# One European Union, different cultures: The effect of identity on trust in the European Union institutions

**Bachelor Thesis** 

C.F. de Ruiter 408745

supervisor
A.L. Boring

Erasmus School of Economics, Erasmus University Rotterdam

#### Abstract

This paper analyses the effect of identity on trust in EU institutions. To do so, I group countries by linguistic family as a proxy for ethno-cultural heritage. Using data from the European Election Survey, I find that identity is a significant determinant of trust values. Romance citizens are found to be more positive than Germanic citizens. Furthermore, trust values are generally lower in 2014 than 2009, which may indicate a persistent effect of crisis on trust in European institutions.

## 1 Introduction

What is a world without trust? In private transactions, trust enhances trade by lowering transaction costs, mostly information costs (Den Butter and Mosch, 2003; Dyer and Chu, 2003). In the relation between a government and its citizens, trust is one the primary values of democracy. Citizens vote for a candidate, trusting that they will do a good job once elected. Then what is it exactly that one possesses when trusting another? "Trust involves a judgment, however implicit, to accept vulnerability to the potential ill will of others by granting them discretionary power over some good." (Warren, 1999, p.1)

A specific governmental body that considers trust as an important driver and justification of its own existence is the European Union (Gabel, 1998). Despite Britain's departure, the EU currently has the largest number of member states in its history. Without the support of its member states and their citizens, the Union could not exist. Low trust in and support for the EU is proven to be related to low turnout at European Parliament elections (Mattila, 2003). This can lead to the start of a downward spiral: citizens who do not vote have a high chance of not feeling represented by the election results and will have even less confidence in the next elections. Just like positivity, negativity is contagious in social circles (Rozin and Royzman, 2001); these citizens with low trust in the European Parliament will convince fellow citizens of their negative beliefs. Therefore, trust is a crucial factor for the EU and its existence.

The financial crisis of 2008 has proven to be a watershed moment for trust in both national and international governments (Armingeon and Guthmann, 2014). The results of Dotti Sani and Magistro (2016) indicate that trust in the European Parliament declined most in peripheral European countries such as Cyprus, Greece, Ireland, Italy, Portugal and Spain. During this period, these countries were being affected most severely by the crisis. They explain that low levels of trust are not only problematic for EU institutions. Declining trust levels tend to exacerbate differences between people at different extremes of the social ladder. In particular, the intuition that the unemployed and the poorly educated lose more trust in economically hard times is confirmed.

EU nations are often categorised diametrically, in familiar and loaded terms: North vs. South, net receiving vs. net paying or peripheral vs. non-peripheral. What has not been explored enough yet is whether cultural or historical groups of countries have experienced similar patterns in their levels of trust in EU institutions. In this paper I explore the following research question:

"How do levels of trust in the institutions of the European Union differ across cultural groups of EU member states?"

Firstly, I state several hypotheses exploring this question and discuss the related literature in section 2. Next I describe the dataset used and elaborate on the empirical strategy in section 3. In section 4 I present and interpret the results. Finally, the paper ends with a conclusion and a discussion on the paper's limitations. These limitations imply some suggestions for potential follow-up research.

### 2 Theoretical Framework

Support for European integration and trust in the EU can be explained by various factors (McLaren, 2005). First is a purely rational calculation: a utilitarian cost-benefit analysis of EU membership and what the institutions generate for a country. McLaren calls this egocentric utilitarianism. Secondly, cognitive mobilization or involvement in politics: the more informed one is about the EU, the less adverse one will feel towards the organization. Closely related to communication, the essence of this process is that if citizens do not know what the EU is and how it works, they can hardly trust in it. Thirdly, symbolist politics and identity play a role. A strong nationalist sentiment will impede trust in the EU. The latter relationship has this paper its focus. Fan (2008) mentions the determinant ethno-cultural heritage, but sweeps it under the carpet as being hard to measure. Lastly, on an individual level, various researchers agree that individual characteristics influence trust levels (Gabel, 1998). This suggests the importance of controlling for variables like age, income and partisanship in any analysis of trust in institutions.

Intuitively, trust in institutions is also influenced by past performances of the institutions and by trust in national governments (Muñoz et al., 2011; Sánchez-Cuenca, 2000). This has both to do with lower trustworthiness after bad performance and with the aforementioned cost-benefit analysis: opportunity costs of giving away sovereignty to the EU are lower when trust levels in the national government are low.

A negative relation exists between regulation and trust, as found by Aghion et al. (2010). The authors explain it to be related to citizens' expectations to live in a civic society, which implies little regulation. The EU brings its own rules and regulations, which could lead to relatively low trust levels in the Union. Economic factors such as inflation, GDP and unemployment, which are correlated between themselves, have been identified to influence trust in the EU (Eichenberg and Dalton, 1993). In their work, the authors also analyse national traditions as a determinant of support for the EU, but they do not view the countries as a group identity.

The role of identity in economics has been explored by Nobel laureate Akerlof and Kranton (2000). He explains that choices are influenced not only by economic incentives, but also by identity ("a person's sense of self"). Identity may include gender, physical or other characteristics, but may also include cultural and historic traits of the nation-states which one forms part of. Countries that are located closely to each other and share history are expected to have an identity that is intertwined, and based in a common ethno-cultural heritage. Language is a part of culture and history and reflects similarities between countries. In this paper I group countries by linguistic family as an indicator of culture. Identity is a complex concept, and in Section 3 I argue why language is a good proxy for identity.

Identity as an influencer of trust is one of the least researched theories behind trust. Even though the view of Aghion et al. (2010) that expectations to live in a civic society and demand for government rule may be correlated with identity, identity is more than that. Harteveld et al. (2013) underline the effect of European identity or a strong nationalist identity, but does not research the potential grouping of identities in Europe. He actually hypothesizes that the more the citizens identify with their own nationality, the less they trust the Union, completely ignoring the common ethno-cultural heritage. The common heritage might be influencing a common European identity feeling, but countries could have a common identity but still not trust the EU. Therefore I examine the following hypothesis:

Hypothesis 1: "The language family groups have a significant effect on trust."

General prejudice rules Europe that Romance countries are more positive about the concept of the EU than Germanic countries. Medrano (2010) describes the contrasting attitudes on the EU of Germany and France, for instance. Whether based on net financial transfers to and from the EU budget (Karp et al., 2003) or on political emotions (Verbalyte and von Scheve, 2018), trust in the EU institutions seems to differ between Germanic and Romance countries. The recent Brexit may illustrate this belief. Both groups were among first the member states and could therefore represent a divided European core. To test this, I establish the following second hypothesis:

Hypothesis 2: "Germanic countries have lower trust levels than Romance countries over the 2004-2014 period."

The watershed moment of the 2008 financial crisis has led to booming Euroscepticism: trust in the EU has been described to have generally declined after the crisis of 2008 (Armingeon and Ceka, 2014; Sojka, 2013; Roth, 2009). Interestingly, Serricchio et al. (2013) argue that the economic component is not necessarily the source of Euroscepticism, but national identity and

political institutions are. Accordingly, in this paper I explore the differences in trust before and after 2008. For that, I test the following hypothesis:

Hypothesis 3: "Levels of trust will generally be lower after the crisis (2014) than before (2004)."

## 3 Data and Methodology

#### 3.1 Data

The dataset used for the analysis is one that is composed of three cross-sectional datasets from the European Election Survey, dating from 2004, 2009 and 2014. These are years in which European Parliament elections took place. The datasets are created on the basis of survey questions on the political interest, involvement and preference of EU citizens. In 2004 the EU citizens interviewed for the dataset were from 25 member states. The other years have been trimmed down to the availability of data in the 2004 set. The interviewers tried to collect answers from 1000 respondents in every member state. However, because the y variable trust contained unusable values that had to be deleted like 0 for "do not know", observations can be less for some countries. For 2004 they separated Britain and Northern Ireland as two values, which where clustered in later sets as the United Kingdom. Therefore the United Kingdom has twice as many observations (n=2479).

Table 1: Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
Trust	63,244	2.56	0.83	1	4
Interest politics	62,990	2.48	0.92	1	4
Leftright	56,297	6.10	2.61	1	11
Birthyear	63,244	1960	17.21	1903	1998
Household	63,007	2.17	0.98	1	9
Socialclass	61,417	2.67	0.95	1	5

Table 1 shows how the variables are constructed. The y variable trust is a 1-4 scale variable of trust in the EU institutions, ranging from 1 – yes, definitely trust, to 4 – no trust at all. This has to be borne in mind at the interpretation in Section 4. With a mean of 2.56, people tend to slightly distrust the EU institutions more than they trust them. For the 2004 dataset I took an

<sup>&</sup>lt;sup>1</sup>Data has been dropped for Bulgaria, Croatia, Lithuania, Malta and Romania.

average of three questions on trust, namely trust in the European Parliament, in the European Commission and in the Council of Ministers. This did not lead to too much distortion because they are all sufficiently correlated between themselves (see Appendix Table A.1). The 2009 and 2014 subset had a single variable of trust in EU institutions, that both needed to be rescaled to a 1-10 scale. The first from a 1-5 scale, the second from a 1-4 scale. Due to scale perception bias, this is a decision that makes the information lose value. The responses on different scales are not fully comparable. However, the only difference in the answer possibilities for the trust questions of 2009 and 2014 is that there is no neither agree nor disagree / middle option in the 2014 question. Appendix Figure B.1 visualizes the effect of the rescaling: a high density at the extremes and at the first and third quartiles. For the analysis of the difference in election years of hypothesis 3, the factor variable election indicates the year of election. The variable takes on 2004, 2009 or 2014. The years have respectively n=17,700, n=22,012 and n=24,039 observations.

Then for analysis of the effect of different cultures on trust, I group countries according to language family of the main language in the country (Table 2). This is a proxy of their common ethno-cultural heritage. For the bilingual country Belgium, I have separated Flanders and Wallonia to use them in different language families. For each family I create a dummy variable: Germanic, Romance, Slavic, Uralic, Baltic, Hellenic. Luxembourg is put with the Germanic family because its main national language, Luxembourgish, is a Germanic language.

Table 2: Linguistic families

Group	Germanic	Romance	Slavic	Uralic	Baltic	Hellenic
Countries	Austria	Belgium (Wal)*	Czech Republic	Estonia	Latvia	Cyprus
	Belgium (Flan)*	France	Poland	Finland		Greece
	Denmark	Italy	Slovakia	Hungary		
	Germany	Portugal	Slovenia			
	Ireland	Spain				
	Luxembourg					
	Netherlands					
	Sweden					
	United Kingdom					

<sup>\*</sup> Flan=Flanders region, Wal=Wallonia region.

To control for the effect of political involvement described in Section 2, I include a 1-4 in-

terestpolitics scale variable. It ranges from 1 – very interested to 4 – not interested at all. Additionally, to isolate the identity effect I include a control variable for political view:scale variable *leftright*, that ranges from 1 (left) to 11 (right). In 2004, a 1-10 scale was used for every country, except Sweden. This variable had to be rescaled in the 2004 set for these countries to a 1-11 scale. With a mean of 6.11, the final dataset is fairly balanced.

Finally, I control for personal characteristics gender, year of birth, household size and social class. They need to be controlled for because they influence both trust levels and identity, as stated in Section 2. For gender, 1 is Male, 2 is Female. Birthyear states the year of birth. The oldest person interviewed is born in 1903, the youngest from 1998 (interviewed in 2014). Household reports the number of members of the household aged 18 and over, ranging from 1-9 in this dataset. Socialclass is a self-reported scale from 1-5, ranging from working class to upper class. The scale of 2014 has been rescaled to from 1-10 to 1-5.

Table 3: Descriptive statistics per year, not rescaled

Variable	Year	Obs.	Mean	Std. Dev.	Min.	Max.
Trust	2004	17,700	2.56	0.83	1	10
	2009	22,012	2.83	1.10	1	5
	2014	24,039	2.57	0.86	1	4
Interestpolitics	2004	17,582	2.51	0.87	1	4
	2009	21.967	2.40	0.88	1	4
	2014	23,944	2.54	0.98	1	4
Leftright	2004	16,287	5.41	2.36	0	10
	2009	20,171	6.30	2.67	1	11
	2014	20,246	6.07	2.54	1	11
Birthyear	2004	17,700	1958	16.59	1903	1990
	2009	22,012	1959	16.73	1910	1991
	2014	24,039	1963	17.78	1915	1998
Household	2004	17,581	2.31	1.06	1	9
	2009	21,912	2.09	0.97	1	9
	2014	24,021	2.14	0.92	1	9
Socialclass	2004	17,124	2.41	1.07	1	5
	2009	21,415	2.52	1.01	1	5
	2014	23,363	5.47	1.56	1	10

## 3.2 Methodology

To explore the effect of cultural group on trust in the EU, I regress all cultural group dummies on trust. The first two hypotheses are general instead of year specific. Therefore, the input consists of the data for all three election years. Including the control variables, that leads to the following equation of the multiple regression model:

$$trust = \alpha + \beta_n \cdot linguistic\_family + \beta_6 \cdot interest politics + \beta_7 \cdot left right$$
$$+ \beta_8 \cdot gender + \beta_9 \cdot birthyear + \beta_{10} \cdot household + \beta_{11} \cdot social class + \varepsilon$$
 (1)

I leave Germanic out of the equation and use it as reference category. It is the largest group of countries so it makes a good base case. In addition, I use robust standard errors, because I do not know whether the standard errors are homoscedastic. The multiple regression model is suitable for the research of the main question of this paper because the regressions can fit the group dummies well. Each estimated coefficient of the particular language family can tell about the effect of the identity of citizens of those member state on their trust in the EU.

Using model 1, for hypothesis 4.1 on the general effect of identity on trust in the EU, I test the joint significance of the cultural group dummies in a Wald test.

Model 1 is also suitable for testing hypothesis 4.2, since it also compares the dummy variable *Romance* to base case *Germanic*.

Hypothesis (3) explores the differences before and after 2008. For this hypothesis I use model (1), but include the year of election as a factor variable (election). This results in the following equation:

$$trust = \alpha + \beta_n \cdot linguistic\_family + \beta_6 \cdot election + \beta_7 \cdot interest politics + \beta_9 \cdot left right$$
$$+ \beta_{10} \cdot gender + \beta_{11} \cdot birthyear + \beta_{12} \cdot household + \beta_{13} \cdot social class + \varepsilon$$
 (2)

where linguistic family is filled in by the five dummy variables (*Romance, Slavic, Uralic, Hellenic and Baltic*) and n denotes any number 1-5 to separate the coefficients of the linguistic families. Again, I leave Germanic out of the equation and use it as reference category. Likewise, I use robust standard errors, because I do not know whether the standard errors are homoscedastic.

To test hypothesis (3), I perform a reverse-adjacent contrast analysis to orderly review the differences between the year effects. It shows the differences between all separate year effects. This is an orderly way to review differences between all election years.

To check on robustness, first I will use model (1) and model (2) but perform ordered logistic regressions with these models to outlaw a possible violation of the assumption of independent and identically distributed errors. Second, I perform separate regressions per (election) year with the untouched trust variable. That is, using the original scale for every year.

# 4 Results and Interpretation

In this section I elaborate the results of the aforementioned regression models. After that, I interpret the results. I do this in the order of the hypotheses. This means I discuss the general results for the three years together first including the necessary test results, then I discuss the separate election results and the according test results.

#### 4.1 General identity effect

For the general effect of identity of different cultural groups on the trust of the respective citizens in the EU, I hypothesize the following.

Hypothesis 1: "The language family groups have a significant effect on trust."

It is important to emphasize again that the trust variable ranges from high trust to low trust. That implies that a lower or negative coefficient for the linguistic group results in a positive effect on trust. Table 4 shows that in the general analysis (years 2004, 2009 and 2014), all cultural group dummies except Baltic have a significant effect (p = 0,00) on trust compared to base case Germanic at  $\alpha = 0.05$ . Additionally, seeing the dummies are all significant, the variation within linguistic groups is likely not to be random.

Specifically, compared to the base case of having Germanic identity, Romance citizens have a trust level that is 0,19 higher on average. Slavic people have a trust level that is also 0,19 higher on average. Citizens of Uralic countries even have a trust level that is 0,27 higher than the Germanic trust level. The trust level of Hellenic citizens is 0,25 higher than Germanic trust on average. Only the estimate for linguistic group Baltic is not significantly different from zero. All trust levels are measured on a 1-4 scale. The Wald test results in Appendix Table C.2 tells that even though the estimate Baltic is insignificant by itself, all cultural group dummies are jointly different from zero (p=0,00).  $H_0$  that all coefficients for the linguistic groups are jointly equal to zero, can be rejected.

In alignment with the literature discussed in section 2, the relation between interest in politics and trust is positive. Both scales range from high interest (or high trust) to low interest (or low trust), so the significant positive effect of magnitude 0,15 means that for a higher interest level of one point on a 1-4 scale, trust is 0,15 higher on average. The effect for political self placement leftright on trust is significantly positive with a magnitude of 0,02. For every point respondent place themselves further towards being politically right-wing, their trust level increases by 0,02. With a 1-11 scale for leftright, this means that the difference in trust levels between ultimate left and extreme right is 0,2 on average.

Being female has a significant positive effect of magnitude 0,08 on trust. This means that females have a EU trust level that is 0,08 higher then men have on average. The year of birth does have a significant effect. The estimate for birthyear is significantly positive, thus the relation between birthyear and trust is negative. The lower the year of birth, the higher the age, therefore older citizens tend to have slightly higher trust levels on average. The effect of socialclass is significantly positive with a magnitude of 0,10. On a range of 5 classes, respondents classifying themselves 1 class higher, means a trust level that is 0,1 higher on average a scale of 1-4.

Table 4: Summary of estimations for equations (1) & (2), rounded up to 3 decimal places

n = 54,752	Trust, model 1	Trust, model 2
Romance	-0.193***	-0.171***
Slavic	-0.188***	-0.157***
Uralic	-0.272***	-0.264***
Hellenic	-0.246***	-0.193***
Baltic	-0.015	0.007
election (2009)		-0.343***
election (2014)		-0.152***
interestpolitics	0.147***	-0.136***
leftright	-0.022***	-0.018***
gender (female)	-0.057***	-0.047***
birthyear	-0.002***	-0.001***
household	0.005	-0.009**
socialclass	-0.096***	-0.096***

<sup>\*,\*\*,\*\*\*</sup> indicates significance at the 90%, 95% and 99% level, respectively

#### 4.2 Differences between Germanic countries and Romance countries

To analyse the differences between Germanic and Romance countries, I hypothesize the following:

Hypothesis 2: "Germanic countries have lower trust levels than Romance countries over the 2004-2014 period."

Table 4 for the general analysis shows a significant positive effect of Romance identity on trust in the EU of magnitude 0,19, compared to the Germanic base case. This means that compared

to being Germanic, a Romance identity implies a trust level that is 0,19 higher on average on a 1-4 scale.

#### 4.3 Difference before and after crisis

To analyse the difference between trust in the EU in election year 2004 before the 2008 financial crisis and election year 2014 after the crisis, I hypothesize the following:

Hypothesis 3: "Levels of trust will generally be lower after the crisis (2014) than before (2004)."

Table 4 shows that compared to base year 2004, trust is significantly higher in 2014. This indicates a growth in trust between 2004 and 2014. However, Table 5 shows the contrast of marginal linear predictions between 2014 and 2009: compared to 2009, trust levels were 0,2 lower on average. A trust shock definitely has taken place after 2009. This could indicate a slight delay in the effect of the financial crisis on trust levels.

Table 5: Contrast of election years

Election year	Contrast
2009 vs. 2004	-0.343***
2014 vs. 2009	0.192***

<sup>\*\*\*</sup> indicates significance at the 99% level

#### 4.4 Robustness Checks

As mentioned in Section 3 I perform ordered logistic regressions to check robustness of both models 1 and 2. Table 6 shows the results for ordered logistic regression with model 1, next to the ordinal least squares regression results. Overall, the signs of the language group dummy coefficient stay the same, along with the significance of the estimates. All identity groups except Baltic significantly influence the ordered log-odds of having higher trust levels, all other variables held constant.

Next, to check whether the rescaling of the trust variable affects the results, Table 7 shows the results of the separate years with an unmodified trust variable with the original scale for every year. On the right side it shows the results with the rescaled variable for comparison. Examining the table, it is visible that for 2004 the biggest change occurs in the magnitude of the coefficients. This is because the rescaling for this year is the most extreme: from 1-10 to 1-4. Furthermore,

the insignificance of *Baltic* originates in 2004. Overall, the coefficients for the cultural dummies remain significant and therefore reinforce the main argument in subsections 4.1, 4.2 & 4.3.

Table 6: Summary of estimations for ologit with model 1, rounded up to 3 decimal places

Trust	Ordered logit	Model 1
Romance	-0.462***	-0.193***
Slavic	-0.424***	-0.188***
Uralic	-0.557***	-0.272***
Hellenic	-0.635***	-0.246***
Baltic	-0.025	-0.015
n = 54,572		

<sup>\*,\*\*,\*\*\*</sup> indicates significance at the 90%, 95% and 99% level, respectively. Full results in Appendix B.1.

Table 7: Summary of estimations for separate year datasets in comparison with model (1), rounded up to 3 decimal places

	Trust,2004	Trust, 2009	Trust,2014	Averages
				$(\mathrm{Model}\ 1)$
Romance	-0.413***	-0.246***	0.080***	-0.193***
Slavic	-0.253***	-0.193***	-0.034*	-0.188***
Uralic	0.440***	-0.081***	0.027***	-0.272***
Hellenic	-0.547***	-0.301***	0.169***	-0.246***
Baltic	-0.222	0.135***	0.067**	-0.015
interestpolitics	0.130***	0.050***	0.192***	-0.147***
leftright	-0.025***	-0.017***	-0.015***	-0.022***
gender (female)	-0.065***	0.004	-0.077***	-0.057***
birthyear	-0.002***	0.001**	-0.001	-0.002***
household	0.029***	-0.001	-0.006***	0.005
socialclass	-0.075***	-0.076***	-0.138***	-0.096***
n	15,600	19,194	19,778	52,752

<sup>\*,\*\*,\*\*\*</sup> indicates significance at the 90%, 95% and 99% level, respectively. Full results in Appendix B.1.

## 5 Conclusion

Motivated by literature on the different influences on trust in the EU of Union citizens, I set up the following research question to explore the effect of identity on EU trust levels:

"How do levels of trust in the institutions of the European Union differ across cultural groups of EU member states?"

Lead by existing literature I explored 3 hypotheses. First, that there is a significant general effect of identity on trust. Second, that Romance citizens have higher trust levels than Germanic citizens on average. Third, that trust levels are lower after the crisis than before the crisis.

Identity is one of the main influences of trust levels as described by many EU trust theories. My analysis shows that hypothesis 1 cannot be rejected: there is a general effect of identity on EU trust levels. Hypothesis 2 cannot be rejected either. I find that Romance trust levels are higher than Germanic trust levels on average. Citizens from Wallonia, France, Spain, Italy and Portugal are generally more positive about the EU and Germans, Dutch, Flamish, Danish, Irish, Luxembourgish, Swedish, Austrians and UK citizens.

Section 4 shows that the 2008 financial crisis has not hit trust levels that hard that 2014 levels (after crisis) are lower than 2004 levels (before crisis). However, trust levels do appear to have experienced a little downward shock after 2009. Hypothesis 3 has to be rejected, but this does not mean that the crisis did not have a negative effect on EU trust levels.

# 6 Limitations and follow-up research

In this section, I explain the caveats of the used data and methodology. These are sometimes inherent to the type of data or methodology, but can in other cases be solved in a certain way in potential follow-up research.

First of all, a classic and inherent caveat to a trust measure: it is survey data. The trust measure is self-reported. Furthermore, the interviews took place over the phone, which might have influenced the respondent to want to present him or herself in a particular way to the interviewer. In addition, the trust measure is a scale measure. Response bias is common in questionnaires like the one for this paper. The main variable trust is measured on a Likert scale, one that as answers that vary from strongly agree to strongly disagree. Likert scales are known to cause response bias (Friedman et al., 1994). The trust question was one of many in all years. Tellis and Chandrasekaran (2010) also report general biases for survey data that apply to this questionnaire: socially desirable responding, "yay-saying" (tending to only answer positively) and "nay-saying" (tending to only answer negatively).

Secondly, as I explain in Section 3, the data has been rescaled in two years. This has been done from a 1-10 to a 1-4 scale and from a 1-5 to a 1-4 scale. This rescaling process relies on the silent assumption that respondents are not sensitive to the amount of points on a scale. A respondent choosing for 7 on a scale of 10 would maybe not have chosen for 2.8 on a scale of 4 (apart from the fact that 2.8 is not even an option to choose for).

Thirdly, more years could have been included. The focus of this paper was on the more recent development of EU trust levels so the the choice of not including years before 2004 was deliberate. Nevertheless, it would make the analysis stronger if data of more years were included. Especially the general analysis would be less prone to year-specific shocks in trust by including more years. In further research it is interesting to include the results of the 2019 elections. Earlier years could be included, but do reduce the sample size of later years because of the lower number of member states at that time.

In addition, language may not be the perfect proxy for identity or cultural group. Borders of linguistic areas are vague and become vaguer every decade. European borders are fluid instead of fixed (Delanty, 2006). People speak more than one language in border areas and may not identify themselves or only partially with the main language of their area. Free movement of people, one of the main chapters of the acquis communautaire of the EU, implies that people move easily which further blurs the idea of having one strong identity that people identify themselves with. On the other hand, for now it might be the best one available, especially considering measurability.

Finally, the models do not have as much explanatory power as would be desirable (see Appendix Table C.1 & C.3). Control variables have been included, but not for all effects described in section 2. Potential follow-up research should include controls for cognitive mobilization. This concept describes the spread of knowledge on the EU in this case. Knowledge could be correlated to the main dependent dummy variables of linguistic family, for instance because citizens of relatively young member states are expected to know less about the Union. Proxies for cognitive mobilization could be percentage of right answers to knowledge questions on the EU. Care should be taken to ensure that the questions include both common and less common knowledge.

## References

- Aghion, P., Algan, Y., Cahuc, P., and Shleifer, A. (2010). Regulation and distrust. *The Quarterly Journal of Economics*, 125(3):1015–1049.
- Akerlof, G. A. and Kranton, R. E. (2000). Economics and identity. The Quarterly Journal of Economics, 115(3):715–753.
- Armingeon, K. and Ceka, B. (2014). The loss of trust in the european union during the great recession since 2007: The role of heuristics from the national political system. *European Union Politics*, 15(1):82–107.
- Armingeon, K. and Guthmann, K. (2014). Democracy in crisis? the declining support for national democracy in e uropean countries, 2007–2011. European Journal of Political Research, 53(3):423–442.
- Delanty, G. (2006). Borders in a changing europe: Dynamics of openness and closure. *Comparative European Politics*, 4(2-3):183–202.
- Den Butter, F. A. and Mosch, R. H. (2003). Trade, trust and transaction costs.
- Dotti Sani, G. M. and Magistro, B. (2016). Increasingly unequal? the economic crisis, social inequalities and trust in the european parliament in 20 european countries. *European Journal of Political Research*, 55(2):246–264.
- Dyer, J. H. and Chu, W. (2003). The role of trustworthiness in reducing transaction costs and improving performance: Empirical evidence from the united states, japan, and korea. *Organization science*, 14(1):57–68.
- Eichenberg, R. and Dalton, R. (1993). Europeans and the european community: The dynamics of public support for european integration. 47:507–34.
- Friedman, H. H., Herskovitz, P. J., and Pollack, S. (1994). The biasing effects of scale-checking styles on response to a likert scale. In *Proceedings of the American statistical association annual conference: survey research methods*, volume 792.
- Gabel, M. (1998). Public support for european integration: An empirical test of five theories. The Journal of Politics, 60(2):333–354.
- Harteveld, E., Meer, T. v. d., and Vries, C. E. D. (2013). In europe we trust? exploring three logics of trust in the european union. *European Union Politics*, 14(4):542–565.

- Karp, J. A., Banducci, S. A., and Bowler, S. (2003). To know it is to love it? satisfaction with democracy in the european union. *Comparative Political Studies*, 36(3):271–292.
- Mattila, M. (2003). Why bother? determinants of turnout in the european elections. *Electoral studies*, 22(3):449–468.
- McLaren, L. (2005). Identity, interests and attitudes to European integration. Springer.
- Medrano, J. D. (2010). Framing Europe: Attitudes to European Integration in Germany, Spain, and the United Kingdom. Princeton University Press.
- Muñoz, J., Torcal, M., and Bonet, E. (2011). Institutional trust and multilevel government in the european union: Congruence or compensation? *European Union Politics*, 12(4):551–574.
- Roth, F. (2009). The effect of the financial crisis on systemic trust. *Intereconomics*, 44(4):203–208.
- Rozin, P. and Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. Personality and social psychology review, 5(4):296–320.
- Sánchez-Cuenca, I. (2000). The political basis of support for european integration. *European Union Politics*, 1(2):147–171.
- Schmitt, H., Bartolini, S., Brug, W. v. d., Eijk, C. v. d., Franklin, M., Fuchs, D., Toka, G., Marsh, M., and Thomassen, J. (2004). European election study 2004 (2nd edition).
- Schmitt, H., Popa, S. A., Hobolt, S. B., and Teperoglou, E. (2014). European parliament election study 2014.
- Serricchio, F., Tsakatika, M., and Quaglia, L. (2013). Euroscepticism and the global financial crisis. *JCMS: Journal of Common Market Studies*, 51(1):51–64.
- Sojka, A. (2013). Euro-crisis and institutional trust in central eastern europe: A comparative approach.
- Tellis, G. J. and Chandrasekaran, D. (2010). Extent and impact of response biases in cross-national survey research. *International Journal of Research in Marketing*, 27(4):329–341.
- van Egmond, M. H., Sapir, E. V. S., van der Brug, W., Hobolt, S. B., and Franklin, M. N. (2009). European parliament election study 2009.

Verbalyte, M. and von Scheve, C. (2018). Feeling europe: political emotion, knowledge, and support for the european union. *Innovation: The European Journal of Social Science Research*, 31(2):162–188.

Warren, M. E. (1999). Democracy and trust. Cambridge University Press.

# Appendix A

Table A.1: Correlation between trust measures 2004 set

	A	В	$\mathbf{C}$
European Parliament (A)	1.00		
European Commission (B)	0.81	1.00	
Council of Ministers (C)	0.77	0.85	1.00

# Appendix B

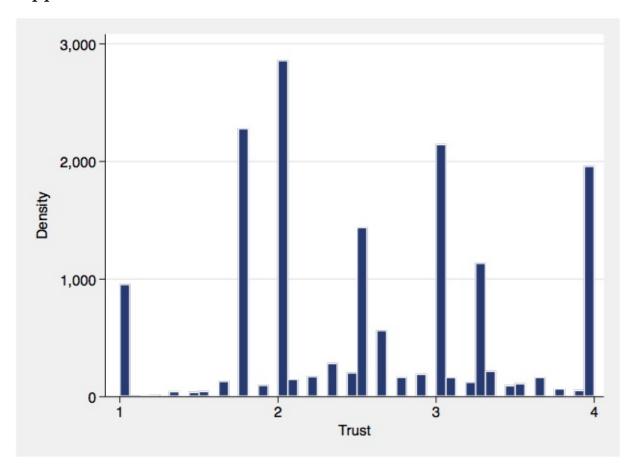


Figure B.1: Density of trust variable in combined set

# Appendix C

Table C.1: Regression on the effect of identity on trust, averaging 2004, 2009 and 2014

Trust	Coefficient	Robust std. err	t	$\boldsymbol{p}$	95 % CI
constant	6.189	0.413	15.00	0.000	5.380 6.997
Romance	-0.193	0.010	-19.95	0.000	-0.212  -0.174
Slavic	-0.188	0.010	-18.56	0.000	-0.208  -0.168
Uralic	-0.272	0.011	-25.92	0.000	-0.293  -0.251
Hellenic	-0.246	0.015	-16.32	0.000	-0.276  -0.217
Baltic	-0.015	0.018	-0.83	0.409	-0.051 $0.021$
interestpolitics	0.147	0.004	34.61	0.000	0.139  0.155
leftright	-0.022	0.001	-15.60	0.000	-0.024  -0.019
$\operatorname{gender}(\operatorname{female})$	-0.058	0.007	-8.42	0.000	-0.072  -0.045
birthyear	-0.002	0.000	-8.38	0.000	-0.002  -0.001
household	0.005	0.004	1.52	0.129	-0.002  -0.013
socialclass	-0.100	0.004	-25.74	0.000	-0.103  -0.089
$R^2$	0.061				
n	54,752				

Table C.2: Wald test on joint significance of group dummies

Test statistic $F$	208.07
Degrees of freedom (numerator)	5
Degrees of freedom (denominator)	54,560
p-value	0.000

Table C.3: Regression on the effect of identity on trust, including year effect

Trust	Coefficient	Robust std. err.	t	p	95 % CI
constant	5.759	0.408	14.11	0.000	4.959 6.559
Romance	-0.171	0.010	-17.96	0.000	-0.190  -0.153
Slavic	-0.157	0.010	-18.56	0.000	-0.177  -0.118
Uralic	-0.264	0.011	-25.91	0.000	-0.285  -0.244
Hellenic	-0.193	0.015	-12.90	0.000	-0.222  -0.164
Baltic	0.007	0.019	0.38	0.705	-0.029  0.043
election(2009)	-0.343	0.008	-41.46	0.000	-0.360  -0.327
election(2014)	-0.152	0.008	-17.95	0.000	-0.168  -0.135
interestpolitics	0.136	0.004	32.38	0.000	0.128 0.144
leftright	-0.183	0.001	-13.24	0.000	-0.021 $-0.016$
${\rm gender}({\rm female})$	-0.047	0.007	-6.96	0.000	-0.061 $-0.034$
birthyear	-0.001	0.000	-6.95	0.000	-0.002  -0.001
household	-0.009	0.004	-2.54	0.011	-0.016 $-0.002$
socialclass	-0.096	0.004	-25.39	0.000	-0.104  -0.089
$R^2$	0.088				
n	54,752				

Table C.4: Contrast of election years

Election year	Contrast	Robust std. err.	${f F}$	p	95~%	CI
2009 vs. 2004	-0.343***	0.008	1718.79	0.000	-0.360	-0.327
2014 vs. 2009	0.192***	0.009	502.32	0.000	0.175	0.208

<sup>\*\*\*</sup> indicates significance at the 99% level

# Appendix D

Table D.1: Ordered logistic regression on the effect of identity on trust in EU

Trust	Coefficient	Robust std. err.	t	$\boldsymbol{p}$	95 % CI
Romance	-0.462	0.022	-21.45	0.000	-0.504  -0.419
Slavic	-0.424	0.022	-19.13	0.000	-0.468  -0.381
Uralic	-0.557	0.023	-24.46	0.000	-0.602  -0.513
Hellenic	0.635	0.036	-17.71	0.000	-0.705  -0.564
Baltic	-0.222	0.039	-0.64	0.520	-0.102  0.052
interestpolitics	0.329	0.010	34.02	0.000	0.310 0.348
leftright	-0.053	0.003	-16.87	0.000	-0.059  -0.047
$\operatorname{gender}(\operatorname{female})$	-0.121	0.015	-7.97	0.000	-0.151  -0.091
birthyear	-0.004	0.000	-8.14	0.000	-0.005  -0.003
household	0.016	0.008	2.04	0.041	0.001 0.032
socialclass	-0.198	0.009	-23.19	0.000	-0.214  -0.181
Pseudo $R^2$	0.012				
n = 1	54,572				

# Appendix E

Table E.1: Regression on the effect of identity on trust in EU, 2004

Trust	Coefficient	Robust std. err.	t $p$		95 % CI	
constant	7.091	0.677	10.48	0.000	5.765 8.418	
Romance	-0.413	0.015	-27.64	0.000	-0.442  -0.384	
Slavic	-0.253	0.018	-13.98	0.000	-0.289  -0.218	
Uralic	-0.440	0.017	-25.66	0.000	-0.474  -0.407	
Hellenic	0.547	0.027	-20.17	0.000	-0.601  -0.494	
Baltic	-0.222	0.035	-6.31	0.000	-0.291 0.153	
interestpolitics	0.130	0.007	18.37	0.000	0.116 0.144	
leftright	-0.025	0.002	-10.89	0.000	-0.030  -0.021	
$\operatorname{gender}(\operatorname{female})$	-0.065	0.011	-5.92	0.000	-0.087  -0.044	
birthyear	-0.003	0.000	-5.93	0.000	-0.003  -0.001	
household	-0.029	0.006	-5.28	0.000	-0.040  -0.018	
socialclass	-0.075	0.005	-13.99	0.000	-0.086 $-0.065$	
$R^2$	0.126					
n	19,194					

Table E.2: Regression on the effect of identity on trust in EU, 2009

Trust	Coefficient	Robust std. err.	t	$\boldsymbol{p}$	95 % CI
constant	4.346	0.712	6.11	0.000	2.950 5.741
Romance	-0.246	0.017	-14.67	0.000	-0.278  -0.213
Slavic	-0.193	0.017	-11.62	0.000	-0.225  -0.160
Uralic	-0.081	0.019	-4.25	0.000	-0.119  -0.044
Hellenic	0.301	0.022	-13.85	0.000	-0.344  -0.259
Baltic	-0.135	0.030	4.51	0.000	0.076 0.124
interestpolitics	0.050	0.007	6.77	0.000	0.035  0.064
leftright	-0.017	0.002	-7.39	0.000	-0.021 $-0.012$
gender(female)	0.004	0.012	0.37	0.709	-0.019  0.028
birthyear	0.001	0.000	-2.37	0.018	-0.002 $0.000$
household	-0.001	0.006	0.21	0.836	-0.011 $0.014$
socialclass	-0.076	0.006	-13.99	0.000	-0.088  -0.064
$R^2$	0.037				
n	19,194				

Table E.3: Regression on the effect of identity on trust in EU, 2014

Trust	Coefficient	Robust std. err.	t	$\boldsymbol{p}$	95 % CI	
constant	5.338	0.688	7.76	0.000	3.989	6.687
Romance	0.080	0.017	4.76	0.000	0.047	0.113
Slavic	-0.034	0.017	-1.95	0.000	-0.067	0.000
Uralic	0.027	0.018	-15.28	0.000	-0.303	-0.234
Hellenic	0.169	0.027	-6.18	0.000	0.115	0.222
Baltic	0.067	0.031	2.13	0.000	0.005	0.128
interestpolitics	0.192	0.007	28.00	0.000	0.179	0.206
leftright	-0.015	0.002	-6.11	0.000	-0.020	-0.010
$\operatorname{gender}(\operatorname{female})$	-0.077	0.012	-6.54	0.709	-0.099	-0.054
birthyear	-0.001	0.000	-3.91	0.018	-0.002	-0.001
household	-0.006	0.007	-0.92	0.836	-0.020	0.007
socialclass	-0.138	0.009	-14.89	0.000	-0.156	-0.120
$R^2$	0.090					
n	19,778					