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Title thesis: A European empirical analysis of the functioning of micro-economic voter turnout models in the age of social media

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Abstract

This thesis takes a closer look at the functioning of three micro-economic models. All of these models aim to solve the problem of a lack of benefits in the explanation of the voting of a rational voter. They do so by looking for new benefits that are to be found in ethics, social image concerns and a utility of expressions. The thesis uses the rise of social media usage as a way to view how the expectations of these models come to practice. Using data from the European Social Survey (ESS), it is shown by empirical analyses that channels that could exist due to the models' ideas exist. It is also shown that these channels are seen more in the newer democratic countries in Eastern Europe.

Introduction

In the 2022 Dutch elections for local councils the election outcomes were quite interesting to look at. However, what news media and government officials seemed to find even more important, and frightening, was the voter turnout during the election. Big Dutch constitutions like Rotterdam had turnouts below 50 % and the nation as a whole finishes only slightly above that number, implying that almost half the people who could go voting, do not go voting (Kiesraad, 2021). Nationwide, in all kinds of elections, there is a decline in voter turnout since the 1950s, the data in the Kennisbank Openbaar Bestuur shows.

All in all, there is a rise in people abstaining from voting. In many ways, that could become problematic, as voting is in itself the basis of democracy, the political fundament of the modern world and its greatness. A democracy is about hearing all voices, accounting to all cultures and social groups. Without enough turnout, a democracy simply loses its institutional power. Thus, there is a great social relevance of getting people to vote. If not all vote, there are high chances that the output is not well spread over all kinds of people in a population, causing unequal representation (Lijphart, 1997). In order to do so, scientists from many fields can, and do, try to look at why people do not cast their ballot.

Economists of the micro-level have done differently. They look at why people do go voting.

This began when Downs wrote *An economic theory of democracy* back in 1957. He wondered why rational people vote, as they should not do so from a cost-benefit perspective. To go voting usually takes quite some effort. One needs to leave their house, travel and in many countries also wait for a (huge) while at the casting stations. Of the latter, a good example is the United States of America, where queues lasting for over an hour are no rarity. In other countries even more troublesome is finding out for who to vote. In the Dutch parliament only, there are over 20 political parties. On the ballot one can find a lot more. To compare all, even if it is done via some sort of survey that makes stuff less complicated, takes time and effort. All of these efforts that one has to suffer in order to vote have their opportunity costs, since one could also be working or at least do something that they enjoy more than waiting to color a box red (let alone find out which box). What Downs noted is that on the opposite side of the costs, the benefits are (from a rational perspective) very small. The difference that is made by a single vote in an election that has millions of voters is insignificantly small. For example, it takes nearly 70 000 votes to take a seat in the Dutch parliament (Kiesraad, 2021). So, the costs seem to outweigh the benefits, hence a rational voter should not go voting.

Since then, micro-economists have tried to come up with other with models that shows that there are benefits of voting aside of the effect of the vote on the election results. This thesis will discuss three of those excessively. These are the ethical voter model, the social image concerns model and the excessive voter model. All of these in at least some way come down to the fact that people go voting because they want to be able to say that they voted. Thus, these micro-economical models see an additional benefits' existence which is high enough to encourage people to rationally decide to vote.

Being able to say that one went voting means that people get benefits from being able to share a message. Anno 2022, sharing a message is more than ever related to social mediums which make it possible to share ones message, including ones message of going vote (if not for a specific party or person), easily. Thus, the question of the importance in social media usage in relation to going voting comes up. In 2010, a group of American researchers found that seeing message about politics on Facebook worked extremely well to motivate people to read about politics and to get politically (passively) active. In other words, to go voting (Bond et al., 2012). What this study also found, was that the transmission of messages via the social medium was an even more important creator of incentives to vote than simply receiving messages. The suggestion that that result invokes, is that "sharing" on social media causes people to go voting.

This last suggestion is what makes this thesis scientifically relevant. Where the previously mentioned study (Bond et al, 2012) uses Facebook, this thesis won't focus on a specific social medium. Using data from 2018 seems like a small difference with 2010, but seeing that the usage of social media has risen gigantically in the 8 years in between, there is actually a good reason to look at how social media influenced people to go voting in 2018. In addition to more usage, the pattern of social media used has also changed a lot. Where Facebook was relatively very popular in 2010, competition has now become bigger than ever. Instagram, Snapchat and Tik Tok are good examples of these new competitors. All in all it can be said that social media is ever changing and thus causal links with it are important to be studied periodically to see how current social media patterns cooperate with election activities (Bataarjav & Dantu, 2011). It is also important that these new patterns have already shown to include more social media usage and thus more "sharing", as mentioned before an important way in which social media stimulates voting (Perrin, 2015).

All in all, researching how social media incentivize us go voting is a socially relevant thing to do since there is a need to stop the decline in turnout rates. It is scientifically relevant due to the inherent change and development of social media usage and patterns of usage. Therefore this thesis will endeavor the relation between social media usage and the decision to go (or not to go) voting. It will first show how micro-economic models show that being able to share the fact that a person voted in an additional benefit that leads to rational persons going voting. Then, an empirical analysis of European social data will follow. The aim of this analysis is to look into the effect of social media usage to express political statements on whether people go voting, and via which channels this happens.

Literature review

How does economic theory lead to the topic that is explored? This section will show why there is an economic relevance of the topic. It will do so by discussing three models that try to solve the problem that was found by Downs (1957). Besides discussing the model it will also explain why a model (and its outcome) links to social media usage.

The ethical voter model

The first model to be discussed was proposed by Coate and Conlin (2004) and it is called the ethical voter model. The model makes use of the fact that many people see it as a norm, a social plight, to go voting. Thus, it is a moral duty to go voting. This moral duty can be explained by the fact that one voted for a certain person (or party) and that all the votes for this person together can cause a (rather huge) benefit for the people who voted for this certain person. The winning of this person is seen as a collective good of a certain social group. The moral plight therefore lies in "paying" for the collective good so that the duty one has towards the group they belong to is performed. Going voting is a cost but that cost can be seen as the price one has to pay for the collective good that one will use together with others. Note that this collective good is the victory of the person that one voted for, and thus one is initially not sure whether the cost which they bear will result in the desired benefit. In anyway, an ethical voter should go voting from a moral point of view.

Levine and Mattozzi (2020) elaborate on the ethical voter model. They state that it is not per se moral duty to vote, but that the feeling of having to vote comes mainly from peer pressure. We feel watched and we are afraid to not to vote because we do not want others to find out that we abstained from voting.

Especially this last view might explain why social media is so relevant to look at in this context. If we feel peer pressure for voting, it does not help that we see that other vote on social media. Questioning our own morality, namely, begins from being aware of possible moral concerns. Social media help spreading information. If not voting causes ethical problems, than the fact that social media making people aware that they can vote will increase the amount of people that go voting due to the reasons that the ethical voter models mentions. Logically, for a peer pressured individual this makes it harder to abstain from voting. On the other side, the fact that we can use social media to spread the word that we went out to fulfill our democratic moral duty, makes that we are also more motivated in a positive way, i.e. to go voting. Also, social media just makes us more aware of the election and of the fact that the moral plight exists. For instance, because

we see our friends going out voting, or because we simply see more new flashes that will keep our political eye awake.

The social image model of voting

The second model is the social image model of voting. The idea of this model works comes from a study by Silver et al. (1986). This study of the 1980 US presidential election namely found out that quite a lot of people lie about their status as a (non) voter. Especially people who did not go voting tend to say they did. The study also found that people who are strongly affiliated with a certain person or party that can be voted for, have a higher changes to adopt this kind of lying behavior.

So, many people want to say that they voted, but why? This has to do with the fact that people related their voting behavior to their social image. Many people want to be seen as voters (Silver, 1986). Many people also, do not like lying. Because issues of morality and principality arise, people experience lying as a cost. All in all, the benefits of going voting arise on the one hand because people do not want to be a liar, and on the other hand also in basis because of the fact that voting increases one's social image.

The algebraic model that discusses this in a textbook chapter on voting by Swank (2022), which continues on a model by Harbaugh (1996), finds three main sources of social image concerns that can arise in the voting discussion. These thus encourage people to go voting. Firstly, people want others who support the same candidate to believe that they indeed voted for the candidate they both support, loyalty. Secondly, people want to prove that they do what they ought to do as a proper citizen, namely voting. Thirdly, the believe that voting serves a collective goal likewise in the ethical model of voting.

Social media can help motivating people to vote because social media in many ways are what builds our social image in the current years. This can for instance be seen by Toubia and Stephen (2013) who find that our need to use social media comes more from the contributions that it does to our image than from actual intrinsic utility that social media delivers. We can use social media really well to show what we do in our lives, and that means we can also show that we voted. For example, by posting pictures of ourselves within the voting booth. We can even add a "stemfie" (i.e. a selfie of ourselves with out vote) to show that we voted for the candidate we support. Of course, when people already use social media to address political issues, their image is in part defined by their political visons. We can expect that people who do this are even more concerned by

people knowing that they actually voted than, just like the people who support a candidate in the study by Silver (1986) too. A good example of social images being affected by what people share on social media could be seen in the corona crises, when people who shared stuff online about (not) getting vaccinated were quickly called stupid by people with opposite beliefs, as discussion on social media have clearly proven. All in all, social media vastly influence our social image and the social image concerns we have influence our decision to vote positively.

The expressive voter model

The final model that will be discussed is the expressive voter model it shows quite some similarities with the previous models, as the main idea that is approached still is about wanting to be able to say that one voted. The view that is used however, is the purest utilitarian of the three. In the baseline namely the model solves the problem of voting losing cost-benefit analyses by raising the benefit with a utility of expressing ones identity. A good explanation for this was given by Brennan and Lomasky (1998). Expressive utility is gained by getting a feeling of supporting a candidate. To this feeling, also being part of a group and having a chance of experiencing the feeling of “winning” are important contributors.

So, we vote (in part) because we want to express ourselves. This can make voting a rational act. It can actually deliver a cheap way to “buy” oneself a piece of an identity. Many aspects of our identity namely are predetermined, but since the cost of for who to vote is very low (since there is almost no influence on the result, as Downs (1957) noted), it does not matter for who to choose in that perspective. Thus, one can choose the (political) indemnity which they want, practically freely. A good piece of evidence for the theory was given by Hillman (2011). He explained how Jewish voters used the low cost way to give oneself the identity one wants to have. They used to vote for liberal candidates (the US democratic party) even though their Jewish identity originally would expect them to vote for the US republican party. This would also be more logical seeing their socio-economic positions. However, apparently Jews prefer to be seen as liberals and they can easily and cheaply express this by their vote.

In relation to social media, the expressive utility seems to be easily enlarged. It is much easier to express ourselves in the age of social media. We can share our message (of our vote) with many people by just a few clicks. Therefore, the claiming of a certain identity as described by Hillman (2011) becomes much easier. Additionally, by making and sharing pictures of our vote, but also by spreading messages about political candidates or parties, we can obtain expressive utility with

and about our vote more and more. So, with an increase in total utility, expressive utility seems totally fit for the era of social media.

Concluding theoretical remarks

All in all the three models that were discussed are in many ways about expressing. Expressing ones morality by doing the part for the group one belongs to for instance, for an ethical voter. Expressing also as a means to help affiliate oneself to a social image (or maybe even more as a means to solve social image concerns that one might create). Or lastly, expressing as a driving power for utility. Whatever need there may be to express, we can rest assure that social media helps serving this need efficiently. Never it has been so easy to express, also in the (passive) political world. Therefore, the effect of social media on the decision to go voting can be positive and significant, theory suggests.

Hypotheses

Hypothesis 1: People who use social media more to express political opinions are more likely to vote

People who share stuff about politics online have a greater pressure of keeping the social image of being someone who is actively busy with their political plight. The thesis expects that more than others, people who use their socials to express themselves will use their vote to express themselves too. The belief that they should do something for their group is expressed more in this way too. Sharing on social media in this sense means either reposting messages of others or writing politically affiliated messages by one self. In both ways, the predictions of the social image model of voting would turn out to be true. People link their social image more to their voting behavior, thus the model would expect that their social image concerns would be bigger so that voting has more benefits. A rational voter is than more likely to vote.

Hypothesis 2: A significant positive effect on the decision to go voting is to be expected as a relation to the amount of social interaction that people display.

As discussed, the expressive voter model works via additional benefits that arise from expressive utility. On social media people with a lot of friends will gain more expressive utility than people who have only little friends. In addition to that people with a lot of friends are more likely to come across messages about politics, thus it is more likely that the ethical voter inside them rises. Via these two channels it can thus be expected that people with more friends, assuming they have more followers online too, are more likely to vote and share political messages online.

Hypothesis 3: People who have less trust in parliament are more likely to vote.

The ethical voter's additional motivation to vote comes from willing to perform one's civic duty towards the group they belong to by voting for this group's needs. If one does not trust parliament, it matters to vote because the group's goal is more dependent on who is in parliament if one does not believe in it. Namely, if one does not trust politicians they will see it as a more important duty to do their best for the group effort of electing another politician to have power.. Therefore, the channels at work that motivate people to vote in the age of social media will be more effective with people who say they do not have faith in parliament, causing more voting behavior.

Hypothesis 4: Extreme ideologists are more likely to vote as a means of expression, thus the effect of political extremism on voting is significant and positive.

As discussed earlier, people tend to lie about their voting status more once they have a strong taste as for whom to vote (Silver et al., 1986). Therefore, it seems likely that people who rate themselves as extreme left or extreme right, are more likely to say that they voted in the survey that is used for this thesis. Since people with a strong taste are also more likely to share their opinion on social media, the effect of being an extremist is likely to exist. This would be in line with the findings of Swank and Karamychev (2021). If this hypothesis is not rejected, it could contribute to gathering proof for the expressive voter model. The results of analysis of this thesis might also tell something about the function of marginal expressive utility.

Hypothesis 5: Hypotheses 1 to 4 are likely to have a bigger effect in new European democracies compared to old European democracies.

As table 2 in the next section will show, the newer democracies that this thesis defines as democracies that have come to exist after 1980, generally are eastern European countries. In these newer democracies trust in parliament lies relatively lower. Circumstances in those countries are often less good (Van der Meer, 2010), which causes people to be less happy and trust willing towards their parliament. Thus, the effect of the ethical voter model, predicted in hypothesis 3, is stronger too. The group's cause of trying to elect leaders that the people of a (new democratic) country can trust is bigger in new democracies compared to old democracies. It can therefore also be expected that people will talk about politics when meeting socially, as well as on social media. This leads to a bigger binding of the social image to the vote of people, so that hypothesis 1 is also expected to be true more in new democracies. The fact that people talk about politics more means that more expressive utility can be gained by voting, which is why hypothesis 2 is expected to be at work more in new democracies. Additionally, there is more extremism in those countries due to worse economic climates (Klapisis, 2014), leading to a bigger effect of extremism on voting too, following the idea that more effective utility can be obtained by extremists when they vote. That explains why hypothesis 4 is expected to be working with more power to new democracies.

Data and Methodology

In the European Social Survey data from people all around Europe has been gathered. For empirical analysis a couple of interesting variables stand out. As social media is a recent thing I plan to use the most updated version of the survey, the edition held in 2018. This is the ninth version of the survey. In the survey people have said whether they voted in the last national election or not. Additionally interesting variables considering the hypotheses of the thesis are found in the database. These variables will be used as variables with a coefficient β . All variables that are directly relevant to grant a look at the hypotheses of this thesis will be an X in a regression of the kind:

$$P(\text{voted} = 1) = \beta X + \gamma_1 \dots \gamma_n \text{Control}_1 \dots \text{Control}_n + \varepsilon$$

in which ε is the error term and in which multiple control variables α will be added in order to overcome omitted variable bias. The regression will be produced by using the Ordinary Least Squares (OLS) method.

The OLS method requires three assumptions to be present in order to produce flawless predictions of a regression's coefficients. It is important to realize that these assumption can never be met to the fullest, however the study tries to get as close as possible.

To test the hypotheses of the thesis regressions will be run. The key research variables to be used for these regressions are:

Dependent: Vote (Voted in last election, value 1 if yes, 2 if no).

Independent: Pstlonl (Posted anything online about social media, value 1 is yes, 2 is no).

Independent: ScLmeet (how often meet social with friends, scale variable, 1 to 4).

Independent: Trstprl (trust in national parliament, scale variable, 1 to 10).

Independent: LRscale (placement on left right scale, scale variable 1 to 10 (i.e. left to right)).

The descriptive statistics of these 5 crucial variables can be found in tables 7 to 11 in the appendix of this thesis.

The OLS method requires three assumptions to be present in order to produce flawless predictions of a regression's coefficients. It is important to realize that these assumption can never be met to the fullest, however the study tries to get as close as possible. Most visibly this is done by making use of a multilinear regression, so that variables that are in the dataset and might

be omitted variables are included in the regression. One important variable therefore is age. Age is so critical because it has been shown that younger people generally are quite critical of politics and tend to vote less (Dermody et al, 2010). The users of social media are also strongly related to age, as young people are using the socials a lot more (Perrin, 2015). Also included is the variable *PolIntr*, which on a scale 1 to 4 describes how interested people are in politics. People interested in politics are more likely to want to vote and to share political messages online, simply out of interest. A final variable found in the ESS that could be problematic is the variable *TsrtPlt*: how much respondents trust politicians. If this variable holds a low value, than changes are higher that people decide not to go voting as the benefit of voting lies a lot lower. Additionally, voters will probably tend to show less trust in their government as a whole (Trust in parliament) if they feel like the politicians do not act according to their will. Adding the mentioned variables to the regression will solve at least a fraction of the omitted variable bias

Keeping an eye out to avoid multicollinearity is important to consider and discuss too. In the discussion of this thesis there will be a section that critically addresses surveys as a phenomenon and the external validity of this specific survey as that is crucial for a research method that is only applied on a region (Europe) and that suffers from the possibility of lying. Also the OLS assumption of a sample being a random sample will be discussed.

In order to properly use the data the variables need to be adapted to the study. For the vote variable, all possible answers except yes or no were removed. For all variables applies that missing or ungiven responses were set as a missing value so that all datapoints lie within the range of the possible answer values.

All in all, by including all variables, the regression that will be run is the following:

$$P(v = 1) = \alpha + \beta_1 Pstplonl + \beta_2 Sclmeet + \beta_3 TrstPrl + \beta_4 LRscale + \gamma_1 Age + \gamma_2 PolIntr + \gamma_3 TrstPlt + \varepsilon \quad (1)$$

For all countries included in the data set this lead to the results displayed in table 1:

Table 1: Regression 1 on the whole data set

Variable	Coefficient
<i>Ptplonl</i>	0.034** (0.005)
<i>Sclmeet</i>	-0.014** (0.001)

Trstprl	-0.010** (0.001)
LRscale	-0.004** (0.001)
Age	-0.003** (0.000)
PolIntr	0.088** (0.003)
TrstPlt	-0.002 (0.001)
Constant	1.214** (0.014)
Observations	38,260
R-squared	0.094

Note: Standard errors were put between parentheses. * means $P < 0.05$, ** means $P < 0.01$

These variables will not only be addressed in a regression regarding the whole data set. They will also be regressed per region, with the two regions being the new and the old European democracies. A democracy is considered new when it has come to live after 1980. Table 2 shows which kind of democracy each of the participating countries is:

Table 2: New and old democracies.

Old democracies	New democracies
Austria	Bulgaria
Belgium	Cyprus
Denmark	Czech Republic
Finland	Estonia
France	Lithuania
Germany	Montenegro
Greece	Romania
Ireland	Serbia
Israel	Slovakia
Italy	Slovenia
The Netherlands	Hungary

Norway	Poland
Portugal	Latvia
Spain	
Sweden	
Iceland	
Switzerland	

So, two other regressions will be run:

$$P(v = 1)Olddemocracies = \alpha + \beta_1 Pstplonl + \beta_2 Sclmeet + \beta_3 TrstPrl + \beta_4 LRscale + \gamma_1 Age + \gamma_2 PolIntr + \gamma_3 TrstPlt + \varepsilon \quad (2)$$

Table 3: Regression 2 using data from democracies that existed prior to 1980 only.

Variable	Coefficient
Pstplonl	0.030** (0.005)
Sclmeet	-0.011** (0.002)
Trstprl	-0.010** (0.001)
LRscale	-0.002* (0.001)
Age	-0.003** (0.000)
PolIntr	0.076** (0.003)
Trstprt	0.005 (0.001)
Constant	1.214** (0.017)
Observations	23,441
R-squared	0.085

Note: Standard errors ware put between parentheses. * means $P < 0.05$, ** means $P < 0.01$

Continually:

$$P(v = 1)Newdemocracies = \alpha + \beta_1 Pstplonl + \beta_2 Sclmeet + \beta_3 TrstPrl + \beta_4 LRscale + \gamma_1 Age + \gamma_2 PolIntr + \gamma_3 TrstPlt + \varepsilon \quad (3)$$

Table 4: Regression 3 using data from democracies that came to exist after 1980 only.

Variable	Coefficient
Pstplonl	0.072** (0.014)
Sclmeet	-0.009** (0.003)
TrstPrl	-0.001 (0.002)
LRscale	-0.009** (0.002)
Age	-0.008** (0.000)
PolIntr	0.103** (0.005)
TrstPlt	0.001 (0.003)
Constant	1.402** (0.037)
Observations	15,480
R-squared	0.107

Note: Standard errors were put between parentheses. * means $P < 0.05$, ** means $P < 0.01$

Conclusion

What has the empirical analysis in the previous part of the thesis found in relation to the thesis' hypotheses?

Hypothesis 1: People who use social media more to express political opinions are more likely to vote

An important note to begin with is that when people answer "Yes" to the question whether or not they voted in the last national election, the variables' value is 1. When they answer "No", the value is 2. The same applies to *Pstplonl*, the variable that the hypothesis as a whole is about. Therefore, the significant and positive effect of 0.034 that is found in regression two for *Pstplonl*, means that when people answer No to the question of posting political messages, the variable *vote* comes closer to 2 and thus the change is higher that they did not vote (i.e. have a 2 registered as their response). Therefore we can say that there is a rather small but positive significant relation. People who are politically active on social media are destined to vote quicker than people who are not. The hypothesis cannot be rejected.

Hypothesis 2: A significant positive effect on the decision go voting is to be expected as a relation to the amount of social interaction that people display.

The prescribed effect is significantly negative. As seen in regression 1, people's amount of social meeting turns the variable "Vote" closer to 1. Thus, a positive effect on the amount of social meetings with voting. The reason for this finding might well be that people with more social meetings in their life might experience more benefits as they can experience expressive utility more. As the low value of R-squared shows, the effect of the interaction effect on "Vote" is low, but fact remains that as whole this effect does not apply and the hypothesis thus cannot be rejected.

Hypothesis 3: People who have less trust in parliament are less likely to vote.

Regression 1 shows that there is a significant negative effect of trust in parliament on "Vote". Thus people who answer "No" to having confidence in their parliament are more likely to go voting. The idea the ethical voter idea applies therefore seems quite likely. Another explanation for the regression's results seems to be that people who do not trust the parliament want to change it, and thus want to vote new people in to it. This idea is displayed perfectly by the higher negative significant coefficient that applies for trust in politicians. If one does not trust politicians, they will want to vote for new one. It turns out that this need is stronger than the

need to vote for of people who do have trust in parliament. Possible reasons for this is that one who has said not to trust the parliament has made their vote a bigger part of their social image. This causes the reliance of the social image on the vote to grow and thus the incentives to vote, for instance to share that one voted on social media, become bigger. A rational voter thus would vote quicker. That seems like a proper conclusion of the fact that this hypothesis cannot be rejected.

Hypothesis 4: Extreme ideologists are more likely to vote as a means of expression, thus the effect of political extremism on voting is significant and positive.

The coefficient in regression 1 for the effect that this hypothesis is about, shows that the relation is negative. This might be explained again by the possibility of declining marginal utilities to expression. People who are more extremist towards the right wing namely tend to post more, a regression of the left right scale on whether or not people post shows in table 5.

Table 5: Regression on whether people post anything about politics on social media of the left to right scale.

Variable	Coefficient
LRscale	0.011** (0.001)
Constant	1.777** (0.009)
Observations	42,121
R-squared	0.375

Note. Standard errors are put between paratheses. ** means $p < 0.01$

As this has a significant positive coefficient, extreme people tend to already express more. Therefore, it might be the case indeed the additional benefit to expressive utility of voting is simply lower, so that extremists end as non-voters. In addition, extremist more often display hatred towards the parliament, so that the explanation of hypothesis 3 might also apply here. A regression of trust in parliament on the left to right scale shows this in table 6, as the answer “No” has a higher value (namely 2) than the answer “Yes” (with value 1), having no trust leads a voter to the extreme right quicker.

Table 6: Regression on Trust in parliament of the left to right scale.

Variable	Coefficient
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LRscale	0.086** (0.006)
Constant	4.272** (0.035)
Observations	41,789
R-squared	0.006

Note. Standard errors are put between paratheses. ** means $p < 0.01$

So, people who already display more expression, are less like to also express by voting. This hypothesis is rejected.

Hypothesis 5: Hypotheses 3 and 4 are likely to have a bigger effect in new European democracies compared to old European democracies.

When looking at regressions 2 and 3 the coefficients can be easily compared. Firstly, the effect of having posted anything about politics on social media on the value of the variable “Vote” is a lot bigger in new democracies, and still significant. The effect of the amount of social meetings is an bit less of a negative effect, so these effects too are a bit less towards a “Yes” on the vote question here. The coefficients of trust in parliament do no both show a significant effect. The effect is rather strong and positive in old democracies, but absent in new democracies. Finally, the left to right scale shows a bigger negative effect in the new democracies. Therefore, people who are on the extreme right are relatively more likely to vote more in the new democracies. This can be one of the reasons for the rising amount of right wing party victories in Eastern Europe. So, the hypothesis as a whole does not hold true and should be rejected, but the hypothesis cannot be rejected upon hypotheses 1, 3 and 4.

All in all, the empirical analyses that were performed find the clearest proof for the social image model of voting. Hypothesis 1 shows that people who are busy with politics indeed are more likely to vote, as their social image in linked to it more. The world of social media in this perspective thus really leads to more incentives to go voting. For the expressive voter model evidence is also found. The rejections of both hypothesis 2 and 4 however invoke that the idea works limited due to a possible decline in marginal utility of expression. Therefore the idea of social media as a means for extra expressions to pull people over the line to vote, works limited. In particular, it might work for people with trust in parliament and people with a less extreme political ideology. For the ethical voter model proof has shown to be harder to find. Finding data to properly analyze the functioning is difficult. The impossibility of rejecting hypothesis 3, however, poses some possible evidence of its functioning. As there has not been too much

analysis of the model, the thesis should and will remain ambiguous on the idea of an ethical voter.

In conclusion, to come back to whole topic of this thesis, does social media help to raise election turnout? The answer seems to be yes, at least when using the ideas of the social image model of voting. The expressive voter model might well help people vote via social media too, however on a more limited scale seeing the marginal decline of expressive utility. In the ethical voter model some proof of new incentives to vote can be seen too. These effects generally can be expected to work more in the new European democracies which are situated mainly in Eastern Europe. It will therefore be interesting to see if and where election outputs will rise in the coming years, with social media usage rising with the speed of light too. That it can be a part of the solution to secure more voters is clear, how much it will be is yet to be seen.

Discussion

As to be expected for a bachelor's thesis, this research as a whole is far from perfect. This final part of the theses aims to explain the biggest issues that the scientific world will probably have while reading this work. These are found mainly in the methodology and data part of the thesis, which will be discussed to begin with.

The data used came from the ESS survey. Surveys however have one significant problem. The problem of lying. For this survey interviewers sat one on one with the respondents to answer their questions. Even though in such a setting lying seems less easy then while one is just sitting behind their desk at home, still a lie is quickly made. The fact that all interviews had to be held within 55 minutes does not contribute to discovering lies by the survey's personnel (ESS methodology). Questions about voting behavior also earlier have been shown to be subject to false answers (Dellavigna et al., 2016), which in part has to do with the social image model that is discussed in this thesis too. People want to be able to say they voted. Also people might be afraid to share their answers to some questions. For instance the question about where people place them self of the ideological left to right scale, where people might be afraid for reactions of the interviewer. All in all, one needs to be aware that some of the datapoints might not be fully correct. Hence, the result might be a bit biased by lies. Seeing the amount of observations however, it is questionable whether this is a significant amount.

Secondly there are econometric imperfections and uncertainties that come up in the paper. Not all assumptions of the Ordinary Least Squares (OLS) regression technique that was used were always present. Firstly, the conditional mean independence assumption. Omitted variable bias namely, can never be completely removed. In this research, it was at least tried to overcome a part of the bias by performing multilinear regressions, but chances are high that many more can be found. When looking at R-squared, it can be seen that all independent variables that were used in this paper only declare a rather small fraction of the total causation of the variable Vote. Many more are there and chances are high that amongst all these other factors at least some will relate to both the dependent and the independent variables. Secondly, the assumption of having a completely random sample might be questioned, as some kinds of people will just be less likely to answer a survey (even though ESS has tried to overcome this).

Thirdly, it is clear that the variables in the survey were not always perfect for precisely answering the question of the influence of social media on peoples willingness to vote. For instance data about the amount of time that people spend using social media was absent, as were perfect data

concerning how many friends one has. For the variables that are expressed in scales, the scales could have been bigger to improve the exactness of the results. For writing this thesis no new dataset was created, as that would take a lot of time and would very likely never come close to the amount of observations that one can find in survey that are held throughout a whole continent. That is a cause that the result are not perfect, that room for discussion remains.

Lastly, the study may have to deal with external validity problems. The survey that was used for empirical analysis was only held in 30 European countries. Cultures of voting, political systems but also social media use are very different among continents. Especially Africa, Asia and Latin America see may differences. Also, not is all states voting is a pure choice. For some countries it is already known that voting is pretty useless, meaning that the benefits for a rational voter are even lower. Another concern for external validity is time. Social media usage and patterns of usage are changing rapidly. Therefore, what was in 2018 might be different in 2022 already. If all conclusion of the thesis still apply thus is questionable.

Besides trouble that is found in the methodology part of the thesis, one can also ask their questions about some of the deductive work in the literature review. Additionally, one might question how perfect some of the sources are. However, these problems seem less likely and far smaller than the methodological errors, especially when looking directly at the conclusion as a response to the hypotheses.

All in all, the thesis poses many solutions but is also subject to problems, so that social media as a motivator to go voting will have to be researched more extensively and more timely.

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Appendix

Graph 1: Age of all respondents to European Social Survey.

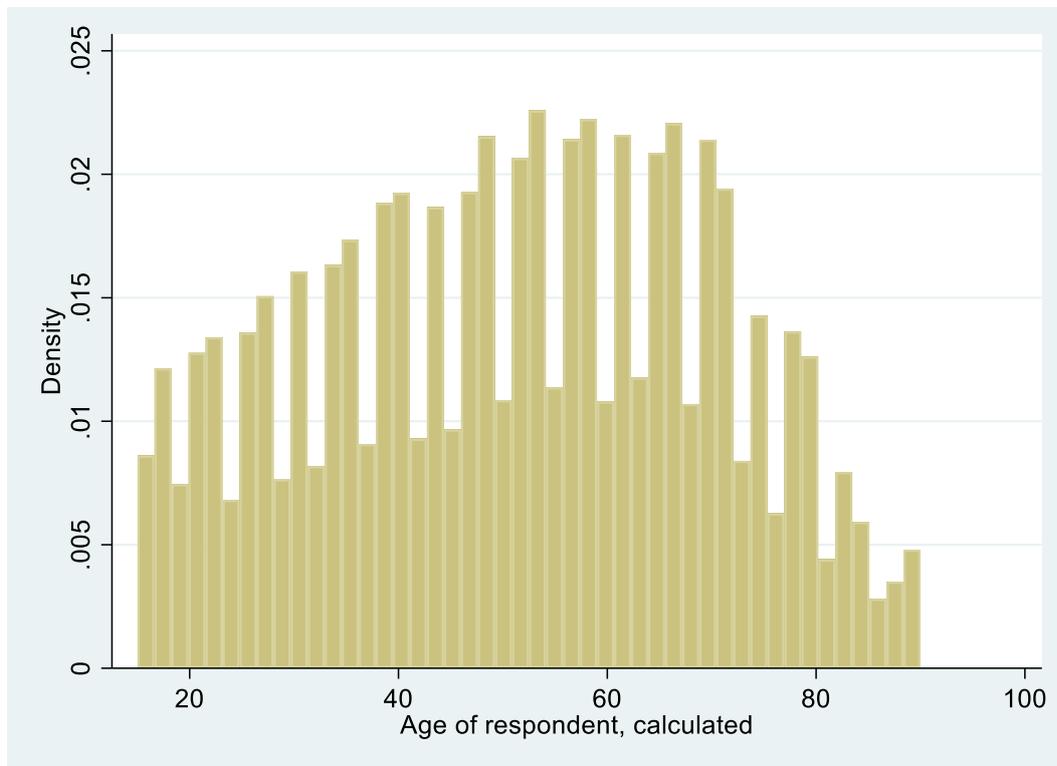


Table 7: Descriptive statistics of variable Vote (did or didn't the respondent vote in the last national election, 1 being yes and 2 being no).

Variable	Obs	Mean	Std. Dev.	Min	Max
vote	45,233	1.22	0.41	1	2

Table 8: Descriptive statistics of variable Pstponl (did or didn't the respondent post or share any political messages on social media, 1 being yes and 2 being no).

Variable	Obs	Mean	Std. Dev.	Min	Max
pstponl	49,236	1.85	0.36	1	2

Table 9: Descriptive statistics of variable ScLmeet (how often did the respondent have social meeting with friends or other fellows, rated 1 to 7).

Variable	Obs	Mean	Std. Dev.	Min	Max
scLmeet	49,352	4.86	1.58	1	7

Table 10: Descriptive statistics of variable TrstPrl (how much trust does the respondent have in the national parliament, rated 1 to 10).

Variable	Obs	Mean	Std. Dev.	Min	Max
trstprl	48,375	4.52	2.66	0	10

Table 11: Descriptive statistics of variable LRscale (where does the respondent place themselves on a scale from 1 (left) to 10 (right)).

Variable	Obs	Mean	Std. Dev.	Min	Max
lrscale	42,269	5.03	2.26	0	10