

Trust and Voting Behavior - A Case Study of the 2021 German Parliamentary Election

Yun-Tsz Tsai

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Introduction

Broadly speaking, the idea of trust can be thought of as the tendency of perceiving others positively. For example, leaving valuable belongings on one's seat in a public space when one has to leave for the toilet. This is what Kaase (1999) refers to as interpersonal trust. Institutional trust, on the other hand, represents the perceived reliability of institutions such as the government of a state. In this study, I focus on a narrower definition of institutional trust and therefore I will use the term "political trust" instead.

Many studies have suggested that political trust is highly related to individuals' political participation (Mattila (2020)). Higher political trust is positively related to participation in voting in elections, while for those with lower political trust, they tend to engage more in non-institutional political activities, such as online discussions than voting. In other words, we can probably anticipate that the lower political trust an individual has, the less likely they will turn up at the polling booth.

Besides, if it is true that individuals with higher political trust vote more compared to those with lower political trust, it seems reasonable to assume that political trust will not differ among voters across parties.

This study aims at investigating the relationship between political trust and voting behavior by looking particularly at the 2021 German parliamentary election. Additionally, it examines whether political trust differs among voters.

The hypotheses are formulated as follows:

- 1) For those with low political trust, they are less likely to vote in the election.
- 2) For those who did vote, there is no difference in political trust among voters across all parties.

To test the hypotheses, different statistical models will be employed. The methodology is further elaborated in Section .

Data

To test my hypotheses, I use data from round 11 of the 2023 European Social Survey (ESS). ESS is a cross-national survey conducted every two years and includes a wide range of questions that comprehensively assess various aspects of life.

The response rate for Germany was 26.7% and the total number of valid respondents are 2420. However, not all of them answered all the questions regarding the interest of the study, and those with incomplete response were excluded from the analysis. After filtering out missing values, a total of 1961 individuals reported to have voted in the previous national election. Those who did not vote are coded as 0 and those who voted are coded as 1, and household income is recoded to three ordinal variables.

Table 1 shows the unweighted sample statistics of ESS round 11 for Germany, both overall and by voting or not. The item political trust does not exist in the original dataset. Rather, it is calculated using the average value of the two items - trust in politicians and trust in political parties- with lower values indicating a lack of trust in politics in general. It is clear that the gender ratios for voter and non voters do not differ greatly (~51% vs. ~49% of women), but political trust of non voters is 0.3170732% lower than that of voters. In addition, non-voters are less likely to have received a degree from higher education system and they earn less compared to voters.

Table 2 contains descriptive information on German voters by party choice in 2021 parliamentary election. There were 4 major parties in the German parliament, which are Christian Democratic Union (CDU) and its sister party in Bavarian region, Christian Social Union (CSU), Social Democratic Party (SDP), Green Party and Free Democratic Party (FDP).

The German parliament is elected using a mixed member proportional system, which means voters vote for both their local representative and for a party. Not all respondents were willing to share which parties they had voted for, and therefore brings the sample size down to 1024. Some of the respondents were removed for the analysis as they voted for different parties in the election ($N = 403$).

Some might argue that this is not the best practice given the considerable number of sample loss. I acknowledge that it is still possible to conduct the analysis without dropping these responses, but to keep the analysis simple and straightforward, considerations of all possible party combinations based on their position on the political spectrum is beyond the scope of this study.

Table 1. Descriptive Statistics for 2021 German Voters and Non-voters

	Voted or Not		Overall
	0	1	
N	221	1,740	1,961
Voted	11.3%	88.7%	100.0%
Sex			
Male	48.9%	51.3%	51.0%
Female	51.1%	48.7%	49.0%
Age ¹	47.5 (17.7) ¹	53.2 (17.6) ¹	52.5 (17.7) ¹
Political Trust ¹	2.8 (2.2) ¹	4.1 (2.1) ¹	3.9 (2.2) ¹
Education Level			
No College	80.1%	56.0%	58.7%
College	19.9%	44.0%	41.3%
Household Income			
Low	39.4%	18.9%	21.2%
Middle	41.2%	39.7%	39.9%
High	19.5%	41.4%	39.0%

Political trust corresponds to the average of *Trust in politicians* and *Trust in political parties*.

¹Mean (SD)

Source: 2023 ESS round 11.

Table 2. Descriptive Statistics for 2021 German Voters by Party

	Party Choice				Other	Overall
	CDU/CSU	SPD	Green Party	FDP		
N	333	254	227	71	139	1,024
Vote share	32.5%	24.8%	22.2%	6.9%	13.6%	100.0%
Sex						
Male	51.1%	52.4%	49.8%	59.2%	58.3%	52.6%
Female	48.9%	47.6%	50.2%	40.8%	41.7%	47.4%
Age	59.4 (17.2)	59.8 (16.7)	49.3 (17.1)	48.3 (16.9)	51.0 (17.5)	55.3 (17.7)
Political Trust	4.0 (1.9)	4.2 (2.3)	5.1 (1.7)	3.7 (2.1)	2.7 (2.1)	4.1 (2.1)
Education Level						
No College	59.8%	67.3%	37.0%	43.7%	67.6%	56.5%
College	40.2%	32.7%	63.0%	56.3%	32.4%	43.5%
Household Income						
Low	19.2%	18.9%	16.7%	11.3%	25.9%	18.9%
Middle	38.4%	47.2%	33.9%	31.0%	45.3%	40.0%
High	42.3%	33.9%	49.3%	57.7%	28.8%	41.0%

Methods

To test the aforementioned hypotheses, I employ two different types of statistical models. Binary logistic models for the association between political trust and participating in voting; multinomial logistic regression models for telling whether or not political trust among voters from different parties differ. The dependent variable for the former is voting or not voting, which are coded as 1 and 0 respectively, and party choice for the latter, in which the reference category is the Christian Democratic Union (CDU) and Christian Social Union (CSU). For both hypotheses, the main independent variable is political trust, and I control for other variables, including sex assigned at birth, age, having a college degree and household income, that are empirically considered important in an analysis of this kind. Finally, an interaction term of college education and political trust is also included.

Results

First, we start with models that test the first hypothesis. Table 3 shows the estimated odds ratio from binary logistic regression models. Model A includes political trust as the sole independent variable. All the other control variables are added to Model B and the strong connection between individual's voting behavior and their level of political trust remains robust. Model C further examines the plausible confounding effects of higher education and political trust. However, not any connection has been established by these models.

Across the models, Model B and Model C obviously outperform Model A in terms of model fit statistics (shown at the bottom of Table 3). After conducting a Likelihood Ratio Test (LRT), it is found that the two models do not differ from each other ($p = 0.661$). Thus, I will focus on the interpretation of coefficients of Model B.

The results suggest that other being equal, for every one unit increase in political interest, the odds of individual voting will increase by 29%. Sex, on the other hand, does not affect one's odds of voting, which imply that for the sample on which the models are built upon, men and women do not differ inherently in their possibility to vote. For the rest of the variables in Model B, all of them are a value greater than 1. This means that for individuals who are older or highly educated, the odds of them voting also increase. Additionally, increasing amount of income also boost individuals' odds of voting.

Moving on to the models that examine the second hypothesis. Party choice is the dependent variable in these models. A total of three models were constructed and the independent variables included are exactly the same with what is included for binary logistic regression models. Similarly, adding interaction term of higher education and political trust does not make any significant statistical difference, and therefore only two of the models are presented.

In contrast to the assumption that voting individuals have the same level of political trust collectively, Table 4 demonstrates that although trust does not seem to differ among voters

Table 3. Odds Ratio from Binary Logistic Regression Models of 2021 German Parliamentary Election

	A	B	C
Intercept	3.15*** [2.47, 4.05]	0.32*** [0.17, 0.58]	0.31*** [0.17, 0.57]
Political Trust	1.31*** [1.22, 1.40]	1.29*** [1.20, 1.39]	1.30*** [1.20, 1.42]
Female (ref: Male)		1.00 [0.74, 1.34]	1.00 [0.74, 1.34]
Age (years)		1.03*** [1.02, 1.04]	1.03*** [1.02, 1.04]
College Educated (ref: Not)		2.03*** [1.43, 2.95]	2.32* [1.18, 4.77]
Middle Income (ref: Low)		2.00*** [1.43, 2.80]	2.00*** [1.43, 2.80]
High Income		4.33*** [2.89, 6.59]	4.34*** [2.89, 6.60]
College Educated \times Political Trust			0.96 [0.81, 1.14]
Num.Obs.	1961	1961	1961
AIC	1322.5	1221.1	1222.9
BIC	1333.7	1260.1	1267.5
Log.Lik.	-659.273	-603.536	-603.439

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

95% confidence intervals in brackets.

Source: Author's calculations using round 11 European Social Survey.

for most of the major parties, political trust is what positively related to voting for the Green Parties. However, political trust is negatively associated with voting for non-major parties.

Table 4. Odds Ratios from Multinomial Models of Party Vote in 2021 German Parliamentary Election

	1				2			
	SPD	Green Party	FDP	Other	SPD	Green Party	FDP	Other
Intercept	0.909	3.314**	1.115	5.338***	0.677	0.963	1.709	18.660***
	[0.404, 2.047]	[1.483, 7.405]	[0.337, 3.682]	[2.276, 12.517]	[0.285, 1.607]	[0.389, 2.381]	[0.464, 6.294]	[7.016, 49.628]
Female (ref: Male)	0.895	1.172	0.786	0.673	0.868	1.111	0.794	0.722
	[0.640, 1.253]	[0.820, 1.677]	[0.460, 1.342]	[0.444, 1.020]	[0.619, 1.218]	[0.772, 1.601]	[0.464, 1.359]	[0.472, 1.107]
Age (years)	0.999	0.964***	0.963***	0.968***	0.999	0.965***	0.962***	0.962***
	[0.989, 1.009]	[0.954, 0.974]	[0.948, 0.978]	[0.956, 0.979]	[0.989, 1.009]	[0.955, 0.975]	[0.947, 0.978]	[0.950, 0.975]
College Educated (ref: Not)	0.752	2.819***	1.854*	0.832	0.718	2.496***	1.961*	0.988
	[0.525, 1.076]	[1.942, 4.091]	[1.074, 3.198]	[0.535, 1.292]	[0.500, 1.031]	[1.705, 3.654]	[1.131, 3.400]	[0.627, 1.555]
Middle Income (ref: Low)	1.256	0.868	1.155	0.769	1.258	0.898	1.170	0.778
	[0.797, 1.980]	[0.517, 1.457]	[0.480, 2.781]	[0.455, 1.301]	[0.797, 1.985]	[0.529, 1.524]	[0.486, 2.819]	[0.455, 1.332]
High Income	0.856	0.713	1.297	0.349***	0.841	0.712	1.318	0.356***
	[0.522, 1.403]	[0.424, 1.200]	[0.555, 3.034]	[0.196, 0.624]	[0.513, 1.381]	[0.419, 1.207]	[0.563, 3.086]	[0.196, 0.645]
Political Trust					1.082	1.315***	0.898	0.727***
					[0.998, 1.174]	[1.196, 1.446]	[0.787, 1.024]	[0.654, 0.810]
Num.Obs.	1024				1024			
AIC	2953.1				2848.2			
BIC	3071.5				2986.3			
Log.Lik.	-1453				-1396			

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

95% confidence intervals in brackets. Reference category for outcome is Christian Democratic Union and its sister party Christian Social Union. SPD = Social Democratic Party; FDP = Free Democratic Party Source: Author's calculations using round 11 European Social Survey.

Discussion

Reference

- Hooghe, Marc, and Sofie and Marien. 2013. "A Comparative Analysis of the Relation Between Political Trust and Forms of Political Participation in Europe." *European Societies* 15 (1): 131–52. <https://doi.org/10.1080/14616696.2012.692807>.
- Kaase, Max. 1999. "Interpersonal Trust, Political Trust and Non-institutionalised Political Participation in Western Europe." *West European Politics* 22 (3): 1–21. <https://doi.org/10.1080/01402389908425313>.
- Mattila, Mikko. 2020. "Does Poor Health Mobilize People into Action? Health, Political Trust, and Participation." *European Political Science Review* 12 (1): 49–65. <https://doi.org/10.1017/S175577391900033X>.