# Voter Turnout and Twitter: The Example of the 2012 Dutch National Election

## **Master Thesis**

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#### Abstract

In recent times, social media platforms like Facebook, Twitter or Instagram are getting more and more popular among the Dutch society. Depended on their interests, they can share their views like the political ones and participate in political discussions on such platforms. At the same time, scientific articles about national elections in the USA or in Sweden have proven that the use of social media can lead to an increased voter turnout. However, it is not known in how far this evidence is valid for the most recent Dutch national election in 2012. Thus, the first hypothesis of this thesis is *"Voters who use Twitter more often will show higher levels of electoral turnout"*.

At the same time, many scientific articles suggest that the relationship between use of social media and voter turnout can be specified by the age of the voters. In the articles, it is proven that especially younger voters are affected by this relationship. However, at the same time, there is evidence that especially Twitter is more often used by elderly Dutch citizens than by their younger counterparts. Thus, the second hypothesis is *"The effect of the use of Twitter is stronger for younger voters than for older voters"*.

"In this paper use is made of data of the LISS (Longitudinal Internet Studies for the Social Sciences) panel administered by CentERdata (Tilburg University, The Netherlands)." (LISS Panel, n.d.d., p.1). This is done to answer the hypotheses and the research questions and to create a cross-sectional study which focuses on the use of Twitter, the voter turnout and the age of the LISS Panel members. Moreover, there is a focus on additional third variables as the following of traditional media such as newspapers and TV and radio news, political participation and socio-economic status. It can be concluded that the age and the socio-economic status can specify the relationship between use of Twitter and voter turnout.

This topic is highly important in two ways. Firstly, social media is getting more and more popular among different groups within the society and secondly, the use of social media can potentially decide the results of an election. Thus, there is a probability that the effect of social media shall not be underestimated if a candidate wants to get elected and needs to be presented to the public.

### Acknowledgments

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#### 1. Introduction

The bivariate relationship between voter turnout and media exposure in traditional sense is a relatively old topic in the academic literature. On the one hand, it can be claimed that media exposure via traditional media such as radio or print media in particular leads to an increased voter turnout. This relationship is positive regardless of the socio-economic position of the people. Notably, this observation has been already made in the 1970s (Subervi-Vélez, 2008). On the other hand, however, one may say that many forms of traditional mass media are responsible for a too passive political engagement in comparison with new media such as the internet (Hasebrink & Paus-Hasebrink, 2007; Lewis-Beck, Jacoby, Norpoth & Weisberg, 2008; Mossberger, Tolbert & McNeal, 2008). This means that the people who mainly inform themselves on more passive media forms such as television shows seem to participate less in political issues than those people who mainly inform themselves on more active media forms like newspapers or the internet as a 2004 Europe-wide EUYOUPART study revealed (Hasebrink & Paus-Hasebrink, 2007). Subervi-Vélez (2008) also mentioned that television is not a suitable form of traditional media in political sense and thus, cannot be associated with an increased voter turnout as television is mainly seen as an entertainment tool instead of an information tool. Another disadvantage the academic literature could figure out was that conventional mass media had poor and slow information flows and this might be responsible for the declining voter turnout in US Elections since the mid-1990s. In other words, the lack of sufficient political information flows discourages many potential voters to go to the elections in the end (Mossberger et al., 2008). Such slow information flows leads to another very important political issue, namely that especially younger people feel less motivated to vote in elections (White & Anderson, 2014). However, the internet cannot be seen as a traditional mass media but rather as a new form of media (Green, 2010). What does the internet as a new media mean for the level of electoral turnout?

In comparison, the relationship between voter turnout and the new media -in this case the internet- is a rather new issue in the academic literature. It is observed that the internet provides faster and better information flows compared to conventional mass media like television or newspapers. Citizens are freer to select which political news they want to read. This way, it can indeed influence the voting behavior of the citizens. The consumption of new media leads to higher political knowledge and higher turnouts of especially younger voters who are particularly interested in recent political news and developments. The reason is that they feel much closer to the internet as mass media just because of

the better information flows. Additionally, a large number of people are highly dissatisfied with traditional media as a whole because of the lack of information (Mossberger et al., 2008; White & Anderson, 2014). However, the assumptions of Mossberger et al. (2008) and White and Anderson (2014) regarding the dissatisfaction with traditional media due to the lack of information are in contradiction with Norris' (2000) views. According to Norris (2000), the flow of political information by the traditional media like television cannot be the reason for the lack of political interest and engagement and thus, low voter turnout. Moreover, much depends on the quality of the television programs or shows potential voters are watching: If someone consumes more 'high-quality' TV news than tabloid-like infotainment news, then this person will have sufficient political knowledge and this can result in the decision to vote and a higher voter turnout as well. Additionally, not everyone can benefit from the rise of the internet as new media; especially people from lower socio-economic classes who are not able to afford the costs for internet connection are excluded from gaining sufficient political information and this can also hinder political participation of poorer people. This can finally lead to a greater social and political inequality between poorer and richer people within a society (Norris, 2001).

Nevertheless, the relationship between new media and voter turnout gained an even higher importance since of the rise of social media like Twitter or Facebook (Flew, 2014). Basically, the main difference between social media and new media is that social media is a more interactive form of media in which a user can express its views much easily (Stockmann, 2015). Since the late 2000s, academic scholars like Carlisle and Patton (2013) or Zhang, Johnson, Seltzer and Bichard (2010) made researches about the impact of social media on the voting behavior on the one hand but especially voter turnout on the other hand. A reason for the increasing interest on this research area could be the 2008 US Presidential Election Campaign. The Democratic presidential candidate Barack Obama was the first prominent politician who made actively use of this certain form of this new media (White & Anderson, 2014; Zhang et al., 2010). Obama's active use of social media platforms could be one reason for his victory (White & Anderson, 2014; Zhang et al., 2010). Nevertheless, the relationship between voter turnout and social media does not seem to be an exclusive American phenomenon as the articles of Holt, Shehata, Strömbäck and Ljungberg (2013), Kiss (2010) or the European Commission (n.d.) clearly shows. Their examples take place in European states, particularly in Sweden where a four-wave panel study was made at the time when the election campaign was still active (Holt et al., 2013) and United Kingdom where a Reuters study asked about the effect between social media and voter turnout (Kiss, 2010). The paper of the European Commission (n.d.) is based on surveys of Eurostat. In conclusion, it can be said

that the use of social media can indeed lead to an increased level of voter turnout especially for younger voters. Thus, according to the results of the already existing scientific articles, one can conclude that the relationship between the use of social media as such and voter turnout is statistically significant and can be further specified by the young age of the voters. This assumption will be kept into account for the remainder of the thesis.

However, the focus of this paper will be on the relationship between voter turnout and social media and how they influenced the national election in the Netherlands in 2012. Precisely, it will be questioned to what extent an active use of the social media website Twitter leads to higher voter turnout. The dependent variable is called 'voter turnout' and means if citizens who are allowed to vote in elections do so or not. The independent variable is 'active use of Twitter' and means if potential voters make active use of Twitter. Additionally, a third variable which is called 'age' will be tested as the age of voters can specify the relationship between the use of Twitter and voter turnout. According to the majority of the scientific articles from the literature review, it can be expected that the effect of the use of Twitter is stronger for younger voters than for older voters. This means that it is widely expected that especially young voters aged 18 to 24 relatively more often vote by their use of Twitter than older voters. For the sake of a proper comparison between the age groups, all age groups in which adult citizens are included will be tested and compared with each other to figure out certain patterns and developments in each age group. This way, it can be figured out if indeed rather younger voters can specify the relationship between use of Twitter and voter turnout than older voters do. Next to this, a motivation for choosing this country was that there is a lack of scientific articles about this state in this research area. Also, most existing articles are rather dealing with the US and less with European states like the Netherlands. This way, this paper complements existing literature in this research area as the main focus of this thesis is on the Netherlands. Another positive side effect is that it will be tested if the results from the data analysis are similar to those from the academic literature. It is expected that although more elderly Dutch people make active use of Twitter than their younger counterparts in recent times, the relationship between use of Twitter and voter turnout is stronger for younger people than for older people as the majority of the scientific articles in the literature review suggests for other tested states. However, if the relationship between use of Twitter and voter turnout has not a large enough significance level and/or cannot be specified by the young age of the voters, then this thesis will reject the general claim of the academic community that especially younger citizens more likely go to an election due to their use of Twitter. In short, the findings of the thesis could indeed affect the research

area and especially the academic community and could thus complement the existing literature in a sustainable way. To continue, the outline which is mentioned below this introduction will briefly describe the further structure of this thesis.

#### 1.1. Outline

Apart from the introduction part, the upcoming sections of this paper are structured in following way. Firstly, the second part of this paper is the theoretical section. There, the definitions of social media –in particular Twitter- and voting behavior and voter turnout are mentioned. The definitions are followed by the choice of country and the research questions. Additionally, a literature review of previous articles about voter turnout and social media is provided. To sum up the theoretical section, hypotheses are stated which are -like the research questions- important for the remainder of this thesis.

Next, the third part of this paper is about the research method. This chapter deals with the data selection and research design. It is highly important to choose the correct research design as it has an influence on the whole research.

Eventually, the fourth part of this paper is the data analysis section. It aims to show the outcomes of the data sets. These outcomes can finally answer the research questions and hypotheses of this paper.

Lastly, the concluding part discusses the outcomes of the data analysis. Moreover, there will be a comparison between the outcomes of this research and the findings of the literature review. Moreover, a discussion about further research is included in the fifth chapter.

#### 2. Theoretical Section

This chapter describes and justifies the research questions and the hypotheses. Furthermore, this section provides the literature review of other scientific articles which have already dealt with this topic. However, it is at first important to define the most important terms of this thesis.

#### 2.1. Definitions

Obviously, as the terms 'social media', 'Twitter' and 'voter turnout' are often mentioned in this paper, it is therefore highly necessary to define them. In addition, the term 'voting behavior' is also described because according to O'Connor and Yanus (2014), 'voting behavior' is closely related to 'voter turnout' and thus, difficult to untangle.

#### 2.1.1. Social Media

According to Flew (2014) and Merriam-Webster (n.d.b.), social media is considered as a relatively new phenomenon within the internet which is popular since the mid-2000s. The most common social media platforms are for instance Twitter, YouTube and Facebook and they enable a quicker, cheaper and more active form of communication between individual users or groups. Social media provides space for social networking on the one hand but also online microblogging on the other hand. Usually, these websites are decentralized which means that people are able to communicate and participate in an open manner. A huge difference between traditional media and social media is that the relationship between individuals who produce this kind of media and their users is rather of an asymmetric nature in social media. Thus, users of social media platforms can have different influences on users. For instance, the connections of the users are essential for the growing importance of social media. Finally, these features of social media can lead to better access and distribution of information and more information can also lead to more kinds of participation in real life. To conclude, the use of social media can lead to more general offline participations of their users. What does this mean for a specific social media webpage like Twitter?

#### 2.1.2. Twitter

In this thesis, the focus is on the social media webpage Twitter as one of the data sets which are used for the research asks for the membership on Twitter but not for other social media platforms. Generally, Twitter is an American social media platform which is specialized for online microblogging. Registered users can communicate with each other via so-called tweets which are short messages and are no longer than 140 characters. Twitter was developed throughout the mid-2000s by former Google employees and after further expansions during the development phase, Twitter was launched in 2007 and became popular within a short time. In the 2008 US Election, the Democrat Barack Obama heavily used this social media platform. By his use, Twitter became enormously important as a platform for advertising national election campaigns but also for other political events such as protests about the electoral results in Iran in 2009 or the 2008 Georgian-Russian Conflict (Encyclopaedia Britannica, n.d.). According to Twitter (n.d.), 320 million people are active users of this website worldwide. The majority of the Twitter users are not from the US: 79 per cent of all users live abroad. More than 35 languages are offered by Twitter as in late September 2015. In brief, the use of social media -in particular Twittercan indeed lead to more political awareness. Moreover, the worldwide popularity of Twitter is another justification for choosing this particular social media platform for the further thesis. However, what does it mean for the voting behavior and especially the voter turnout in elections?

#### 2.1.3. Voting Behavior/ Voter Turnout

Both voting behavior and voter turnout seem to be tightly related to each other; voter turnout is widely seen as one result of the voting behavior of citizens. To be more precise, voter turnout springs from a definition of voting behavior: The individual choice and participation to vote in an election (BBC, 2014; Kumar & Rai, 2013; O'Connor & Yanus, 2014). However, it is necessary to untangle these two terms as the focus of this research paper is on voter turnout. This is the case in the below paragraph.

*Voting behavior* can be defined in at least two different ways: Firstly, it means if people go to an election or not in order to vote. In other words, the first definition targets at the individual participation in an election. The second definition is targeted at the choice what political party should be voted for and why this particular political party is voted. To be more precise, the second definition aims at the individual considerations of the voting decisions of the voters (BBC, 2014; Kumar & Rai, 2013). The latter definition appears to be highly important for a further explanation of voting behavior. Gibbins (2015) and Webb (2015) describe that the individual voting behavior can be influenced in many different ways. Voters mainly elect for a certain political party or presidential candidate based on their own partisan alignment which means that voters tend to vote for a political party which fits into their own social identity. This used to be a long-term factor to vote for a presidential candidate for instance. Nowadays, short-term factors become more important for the decision to elect for a party or candidate; partisan alignment becomes less relevant in the last years. This means that current political issues or the charisma and trustworthiness of a candidate is now more important than the actual political attachment. Political scientists attribute this phenomenon to 'cognitive mobilization' which means that the modern voter appears to be more educated and informed in politics than in the past.

In comparison, *voter turnout* means how many people who are old enough to participate and vote in elections actually do so. In other words, voter turnout means if people vote in an election or not. In most states, voting is legally allowed if a citizen is aged 18 or older. It is important that the election campaign is vital and competitive. If an election campaign is competitive, then it leads to an increased voter turnout because it becomes less obvious and predictable which political party and presidential candidate would finally win the election (Merriam-Webster, n.d.c.; O'Connor & Yanus, 2014; Webb, 2015). To sum up, it can be said that the term 'voter turnout' more or less targets at the first definition of voting behavior, namely the individual choice if one goes to an election to vote or not (BBC, 2014; Kumar & Rai, 2013). Furthermore, according to Koas (2012) and the Organisation for Economic Co-Operation and Development (OECD, 2007a; 2007b), voter turnout can also reflect the trust in politics and the government but also their own political participation. In short, voter turnout depends much on the legitimacy of a government. A high voter turnout usually stands for a well-working democracy in a country. Moreover, a high voter turnout shows that a government is elected due to the choice of the people. Additionally, voter turnout usually increases the older a potential voter is.

To sum up the definitions of Flew (2014), Gibbins (2015), Merriam-Webster (n.d.b.; n.d.c.), O'Connor and Yanus (2014), the OECD (2007a; 2007b) or Webb (2015), political parties and presidential candidates seem to be highly interested to get elected. This includes the active engagement of political parties and politicians in social media to reach all potential voters get their trust and get elected by them. It can be hypothesized that this engagement could increase voter turnout and influence the political future of a

state like forming a governmental coalition. Although voting behavior can indeed explain the voter turnout, the main focus of this paper is clearly on voter turnout. Its definition is highly important for the remaining parts of the thesis. Having described the general definitions of the most important terms of this thesis, it is therefore important to justify the choice of country which is in this case the Netherlands.

#### 2.2. Choice of Country

According to the statistics platform Statista (2015a), 52 per cent of all internet users in the Netherlands claim to use social media actively at least once a month. Thus, the Netherlands was on the eighth position in this statistics from early 2014. Besides the Netherlands, 39 other European states were tested at the same time as well. The statistics also revealed that the European average was around 40 per cent of all internet users made active use of social media once a month. In other words, the percentage of the monthly Dutch social media users was significantly above the European average.

A further important fact is that about 10.7 million social media users are registered in the Netherlands and it is expected that this number will be increased in the near future. As for 2018, experts analyzed that more than 12.2 million users of social media live in the Netherlands (Statista 2015d). Another reason to choose the Netherlands for the sake of the research is the fact that this country has the largest percentage of internet access per household in whole Europe. It is figured out that 94 per cent of all Dutch households have an own access to internet (Andeweg & Irwin, 2014). As in 2011, almost 27 per cent of all Dutch internet users had an own Twitter account. This also means that the Netherlands is the most active state on this particular social media website compared to the number of citizens. In 2013, about 3.3 million Dutch citizens were active users of Twitter (Andeweg & Irwin, 2014; Demirhan, 2014). Around this time, the total Dutch population consists of more than 16 million people (Statista, 2015e).

Another argument worth considering for choosing the Netherlands for this research is that regarding the Dutch political parties, all of them had an own website from 1998 onwards. In 2010, almost all Dutch political parties except the Freedom Party and SGP (Reformed Political Party) had their own YouTube channel. Moreover, the Freedom Party was also the only Dutch political party without any official fan pages on two of the most important social media platforms in the Netherlands in 2010, namely Facebook and Hyves (Andeweg & Irwin, 2014). Furthermore, it seems that the greater the influence of the party is, the more videos the party has on their own YouTube channel. For example, the CDA

(Christian Democratic Appeal) had 121 uploaded videos on YouTube in 2010 but the Dutch Animal Rights Party just had four videos on this platform. In early 2011, about 90 members of the Dutch Parliament had their own Twitter accounts. This is a huge difference compared to 2009 when only 16 of these politicians already had their own Twitter profile (Andeweg & Irwin, 2014). Ideally, a distribution of 50 per cent of Twitter users and 50 per cent of non-Twitter users would have been ideal to provide a valid justification for the choice of the Netherlands as such distributions would offer more variations of the individual behavior of the people. Nevertheless, the number of Twitter users is statistically significant enough. To summarize, regarding the spread of Twitter in the Netherlands, this country can be considered as qualified enough for the research and one can expect that the relationship between social media and voter turnout is positive.

Besides, there is another advantage of taking the Netherlands for the purpose of this research. Regarding the voter turnout, it can be said that after the ban of compulsory voting in Dutch national elections in the early 1970s, the voter turnout started to shrink throughout the last decades. The lowest voter turnout was observed in the 1998 Dutch national election as only 73.3 per cent of all adult Dutch citizens voted in this election. During the last elections, the voter turnouts were not very constant but one can nevertheless observe a downward trend. Whereas the voter turnouts for the 2003 and 2006 elections were by 80 respectively 80.4 per cent, the voter turnouts for the last elections in 2010 and 2012 were by 75.3 respectively 74.6 per cent (Andeweg & Irwin, 2014). Once again, a distribution of 50 per cent of voters and 50 per cent of non-voters would have been much more ideal as such distributions can lead to more variations. However, the voter turnout in the Netherlands is statistically significant enough to draw some conclusions. To sum up, the choice of the Netherlands as the testing country is largely described and justified. Having stated this, the research questions are discussed below.

#### 2.3. Research Questions

Having provided enough sufficient justifications for the choice of the Netherlands, it is important to describe the research questions which are necessary for the further parts of this paper. In the paper, the relationship between the use of Twitter as a social media and voter turnout during the 2012 Dutch national election will be discussed and analyzed. Generally, by the popularity of Twitter in the Netherlands, it would not be surprising if this particular social media platform has an enormous

influence on the level of electoral turnout (Andeweg & Irwin, 2014; Demirhan, 2014). Hence, the main research question of this paper is:

#### Q (1): To what extent does the active use of Twitter lead to a higher voter turnout?

Apart from the general bivariate relationship, there are many different variables which can explain the relationship between social media and voter turnout. For example, Holt et al. (2013) or the European Commission (n.d.) examined that the variable 'age' can specify the relationship between the use of social media and voter turnout. By reading their articles, one can therefore expect that especially younger voters use social media more often than older voters which means that the effect of the use of Twitter is stronger for younger voters than for their older counterparts. It appears as if particularly this group of people is more likely influenced by the political advertisements or pages they receive respectively follow on the social media pages they actively use. Another side effect of their social media use is that they become more aware of upcoming political events such as national elections. 18.1 per cent of Facebook users in the Netherlands were between aged 15 and 24. However, this percentage is surprisingly smaller than for the internet users who were older than 55 years. From this age group, 23.6 per cent have visited Facebook in May 2013 (Statista, 2015b). Nevertheless, more important for this research, according to another statistic from Statista (2015c), about 19 per cent of all Dutch internet users who were between aged 15 and 24 made use of Twitter. 21.3 per cent of all citizens older than aged 55 have visited this social media site as of May 2013. This can be also seen as an unexpected fact at first glance.

However at the second glance, social media platforms have their own life cycle containing the foundation, rise of popularity, decline and shutdown of a social media platform (Pérez-Latrel & Tsourvakas, 2013). As an example for the rise and fall of a social media website, the Dutch social media platform Hyves used to be one of the most popular social media platforms in the Netherlands before other platforms like Facebook or Twitter became even more popular and thus, Hyves lost more than seven million users between 2010 (10 million users) and 2013 (2.6 million users). In 2013, Hyves was shut down as a social media platform (van Hoek, 2013). Besides, even still popular social media platforms like Facebook nowadays experience a decrease of especially young users due to new platforms like WhatsApp or Snapchat. However, another important reason for the decline of teenage Facebook users is the fact that even many of the youngsters' parents have an own Facebook account

nowadays which discourages many teenagers to make further use of Facebook (Olson, 2013). However, more importantly for this thesis, Twitter's popularity tends to shrink which is mainly caused by bad decision-makings regarding the introduction of replacing the 'favorite' button with like tab which has the shape of a heart for instance (Smith, 2015). This can also have an influence on the Netherlands as especially teenage users who are between aged 15 and 19 have left Twitter in 2015. To be more precise, 48 per cent of Dutch teenagers shut down their accounts. Notably, more elderly Dutch people than their younger counterpart seem to make use of Twitter instead by now. This means that a shift from mainly younger to older Twitter occurred in the Netherlands as an increase of Twitter users who are 80 years old and older have joined this social media platform (Nu.nl, 2016). This evidence more or less supports the statistics from Statista (2015c) what says that more elderly than younger Dutch internet users use Twitter. However, it is not clear yet in how far this recent shift from young to older users in Twitter affects the relationship between use of Twitter, voter turnout and age. To observe if young voters aged 18 and 24 indeed more likely go to an election than all other citizens who are older than 24, all other age groups containing adult citizens will be taken into consideration in the data analysis. Thus, the sub-question is as follows:

# - Q (2): How strong is the effect of the use of Twitter on voter turnout among different age groups?

After having explained both research questions, the next step is to provide the literature review which is in the next sub-chapter. The literature review will provide some preliminary answers to the research questions. Additionally, the literature review is important for formulating the hypotheses which are described in sub-section 2.5.

#### 2.4. Literature Review

In general terms, the 2008 US Presidential Campaign is largely seen as a 'forerunner' in this new research area (Zhang et al., 2010) and since then, a large number of researchers are trying to figure out which variables may explain and influence the relationship between social media and voter turnout. General examples of the relationship between social media and voter turnout can be found in a short overview in the beginning of this sub-section. In addition to these examples, there will be a great focus on the possible third variable 'age' but on other possible factors such as the socio-background or the

political participation as well. These examples are briefly mentioned. This way, preliminary answers to the research questions can be provided. Besides, the literature review is important to describe the hypotheses as well which are stated in sub-section 2.5.

In general, it can be said that the use of social media of potential voters and voter turnout seems to have a strong relationship. One example can be found in the Canadian city of Calgary. In 2010, the voter turnout for the Mayor was at 51 per cent and was an all-time record for Calgary. This high voter turnout was explained by the active use of social media websites by the voters but also by the great engagement of the elected Mayor Naheed Nenshi in these platforms. His victory could not be explained by his large political history as well because his two opponents had far more experiences in political affairs (White, 2012). In addition, Edgerly, Bode, Kim and Shah (2013) suggested that the use of social media by voters can indeed lead to an increased electoral turnout. This was especially the case for the 2008 US Election because the voter turnout was higher than in the previous elections. Again, it is revealed that the active use of social media platforms of citizens. This development could be explained thy the active development could be explained that the decreased distance between potential voters and the presidential candidates.

Having considered the general relationship between the use of social media and voter turnout, it becomes striking that all these examples of Edgerly et al. (2013), Fiander (2012) and White (2012) also focus on the age of voters. These articles remark that although Twitter's shrinking popularity and rise of Twitter membership among elderly people in recent times (Dredge, 2015; Nu.nl, 2016; Smith, 2015), especially young voters seem to influence the relationship between Twitter and voter turnout as this group of people is more probably active in social media websites (Edgerly et al., 2013; Fiander, 2012; Whiter, 2012). For this purpose, this variable is seen as a specification of the relationship between use of Twitter and voter turnout as it can be expected that the effect is stronger for younger voters than for older voters (Babbie, 2010). Due to this assumption, 'age' as a potential third variable will be discussed below.

#### 2.4.1. Variable 'age'

Many scholars have already dealt with the question in how far the general use of social media leads to an increased voter turnout of young citizens. For example, Holt et al. (2013) were dealing with a study about the 2010 Swedish election campaign without specialize on a certain social media webpage. The scholars analyzed that especially younger voters who are not older than aged 33 were active in social media platforms. They also figured out that older Swedish citizens made less use of social media websites. Moreover, younger voters also used social media to get more interested in politics and their increased political interest also led to more political participation. At the same time, older Swedish voters still consume traditional media like television or newspapers more often than social media to get involved and participate in politics. The authors also concluded that social media seems to be the substitute for traditional media which is less popular for younger Swedish people. However, they also revealed that real political interest would actually increase if citizens become older though younger Swedish citizens would express their political interest in a different way than their older counterparts. For example, they would rather start a petition or demonstrate than being involved in other more traditional kinds of political participation which are more in common for older people.

Apart from the Swedish case, in the wake of the national election in United Kingdom (UK) in 2010, a study of the agency Reuters figured out that especially young voters who are between 18 and 24 years used social media as a main media form to inform themselves of election campaigns. Their use of social media was finally the main reason to vote. This behavior was true for 64 per cent of the interviewed young voters. To compare, 30 per cent of the young voters said that conventional TV debates between the candidates were the real reason to vote in this election. Furthermore, the Reuters study revealed that other kinds of traditional media sources such as TV news or newspapers were even less popular among this cohort. The reason for the popularity of social media websites in terms of voter turnout among young citizens is that the communication and participation in social media is more active and fluent than in traditional mass media. The voter turnout of the 2010 UK Election could have benefited from the use of social media. In average, the turnout increased by five per cent but as for the voters between age 18 and 24, the increase was even higher: According to the study, the voter turnout increased by seven per cent (Kiss, 2010).

Furthermore, in a paper of the European Commission (n.d.), it was estimated that within the European Union (EU) member states, 86 per cent of all internet users who are between aged 16 to 24 were active on social media websites as in 2011. However, it was not mentioned which platforms were particularly popular among this group of people. It was also figured out that these percentages decrease with each following age group. For instance, less than 50 per cent of all people aged 35 to 44 were active social media users. However, this paper also revealed that still more than 20 per cent of all internet users who were between aged 65 to 74 were active in one or more social media platforms. As for the Netherlands, the paper showed that around 50 per cent of all Dutch internet users made active use of least one social media platform in the last three months before they were interviewed for the paper. This was slightly below the European average which was more than above 50 per cent. In this statistic, the Netherlands was on the 22nd position from 29 tested European countries. Beside this, the paper showed that almost 30 per cent of all Dutch citizens read about different political views and finally post their own political opinions in the internet in 2011. From all these tested states, the Netherlands was ranked on ninth position. This percentage was above the European average which was 20 per cent. To sum up, the general use of social media can indeed lead to an increased voter turnout of younger adults. Basically, the data from the European Commission (n.d.) supports the outcomes of the Reuters study about the 2010 UK national election (Kiss, 2010) and the scientific article of Holt et al. (2013) that the relationship between use of social media as such and voter turnout exists and can be further specified if the voters are still young. However, how strong are the effects for a certain social media webpage like Facebook or more importantly, Twitter?

Clearly, many other articles do not focus on social media platforms and their influence on voter turnout in general. Rather, they focus on a particular social media website. On example is the social media webpage Facebook. Zhang et al. (2010) figured out that especially younger voters who are younger than aged 30 informed themselves about each presidential candidate. About 50 per cent of all younger voters made use of social media websites in order to get informed by the election campaign and to learn more about the political interests and preferences of their friends and to discuss with them actively. Especially the candidate of the Democratic Party, Barack Obama extensively made use of social media pages. His engagement in social media attracted fund raisers and potential voters. His efforts to win the election became obvious on Facebook. On his fan site, his election campaign events were regularly announced on time. This way, interested fans could attend these events in which he was supposed to take part. In addition, these researchers claimed that Obama's defeat to John McCain could be to a certain extent explained by his enormous popularity on Facebook which was expressed by the number of fans. John McCain who was the candidate of the Republican Party had about 624,000 fans on his official Facebook page and at the same time, Facebook counted about 2.4 million Barack Obama supporters. After the election, it was estimated that the number of voters who were younger than aged 30 increased by almost 3.5 million compared to the previous election in 2004. Moreover, it has been estimated that 66 per cent of all young voters elected Barack Obama.

In the same way like in the former article of Zhang et al. (2010), Carlisle and Patton (2013) also mentioned of the importance of Facebook at the 2008 US Presidential Campaign. The researchers wrote that Facebook cooperated with ABC News to inform potential and indecisive voters in order to motivate them to vote in the upcoming US Election. As a result of this cooperation, Facebook provided an application which should lead to more active discussions during the election campaign. Moreover, the authors of this article also appreciated the importance of the social media in other politically-motivated protest movements. As examples, the researchers mentioned the 2011 Arab Spring or the London Youth Riots what also took place in the same year. These events gained their importance by the mobilization of protesters on social media platforms. To sum up both articles of Zhang et al. (2010) and Carlisle and Patton (2013), it can be concluded that the use of Facebook leads to an increased voter turnout of especially younger voters. Nevertheless, although the effect of Facebook as social media is strong in terms of voter turnout of young people, it is more important for the sake of this research to find out how strong the effect of Twitter actually is.

Indeed, as this paper deals with the influence of Twitter in terms of voter turnout, it is therefore also necessary to mention how other scholars see this relationship. For instance, the active use of Twitter by the Presidential Candidate Barack Obama in 2008 can also explain why the voter turnout among younger citizens between aged 18 and 29 increased compared to the previous US Election in 2004. The increased voter turnout among young Americans stopped the long-term trend of declining voter turnout of this particular age group in national elections. Afterwards, it has been speculated that especially the young American voters felt more attached to Obama as he also actively used Twitter just like them (Latimer, 2012).

Likewise, for the next US Election in 2012, it has been estimated that 88 per cent of social media users were allowed to vote. 15 per cent of these people had an own Twitter account at that time. Especially

younger citizens between aged 18 and 29 were making active use of Twitter: 32 per cent of them had an account on this social media platform. Moreover, especially liberal voters were active Twitter users. According to a Pew study, 37 per cent of liberal voters could be found on Twitter. It has been also revealed that this group of people was more likely politically active and went to the national election. However, in order to get additional information for the US Election, only four per cent of the study participants used Twitter (Owen, 2013).

Although the next example did not primarily deal with a particular election, researchers figured out that especially the active use of Twitter can increase the voter turnout of British citizens who are between 18 and 34 years. About 45 per cent of 3,000 interviewed young citizens confessed that their use of Twitter led to greater interest in politics in general whereas 37 per cent indicated that Twitter was a helpful tool to inform them during the last UK Election. There are different reasons for the popularity of Twitter and its positive influence on young voters: The majority of the people claimed that the coverages on Twitter are written in a simple and understandable way. Moreover, Twitter helped them to retrieve more honest information about recent political developments. 74 per cent of the 3,000 study participants mentioned that they planned to vote in the next election. However, this percentage is still lower than the national average. According to the same study, 83 per cent of all British citizens who are allowed to vote said that they want to vote in the next election (Perraudin, 2015). This article also rejects the conclusion of Zhang, Seltzer and Bichard (2013) who claimed that Twitter does not lead to more political awareness of people. According to the research of Zhang et al. (2013) about the 2012 US Presidential Campaign, it was found out that social media platforms such as Facebook, GooglePlus, Twitter and YouTube can indeed lead to more offline political participation. However, from all of these tested social media pages, only Facebook and GooglePlus could indeed increase political interest of the social media users. To explain this in a different manner: Only these two social media platforms can apparently lead to further political awareness of citizens. On the one hand, it can be concluded that the use of social media -particularly Twitter-, can affect the voter turnout especially if the voters are still relatively young. In this sense, by the articles of Latimer (2012), Owen (2013), Perraudin (2015) and Zhang et al. (2013), it can be therefore concluded that the use of Twitter can lead to a higher voter turnout among younger adults.

However, this claim is heavily affected by more recent developments which suggest that Twitter is becoming less popular by especially young internet users in 2015. For instance, it is figured that in the

Netherlands, 48 per cent of all Twitter users aged 15 to 19 have shut down their accounts on this specific social media platform whereas at the same time, more than 40 per cent of Dutch citizens who are 80 years old and older have joined Twitter. Likewise, a similar development can be observed for Facebook. Also in 2015, 12 per cent of Dutch teenagers aged 15 to 19 have left this social media platform and at the same time, 52 per cent of Dutch citizens who are 80 years old and older have joined. Instead, other social media platforms like Instagram or Snapchat are getting more and more popular in general (Nu.nl, 2016). Additionally, this phenomenon appears to occur not only in the Netherlands but also in other states like the United Kingdom where less teenage social media users are using Facebook and more importantly Twitter -what is criticized to neglect the needs of teenage users and thus, loses them- in favor of Snapchat and Instagram where more than 38 per cent of young Britons aged 16 to 24 have an own account on the latter social media platform (Dredge, 2015). Thus, there is a possibility that Facebook but especially Twitter are no longer relevant for younger voters in their decision-making to vote or not in the next Dutch national election. However, as the next Dutch national election will take place in early 2017 (Neslen, 2015), it will be difficult to estimate in how far the decline of young Twitter users in the Netherlands influences the effect of age on the relationship between use of Twitter and voter turnout by now.

In the same way, one must be careful when considering the effect of age as a possible third variable on the relationship between use of Twitter and voter turnout. For instance, the article of the European Commission (n.d.) did not mention for what particular reasons young people are using social media platforms and in how far their use of social media platforms leads to an increased voter turnout among this specific group of people. Furthermore, the voter turnout in an election appears to depend much on the quality of news one consumes on a particular media. Media users who do not consume much political news of a high quality regularly less likely participate in political matters then those media users who get regularly politically informed by news sources from a higher quality (Norris, 2000). Although Norris (2000) did not mention of social media platforms in particular but of traditional media in general, this claim can be easily translated to the way of consumption of social media websites. It can be said that political interest or political participation are able to explain the relationship between use of social media -Twitter- and voter turnout in a better way than the age of the users does. To sum up, the age of social media users cannot be always the main explanation for this relationship. These other potential alternative third variables -socio-economic background and political participation- are described and discussed in the next paragraph.

#### 2.4.2. Other possible third variables

Nevertheless, age is not the only variable which was subject to previous researches in this field of political science. It tested if other possible third variables have an effect on the relationship between social media and voter turnout as well. In this section, it is briefly mentioned in how far the socio-economic status - here in form of income - and political participation in form of political interest influenced the relationship between the voter turnout and the use of social media. Different from the previous sub-section, there will be descriptions of the use of social media without restricting on particular platforms.

#### Socio-Economic Background

According to the research of Carlisle and Patton (2013), young upper-class voters who attend university and whose parents have a high income tend to be rather positively affected by the relationship. In other words, these people rather vote in an election than their poorer and less educated counterparts. It can be said that the socio-economic status can indeed explain the relationship between social media and voter turnout as well.

Besides, Harris and Hohmann (2013) also stated that people who belong to a low socio-economic class due to their low income and low education have limited internet access and this could mean that these people are less politically-informed and more likely do not go to an election because they often times do not use of social media.

The same opinion like Carlisle and Patton (2013) and Harris and Hohmann (2013) was claimed by Norris (2001). Although social media was not mentioned, Norris (2001) claimed that especially people from lower socio-economic classes are excluded from the rise of internet as these people are not able to afford the costs for internet connection. As a result, poorer people are not able to inform themselves about political events online and this can lead to less political participation and lower voter turnout among these people. As a side effect, the social inequality between richer and poorer people can even increase. Though social media was not mention, Norris' (2001) example can be translated from internet as such to social media in particular.

To sum up, it appears that the socio-economic background of a citizen explains the relationship between social media use and voter turnout. Rich and educated people have more likely access to internet and thus, greater access to social media platforms than poor and less educated people who often do not have internet access (Carlisle & Patton, 2013; Harris & Hohmann, 2013; Norris, 2001). However, the socio-economic background is not the only alternative third variable. According to Carlisle and Patton (2013), general interest in politics finally leads to more political participation and higher voter turnout. Having considered the socio-economic background as an alternative third variable explaining the relationship between the use of social media like Twitter in particular and voter turnout, it is therefore interesting to get to know if other factors such as the political participation can also influence this relationship.

#### Political Participation

Though they dealt with traditional media -not with social media- and voter turnout, Gerber and Green (2000) figured out that political participation in a party or in (non-)partisan organizations has a positive impact on the voter turnout in national elections. However, by the decline of participation in political parties and organizations, the contact between candidates, political parties and voters became less personal. This led to lower voter turnouts as more and more people are choosing not to go to national elections.

Norris (2000) also did not mention of social media but of traditional media to explain to what extent consumption of media leads to an increased voter turnout by political participation. Instead of blaming new media for insufficient political information flows per se, it is supposed that political participation depends much on the quality of traditional media consumption. Potential voters who get politically informed by traditional media news which have a high quality are showing higher political participation and higher voter turnout then those potential voters who tend to consume much more tabloid or yellow press news.

Moreover, Harvey (2014) mentioned that the use of social media websites would lead to greater political knowledge and thus, to an increased political participation of especially people who are younger than 30 years. By doing so, younger people regardless of their socio-economic background would start to make more contact with politicians or start to work as volunteers in real life. Additionally, many of these young people initialed social movements by the use of social media and the thus resulting increased political participation as the 2011 Arab Spring or the 2010 UK Tuition Hike Protest clearly show. Overall, the use of social media and the resulting political participation would finally lead to a higher voter turnout among these young people.

Even though the articles of Gerber and Green (2000) and Norris (2000) do not deal with social media, their examples can be easily translated from media in general to social media. As a result, although active political participation is declining, the active use of social media can indeed lead to more knowledge about political events and thus also stimulate political participation. This seems to be the case for especially the youngest voters as the voter turnout for this group of voters can increase (Gerber & Green, 2000; Harvey, 2014; Norris, 2000). To conclude, it can be said that political participation is also an alternative third variable which can explain the relationship between the use of social media and voter turnout.

To be more precise, it appears as if the political participation and the socio-economic background are both strong alternative third variables which can also explain the relationship between the use of social media like Twitter and voter turnout. Thus, although the variables political participation and socioeconomic background are part of the hypotheses, both variables will be nevertheless considered in the data analysis. This will be done to figure out if these variables are indeed possible third variables which can specify the relationship between use of Twitter and voter turnout as well and can be therefore considered for further researches in this research area. Despite this, the variable 'age' tends to be stronger than the two other alternative third variables. Therefore, this particular variable will be emphasized in the remainder of this research paper like in the hypotheses section below.

#### 2.5. Hypotheses

Firstly, according to the articles in the literature review - in particular of Edgerly et al. (2013); Fiander (2012); Holt et al. (2013) or White (2012) -, it can be hypothesized that the use of social media websites leads to more political participation and interest which finally turns into higher electoral turnouts among potential voters in a ceteris paribus - if other possible variables or factors do not change and stays the same (Merriam-Webster, n.d.a.)-. As these examples took place in different countries -Canada, Sweden and the USA-, it would not be surprising if this assumption was also true in the Netherlands as a large

number of Dutch citizens are registered in social media websites. Twitter can be seen as a qualified social media platform because Twitter appears to be quiet popular in the Netherlands (Andeweg & Irwin, 2014; Demirhan, 2014; Statista, 2015a; 2015d; 2015e). The membership of the Dutch voters on Twitter in relation to their participation in the 2012 election will be tested in the data analysis section. Therefore, related to the first research question, the main hypothesis is:

- H (1): Voters who use Twitter more often will show higher levels of electoral turnout.

Secondly, it appears as if the use of social media like Twitter is stronger for younger voters than for older voters although according to a more recent article from Nu.nl (2016), Twitter is getting less popular among teenage internet users in the Netherlands. However, the apparent stronger effect for younger voters can finally influence the whole relationship between use of Twitter and voter turnout at least according to the articles of Holt et al. (2013); Kiss (2010); Latimer (2012) or Owen (2013). This is the case because the authors assumed that especially this group of people is more active on social media platforms than older citizens. Especially Holt et al. (2013) assumed that the effect of the use of social media as a whole may be stronger for younger people than for their older counterparts as older voters. To a certain degree, this assumption can be linked to the article of Perraudin (2015) who claimed that Twitter is an important social media website which informs especially young citizens about political events and developments and this can lead to an increased political interest and finally to vote in national elections.

In brief, it can be said that through the introduction of the third variable 'age', the relationship between use of Twitter and voter turnout can be specified as one may expect that the effect of the use of Twitter is stronger for one subgroup -in this case the younger voters aged 18 to 24- than for the other subgroups containing voters older than age 24. It is possible that younger voters use Twitter more often than older people and in case of a political election, their use of Twitter leads to a stronger mobilization among younger adults to vote. This might lead to a stronger relationship between use of Twitter and voter turnout at least for younger voters than for older voters. Among the latter group, it is possible that there is either a weaker relationship or there is no relationship at all. Hence, a specification of the elaboration model between use of Twitter and voter turnout occurred (Babbie, 2010). Related to the second research question which asks effect of the use of Twitter among different age groups, the second hypothesis is:

- H (2): The effect of the use of Twitter is stronger for younger voters than for older voters.

To conclude, the hypotheses are like the research questions clearly important for the next parts of this research paper. They are equally helpful for the data analysis which will reveal the results of the data sets. Additionally, both research questions and hypotheses also influence the next chapter which is about the research method.

#### 3. Research Method

This paper deals with the question to what extent the use of Twitter leads to a higher voter turnout in the 2012 Dutch national election. Additionally, this paper also wants to get to know if the use of Twitter appears to be stronger for younger voters than for older voters. Next to the theoretical section, it is therefore also highly important to choose and define the correct research method because it can partly influence the outcomes of this research and thus the answers to the research questions and the hypotheses. However, many other different aspects which can affect a research have to be considered if one wants to have a valid and reliable research outcome in the end.

As a result, these aspects are largely mentioned in the upcoming sections of this chapter. The first section of this chapter deals with the data collection which is followed by the second section, the research design. Next, the possible threats and limitations are described and discussed. These issues are highly relevant to be explained also because this research makes use of secondary data by the Longitudinal Internet Studies for the Social Science (LISS).

#### 3.1. Data Collection

To start with the data collection part, it is highly important to mention who originally provides the data sets which are used for this thesis. The SPSS data sets for this study are originally provided from the LISS which is part of the Measurement and Experimentation in the Social Science (MESS) project (LISS Panel, n.d.b; n.d.c.). "The LISS panel data were collected by CentERdata (Tilburg University, The Netherlands) through its MESS project funded by the Netherlands Organization for Scientific Research. " (LISS Panel, n.d.d., p.1). For their researches, a panel which embraces up to 5,000 Dutch households and 8,000 citizens are regularly interviewed via online questionnaires (LISS Panel, n.d.b.). "The LISS panel is a representative sample of Dutch individuals who participate in monthly Internet surveys. The panel is based on a true probability sample of households drawn from the population register. Households that could not otherwise participate are provided with a computer and Internet connection. A longitudinal survey is fielded in the panel every year, covering a large variety of domains including work, education, income, housing, time use, political views, values and personality." (LISS Panel, n.d.d., p.1). To go further, each year, the panel members have to fill in a yearly LISS core study. However, next to the regular yearly core study, other online questionnaires are also offered to the LISS Panel members (LISS Panel, n.d.b.). However, what are the other online questionnaires dealing about?

One of these other online questionnaires deals with the question to what extent the LISS Panel knows the different standpoints of the Dutch political parties, its personal view on each major Dutch political party and if they use the social media platform Twitter to express their own political views. The name of the questionnaire is called 'Calibrating Twitter data: Issue Salience and Issue Ownership in Social Media and in Surveys'. This questionnaire was sent to 6,261 panel members and was filled in by 5,143 of them only once in October 2013. One of the questions of this questionnaire is if the panel member is registered on Twitter (Elshout, 2013a). Indeed, this question is highly crucial for the remainder of this paper. In addition, the unit of analysis of this thesis is those 5,143 individual LISS Panel members who have filled in this particular LISS questionnaire. The unit of analysis is in so far highly important for the research design and data analysis as the behavior of the people who belong to the unit of analysis is studied in this research (Babbie, 2010).

However, although this particular questionnaire asks for the membership on Twitter, it nevertheless does not ask for the age of the panel members and if they have voted in the 2012 Dutch national election. Therefore, other questionnaires are used as well. For the purpose of this thesis, two other additional questionnaires are chosen: The first additional questionnaire deals with the background information of each LISS Panel member which asks for current personal information like age, income or number of children. The name of this particular questionnaire is 'Codebook Background Variables LISS Panel' and the data for this questionnaire was collected for individual panel members from October

2010 onwards respectively from April 2011 onwards for households but are however able to change the answers each month (Elshout, 2012). This is also the reason why on the LISS website in which the data files for the background variables are gathered new zip files for each month can be found. For the sake of the data analysis, the data file from September 2013 will be used the data was collected shortly before the questionnaire about the use of Twitter was filled in by the LISS Panel members (Elshout, 2013a; LISS Panel, n.d.a.). The second additional questionnaire is the yearly LISS core study and wants to get to know from the panel if it follows the news, supports the government or voted in the last national election in 2012. In this thesis, the Politics and Values module is used, to be more precise the 'LISS Core Study Wave 6' which was filled in by the panel members between December 2012 and January 2013 (Elshout, 2013b).

Actually, as in total three different SPSS data sets are used, one can indeed ask the question if it is possible to use them for the data analysis of this thesis. The answer is: The same respondents are filling in all three surveys and thus, it is possible to match the variables although these variables can be found in different surveys. To conclude this paragraph, choosing the data collection is highly necessary but however it is not enough to find the correct research method. To clarify, choosing the appropriate research design can influence the data analysis and therefore the results of this thesis as well. The explanation and justification of the research design can be found below this paragraph.

#### 3.2. Research Design

Apart from the correct data collection, a suitable research design is considered as highly important for the data analysis. The research design can influence the results of the analysis and notably the results of the whole research indeed. Hence, the research design of this thesis will be largely described here. The research design of this thesis is built up as follows: Firstly, this research makes use of secondary data. In this paper, the data is originally collected and provided by the LISS for its own research. Moreover, there are many advantages which can appear by the use of existing survey data. For instance, the use of already existing survey data saves much more time and costs for the research (Babbie, 2010). These advantages can easily justify the choice of secondary analysis in this thesis.

Furthermore, this research is not only based on secondary analysis. In general, a descriptive study observes and describes what was figured out in the research in terms of characteristics or behavior of

the different observed groups within the society for example (Babbie, 2010). As a consequence for this research, the intention is to observe and describe to what extent the use of Twitter and additionally the age of the responding LISS Panel members can explain the decision to vote in the 2012 Dutch national election.

Beside the choice of secondary analysis and descriptive study, this paper often mentions the term 'panel'. Although the term 'panel' would indicate a form of longitudinal study since panel study consists of a panel in which the same group of people is interviewed and observed more than once for a research (Babbie, 2010), this research is a cross-sectional study. To be more precise, in this form of study, a certain group of people is only observed at one point in time for a particular study (Babbie, 2010). In this paper, the unit of analysis is also observed once so far as well: The respondents of the LISS questionnaire which asked for the Twitter membership is only conducted once so far, namely in October 2013. Because there is only one existing LISS statistic about the use of Twitter, this thesis consists of a cross-sectional study (Babbie, 2010; Elshout, 2013a).

To end up this sub-section, this thesis makes use of a survey research. The research of this thesis is based on existing survey data of the LISS which had to be filled in by the LISS Panel members. In this case, the panel members had to fill in online questionnaires. By making use of questionnaires, important information which is highly crucial for the research can be gathered (Babbie, 2010). The description of the research design can be important for the next chapter of this thesis, namely the data analysis which can be found below.

#### 4. Data Analysis

After having discussed the theoretical section and the research design chapter, it is now at this place highly important to describe the data analysis of this thesis. The data analysis section helps to clarify if the two hypotheses of this paper can be either confirmed or rejected. Moreover, this chapter is helpful to find out the answers to both hypotheses. For this purpose, the variables which are used for the data analysis are largely explained as well. In order to find the answers of the research questions, three SPSS data files which are provided from the LISS will be merged and analyzed. To get a first overview, descriptive statistics about the use of Twitter and voter turnout will be presented.

#### 4.1. Overview: Descriptive Statistics

In the descriptive statistics, the LISS Panel members are tested by their use of Twitter and their voter turnout. This is done because both variables appear in the first and second hypothesis. Moreover, the LISS panel members are distinguished and compared by their ages as the variable 'age' is the third variable in the second hypothesis.

To analyze if the panel members make use of Twitter, the variable 'use of Twitter' which was called 'jz13a038' in the data set will be used for the further analysis. Two answers are shown: 1 means yes and 2 means that one is not registered on Twitter (Elshout, 2013a). Additionally, to control if adult Dutch citizens went to the 2012 Dutch Election, the variable 'vote' which is actually called 'cv13f053' in the original data set is used. The category '1' indicates the citizen went to the election on 12 September 2012 whereas the category '2' shows that one did not vote (Elshout, 2013b).

Table 4.1: Frequency of (non-)Twitter users within the LISS Panel (Source: LISS Panel)

Use of Twitter							
Yes	10.2 %	796					
No	53.9 %	4,216					
Missing	35.9%	5,012					
Ν	100 %	7,824					

As Table 4.1 suggest, it can be concluded only a minority of adult LISS Panel members have an own Twitter account. 10. 2 per cent of the panel members claimed being registered on Twitter whereas 53.9 per cent of all adult LISS Panel members stated not being registered on this particular social media platform. Although this situation is far from the ideal 50/50 per cent distribution, this minority shall not be underestimated in the further data analysis. However, it is equally interesting to get to know in how the voter turnout is distributed among the panel members.

Table 4.2: Frequency of (non-)voters within the LISS Panel (Source: LISS Panel)

Voter turnout							
Yes	58.2 %	4,552					
No	8.8 %	688					
Missing	33,0%	2,584					
Ν	100 %	7,824					

According to Table 4.2, 58. 2 per cent of the panel members claimed to have voted in the last Dutch national election whereas 8.8 per cent did not vote. At first glance, 33 per cent of missing cases appear to be rather high. However, it has to be mentioned that panel members who were either not eligible to vote or are too young to vote are treated as missing cases as well and are thus not included in the tables throughout the data analysis.

Overall, it can be said that a large majority of the LISS Panel members went to the last election in 2012 but only a small minority of them are registered on the social media platform Twitter. Nevertheless, these descriptive statistics do not say in how far both hypotheses can be either confirmed of rejected. This will be done in the analysis of both hypotheses which can be found below this sub-chapter.

As already mentioned, the first two figures and tables were dealing with both hypotheses. However, the variable 'age' as a third variable is also part of the second hypothesis. For this purpose, to get a first overview of the test of the second hypothesis which deals with the age of voters who use Twitter, the variable 'age' which is called 'lftdcat' in the data set originally distinguishes seven age groups. These groups were set by the Statistics Netherlands (CBS). Nevertheless, for the sake of the paper, the first age group "1: 14 years and younger" (Elshout, 2012, p.3) will not be considered for the further analysis and thus, can be neglected. The other age groups are: "2: 15-24 years, 3: 25-34 years, 4: 35-44 years, 5: 45-54 years, 6: 55-64 years and 7: 65 years and older" (Elshout, 2012, p.3).

Age (in CBS categories)						
15-24 years	12.1 %	949				
25-34 years	12.2 %	956				
35-44 years	16.1 %	1,261				
45-54 years	18.5 %	1,450				
55-64 years	19.2 %	1,499				
65 years and older	21.8 %	1,709				
N	100 %	7,824				

Table 4.3: Frequency of adult age groups within the LISS Panel (Source: LISS Panel)

As Table 4.3 clearly shows, it can be concluded that more people who are aged 65 and older apparently filled in the surveys than all other age groups which contain adult panel members. The smallest percentage can be found among the age group '15-24 years'. Only 12.1 per cent of all panel members are part of this age group. However, it has to be stated that all underage LISS Panel members who actually belong to this cohort, are excluded from this analysis. Nevertheless, it can be hypothesized in

how far these frequencies among the age groups can influence the further data analysis in either way. This will be discussed in the analysis of the second hypothesis later this chapter.

#### 4.2. Test: First Hypothesis

After having done the descriptive statistics, the first test deals with the first hypothesis which is "Voters who use Twitter more often will show higher levels of electoral turnout." In order to test this hypothesis, it will be analyzed if the unit of analysis -the 5,143 LISS panel members- are registered on Twitter and went to the 2012 Dutch Election. For this purpose, a cross tabulation will be offered in which the number and percentages of cases are shown In this case, the independent variable (use of Twitter) is shown in the rows whereas the dependent variable (voter turnout) represents the columns. Table 4.4 shows the cross tabulation for the relationship between use of Twitter and voter turnout. This hypothesis will be analyzed via a chi-square test in order to get the chi-square value (csv), the degrees of freedom (df) and the p-level. These values are highly important for a data analysis in different ways. First, chi-square shows the strength respectively independence of the relationship between the use of Twitter and voter turnout. In detail, the chi-square shows in how far the observed values differ from the expected ones. The calculation for the chi-square is:  $\frac{deviation^2}{expected value}$  (Huizingh, 2007; Linoff, 2016). Moreover, the df is the parameter for the chi-square distributions. It can be calculated as follows: "(number of rows – 1)\* (number of columns – 1)" (Huizingh, 2007, p. 250). Finally, the p-value is highly important to show the possible statistical significance of the relationship between the use of Twitter and the voter turnout (Huizingh, 2007; Linoff, 2016). As the first hypothesis assumes that the use of Twitter leads to an increased level of voter turnout, the null hypothesis (H(O)) in this data analysis is: H(O): There is no relationship between the use of Twitter and electoral turnout; both variables are independent. Likewise, the alternative hypothesis is: H(A)): There is a relationship the use of Twitter and electoral turnout; both variables are not independent. Although the first hypothesis suggests a relationship, a null hypothesis always represents a 'status quo', means that there is no relationship between two variables (De Veaux, Velleman & Bock, 2012).

	Use	Do not	N				
	Twitter	use					
		Twitter					
Vote	86.6 %	87.8%	87.6 %				
Did not	Did not 13.4 %		12.4 %				
vote							
Ν	664	3,838	4,502				
Chi-square test							
	Csv=	Df=1	p=0.393				
	0.730						

Table 4.4: Cross table for relationship between use of Twitter and voter turnout (including chi-square test) (Source: LISS Panel)

According to this cross table (Table 4.4), 86.6 per cent of registered Twitter users voted in the 2012 Dutch national election. This percentage is smaller than for the non-Twitter users who went to the last election. Here, 87.8 per cent of non-Twitter users voted. Hence, it is less surprising that the percentage of Twitter users who did not vote in the last election is higher than the percentage of non-Twitter users who indeed voted (13.4 per cent compared to 12.2 per cent).

To conclude, the use of Twitter does not automatically lead to an increased voter turnout among registered Twitter users. In other words, it seems as if the null hypothesis cannot be rejected as the use of Twitter does not lead to an increased electoral turnout. However, in how far can the chi-square test confirm or reject the null hypothesis in statistical terms? The chi-square test can shed a light to this question.

Before both hypothesis and research question can be answered, it has to be figured if a chi-square can be applied at all. The values of the chi-square, df and p-value which can be found on the bottom of Table 4.4 have to mentioned. At first, the chi-square of the relationship between the use of Twitter and voter turnout is 0.730 whereas the df is 1. The number of df is figured out by the calculation: 1 = number of rows [2] -1 \*number of columns [2] – 1 (Huizingh, 2007). Moreover, the p-value -which is shown in Table 4.5 as significance level- is 0.393. According to Huizingh (2007), the standard threshold for p-value is 0.05. If the p-value of 0.393 is compared with the standard threshold of 0.05, then one can figure out that the p-value of 0.393 is higher than the threshold p-value of 0.05 (0.393 > 0.05). In other words, this means that the null hypothesis (H(O): There is no relationship between the use of Twitter and electoral turnout; both variables are independent) cannot be rejected: The difference of the p-values is too large and the significance level is too large to claim that the use of Twitter indeed leads to an increased electoral turnout. Additionally, the first research question (*To what extent does the active use of Twitter* 

*lead to a higher voter turnout?)* can be answered as follows: The active use of Twitter does not necessarily lead to an increased voter turnout. On the contrary, more registered Twitter users did not vote than non-registered Twitter users.

#### 4.3. Test: Second Hypothesis

After the null hypothesis of the first hypothesis cannot be rejected and hence, first hypothesis cannot be confirmed, it can be questioned a third variable can help creating a relationship between use of Twitter and voter turnout. In order to answer this question, the control variable 'age' as third variable will be added to the variables 'use of Twitter' and 'voter turnout'. According to the literature review, it can be expected that the younger the voters are, the higher are the chances that they vote due to their use of Twitter. Here, not only the youngest and oldest age group including adult citizens who are allowed to vote will be compared to each other; all age groups which consist of adult citizens will be compared to each other; all age group and more importantly, to observe which age group can more or less specify this relationship. To be more precise, this is done to get to know if the general assumption from the academic community that the relationship between the use of Twitter and voter turnout can be in this case also specified if the voters are under age 30. In order to figure out the statistical significance of this relationship, the same tests as for the first hypothesis are executed.

However, the second age group which embraces panel members who are between 15 and 24 years (Elshout, 2013b) should be carefully treated in this analysis as Dutch citizens who are younger than 18 years are not allowed to vote in a national election. For this purpose, the respondents who are between 15 and 17 years old will be sorted out in the SPSS data set in order to avoid wrong results. In other words, only cases respectively panel members are selected in which the condition of being aged 18 and older for the sake of the data analysis. This way, it can be avoided that underage panel members appear in the data analysis and thus finally lead to invalid results. The second hypothesis is measured in the same way as for the first hypothesis. As for the second hypothesis, the H(O) is: *There is no relationship between the use of Twitter and electoral turnout which is specified by the control variable age; all variables are independent.* In contrast, H(A) is: *There is a relationship the use of Twitter and electoral turnout which is specified by the control variable age; all variables are not independent.* 

Table 4.5: Cross table for relationship between use of Twitter and voter turnout, specified by age groups of voters based on CBS categories (including chi-square tests) (Source: LISS Panel)

	15-2	24 years		25-34 years			
	Use	Do not use	Ν		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	82.8%	80.9 %	81.5 %	Vote	80.3 %	84.2 %	82.9 %
Did not	17.2 %	19.1%	18.5 %	Did not	19.7 %	15.8 %	17.1 %
vote				vote			
Ν	93	194	287	Ν	132	284	416
	Chi-s	quare test			Chi-so	quare test	
	Csv=	Df=1	p=0.703		Csv=	Df=1	p=0.331
	0.146				0.945		
	35-4	44 years			45-	54 years	
	Use	Do not use	Ν		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	84.9 %	80.9 %	81.9 %	Vote	94.1 %	87.2 %	88.3 %
Did not	15.1 %	19.1 %	18.1 %	Did not	5.9 %	12.8%	11.7 %
vote				vote			
Ν	152	482	634	Ν	135	728	863
	Chi-se	quare test		Chi-square test			
	Csv=	Df= 1	p= 0.27		Csv=	Df= 1	p=
	1.218				5.169		0.023
	55-0	64 years		65 years and older			
	Use	Do not use	Ν		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	91.2 %	89.9 %	90 %	Vote	86 %	91.1 %	90.9 %
Did not	8.8 %	10.1 %	10 %	Did not	14 %	8.9 %	9.1 %
vote				vote			
Ν	102	903	1,005	Ν	50	1,247	1,297
	Chi-s	quare test			Chi-so	quare test	
	Csv=	Df= 1	p=		Csv=	Df= 1	p=
	0.161		0.688		1.511		0.219

Table 4.5 shows that 86.6 per cent of all voters who are between 18 and 24 years old and have an own Twitter account -the panel members younger than 18 were sorted out prior the data analysis but still, the name of this age group is 15-24 years- went to the 2012 Dutch national election. This percentage is slightly lower than the percentage of voters from the same group who are not registered on Twitter. Here, the percentage is 87.7 per cent. Additionally, the age groups '35-44 years', '45-54 years' and '55-64 years' show similar patterns like the age group '15-24 years'. In these age groups, the percentage of Twitter users who voted in the 2012 Dutch national election is higher than the percentage of Twitter users who did not vote. Thus, at first glance, it appears as if there can be a spurious zero relationship between the use of Twitter and voter turnout by the introduction of the third variable 'age' which can be also seen as a suppressor variable. This can especially be the case for voters who are registered on Twitter and are aged 45 to 54 as this age group has the highest voter turnout among all age groups (94.1 per cent). To add, the lowest voter turnout can be found among the panel members who are between 25 and 34 years old (80.3 per cent). However, what are the consequences for the results of the chisquare test?

Table 4.5 also shows the chi-square test for each age group. Regarding the p-values of each age group, it can be said that the p-values are almost always larger than the threshold value 0.05 which means that there is no relationship between the use of Twitter and voter turnout, specified by the age of voters. However, there is one exception: As for the age group '45-54 years', the p-value is 0.023 which is smaller than 0.05. This means that there is indeed a spurious zero relationship between use of Twitter and voter turnout, specified by the suppressor variable 'age' as this relationship exists among LISS Panel members aged 45 to 54 only.

To sum up, the null hypothesis can be rejected. The relationship between the use of Twitter and voter turnout can be specified by the age of Twitter-using voters if they are between 45 and 54 years old. Likewise, the second research question (*How strong is the effect of the use of Twitter on voter turnout among different age groups?*) can be now answered as follows: The effect is the strongest for voters aged 45 to 54. However, it has to be said as well that the assumption from the literature review can be rejected. The relationship between use of Twitter and electoral turnout cannot be specified by the younger age groups of voters who are registered on Twitter.

#### 4.4. Test: Other Variables

The data analysis of both hypotheses finally concludes that the use of Twitter does not lead to higher electoral turnout. However, the data analysis reveals that both variables can be specified by the introduction of the age of the LISS Panel members. Nevertheless, it will be additionally analyzed in how far the use of Twitter can lead to an increased voter turnout at all if this relationship is specified by another third variable than the age of the voters. For this purpose, it will be analyzed if the panel members follow news via traditional media such as radio and television (cv13f002), via daily-published free newspapers (cv13f004) or via daily-published paid newspapers (cv13f166) (Elshout, 2013b). In all

cases, the possible answers are either yes or no. This is done to find out if traditional media still has an influence on the electoral turnout.

Moreover, the two other possible third variables from the literature review - political participation and socio-economic status - will be also analyzed in the data analysis. The reason for choosing both variables is that the literature review suggests that these variables can also specify the relationship between use of Twitter and voter turnout. The interest in political topics (cv13f012) will be considered for the data analysis. There are the different categories in this data set: "1 very interested, 2 fairly interested, 3 not interested" (Elshout, 2013b, p.5). Additionally, it will be analyzed if the socio-economic status (in case the income) of the panel member members can specify the relationship between use of Twitter and voter turnout. As for the socio-economic status, the panel members are asked for their personal net monthly income. The original variable 'nettocat' embraces 15 categories from "0: No income" (Elshout, 2012, p.6) to "6: EUR 2501 to EUR 3000" (Elshout, 2012, p.6) and "12: More than EUR 7500" (Elshout, 2012, p.6).

#### TV and/or radio news

	Follow TV an	d/or radio news		Do not follow TV and/or radio news			
	Use	Do not use	Ν		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	89.4 %	89 %	89.1 %	Vote	65.8 %	75.6 %	73.9 %
Did not	10.6 %	11 %	10.9 %	Did not	34.2 %	24.4 %	26.1 %
vote				vote			
Ν	585	3,481	4,066	N	79	357	436
Chi-square test				Chi-square test			
	Csv=	Df=1	p=0.788		Csv=	Df=1	p=0.073
	0.073				3.222		

Table 4.6: Cross table for relationship between use of Twitter and voter turnout, specified by the following of TV and/or radio news (including chi-square tests) (Source: LISS Panel)

According to Table 4.6, it can be concluded that the following of TV and/or radio news is not a suppressor variable which can help creating a spurious zero relationship between the use of Twitter and voter turnout. Both p-values (0.788 respectively 0.073) are larger than the threshold value of 0.05. To summarize, the use of Twitter and the following of radio and/or TV news does not lead to either higher

or lower turnout. However, can the following of free daily newspaper lead to a specification of the relationship between use of Twitter and voter turnout?

#### Free daily newspapers

Table 4.7: Cross table for relationship between use of Twitter and voter turnout, specified by the following of free daily newspapers (including chi-square tests) (Source: LISS Panel)

I	Follow free d	aily newspapers		Do not follow free daily newspapers			
	Use	Do not use	Ν		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	89.1%	85.9 %	86.5 %	Vote	86 %	88.1 %	87.8 %
Did not	10.9 %	14.1 %	13.5 %	Did not	14 %	11.9 %	12.2 %
vote				vote			
N	128	583	711	Ν	536	3,255	3,791
Chi-square test				Chi-square test			
	Csv=	Df=1	p=0.348		Csv=	Df=1	p=0.168
	0.879				1.902		

According to Table 4.7, it can be concluded that the following of free daily newspapers also does not specify the relationship between use of Twitter and voter turnout. Like on Table 4.6, Table 4.7 reveals that both p-values are larger than 0.05 which means that there is no specification of the relationship between use of Twitter and voter turnout by the introduction of the third variable 'following free daily newspapers'. Is the situation the same for the other third variable 'following paid daily newspapers'?

#### Paid daily newspaper

Table 4.8: Cross table for relationship between use of Twitter and voter turnout, specified by the following of paid daily newspapers (including chi-square tests) (Source: LISS Panel)

F	ollow paid d	laily newspapers		Do not follow paid daily newspapers			
	Use	Do not use	N		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	92.1 %	93 %	92.9 %	Vote	82.6 %	81.6 %	81.8 %
Did not	7.9 %	7 %	7.1 %	Did not	17.4 %	18.4 %	18.2 %
vote				vote			
N	278	2,078	2,356	N	386	1,760	2,146
	Chi-sq	uare test		Chi-square test			
	Csv=	Df=1	p=0.589		Csv=	Df=1	p=0.646
	0.292				2,111		

As seen on Table 4.8, it can be said that there is again no relationship between the use of Twitter and voter turnout, specified by the following of paid daily newspapers. The reason is that both p-values -0.589 and 0.646- are larger than the threshold value of 0.05. To conclude, both free daily and paid daily newspapers cannot specify a spurious zero relationship between use of Twitter and voter turnout as a suppressor variable. Moreover, traditional media cannot specify the relationship between use of Twitter and voter turnout. However, what are the findings for the additional third variables 'political participation' and 'socio-economic status' suggested by the literature review?

#### Political participation

V	ery intereste	d in political topic	Fa	irly intereste	d in political topi	cs	
	Use	Do not use	N		Use	Do not use	Ν
	Twitter	Twitter			Twitter	Twitter	
Vote	93.8 %	96.7 %	96.2 %	Vote	89.1 %	91 %	90.7 %
Did not	6.2 %	3.3 %	3.8 %	Did not	10.9 %	9 %	9.3 %
vote				vote			
Ν	129	577	706	Ν	423	2,459	2,882
	Chi-so	quare test			Chi-sa	quare test	
	Csv=	Df=1	p=0.119		Csv=	Df=1	p=0.216
	2.425				1,529		
N	lot interested	l in political topics	S				
	Use	Do not use	N				
	Twitter	Twitter					
Vote	68.8 %	71.4 %	71.1 %				
Did not	31.3 %	28.6 %	28.9 %				
vote							
Ν	112	802	914				
				-			
	Chi-so	quare test					
	Csv=	Df=1	p=0.555				
	0.348						

Table 4.8: Cross table for relationship between use of Twitter and voter turnout, specified by political participation (including chi-square tests) (Source: LISS Panel)

According to Table 4.9, it has to be concluded that political participation as expressed as political interest cannot specify the relationship between use of Twitter and voter turnout. In each category, the respective p-value is larger than 0.05. In this case, the assumption of the literature review that political

participation can specify the relationship between use of Twitter and voter turnout cannot be confirmed. However, how is the situation for the other additional third variable 'socio-economic status'?

#### Socio-economic status

Table 4.10: Cross table for relationship between use of Twitter and voter turnout, specified by socio-economic status, based on
personal net monthly income in categories (including chi-square tests) (Source: LISS Panel)

	No	income		€ 500 or less				
	Use Twitter	Do not use Twitter	N		Use Twitter	Do not use Twitter	N	
Vote	87.3%	83.9%	84.4 %	Vote	73.8 %	86.8 %	84.4 %	
Did not vote	12.7 %	16.1%	15.6 %	Did not vote	26.2 %	13.2 %	15.6 %	
Ν	55	323	348	Ν	42	182	224	
	Chi-s	quare test			Chi-s	quare test		
	Csv= 0.406	Df=1	p=0.524		Csv= 4.377	Df=1	p=0.036	
	€ 501	–€1,000	•		€ 1,00	1 – € 1,500		
	Use Twitter	Do not use Twitter	N		Use Twitter	Do not use Twitter	N	
Vote	81.6 %	86.8 %	86.3 %	Vote	84.1 %	86.6 %	86.3 %	
Did not vote	18.4 %	13.2 %	13.7 %	Did not vote	15.9 %	13.4%	13.7 %	
Ν	76	727	803	Ν	113	764	877	
	Chi-s	quare test		Chi-square test				
	Csv= 1.584	Df= 1	p= 0.208		Csv= 0.554	Df= 1	р= 0.457	
	€ 1,50	1 – € 2,000	•	€ 2,001 – € 2,500				
	Use Twitter	Do not use Twitter	N		Use Twitter	Do not use Twitter	N	
Vote	89.1 %	87.5 %	87.7 %	Vote	88.9 %	91 %	90.6 %	
Did not vote	10.9 %	12.5 %	12.3 %	Did not vote	11.1 %	9 %	9.4 %	
Ν	156	790	946	Ν	99	467	566	
	Chi-s	quare test			Chi-s	quare test		
	Csv= 0.323	Df= 1	p= 0.57		Csv= 0.432	Df= 1	p= 0.511	
	€ 2,50	1 – € 3,000			€ 3,00	1 – € 3,500	I	
	Use Twitter	Do not use Twitter	N		Use Twitter	Do not use Twitter	N	
Vote	88.5 %	92.7 %	91.8 %	Vote	92 %	98.7 %	97.1 %	

Did not	11.5 %	7.3 %	8.2 %	Did not	8%	1.3 %	2.9 %
vote				vote			
N	52	193	245	N	25	78	103
Chi-square test				Chi-square test			
	Csv=	Df= 1	p=		Csv=	Df= 1	p=
	1.003		0.317		3.002		0.082
€ 3,501 – € 4,000				€ 4,001 – € 4,500			
	Use	Do not use	Ν		Use	Do not use	N
	Twitter	Twitter			Twitter	Twitter	
Vote	100 %	95.7 %	96.4 %	Vote	100 %	93.8 %	94.7 %
Did not	-	4.3 %	3.6 %	Did not	-	6.3 %	5.3 %
vote				vote			
N	10	46	56	N	3	16	19
Chi-square test				Chi-square test			
-	Csv=	Df= 1	p=		Csv=	Df= 1	p=
	0.451		0.502		0.432		0.511
€ 4,501 – € 5,000				€ 5,001 – € 7,500			
	Use	Do not use	Ν		Use	Do not use	N
	Twitter	Twitter			Twitter	Twitter	
Vote	100 %	100 %	100 %	Vote	100 %	93.3 %	94.1 %
Did not vote	-	-	-	Did not vote	-	6.7 %	5.9 %
N	1	12	13	N	2	15	17
Chi-square test				Chi-square test			
	Csv= -	Df= -	p= -		Csv=	Df= 1	p=
			1-		0.142		0.707
More than € 7,500						1	
	Use	Do not use	Ν				
	Twitter	Twitter					
Vote	100 %	100 %	100 %				
Did not vote	-	-	-	-			
N	1	10	11				
Chi-square test				-			
	Csv= -	Df= -	p= -				

According to the p-values presented on Table 4.10, it can be said that the socio-economic status can specify the spurious zero relationship between use of Twitter and voter turnout. To be more precise, the relationship can be specified if the LISS Panel members have an income of EUR 500 or less because the p-value of 0.036 is smaller than 0.05. However, as for the other income classes, no specification of the relationship between use of Twitter and voter turnout can be found as all the other p-values are larger than 0.05. However, it has to be mentioned that for the income classes 'EUR 4,501 to 5,000' and 'more than € 7,500', the values of the chi-square (csv), the degree of freedom (df) and the p-value (p) is not available, probably caused by the small number of members of these income classes (13 respectively 11). To summarize, it can be said that the socio-economic status as a third variable can indeed specify the spurious zero relationship between use of Twitter and voter turnout as mentioned by the literature review. However, according to the literature review, this relationship may be specified by a greater socio-economic status which is different from the outcome of this data analysis.

#### 5. Conclusion

This thesis is dealing with the topic in how far the use of Twitter leads to a higher turnout at the 2012 Dutch national election and to what extent the age of voters can specify this relationship. Additionally, other variables were tested to get to know if other factors can also specify this relationship. According to the literature review which emphasized on other national elections in the USA or Sweden, the age of voters and also the socio-economic status or the political participation can specify this relationship. Moreover, following traditional media such as TV and/or radio and newspapers was chosen as alternative third variables. Two hypotheses and research questions were used as a guideline to shed a light throughout the data analysis and to get to know if there are any relationships or specification.

According to the results of the data analysis, there is no relationship between use of Twitter and voter turnout. Moreover, no specification by the introduction of any types of traditional media and political participation can be found. However, by the introduction of the third variables 'age' and 'socio-economic status', a specification among some subgroups can be found. As for 'age', a spurious zero relationship exists among LISS Panel members aged 45 to 54 whereas for the 'socio-economic status', the relationship between use of Twitter and voter turnout exists for panel members who have an income of EUR 500 or less only.

As these results are much different from the expected results based on the literature review, one can ask the question why these results are much different. As for the variable 'age', it can be hypothesized that the results reflect the rising popularity of Twitter among 'older' Dutch citizens whereas their 'younger' counterparts tend to leave Twitter (Nu.nl, 2016; Statista, 2015c). Moreover, a popularity of a particular social media platform can change over time. As the majority of the scientific articles are based on data from 2008 or 2010, it can be hypothesized that at that time, Twitter was still popular among younger internet users whereas that was not true around 2012 and 2013 when the data of the LISS Panel study were collected.

As for the 'socio-economic status', it can be hypothesized that even poorer people can get internet and hence, access to social media such as Twitter in several facilities such as libraries or internet cafes where they do not need to pay much for using internet. Moreover, more and more cities provide free internet access for the public which everyone can use. Furthermore, by the introduction of less costly cell phones which can provide internet access even poorer people can start using social media platforms (Harvey, 2014). Thus, it becomes less surprising but possible that people with a low income of EUR 500 or less can specify the relationship between use of Twitter and voter turnout although Twitter users who have such an income have the lowest voter turnout among all income groups. Furthermore, not much is known about the characteristics of the people with a low income of EUR 500 or less of their age. It is for instance possible that Twitter users with an income of EUR 500 or less often due to their general lack of political interest or because they are younger than aged 35. The voter turnouts among Twitter users who lack political interest respectively who are younger than aged 35 are one of the lowest ones in the analysis.

To conclude, it has to be said that the use of Twitter can be a strong variable for explaining the voter turnout of the 2012 Dutch national election since specification among variables can be found. However, this can be a chance for further researches in this study area in the near future as other variables may help explaining or specifying factors for vote in national elections. This will be shortly discussed in the sub-section 'Further Research' which can be found below the next sub-chapter called 'Threats and Limitations'.

#### 5.1. Threats and Limitations

However, the research is slightly hampered by some minor issues due to few limitations mainly caused by the data sets. Firstly, the SPSS data sets from the LISS are from two different years -2012 and 2013which makes the research and the data analysis less coherent. Moreover, there was a possibility that the number of Dutch Twitter users could have drastically increased or decreased within one year. Fortunately, this is not the case for this research. However, the number of Twitter users has drastically changed in 2015 as most notably, almost half of the teenage Dutch Twitter users have left this social media platform (Nu.nl, 2016). Such developments have to be always taken into account in similar researches as this can affect the results and can lead to invalidity and/or unreliability of the whole research.

Finally, the LISS data set which asked for the use of Twitter did not ask for the use of other (then) popular social media platforms like Facebook, Hyves or Instagram. To explain further, it would have interesting to compare the results from the use of Twitter and voter turnout with the results from the use of other popular social media platforms and voter turnout to conclude which social media platform has a greater influence on the voter turnout in the 2012 Dutch national election. However, especially this point seems to be relevant for further researches in this area.

#### 5.2. Further Research

As already mentioned above, because the LISS data set only asked for the use of Twitter and not for other social media platforms, it can be thus interesting to make another research which asks for the use of other highly popular social media platforms like Facebook or Instagram. In this way, it can be figured out if there is a social media platform which has an effect on voter turnout in the Netherlands and in how far the different age or age groups can specify this relationship. By doing so, politicians may have to engage in other popular social media platforms different than Twitter in order to get in touch with their potential voters. Such a suggested research can be done for the next Dutch national election in 2017. Social media is highly popular among a huge part of the Dutch population and thus, politicians and political parties still shall not underestimate the power of the use of social media in general as the development of the Arab Spring clearly shows.

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