give a deeper look into the sociodemographic factors and their effect on voting. Also, logistic regression analysis results will be presented in this part. The last part of this paper will sum up the findings of the conducted analysis.
1. DETERMINANTS OF ATTITUDES TOWARDS EUROPEAN INTEGRATION

1.1 Euroscepticism

The Oxford English Dictionary defines an “Eurosceptic” as “a person who is opposed to increasing the powers of the European Union”. Central to the current comparative literature on the topic is the definition of Euroscepticism proposed by Paul Taggart. Taggart (1998) was the first one to suggest that Euroscepticism is “the idea of contingent or qualified opposition, as well as incorporating outright and unqualified opposition to the process of European integration”. The definition was later improved by Taggart and Szczerbiak, by creating two different Euroscepticism forms - ‘hard Euroscepticism’ and ‘soft Euroscepticism’. ‘Hard Euroscepticism’ refers to “principled opposition to the EU and European integration” and ‘soft Euroscepticism’ indicates that there is not a principled objection to European integration or EU membership, but “where concerns on one (or a number) of policy areas lead to the expression of qualified opposition to the EU, or where there is a sense that ‘national interest’ is currently at odds with the EU’s trajectory” (Taggart and Szczerbiak, 2002).

From a historical perspective, Euroscepticism as a political phenomenon appeared first in mid 1980s and started to gain popularity since the early 1990s. At first, in the mid- and late 1980s, there was a tendency to use the term “Eurosceptic” in an economic perspective, as it was used to describe the “anti-Marketeers” in the United Kingdom (Spiering, 2004). Anti-Marketeers were the oppositionists to the economic integration and joining the single market - in other words, opposed to joining the European Union. The term was introduced by Margaret Thatcher in 1988 in her notorious speech, in which the British prime minister opposed to a super-state idea of Europe (Bârgăoanu, 2014).

The rise of Euroscepticism as a political phenomenon in today’s context can be strongly related to Maastricht Treaty in 1992, as this was when the questions about the surrounding agenda started to emerge. Usherwood and Startin (2013) suggest that the Maastricht Treaty
was significant for a number of reasons. First, it created a new political order with the name change from “Community” to “Union”. Secondly, the Treaty characterizes a moment when the political, economic, social, legal, environmental and foreign affairs areas started to become blurry in terms of European and domestic policy. Usher and Startin also argue that the Post-Maastricht opposition to ‘Europe’ changed from a straightforward question concerning the pros and cons of EU membership to one that started questioning the general route that European Union was taking.

From the emergence of Euroscepticism in the mid 1980s until present time, it has stayed a persistent phenomenon across the continent. An analysis conducted by Alina Bârgăoanu et al. (2014) gives an overview of the changes in public opinion between 2008 and 2013, focusing on the rise of Euroscepticism, using secondary data analysis of standard Eurobarometers. They suggest that Europeans’ trust in the future of the EU has been in a continuous decline. The distrust in the EU outweighed trust in spring 2010 for the first time in the history of the European public opinion research. 42% of the respondents trusted the EU, whereas 47% said they distrusted the Union. In 2013, a new drop in confidence emerged due to the discussions between the European Council and the European Parliament on the approval of the Multiannual Financial Framework (MFF) for the 2014 and 2020 period. According to the 2013 spring wave barometer, only 31% of citizens believed that the EU is a sustainable project. According to more recent surveys (Eurobarometer 2014-2016), the trust towards EU has gone through a small increase in 2014-2015 and decreased again in 2016. In numbers, in 2014 the trust increased to 37%, in 2015 to 40% and in 2016 it fell back to 33%.

1.2 The rise of Euroscepticism in the UK

Since joining the European Union in 1973, the British public has been considered be the most Eurosceptic electorate in the EU. Although Euroscepticism has increased in several EU member states over time, it first emerged as distinctively in Great Britain (Startin, 2015). Harmsen and Spiering (2004) argue that the term Euroscepticism entered the British political lexicon in the mid 1980s, first appearing as a citation from an article in The Times from June 1986, which was about the famous Thatcher speech, mentioned also in the previous chapter.
Thatcher was the first to leader to question the European Union’s direction and therefore her speech had a significant impact in bringing the negative discourse to the mainstream. Gifford (2006) associates Euroscepticism with the politicians in the right of the internally divided Conservative Party who became increasingly opposed to the second wave of European integration during the 1980s and 1990s. On another paper, Gifford (2010) argues that the attitude towards Europe and its policies in British public was set in 1992 when the UK was forced out of the Exchange Rate Mechanism. Gifford also questions, whether there is something distinctive and exceptional about British Euroscepticism and relates it to the terms of structuring the opposition in the government. He argues that as British governments are operating in a system of one-party rule, then they have to give greater consideration to backbench Eurosceptic opinion, more than proportional representation systems do. This might result in government adopting negative positions towards European integration as a consequence of strong opposition within party ranks.

Today, one of the main influencers firing the fuel to the UK Euroscepticism flame are political parties. While most member countries hold rather pro-EU positions, similarly to Gifford, De Vries and Edwards (2009) argue that the leading figures in Britain’s governing Conservative Party have been fiercely opposed to the EU, helping to bring Euroscepticism into the mainstream. There are parties that situate firmly on the “Leave” (United Kingdom Independence Party) or “Remain” (Greens and Liberal Democrats) side, as well as parties that are not uniform on the question, such as that the mainstream Labour and Conservative parties (Vasilopoulou, 2016). This brings out another important factor - the internal division in terms of Euroscepticism in leading political parties. A study conducted by Sara B. Hobolt (2016) suggests that the Brexit referendum itself was a culmination of decades of internal division in the British Conservative Party on the issue of European integration. A “straight in-out referendum of the European Union by 2017” pledge was included in their 2015 manifesto. This reason for this was mainly to calm the Eurosceptic wing of the party and to avoid the voters shifting to the populist right wing, United Kingdom Independence Party. Since the Conservatives were internally divided, Vasilopoulou (2016) argues that it is also possible to identify two main Conservative-led campaigns - Conservatives for Reform in
Europe who support Britain’s EU membership and Conservatives for Britain who support Brexit. According to Vasilopoulou (2016), from the leading politicians, former Prime Minister David Cameron and former Chancellor of the Exchequer George Osborne were actively supporting the UK’s continuous membership of the EU. However, prominent Conservatives such as former Justice Secretary Michael Gove and former Mayor of London Boris Johnson were on the “Leave” side.

A notable influencer in the UK Euroscepticism is also considered to be media and tabloid press. According to Startin (2015), UK has been distinctive from other EU states by the role and influence of its tabloid press. Startin suggests that the newspapers such as The Sun, the former News of the World and the Daily Mail, have been portraying EU in negative terms and as against the national interest. Moreover, the famous negative headlines have been noticed and used as iconic reference points by British Eurosceptics. Startin has conducted a broad-brush three-dimensional scale of Europositive, Euroambivalent and Eurosceptic to categorise the general outlook of each British daily newspaper, of which result is clearly lopsided towards Euroscepticism. Hobolt (2016) argues on the same subject, referring to a media study (Loughborough University, 2016), which shows that the Conservative politicians dominated media coverage on both sides of the campaign, accounting for almost two-thirds of all referendum-related media appearances.

1.3 Utilitarian approach

As the focus of the present paper lies on individual level determinants of attitudes towards the EU, the utilitarian approach provides important insights. The basic proposition of the utilitarian approach is that since European trade liberalization favours citizens with higher levels of human capital and income, then such individuals will be more supportive of European integration (Gabel, 1998; Gabel and Palmer, 1995; Tucker et al., 2002). Human capital in this sense is related to individual competitiveness in a single, liberalized market.

The first dimension of the utilitarian approach is a party-level dimension. Vasilopoulou (2016) emphasizes that “citizens are seen as rational individuals who evaluate EU policy-
making and their voting is conditional upon underlying evaluations of European integration”. According to this research, the actual Euroscepticism principle lies in utilitarian concerns - whether and how the UK has benefitted from EU membership and specific issue preferences related to EU freedom of movement. The article suggests that British people are less receptive to campaigns that strictly focus on domestic politics, and more receptive to the agendas that are discussing the UK’s membership of the EU from a cost-benefit perspective. Vasilopoulou also mentions particularly influencing questions, such as whether EU citizens should have the right to access work and receive welfare in the UK. Labour mobility and concerns related to security, borders and multiculturalism are powerful frames, as they both bring in the cost-benefit considerations amongst citizens. According to Eurobarometer survey 2015, 61 percent of British people feel that immigration is the most important issue facing the EU, being three percentage points above the EU average (Eurobarometer, 2015).

The second dimension of the utilitarian approach is an individual-level dimension. As the European integration goes hand in hand with the globalization, a growing literature shows that there is a division between the so-called “winners” and “losers” of globalization (Hobolt, 2016; Teney et al., 2013). These groups have distinct positions towards issues such as international cooperation, European integration and immigration. The “winners” are young, well-educated professionals in urban centres, who favour more open borders, immigration and international cooperation. The “losers” in this sense are the working class, less educated and older people. (Hobolt, 2016). A research conducted by Hakhverdian et al. (2013) suggests that there is consistent evidence showing that socioeconomic factors affect the attitudes towards European integration. On the same subject, Vasilopoulou (2016) mentions education as a key sociodemographic factor, suggesting that highly educated and more affluent people are more likely to express positive EU attitudes, likely less to express dissatisfaction, more likely to recap the economic benefits of European integration and less likely to feel threatened by other cultures.

A Glocalities Motivaction survey regarding Eurosceptic political parties in Great Britain, France, Italy, Belgium and the Netherlands (conducted in December 2013 and January 2014)
sheds some light into the sociodemographic profile framework. Voting behaviour in this survey is based upon people’s recollection of their vote during the last national elections. The results of this survey show that voters of Eurosceptic parties feel fundamentally abandoned and betrayed by their own society and institutions. They feel victims of both the economic crisis and the broader process of globalization. The survey concludes the sociodemographic profile of Eurosceptic voters to some ways resemble the stereotype of an “angry white man”. Eurosceptic voters tend to be older (45+), often male and married. Eurosceptic voters can be found in all income groups and employment situations, however there are slightly more Eurosceptic voters with lower education. The Euro-sceptic voters do however associate themselves more with the working class and report significantly more problems to “make ends meet”, which makes that group more than average struggling with the economic crisis. More than other voter segments they are facing difficulties in coping with the pressures of the increasing forces of globalization.

Hence, it can be expected that the above mentioned sociodemographic factors might also have an influence towards the “Leave”-voters in United Kingdom European Union membership. A few more sociodemographic variables will be included to the analysis of the present research in order to identify the voters’ sociodemographic profile.

Subsequently, present research proposes the following hypotheses about the correlates of vote on the British referendum:

H1. Men were more likely than women to vote “Leave”.
H2. Older people were more likely than young people to vote "Leave".
H3. People with lower education were more likely than people with higher education to vote "Leave".
H4. People with lower income were more likely than people with higher income to vote "Leave".
H5. People living in England were more likely than people living in Scotland and Wales to vote "Leave".
H6. People in White British ethnicity group were more likely than people in other ethnic groups to vote "Leave".

H7. People belonging to a particular religious group were more likely than people not belonging to a particular religious group to vote "Leave".

H8. People working full time were more likely than people with other working statuses to vote "Leave".

H9. People in working class were more likely than people in other social classes to vote "Leave".
2. EMPIRICAL ANALYSIS

2.1 Data and methods

The following analysis is based on British Election Study 9th Wave panel research that was conducted right after the EU referendum. In general, British Election Study is one of the longest running election studies worldwide and also the longest running social science survey in the UK. The first study was conducted in 1964 and since then the surveys have taken place immediately after every general election.

Wave 9 constitutes post-referendum wave of the ESRC’s ‘Panel Survey Study of the 2016 EU Referendum’ project. In total, 30036 respondents replied to wave 9 of the British Election Study (British Election study, 2016). British Election study consists of ten waves, however the wave 9 constitutes a post-referendum study that was conducted directly after the EU referendum (ibid). British Election Study in general is composed of face-to-face address-based random probability sample surveys, an inter-election internet panel, a range of survey-experiments, a daily rolling thunder campaign study of voters, and a Comparative Study of Electoral Systems module in the post-election survey to enable international comparison (ibid).

The method being used for the research is a statistical analysis of individual-level survey data. In order to find out which sociodemographic factors influence the vote for EU referendum the most, a regression analysis is conducted, for which the dependent variable is whether a person would vote to leave the EU or to remain. There will be nine independent variables included in the analysis, in correspondence with the set hypotheses.

2.2 Variables

The indicators that might affect performance and human capital in a single, liberalized market are gender, education, income, country, age, ethnic origin, religious affiliation, working status and social class. All of these variables are included in BES 9th Wave data source as a part of the questionnaire. The dependent variable is also available in the data source and it is
measured with a question “If there was a referendum on Britain’s membership of the European Union, how do you think you would vote?”. The respondents could choose between four different options: “Stay/remain in the EU”, “Leave the EU”, “I would not vote” and “Don’t know”. Since the focus of this paper is on the actual decision of either choosing to leave or remain in the EU, the dependent variable is recoded as a dichotomous variable, 1 as "Leave the EU" and 0 as "Stay/remain in the EU". A few (0.6%) “Don’t know” answers have been removed. Also, missing cases (6%) were removed from the analysis.

The first independent variable in the present analysis is gender. In the analysis, male respondents are coded to 1 and female respondents to 0. The second independent variable, age, is measured as the age in years at time of the survey.

The next independent variable, education, is measured with different variables in the BES 9th Wave data source. The first variable measures the highest qualification and the second one measures the education level. There are also variables such as “age completed formal education” and a variable for measuring going to private schools. These variables could have some effect on the voting outcome, but the actual education level is presumably the most important predictor of the vote. The variable used in this paper is education level, as this is somewhat wider than the highest qualification which measures specific qualification areas. For replying to this question, the respondents could choose from six different options: no qualifications, GCSE D-G, GCSE A*C, A-level, undergraduate and postgrad.¹ Missing cases

¹ Note: The reason education the variable is regrouped, is to make it more comparable in terms of Europe education system, where the primary and lower secondary education levels serve as the mandatory minimum of general education requirement (grades 1-9), usually until the age of 16; upper-secondary education is acquired at the upper secondary school level and higher education comes after the upper-secondary level (Estonian Ministry of Education and Research, 2017; European Commission, 2014). Therefore, the GCSE levels, which are considered as lower secondary education in the UK (as it starts from the age of 11), have been regrouped as primary and lower secondary education together with no qualifications level. The next group, A-level, is considered as further education in the UK, however it is renamed as upper-secondary education, as it
(15.3% of respondents) were removed from the analysis. For the purposes of logistic regression analysis, I have grouped the respondents into three groups: “Primary and lower secondary education level or less”, which refers to respondents with GCSE levels and no qualifications, “Upper-secondary level” which refers to A-level and “Higher education”, which refers to undergraduate and postgraduate levels.

Another independent variable is income, measured as gross personal income. As regarding to this variable, there is a large proportion of respondents, who preferred not to answer (15.5%), additionally, 17.7% of the cases are missing values. Therefore, when taking income variable into the analysis, the selection and results might not be representative. For that reason two regression analyses will be conducted - one with income variable and another without. In regards to the variable, the response options were originally divided into 14 different groups, additionally “Prefer not to answer” and “Don’t know” (2.8%) options. The income groups start from under £5,000 per year, moving with £5,000 intervals up to £50,000. Then starting from £50,000 per year moving with £10,000 interval up to £100,000. The last group represents people who earn £100,000 and more per year. In the present analysis, everything over £50,000 is regrouped together, for the reason that the percentage of the people earning more than £50,000 in different groups is very small. Therefore the new amount of the variable groups is 11, also “Prefer not to answer”, “Don’t know” and missing values are not taken into the analysis. As the income variable consists of categories with mostly equal intervals, the variable is taken to the analysis as interval-level variable.

Another variable taken into the analysis is country. For respondents, there were three options to choose from - England, Scotland and Wales. For the analysis, England is being coded as a reference group and two new variables are recoded - Scotland and Wales. The missing values (16.9%) are not considered into the analysis.
In order to check the relationship of the religion variable with the outcomes of voting, the variable measuring this is also added to regression analysis. Religion is measured with two different variables - religious affiliation and religious denomination. In the present paper religious affiliation is taken into the analysis instead of religious denomination, as the latter has 59.6% of missing responses, while religious affiliation has only 0.6% of missing responses. “Do not regard as belonging to any particular religion” is considered as a reference group, while creating a new dummy variable for “Yes - Church of England/Anglican/Episcopal”. All other religions are coded as “Other religions”, as another dummy variable. Also, missing responses and “Prefer not to say” (1.3%) are not included in the analysis.

The next independent variable in the analysis is ethnicity. Each respondent had 16 different options to choose, from "White British", "Any other white background", "White and Black Caribbean", "White and Black African", "White and Asian", "Any other mixed background" "Indian", "Pakistani", "Bangladeshi", "Any other Asian background", "Black Caribbean", "Black African", “Any other Black background”, "Chinese", “Other ethnic group” to “Prefer not to say”. In the regression analysis White British is taken as a reference group, re-coded all other groups as “Other ethnic groups” and coded “Prefer not to say” (1%) together with missing values (17%). For this variable, the large percentage of missing values might also produce unrepresentativeness, therefore I will conduct one regression with and one without this variable.

The next variable taken into the analysis is working status. Working status is measured with 9 different responses, from “Working full time (30 or more hours in a week)”, “Working part time (8-29 hours per week)”, “Working part time (less than 8 hours a week)”, “Unemployed and looking for work”, “Full time university student”, “Other full time student”, “Retired”, “Not in paid work for any other reason” to “Other”. All options are coded into four groups: “Working full time”, “Working part time” and “Retired”. All other values are set together as one reference category.
The last independent variable in the regression analysis is social class. Social class is measured with a question, “Do you ever think of yourself as belonging to any particular class?”. The possible responses for this question were “No”, “Yes, middle class”, “Yes, working class”, “Yes, other” and “Don’t know”. For the present analysis, the variable is coded into three groups: “Yes, working class” and “Yes, middle class” and everything else as a reference group together with few missing cases (1.4%).

2.3 Descriptive statistics
The first measureable variable in the present analysis is the dependent variable. The dependent variable is measured with a question “If there was a referendum on Britain’s membership of the European Union, how do you think you would vote?”. Table 1 shows that 47% of respondents would have voted for staying in the EU, 46.45% would have voted for leaving, 0.6% did not know and 5.95% of respondents did not give their answer to the question. A comparison between the results and the actual EU referendum indicate moderate similarities, as the percentage differences of people choosing either “Stay” or “Leave” indicate quite a close race, being 0.55% for the below results and 3.8% difference for the actual results of the EU referendum, as the percentage of those who voted in the EU referendum for “Leave” was 51.9%, while 48.1% voted to stay in the European Union (The Electoral Commission, 2016). The amount of invalid or blank votes in the EU referendum was 0.08% compared to 6.55% of “Don’t know” and “Null” cases in BES 2016 study.

Table 1. EU referendum vote

<table>
<thead>
<tr>
<th>Vote on EU referendum</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Null</td>
<td>5.95%</td>
</tr>
<tr>
<td>Don't know</td>
<td>0.60%</td>
</tr>
<tr>
<td>Leave the EU</td>
<td>46.45%</td>
</tr>
<tr>
<td>Stay/remain in the EU</td>
<td>47.00%</td>
</tr>
</tbody>
</table>

Source: BES 2016, n=30,036
The next variable in the analysis is gender. Graph 1 represents the division between male and female votes. There is no significant cleavage in terms of which gender chose more “Leave” than “Stay”.

**Graph 1. Vote decision by gender**

![Graph 1](image1.png)

Source: BES 2016, n=38,069

As regarding to the age variable, there is a clear tendency seen from Graph 2. The graph indicates that the older the respondent, the more likely they chose “Leave”. However, since the representation of the respondents with age over 90 years is so small (12 respondents out of 30036 were 90 or more years old), no firm conclusions for the oldest age group can be drawn.

**Graph 2. Vote decision by age**

![Graph 2](image2.png)

Source: BES 2016, n=28,069
The next variable in the analysis is education. Graph 3 represents the voters' decisions amongst people of education levels. In this graph it can be seen that the biggest cleavage in vote division in favour of leaving EU is in no qualifications level (approx. 50% difference), then comes GCSE D-G (approx. 34% difference) and GCSE A*-C with approximately 32% of difference. The vice versa conclusion can be drawn on the postgraduate and undergraduate level, as voters in postgraduate level vote approximately 51% more for staying in the EU and voters in undergraduate level respectively 28%.

**Graph 3. Vote decision by education**

<table>
<thead>
<tr>
<th>Education Level</th>
<th>A-level</th>
<th>GCSE A*-C</th>
<th>GCSE D-G</th>
<th>No qualifications</th>
<th>Postgrad</th>
<th>Undergraduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave the EU</td>
<td>50.71%</td>
<td>66.34%</td>
<td>67.17%</td>
<td>74.54%</td>
<td>24.64%</td>
<td>36.02%</td>
</tr>
<tr>
<td>Stay/remain in the EU</td>
<td>49.29%</td>
<td>33.66%</td>
<td>32.83%</td>
<td>25.46%</td>
<td>75.36%</td>
<td>63.98%</td>
</tr>
</tbody>
</table>

Source: BES 2016, n=23,789

Income variable in the questionnaire is measured with 14 different categories. “Don’t know”-s, “Prefer not to say”-s and missing cases are excluded from the analysis. On Graph 4 it is seen that the higher the income level, the lower the percentage of voters who vote for leaving the EU. At the income level £100,000, it reaches its peak by having approximately 31% less voters who vote for leaving the EU compared to the ones who vote for remaining in the EU.
The next variable in the analysis is country. Table 2 shows that the respondents in Scotland and Wales chose clearly less “Leave” than the respondents in England.

**Table 2. Vote decision by country**

<table>
<thead>
<tr>
<th>Country</th>
<th>Vote on EU referendum</th>
<th>England</th>
<th>Scotland</th>
<th>Wales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Leave the EU</td>
<td>52.69%</td>
<td>35.46%</td>
<td>45.53%</td>
</tr>
<tr>
<td></td>
<td>Stay/remain in the EU</td>
<td>47.31%</td>
<td>64.54%</td>
<td>54.47%</td>
</tr>
</tbody>
</table>

Graph 5 is showing vote decision by ethnicity. The results indicate that the White British and other ethnic groups are the only categories, where the percentage of the respondents who chose leaving the EU is higher than the percentage of the ones who chose staying. “Prefer not to say”-s and missing cases have been excluded from the analysis. As for the religious
affiliation variable shown in Graph 6, same tendency can be seen, as the only groups having proportionally more responses in favour of leaving is "Other religion" group and the respondents that do not regard themselves as belonging to any particular religion. All other religion groups represent higher percentage of respondents who chose the option of staying in the EU.

**Graph 5. Vote decision by ethnicity**

![Graph 5](image)

Source: BES 2016, n= 21,478

**Graph 6. Vote decision by religious affiliation**

![Graph 6](image)

Source: BES 2016, n=23,109
The next variable in the descriptive statistics is working status. In Graph 7 there are 9 different working status groups that respondents could choose from when filling the survey. Graph 7 shows that there are two groups that stand out with high percentage of “Leave” voters: “Other full time student” (71.75%) and “Full time university student” (81.93%). From the “Leave” voters, two groups also stand out with higher percentages: “Retired” (58.46%) and “Not in paid work for any other reason” (58.65%).
The last variable in the analysis is social class. Social class is measured with a question - “Do you ever think of yourself as belonging to any particular class?”. Table 3 shows that the middle class category has a higher percentage of votes for “Stay, remain in the EU” compared to other social classes. Working class category stands out with a higher percentage of “Leave” votes.

**Table 3. Vote decision by social class**

<table>
<thead>
<tr>
<th>Vote on EU referendum</th>
<th>Don’t know</th>
<th>Not in any social class</th>
<th>Yes, middle class</th>
<th>Yes, other</th>
<th>Yes, working class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave the EU</td>
<td>48.01%</td>
<td>49.50%</td>
<td>40.89%</td>
<td>48.77%</td>
<td>57.35%</td>
</tr>
<tr>
<td>Stay/remain in the EU</td>
<td>51.99%</td>
<td>50.50%</td>
<td>59.11%</td>
<td>51.23%</td>
<td>42.65%</td>
</tr>
</tbody>
</table>

Source: BES, n=27,679
2.4 Results of regression analysis

The following part of the paper presents the results of the binary logistic regression analysis. A logistic regression analysis was conducted in order to predict voting on the EU referendum using education, income, country, age, ethnicity, religious affiliation, social class and working status as predictors. A test of the full model against a constant only model is statistically significant (p < 0.001). Nagelkerke $R^2$ for the model is 0.193, indicating a moderately strong relation between prediction and the predictors. The model classifies 67.3% of all the cases correctly. 71.3% of "Stay/remain in the EU" and 62.8% of "Leave the EU" are predicted correctly.

Table 10 reports the odds ratios (Exp (B)) for the independent variables included in the model. The Exp (B) column presents the extent to which raising the corresponding measure by one unit influences the odds ratio. An odds ratio of 1 denotes statistical independence (no effect), while an odds ratio less than 1 means negative effect and an odds ratio greater of 1 stands for positive effect. The results reported in the second column of Table 4 show that all variables except variables in working status group - “Retired” (p=0.101), “Working full time” (p=0.565), “Working part time” (p=0.240) and gender (p=0.038) - are statistically significant at the 95% confidence level. The statistical significance for “Working class” is 0.011 and for all other variables p≤0.001, therefore it can be said that the majority of analysed independent variables have a statistically significant effect on the dependent variable.

The results reported in Table 4 suggest that people who chose “Leave” as a response to the question “If there was a referendum on Britain’s membership of the European Union, how do you think you would vote?” differ from the ones who chose “Stay” in several aspects. They tend to be older residents of England, who are less educated, earning a smaller income, belong to the working social class, are rather religious and have a White British ethnic background. Regarding the specific independent variables and their relationship with the dependent variable, the hypotheses propose that a higher age and a lower income have a positive effect on the independent variable.
Table 4. Individual-level predictors of vote for EU referendum

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary and lower secondary level or less</td>
<td>1.721***</td>
<td>-</td>
</tr>
<tr>
<td>Higher education</td>
<td>0.516***</td>
<td>-</td>
</tr>
<tr>
<td><strong>Country</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td>0.530***</td>
<td>0.491***</td>
</tr>
<tr>
<td>Wales</td>
<td>0.737***</td>
<td>0.682***</td>
</tr>
<tr>
<td><strong>Religious affiliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Church of England, Anglican, Episcopal</td>
<td>1.666***</td>
<td>1.765***</td>
</tr>
<tr>
<td>Other religions</td>
<td>1.365***</td>
<td>1.285***</td>
</tr>
<tr>
<td><strong>Working status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>0.904</td>
<td>0.831***</td>
</tr>
<tr>
<td>Working full time</td>
<td>0.970</td>
<td>0.761***</td>
</tr>
<tr>
<td>Working part time</td>
<td>0.929</td>
<td>0.828***</td>
</tr>
<tr>
<td><strong>Social class</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes, middle class</td>
<td>0.776***</td>
<td>0.620***</td>
</tr>
<tr>
<td>Yes, working class</td>
<td>1.121*</td>
<td>1.286***</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other ethnic groups</td>
<td>0.633***</td>
<td>0.601***</td>
</tr>
<tr>
<td><strong>Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1.018***</td>
<td>1.024***</td>
</tr>
<tr>
<td>Personal income</td>
<td>0.979**</td>
<td>-</td>
</tr>
<tr>
<td>Gender: male</td>
<td>1.080</td>
<td>1.129***</td>
</tr>
<tr>
<td>Constant</td>
<td>0.417***</td>
<td>0.310***</td>
</tr>
<tr>
<td><strong>Nagelkerke R²</strong></td>
<td>0.193</td>
<td>0.124</td>
</tr>
<tr>
<td>N</td>
<td>15268</td>
<td>22798</td>
</tr>
<tr>
<td><strong>Percent correctly predicted</strong></td>
<td>67.3</td>
<td>62.9</td>
</tr>
</tbody>
</table>

Note: The figures shown are odds ratios (Exp (B)). *** p ≤0.001; ** p≤0.01; * p≤0.05
The results of the regression analysis also show a slight tendency of elderly people choosing the “Leave” option more than younger people. Table 4 also supports hypothesis 4, by showing that personal income is negatively correlated to the vote for the EU, meaning that the higher the income, the less likely people were to vote “Leave”.

Table 4 indicates that education level has a significant effect on the vote for EU referendum and supports the hypothesis of a lower education relation to a larger proportion of “Leave” votes. Higher education has a negative effect on voting for “Leave” compared to the reference group of an upper-secondary level education (A-level). However, the odds that a person in primary or lower secondary education level votes “Leave” are 1.7 greater than the odds for a person in upper-secondary level voting “Leave”. This result is also supported by descriptive statistics, where GCSE D-G, GCSE A*-C and no qualification levels are related strongly to voting for “Leave”, A-level qualification does not seem to have an impact and undergraduate and postgraduate students are more related to voting for staying in the EU.

A strong negative effect is seen on the country level analysis. Hypothesis 5 proposed that people living in England were more likely than people living in Scotland and Wales to vote "Leave". This proposal is supported both by the below results and descriptive statistics, since those who marked their home country as Scotland or Wales, compared to those who marked it as England, are strongly related to voting for staying in the EU. The results of regression analysis indicate that the odds that a person living in Wales votes “Leave” are 0.7 times smaller than the odds of a person living in England voting ”Leave”. The odds that a person living in Scotland votes “Leave” are 0.5 times smaller than the odds of a person living in England.

As regarding to religious affiliation, the Table 4 shows a strong positive effect on the dependent variable. The hypothesis 7 proposed that people belonging to a particular religious group are more likely than others to vote "Leave". Results of the regression analysis support that thesis and show that religious affiliation of Church of England, Anglican, Episcopal or feeling part of other religious groups has a strong positive effect on voting for “Leave”, rather
than the reference group of not religious people. This is also in correspondence with the literature on that subject, which indicates to the relation of religion (and religious intolerance) and Euroscepticism (Hobolt et al, 2011; Boomgaard, Freire, 2009).

The hypothesis proposed for ethnicity is supported by both the logistic regression and descriptive statistics. The negative effect on “Other ethnicity” variable in the Table 4 indicates that the people who preferred “Leave” option in the questionnaire are rather in the reference group of White British people. The results indicate that the odds that a person in other ethnic groups votes “Leave” is 0.6 times smaller than the odds of a person in White British ethnicity group.

Following the results of previous studies (based on Glocalities Motivation survey) that have focused on sociodemographic factors, the last hypothesis proposed that people in the working class were more likely than people in other social classes to vote "Leave". The results of the regression analysis show that while identifying with the working class has a moderate impact on voting for “Leave”, belonging to middle class has a negative effect.

As previously mentioned, two variables have proportionally more missing cases than others. Therefore those variables, education and personal income, are excluded from the second regression analysis and Model 2 is conducted with seven independent variables. The overall representativeness seems to be better, as the percentage of the cases included in the analysis is 75.9% (N=22798) compared to 50.8% (N=15268) in the Model 1. A test of the full model against a constant only model is statistically significant (p < 0.001). Nagelkerke R² for the model is 0.124 and the model classifies 62.9% of all the cases correctly. 62.7% of "Stay/remain in the EU" and 63.2% of "Leave the EU" are predicted correctly. All the variables in the regression are statistically significant.

As regarding to specific independent variables, the overall positive and negative effects on the dependent variable stay generally the same. The only remarkable difference appears with the working status and gender variables, as these have become statistically significant,
meaning that working full time, working part time and retired variables have a negative effect on voting for “Leave”, compared to the reference category that includes “Unemployed and looking for work”, “Full time university students”, “Other full time students”, “Not in paid work for any other reason” and “Other” respondent groups. Based on the results of the second model of regression analysis, the hypothesis regarding working status is rejected. The hypothesis 8 expected people working full time more likely than people with other working statuses to vote for "Leave". If the education level and income variables were considered in the analysis, working status variable was not statistically significant. However, if education level and income variables were excluded from the analysis, then being in a working status group of “Retired”, “Working full time” and “Working part time” had a negative effect towards the reference group.

The results of the second regression analysis also show that the male respondents were more likely to choose for “Leave” than female voters. The odds that a man votes “Leave” are 1.1 times greater than the odds of a woman voting “Leave”. Based on the analysis of the second model of regression analysis, it can be said that the hypothesis regarding gender (H1) is partially supported. If the education level and income variables were considered in the analysis, the gender variable did not have a significant effect on choosing “Leave” or “Stay/remain in the EU”. However, if education level and income variables were excluded from the analysis, gender variable became statistically significant.
CONCLUSION

Great Britain and the European Union membership referendum is a significant event in the history of the country, the Union and its member countries. Euroscepticism and its rise all over the continent, however, might mean that this event does not remain unique. Amongst other factors, it is clear that sociodemographic factors have an effect on individual vote choice, therefore it is necessary to analyse the factors thoroughly to find a more general pattern in voting habits. The purpose of this paper was to identify the main sociodemographic factors that distinguish probable “Leave” voters from others and relate the factors to possible theoretical reasons. The aim was achieved by conducting a quantitative analysis using survey data from British Election Study 9th Wave panel research that was conducted right after the EU referendum. The nationally representative sample consisted of 30,036 respondents.

The results of statistical analysis lend considerable support to eight of the nine proposed hypotheses. The hypotheses were based on the findings from the previous literature and research on the subject. Firstly, the expectation of men being more likely to vote “Leave” is supported partially by the results of regression analysis. If the education level and income variables were considered in the analysis, gender variable was not statistically significant. However, if education level and income variables were excluded from the analysis, gender variable was statistically significant and the male voters were more likely to vote for “Leave” than female voters.

Secondly, the hypothesis relating older age to voting “Leave” is also proved to be correct in the present analysis. The results of the regression analysis show a slight tendency of elderly people being more likely to choose “Leave” than younger people. In theory, this can be related to utilitarianism theory, explained in the part where determinants of attitudes towards European Union were examined. The findings suggested that there is a division between the so-called “winners” and “losers” of globalization, whereas older people belong rather in the “losers” group because they tend to be less competitive on the labour market.
A significant factor shaping the pattern of attitudes towards the European Union is education. This was mentioned as an important factor in previous studies, and the empirical results of this study also confirm the same. A clear cleavage of voting patterns appears when comparing people with higher degrees to people whose education level varies from no qualifications to primary and lower secondary level. The odds of choosing “Leave” for those in a primary and lower secondary education level or less, was shown to be 1.7 times greater than in the reference group of a secondary level.

The results of the present research also suggest that hypotheses regarding place of habitation and ethnicity are proved to be correct. It was expected that people living in England were more likely than people living in Scotland and Wales to vote “Leave”. Also, it was hypothesized that people in “White British” ethnicity group were more likely than people in other ethnic groups to vote “Leave”. These expectations were proved to be correct, as people living in England were more likely than people living in Scotland and Wales to vote “Leave”, just as “White British” ethnicity group compared to other ethnicity groups. As regarding to religion, the same tendency appeared from the results, supporting the proposed hypothesis of people in a particular religious group voting more likely “Leave” than others.

The results regarding working status indicate that working status is only statistically significant when education level and income is excluded from the analysis. Moreover, hypothesis regarding working status is rejected, as the results do not support it – people working full time do not vote more likely “Leave” than people with other working statuses. Therefore final conclusions cannot be drawn from the results. Regarding social class, the hypothesis is fully supported by the regression analysis results. The results show that people identifying themselves in the working class were more likely to vote for “Leave” than people in any other social class.

All in all, the results of this analysis allow to draw a sociodemographic profile of a “Leave” voter. The results of the present research suggest that people who chose “Leave” as a response to the question “If there was a referendum on Britain’s membership of the European
Union, how do you think you would vote?” differ from the ones who chose “Stay” in many aspects. They are older citizens of England who are less educated, earning a smaller income, identifying themselves as being in the working class, rather religious and with a White British ethnicity background. Most of these factors are the ones that can be related to the theoretical part of the paper and therefore these people could be identified as the so called “losers” of the globalization process. Globalization together with immigration is definitely a well-known issue in Europe. The results of the study have helped to identify the reasons behind the observed voting pattern in the EU referendum and could be of help in creating policies that would alleviate the adverse effects of - and fears related to - globalization and European integration.
KES HÄÄLETAS BREXITI POOLT? LAHKUMISE POOLT HÄÄLETANUTE
SOTSIAALDEMOGRAAFILINE PROFIIL

Kerli Kivilaan

Resümee


Kääsesolev uurimus tõestas, et võrreldes noortega on eakamatel inimestel tendents häältestada enam lahkumise poolt. Teoreetiliselt võib seda seostada utilitarismi teooriaga, millest lähemalt on teoreetilises osas. Analüüsi tulemused toetavad ka käsitlust, mille kohaselt on globaliseerumisel "võitjad" ning "kaotajad", kusjuures vanemad inimesed kuuluvad oma madalama konkurentsivõimega tööturul pigem viimaste hulka.
Oluline faktor hoiakute kujunemisel Euroopa Liidu osas on haridus. Haridustaset mainisid olulisena ka eelneval uurimused ning ka käesoleva töö empiirilise analüüsi tulemused kinnitavad seda. Võrreldes kõrgharitud inimesi hariduseta või põhiharidusega inimestega, ilmneb selge erinevus. Tõenäosus hääletada lahkumise poolt oli hariduseta või põhiharidusega kodanike hulgas 1,7 korda suurem kui keskharidusega inimeste hulgas.


Sarnaselt muutujaga, mis mõõtis soo mõju hääletustulemustele, on ka tööhöive statistiliselt oluline vaid siis, kui analüüsid on eemaldatud sissetuleku ning haridustaseme muutujad. Analüüsi tulemused näitavad, et nii täis- kui poolega töötav inimesed ning ka pensionärid hääletavad vähem lahkumise poolt kui referentsgrupiks võetud taustakattegru, kuhu kuuluvad õpilased, töötud ning need, kes ei osanud ennast ühegi kategooriaga identifitseerida. Seega on tööhöive kohta keeruline konkreetset järeldust välja tuua, mis omakorda viitab sellele, et antud muutuja vajab edastist uurimist.

põhjuseid vaadeldud Euroopa Liidu referendumi valimismustris ning võiks aidata tulevikus kaasa seesuguste poliitikate loomisele, mis leevendaksid Euroopa integratsiooni ja globaliseerumise vaenulikke efekte ja sellega seotud hirme.
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