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The effect of internet usage on voter turnout in the European Union

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Abstract

This master thesis investigates the effect of internet usage on voter turnout in the European Union over the sample period from 1990 to 2016. The methodology applies is both ordinary least squares (OLS) estimation and the fixed effect model approach, in which the dependent variable is voter turnout and the independent variable is the internet usage. Both socioeconomic variables such as population, gender (female) and age, in addition to macroeconomic variables such as GDP per capita and the unemployment rate are used as a control variable in the regressions. The main findings suggest a positive and statistically significant effect of internet usage on voter turnout in the European Union. Moreover, the findings from the OLS estimation and the fixed effects models only differ slightly, which makes the simultaneity problem less likely in the empirical analysis. The sensitivity analysis conducted in this thesis examine the robustness of the main findings by firstly excluding the female variable as a control variable and secondly by excluding Belgium and Luxembourg from the data set due to compulsory voting in these countries. In both cases, the estimated effect of internet usage on the voter turnout remains positive and huge in magnitude and statistically significant at conventional levels. That said, all findings reported in this thesis should be considered with some caution, as more comprehensive sensitivity analysis with respect to control variables not used in the empirical analysis may be conducted. Such comprehensive sensitivity analysis has been beyond the scope of this thesis and is left for future research.

Acknowledgements

Contents

1.0 Introduction

The importance of political participation in the electoral processes is essential for the strength of the European democracies. Electoral exclusion from the population or its subgroups has significant and wide-ranging negative consequences for the legitimacy of the democracies (Weiler, 2013). Therefore, it is crucial for policymakers to understand citizens' behaviour and potential drivers of political participation. A great number of studies have uncovered that there are several factors that affect voter turnout. These factors are often referred to as; socio-economic, political, institutional and individual factors (IDEA; Solijonov, 2016)

Since the beginning of the 20th century, there has been a significant change in how people collect and acquire political information through a constant increase of available literature, where the emergence of newspapers, the radio, and television facilitated the distribution of information among the population. However, the selection and filters of information during the production of mass media may affect the voter's opinions and could potentially change how people vote. Furthermore, if the voters are aware of the possible media bias and how they could filter it from the information, the effect on voters' belief are unlikely to have large effects (Bray and Kreps, 1987). While a more recent study suggests that voters do not sufficiently account for bias in the media, so media bias could persuade voters (De Marzo, Vayanos, & Zwiebel, 2003).

Even though the 20th century was embossed by a growing availability of literature, the new mass media of the 21st century through the emergence of the internet has changed the media once again substantially. As the internets' primary function is to provide access to information on a global basis, as well as allowing people to share ideas. The internet is also more cost-effective, where political information can be distributed at high speed, which gives a broad scope of opportunities. In addition, there is egalitarian access to the consumption and the production of political news (Prat & Strömberg, 2013). The internet has increased the access to political information, which exposes the public to political coverage, and provides people to gain more understanding about political issues and candidates.

The main purpose of this thesis is to investigate whether internet usage motivates citizens in the European Union to vote during the elections.

1.1 Motivation of the study

Investments in broadband networks in Europe have occurred in context of more than two decades of legal and institutional changes, which have introduced competitions, regulatory rules, and practice across the member states of the European Union (McKinsey&Company, 2012). Since the mid-1990s the expansion of broadband networks have increasingly being supported by the European Commission, national governments, national research organizations, and national business corporations, which led to a boom in the European households internet access between 2000 and 2002, from 18 per cent to 40 per cent (Levinson & Christensen, 2003). In the same period, the northern European countries, led by the Netherlands, Denmark and Sweden had around two-thirds of the population online, while the southern countries like Romania, Bulgaria, Greece and Italy have rapidly caught up. Due to the European commission's policy of investments in a broadband network since the early stage, the European Union are well-suited for the study of the effect of internet usage on political participation. In addition, fixed broadband was available to 98 per cent of European homes in 2016, where 26 per cent of European homes at the same time, did not have a subscription (European Commission, 2018).

In my master thesis, I seek to understand, as well as investigate the effects of internet usage on voter turnout, by looking at all the member states of the European Union. My chosen topic is motivated by the increasing attention to understanding the complexity of the internet as a communication tool, and how it affects voter turnout. Firstly, the internet serves the society with a broad scope of informational and communicational channels, which makes it possible to test whether there are any causal effects of internet usage on voter turnout. Secondly, there is still no conclusive evidence on this field, whereas, researchers find either a positive, negative or non-significant effect of internet usage on political participation. These findings give an illustration of the research potential and the uncovered materials that remain within the field. Thirdly, since there is no research to the best of my knowledge analysing the internet usage on voter turnout in the European Union as a whole, this thesis contributes by using existing

literature as a framework that hopefully will clarify the unexplored research within the European Union context.

1.2 Hypothesis and empirical evidence

In order to determine whether internet access affects political participation in the European Union, I have looked at one explicit measures of participation. This thesis is limited to study the hypothesis stating that internet usage has a causal effect on voter turnout. In other words, whether increased internet usage makes a person more or less likely to vote. Several empirical studies have examined the impact of internet usage on civic and political engagement. These studies suggest either a positive or negative effect of internet usage on political participation. Several researchers have found that individuals reading online news or political information are more likely to vote and participate in politics in numerous ways (Bimber, 2003; Tolbert & McNeal, 2003 & 2008; Czernich, 2012; Poy and Schüller, 2016). Other researchers have found that individuals reading online news or political information are less likely to vote and participate in politics in various ways (Prior, 2001; Falck, Gold & Heblich, 2014; Gavazza, Nardotto & Valletti, 2015 & 2017). These studies examine different regions and counties around the world, which may explain the different findings.

1.3 Main findings

The main findings suggest a positive and statistically significant effect of internet usage on voter turnout in the European Union. Moreover, the findings from the OLS estimation and the fixed effects models only differ slightly, which makes the simultaneity problem less likely in the empirical analysis. The sensitivity analysis conducted in this thesis examine the robustness of the main findings by firstly excluding the female variable as a control variable and secondly by excluding Belgium and Luxembourg from the data set due to compulsory voting in these countries. In both cases, the estimated effect of internet usage on the voter turnout remains more or less unchanged and are still positive, huge in magnitude and statistically significant at conventional levels.

1.4 Outline of the study

This thesis proceeds in the following way. In chapter two I will give an overview of the broadband internet's history, since the early stage in the European Union, an overview of the election system in the member states, some initial evidence of individuals' internet usage and I will provide a literature review of relevant studies regarding the impact of internet usage on voter turnout, as well as theories about voter turnout and new media channels. In chapter three, I present the data applied in this thesis and some descriptive statistics. In chapter four, I describe the model used in this thesis. The results are presented in chapter five, where I begin whit a discussion part followed by a sensitivity check. In the last chapter, I summarize my findings and provide some conclusion.

2.0 Institutional Setting

In this chapter, I will introduce three key elements in addition to a literature review that create the fundament for my further analysis of the impact of internet usage on voter turnout. Section 2.1 will outline the role of broadband internet in the European Union, both at the country level as well as an overall picture of the European Union. Section 2.2 presents how the electoral systems are developed in the member states at the national parliamentary level, and further election relevant information are presented in appendix B. In Section 2.3 I will investigate a study developed by the European Commission, which is an analysis of the impact of media use in front of elections in the European Union. This analysis serves as evidence of the correlation between internet usage and voter turnout, which corresponds to my stated hypothesis. Lastly, section 2.4 presents research conducted about the effect on voter turnout.

2.1 The Broadband Internet in the European Union

Investments in broadband networks in Europe have occurred in the context of more than two decades, through *"An information society for all"* in 1999, eEurope 2002, eEurope 2005, i2010, and most recently *the digital agenda for* Europe 2010-2015 and 2020. In 1999 the European Commission's goals were to bring home and school, every business and administration, as well as every citizen into the digital age and online (European Commission, 1999). The e-Europe project in 2002 through the European Commission was firstly; to make the internet cheaper, faster and safer, secondly; invest in human resources and

training, and finally; promote the use of the internet. In 2005 the project was updated, where the main objectives was to modernise online public services, a dynamic e-business environment, secure the information infrastructure, broadband access to competitive prices, benchmarking and the dissemination of good practice (Stajano, 2008). In 2010, the commission launched the digital agenda for 2010-2020, where the target was to bring basic broadband (>144Kbps) to all Europeans by 2013, and fast broadband (>30 Mbps) to be available to all by 2020, and ultra-fast broadband (>100 Mbps) to at least 50 per cent by 2020. This strategy was EU's long-term strategy in order to maintain sustainable and inclusive growth in the European countries. In 2010 the European Union implemented a series of regulatory and policy measures, as well as funding and loans to all member states in order to achieve all mentioned targets. At the end of 2013 all member states in the European Union except for Estonia, Latvia and Lithuania had achieved the 2013 target for basic broadband coverage, and by 2016 all Europeans had access to basic broadband networks. In addition, 98 per cent of all households had access to a fixed broadband connection.

Figure 2.1 gives an illustration of fixed broadband subscriptions by speed in per cent of European citizens. The (>10 Mbps) speed has increased from 10 per cent to approximately 70 per cent in 2015. Both 144 Kbps and 2-10 Mbps has declined in total subscriptions since 2010. However, this gives a picture of the broadband development in the context of the Unions investments and targets since 2008.

**Figure 2.1: Fixed broadband subscription by headline speed in the European Union**
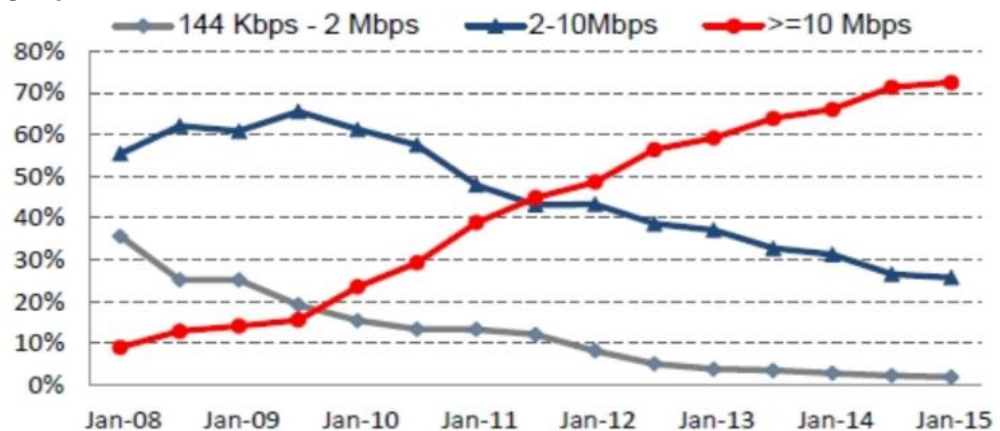
Source: (European Commission, 2015)

If we look at households level of internet access in per cent of the population in each member state, the strongest performance is Denmark, Germany, Luxembourg, Netherlands, Finland, Sweden and UK. In contrast the weakest performers are Bulgaria, Croatia, Cyprus, Latvia, Lithuanian, Portugal, Romania and Greece. More precisely, Denmark and Luxembourg are in front with both 97 per cent and Bulgaria at the bottom with 64 per cent in 2017 (Eurostat, 2018). This is an overall result of the respective members national economy, were the most developed countries have the most developed broadband infrastructure. A comparative assessment of the level of fixed broadband coverage, with basic, standard (fast) and next generation access (ultrafast/fibre), indicates that the Netherlands, Belgium, Luxembourg, Malta and Denmark are the strongest performers, while Greece, Poland, Italy and Croatia score the weakest (European Commission, 2018). The fixed broadband coverage in the European Union was approximately 96 per cent in 2010, since then the standard and next generation access fixed broadband increased.

Figure 2.2: Broadband coverage in the European Union
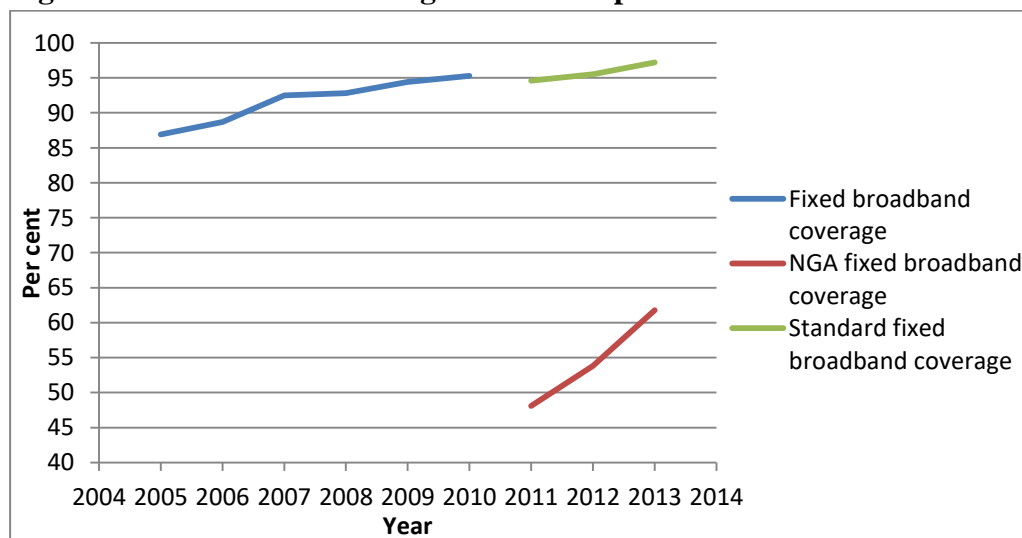
The internet user rate is measured as the percentage of all citizens in the European Union that uses the internet at least once in the last three months. The overall picture of the internet user rate in the European Union illustrates an increase in all member states, led by Denmark, Germany, Luxembourg, the Netherlands, Finland, Sweden and UK, and lagging behind are Bulgaria, Croatia, Italy and Romania who scores the weakest (Eurostat, 2018). In 2016 the average internet user rate for European citizens was approximately 81 per cent.

Figure 2.3: Internet user rates in the European Union
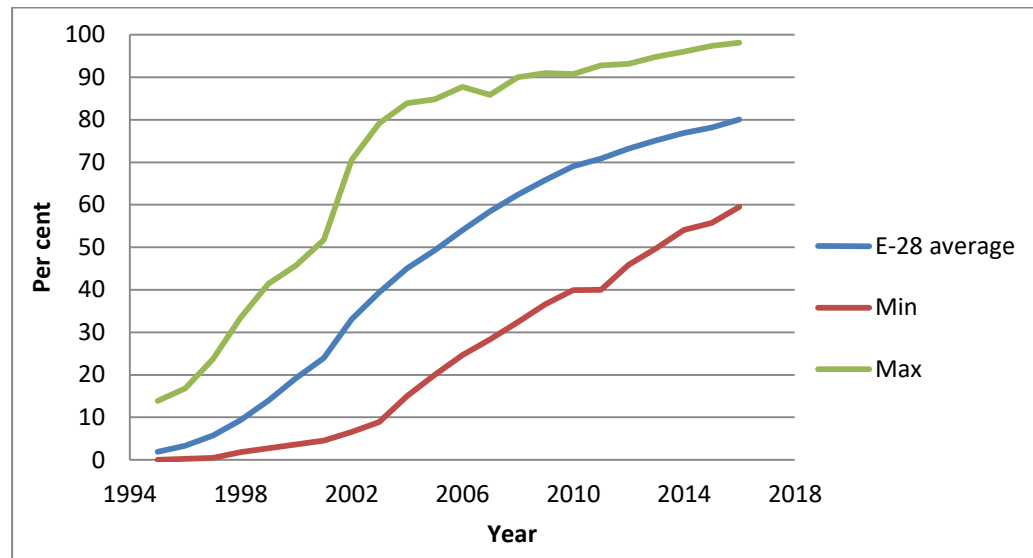
2.2 The election systems in the European member states

The election systems in the European member states vary vastly, mostly due to form of government. Although most of the member states operate with a parliamentary government, some of the countries use a semi-presidential government. A semi-presidential government differs in that a popular elected president is not merely a ceremonial head of state. This means that the President often have the executive power, overseeing defence and foreign policies, as in for example France. In a federal form of government, like Germany, the President is appointed and only serves as a ceremonial figure, and is not elected by a popular vote. It can also have a Prime minister and a President from opposing parties.

Another difference is between a republic and a monarchy. Even though the majority of the member states are republics, seven of the members still have monarchy, which are Belgium, Denmark, Luxembourg, the Netherlands, Spain, Sweden and United Kingdom. This means that the monarch serves as the head of state. However, all of these states have a parliamentary government, meaning it is generally a ceremonial role for the monarchs, mirroring the president in republics with a parliamentary government.

In addition, the member states have different self-governance. Most have a unitary-, or federal self-governance, while a few have a devolved self-governance. The biggest difference between unitary- and federal self-governance, is how the power is split in the parliament, and other governed bodies.

One trait among member states which has gained independence is an abnormally high voter-turnout in their first election. This is especially relevant for the states formerly being part of the Soviet Union and Yugoslavia. Romania, for example, had a voter-turnout of more than 70 per cent their first two elections, but in the last three elections, they had a voter-turnout of less than 40 per cent. This is a very familiar pattern among these states, and it might skew the average or give the wrong impression of a decline.

It might also be relevant to exclude states with compulsory election from the analysis. These states are Belgium, Cyprus, Greece and Luxembourg. As we can see with Belgium, there has been no significant change in voter-turnout ever, with a mesmerizing 92 per cent average. Compared to the other states, this number might seem artificially high, and to offer no relevant information. The same traits can be found in Luxembourg, who also operates with compulsory elections. However, Greece, with a compulsory voting until the age of 70, only has an average of 76.4 per cent, and has had a decline similar to the trend of the countries without compulsory elections. However, even though Greece operates with punishment for not voting, this has not been adhered to, so the validity of the compulsory voting can be dismissed (NSD, 2018). Another interesting feature is that none of the states, bar Luxembourg, had a higher voter-turnout in their last election than their first election since 1970. Again, this needs to be seen in context that some of these states held their first election after becoming independent, but the overall trend is a decline, nevertheless.

One of the most interesting features is the decline in voter-turnout in France. Starting off with a respectable 81.37 per cent in 1973, the voter-turnout has fallen dramatically ever since, and in 2017 it reached a preliminary lowest with only 42.64 per cent. Compared to Germany, who has a somewhat similar graph, they have seen an uptake in recent election, but also had its lowest voter-turnout at 70.78 per cent. This clearly demonstrates just how unbelievable France's decline has been. In fact, ten of the 28 member states have had voter-turnout below 60 per cent in recent years. Of course, some of these countries have had a historically low average, but many of these have without a doubt seen a decline in recent elections.

In spite of this, there still are an influx of countries who has maintained high voter-turnout. The Scandinavian member states, Sweden and Denmark, for

example, have an average slightly above 86 per cent, and both countries were almost at the level of the average in their latest elections. In fact, neither of the countries have ever been below 80 per cent. Although this is not the norm for most of the countries, ten of the member states have an average of over 80 per cent. Most of these countries have had a high-voter turnout most of the elections, but some of them have seen a drastic decline. Cyprus, for example, had 66.74 per cent voter-turnout in 2016, even though their average is 86.2 per cent. This is also the case for a few of the member-states; although their average is very high, there has been a noticeable decline.

To conclude, there is a majority of the member states who have had a decline in voter-turnout. Most of the countries gaining independence within the time frame had an abnormally high voter-turnout in the first elections, and thereafter a relative steep decline. This is a very common trend, especially in the elections since 1990. Another point is that countries that operate with compulsory voting have an unshakable high voter-turnout throughout the time frame, and gives a skewed illustration of the overall trend. The main take away is that although many of the countries have maintained a voter-turnout close to their respective average, most of the member states have seen a clear decline. This is perhaps most noticeable in France, as previously mentioned.

Figure 2.4: Voter turnout trend in the European Union. The black line is the trend-line (1990-2017)
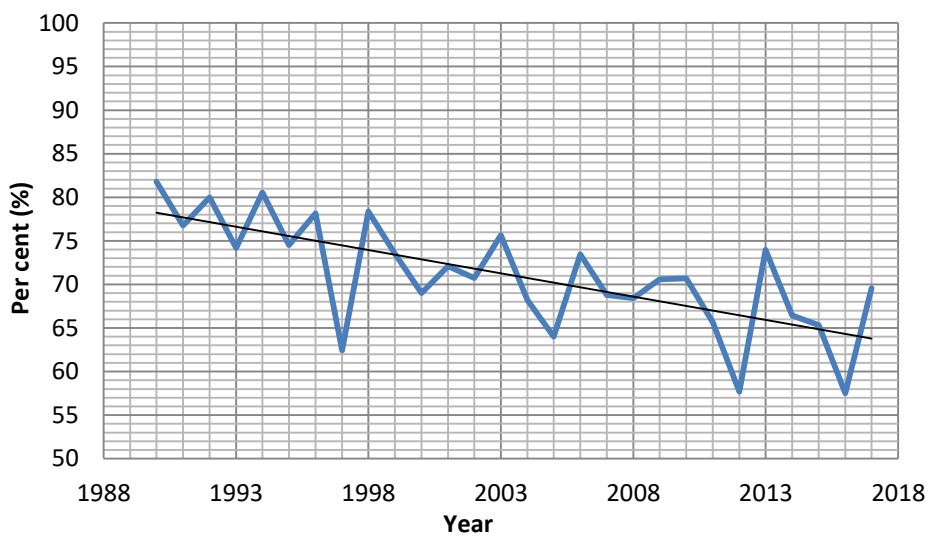
2.3 Internet use and election - survey

In this section, I explore characteristics of Europeans citizens by reviewing a survey about media use associated with the election and political issues in European Union. The survey is conducted by *TNS opinion and social* in 2016, on request of the European Commission on behalf of the *Directorate-General for Communication*, and outlines the media use in European Union, public's trust in media, as well as which media channel Europeans use as a source of information on electoral and political matters (European Commission, 2016). The survey covers the national population of citizens and the population of citizens of all the European Union Member States, with approximately 1000 interviews in each country of people aged 15 years and over. Through this survey, I am able to give an impression of the possible connection between voter turnout and internet usage.

Firstly, the respondents were asked how frequently they used the internet, where they could choose between: *everyday/almost every day, two or three times a week, once a week, two or three times a month, never* and *don't know.* The results indicated that three-quarters of Europeans in 2016 used the internet at least once a week, which was an increase of two per cent since 2015, and a twelve per cent rise since 2010. Furthermore, the daily or almost daily internet use varies considerably between the member states from 42 per cent in Romania, to 89 per cent in the Netherlands. Moreover, the average in European Union on daily or almost daily internet use was 61 per cent in 2016, up 2 per cent since 2015 and 16 per cent since 2010. In addition, 21 per cent of all Europeans never use the internet due to no internet access or interest.

Secondly, the respondents were asked how much they *tend to trust* or *tend not to trust* the internet, where the results were compared to how frequent the respondents use the internet. There is a minority of Europeans, 36 per cent, that tends to trust the internet, while 48 per cent tends not to trust the internet. The remaining 16 per cent do not know. The interesting finding in the survey indicates that Europeans who use the internet at least once a week tend to trust the internet more than average (44 per cent tend to trust compared with 36 per cent on average). In addition, citizens who distrust the internet are also more widespread than the average (50 per cent compared with 48 per cent). In the member states,

the trust ranges from 24 per cent in France to 50 per cent in the Czech Republic, where the trust has increased in 19 member states since 2015, particularly in Finland, Portugal and Austria. However, distrust in the remaining 16 member states has increased or gained ground as well, where Romania, Croatia and Estonia have increased their distrust the most.

Finally, the respondents were asked *where they get most of their news on national political matters*, where they could choose multiple answers. The survey finds that internet has become the second source of national political news, with 40 per cent, which is an increase of 11 per cent since 2011. In Latvia and the Netherlands, the internet is most often mentioned as a source of national political news, with respectively 62 per cent and 61 per cent. While in Portugal and Italy it is less mentioned, with 29 per cent and 30 per cent.

2.4 Literature Review

During the 1930s the modern empirical research on mass media began, partly as a result of Hitler's and Mussolini's use of media in their propaganda (Prat & Strömberg, 2013). Since then, researchers have investigated effects, if any, of the introduction of new media types, such as radio, newspapers, broadcast television and internet. In this section, I will review earlier studies on which effects the introduction of mass media has had on voter turnout and voter's political preferences.

The availability of information and communication systems, through the media, is the main source of information for voters about politicians, the ideological positions of parties, and the government policies. The internet is the new technology of the 21st century that combines the television, print media and the radio through a high level of speed, which serves new opportunities. Theoretical models suggest that more information is usually an advantage for voters because more information helps them to monitor more efficiently and gain more knowledge about the politicians (Besley & Prat, 2006; Strömberg, 2005). This reflects that access to the internet gives people a freedom of information. However, the quality of information provided by the media may contain possible

biases, due to regional differences which could focus on different political issues and so on.

Study on Swedish election data in the period between 1988 and 1991 by Prat and Strömberg in 2005, uncovered that citizens who watched more commercial TV news gain more political knowledge compared to those who did not, with a positive effect on those who would otherwise not obtain such political information. In a comparable study by Snyder and Strömberg in 2010, which analysed the American national election between 1984 and 2004, on whether citizens exposed to press media obtain more political and voter relevant information, a similar conclusion was drawn. They tested voters' political knowledge in the context of political candidates and their ideological standings and figured out that citizens in areas where local newspapers had higher coverage of political candidates were better informed about their candidates, compared to areas where citizens were less informed.

There are numerous studies on the impact of new media channels on voter turnout, which shows various results across the globe on the different types of media. In context of the broadcasting television, a study by Rune Sørensen in 2017, on "The impact of state television on voter turnout" presents a comparative analysis of Gentzkow's earlier research (2006), which found that the introduction of commercial television in the US was the cause of a drop in voter turnout. In contrast, Sørensen's research on how the introduction of broadcasting television has influenced the voter turnout in both local and national elections in Norway during the 1960s and 70s he found that public broadcasting television caused an increase in voter turnout.

There is still an ongoing debate among researchers on whether the internet has an effect, if any, on political participation. In the early stage of the internet, they typically discussed whether the internet stimulates new types of people to engage in the political process, political participation and mobilization through encouraging an egalitarian democracy, or whether it is just a new tool for those who primarily are already politically active and engaged (Norris, 1999). These debates have typically fallen into two different theories, mobilization and

reinforcement. A summarized collection developed by Pippa Norris in 1999 effectively explains the difference between these two theories.

The mobilization theory states that the internet will reduce the barriers to civic engagement, due to lowering the financial cost of news, expanding the opportunities for political debate, as well as allowing citizens to have group interactions (Norris, 1999). This makes it easier for citizens to engage in political debates, understand political issues, and knowing the political representatives in a much more immediate way than before, and therefore the citizens are more likely to vote. This theory assumes that the internet will at some point overtake both the television and traditional newspapers (print media) as the primary source of information and news, through a constant expansion, both for general and election-related news (Norris, 2002).

In contrast to the mobilization theory, the reinforcement theory states that increased internet use will have little effect on voter participation, due to not rationally transform existing patterns of civic involvement. The main argument is due to the matter of internet access, where those who are most likely to have internet access are most probably those with the skills to use the full potential of the internet, and it has tended to be the more educated and well-off citizens, which could indicate that they are more likely to be politically invested. This theory suggests that the internet contributes to strengthening political information to those who are already politically active or in the elite part of the society, which would widen the gap between them and those that are less rich or politically inactive (Norris, 1999).

Several of the first studies of the internet's effect on political participation is conducted by Bruce Bimber, had found a pattern of reinforcement rather than mobilization. In his earlier study from the late 1990s, he found that there is a small evidence of the relationship between internet access and political participation (Bimber, 1999). However, in a later study by Bimber, he suggested that historically the evolution illustrates that new media and other communication tools have not resulted in an increase in civic engagement. Therefore Bimber concluded that the internet would follow the same trends as earlier media, despite many people having huge hopes for the internet. There has happened a lot with

the internet since the early stage, which raises a question mark to Bimber's conclusions, due to the way the world is today. However, the internet is fundamentally different from past media evolution, both as a source of information and news. In contrast to past media evolution, the internet consists of unlimited storage possibilities, as well as audio and visual capabilities, which provides more information to the public. In contrast to Bimber's research, other researchers have found that there is a positive correlation between voter turnout and political participation in internet usage. These authors concluded that the internet provides the public with low cost, more detailed and convenient political information in a more efficient way, which engage civic participation (Tolbert & McNeal, 2003; Weber, Loumakis & Bergman, 2003; Shah, Kwak, & Holbert 2001).

A study developed by Tolbert and McNeal (2003), examines the impact of the internet on voter turnout in the American National presidential election in 1996 and 2000. The findings suggest that individuals with access to the internet and online election news were significantly more likely to vote in the presidential election. They concluded that internet access does have a positive effect on voter turnout and that there was a growing distinction between those who had access and those without internet access (Tolbert & McNeal, 2003). A somewhat comparable study developed by Markus Prior in 2001, found that citizens who use the internet to find information and news exchange are more likely to be politically active compared to those who have a higher preference for entertainment activities over the news (Prior, 2001). Furthermore, a study by Poy and Schüller in 2016 on the introduction of high-speed broadband in Italy, identified a positive effect on voter turnout in the Italian elections in the period between 2008 and 2013. In addition, they also found that the vote shares for far-right and centre-left parties benefited from the high-speed broadband investments in the Province of Trento, while "centre right" parties had a decrease in their vote shares.

A recent study by Falck, Gold and Heblich (2012) suggest that there is a small negative effect of internet access on voter turnout, and no conclusive evidence that the internet benefits single parties in the Germany election. However, this study only analysed the introduction of the internet in Germany. In addition, one of their

explanations was that the internet could possibly crowd out other media that contain more or better information (Falck, Gold & Heblich, 2012). Furthermore, they published a new study in 2014 where they found significantly positive internet effects on small parties' voter shares and negative effects on the vote share of left-fringe parties in the Germany election (Falck, Gold & Heblich, 2014).

With this in mind, it is important to note that research conducted from the late 1990's includes information from the early stage of the internet's history. Since then, the number of internet users has increased at a high speed from year to year and new research on the field is conducted. Despite recent cycles and trends, which indicate an increase in the use of the internet, and developed research on the field, there are still some unanswered questions whether the internet has had an effect on voter turnout in the European Union member states.

3.0 Data

This thesis is based on two different sets of data. The first dataset consists of voter turnout at the parliamentary elections over the period from 1990 to 2017. The second dataset consists of the internet usage and control variables from 1990 to 2016. The compiled dataset gives this thesis the opportunity to estimate the effect of internet usage on voter turnout in the European Union over the period from 1990 to 2016. This section presents the data applied in detail and reports some main descriptive statistics.

3.1 Data description

The first dataset used in this thesis is the voter turnout for the parliamentary elections in the European Union over the period from 1990 to 2017 with 213 observations over a total timeline of 756 observations (election every fourth or fifth year), which is provided by the voter turnout database IDEA. There are some missing values over the period, but all countries have data from 1992 until the latest election in each country. Moreover, there are only two countries that missing some voter turnout levels in the stated period, respectively, Bulgaria and Slovenia. Bulgaria consists of data from 1991-2017 and Slovenia with data from 1992-2014, these missing voter turnout values could influence the estimates as the regression analysis would skip this time-frame for those two countries.

The second dataset consists of individuals' internet use and control variables over the period from 1990 to 2016, where the time-span refers to the early stage of the internet's history until the most recent data. This dataset is provided by WDI (World Development Indicators), which provides the most accurate data available at national and global estimates. The chosen control variables in this study are GDP per capita in current USD dollar, unemployment in per cent of the population, population per country referred in number of inhabitants, female in per cent of the population, age groups from 15 to 74 years old in per cent of the total population in a given country, in addition to a logged GDP per capita and population. There are some missing values for the GDP variable, where Croatia, Estonia, Latvia, Lithuania and Slovenia missing data between 1990 and 1994, in addition Hungary are missing data for the year 1990. The unemployment variable consists of data from 1991 to 2016 for all countries, and the internet user rate have some missing values in the early 1990s, due to the fact that there was almost no internet connection in the following countries at the time; Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Ireland, Latvia, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia and Slovenia.

All data included in this thesis are based on actual data, i.e. the voter turnout dataset are recorded votes counted in all elections for all member states, which serves this thesis with accurate data in order to describe the effect of internet usage on voter turnout. Furthermore, the accumulated dataset consists of more or less all data between 1990 and 2016, which makes it plausible to test the robustness in the results through a sensitivity check.

3.2 Descriptive Statistics

The composed dataset consists of 213 observations for the parliamentary elections, which are over a timeline who gives 756 observations, if we assume that the turnout from one election to the other is the same through the whole period. In addition, there are approximately 750 observations for all independent and control variables. This section presents the descriptive statistics for the dependent variable in table 3.1, the independent variable in table 3.2 and the control variables in table 3.3. The tables' shows mean, standard deviation,

minimum and maximum values of the variables, in addition to number of observations.

3.2.1 Dependent variable

Voter turnout is defined as the percentage of registered voters, who actually voted, in respective countries in the European Union (IDEA, 2018). The mean for voter turnout is 71.64 per cent, the minimum and maximum values are respectively 37.79 per cent and 97.16 per cent, while the standard deviation is 13.36. The minimum value corresponds to the parliamentary election in Romania in 2016, and the maximum value corresponds to the parliamentary election in Malta in 1996. In addition, the maximum value for the period 1970 to 2016 corresponds to the parliamentary election in Poland in 1980 with respectively 98.87 per cent voter turnout. The standard deviation for the voter turnout is less volatile than the internet usage and is more volatile than the control variables. Citizens across the member states differ a lot in their political participation and their ideological standings, as we could see from the voter turnout in appendix B, which describes all parliamentary elections in the member states. The 205 observations capture the voter turnout for the period between 1990 and 2016 for all member countries.

Table 3.1: Descriptive statistics of voter turnout (1990-2016)

Variable	Mean	Std. Dev.	Min	Max	Obs.
Dependent variable					
Voter turnout	71.64	13.36	37.79	97.16	205

3.2.2 Independent variable

Internet usage is defined as individuals who have used the internet, from any location, in the last three months, where the internet can be used via a computer, mobile phone, digital television etc. (WDI, 2018). The mean is 37.4 per cent and the minimum and maximum values are respectively 0 per cent and 98.14 per cent. The maximum value corresponds to Luxembourg in 2016. The standard deviation is relatively high due to it covers the period since the early stage. If I had compared the standard deviation of internet usage with the internet coverage rate, which is described in chapter 2.1 and looked at a specific time frame, i.e. from

2000 to 2005, it would most probably be a lower standard deviation for internet usage than for the coverage rate. This is due to the fact that it is easier for citizens to i.e. acquire a broadband subscription after the internet infrastructure is built.

Table 3.2: Descriptive statistics of Internet variables (1990-2016)

Variable	Mean	Std. Dev.	Min	Max	Obs.
Independent Variable					
Internet usage	37.41	32.45	0	98.14	756

In addition, the dataset consist of internet access (fixed broadband subscription), which have in addition to the internet usage been used in existing literature. The internet access is defined as the percentage of households who have internet access at home with at least 256Kbps download speed, where all forms of internet use are included and the population considered is aged 16 to 74 (Eurostat, 2018). The mean is 61.4 per cent, and the minimum and maximum values are respectively 3 per cent and 97 per cent, while the standard deviation is 21.94. However, the internet access data only consists of data from 2002 until 2016, which gives a loop-whole in the dataset, and is therefore not included in further analysis. Moreover, the internet coverage rate described in chapter 2.1 is not included in the dataset; due to there is no existing data available for every single member state in the period from 1990-2016.

3.2.3 Control variables

My chosen control variables consist of following variables; GDP per capita, unemployment, population, female and age groups from 15 to 74 years old with ten years interval per group. GDP per capita in USD dollar, measure the member countries gross domestic product by midyear population. Further, this value is logged in the regression model, due to make the variable more "normal" in the regression analysis. The unemployment is the percentage share of the total labour force registered as fully unemployed. Population is the total number of citizens (inhabitants) in a given member country measured in real values. This value is also logged in order to make the variable more useful in the regression estimates.

Female is the percentage share of women in the total of the population. Lastly, the age corresponds to a share of the population within a given age group.

Table 3.3: Descriptive statistics of control variables (1990-2016)

Variable	Mean	Std.Dev.	Min	Max	Obs.
Control variables					
Year	2003	7.88	1990	2016	756
GDP per capita	24079.11	18638.82	1102.11	119225.4	730
GDP per capita log	9.74	0.93	7.01	11.69	730
Unemployment	9.21	4.54	1.47	27.47	728
Population	1.76E+07	2.22E+07	354170	8.25E+07	756
Population log	15.86	1.40	12.78	18.23	756
Female	51.29	1.02	49.31	54.21	756
Age 15-24	6.71	0.96	4.67	9.37	756
Age 25-34	7.21	0.71	5.31	8.80	756
Age 35-44	7.28	0.56	5.98	8.63	756
Age 45-54	6.72	0.67	4.77	8.45	756
Age 55-64	5.70	0.75	3.58	7.36	756
Age 65-74	4.35	0.64	2.88	5.99	756

The chosen variables in this thesis have frequently been used as control variables in related research to explain voter turnout. Other variables often applied in the existing literature are education, urbanity, political participation, ethnicity and gender; see for instance Geys (2006) and IDEA (2016). However, due to lack of data available these variables are excluded from the empirical analysis.

4.0 Identification and empirical specifications

The empirical strategy for this thesis addresses one hypothesis that is whether internet usage has a positive, negative or non-significant effect on voter turnout at the cross-national parliamentary elections in the European Union.

A possible econometric problem in the empirical analysis is concerned with simultaneity between the variables in the model. Simultaneity arises when the explanatory variable is jointly determined with the dependent variable. Previous studies have used different identification strategies in order to deal with this problems, among them is the application of instrumental variables, see for instance Gavazza et al. (2015).

This thesis uses a panel data design. Although there is a small number of observations per country in the dataset, a panel data design is applicable due to the large number of countries in the study, and hence also the number of observations in total. The strategy involves using a fixed effects model and compare the results using ordinary least square (OLS). Due to the fact that OLS may have problems with unobserved characteristics, the fixed effect model is used to solve the potential of the simultaneity problem and does so by using the fact that the individual effect is constant over time, see for instance Angrist & Pischke (2008, chapter 3).

4.1 Fixed effect model

The basic framework for the empirical analysis is the following equation:

$$Y_{i,t} = \alpha_{i,t} + \mu Internet_{i,t} + \theta X_{i,t} + \tau_i + \varepsilon_{i,t}, \tag{1}$$

where $i = 1, \dots N$ indicates countries, and $t = 1, \dots T$ donates the year for elections. $Y_{i,t}$ stands for voter turnout rate in each ith country and each tth election, this is the dependent variable in the thesis. The independent variable, internet user rate is measured by $Internet_{i,t}$, which capture the influence of internet as a mass media on voter turnout. The year and country fixed effects are

respectively $\alpha_{i,t}$ and τ_i, and $\varepsilon_{i,t}$ denotes the random error term. Finally, $X_{i,t}$ is a vector of control variables, which includes observable country characteristics that change from time to time, and other function of characteristics. Among them, I include the variables that affect voters' participation in parliamentary elections, in addition to economic factors that might affect the turnout.

Equation (1) can be estimated using panel data, either by using fixed effects or random effects model. These two models have different assumptions. The random effect model assumes that all explanatory variables are uncorrelated with the individual specific effects. This is less likely for the empirical problem at hand. The fixed effects model controls for omitted time-invariant country characteristics. However, there are some disadvantages with the fixed effect model. Although, both models control for certain type of omitted variables, fixed effects estimates are notoriously susceptible to attenuation bias from measurement error. These could either be economic variables, like union status tend to be persistent, or, measurement error often changes from year to year Angrist & Pischke (2008, chapter 5), i.e. the internet user rate. This is clearly a weakness of this study, even though it makes it possible to investigate time-invariant factors, such as compulsory voting as described in chapter 2.2. In addition, when estimating the parliamentary voter turnout, the absence of time dummies would suffer from imprecise estimates. However, this is taken into account in the fixed effect model, where the difference in the voter turnout across years, in addition to other variables, is taken into account due to the time fixed effects. Further, the countries with compulsory voting are excluded for the alternative regression model estimated in model 5.3.

5.0 Results and discussion

In this section I present the results from the regression analysis followed by a discussion of the main findings. Firstly, the results from the OLS estimation are presented and discussed. Then, the findings from the findings from the OLS estimation are compared with the results from the different fixed effects model. The estimates as well as the discussions are throughout based on the hypothesis that internet usage may have had an impact on voter turnout in the European Union since 1990 until the most recent elections. All estimates are based on the period from 1990 to 2016. Thirdly, sensitivity analyses are conducted to examine whether the estimated effect from internet usage on voter turnout is robust against different choices about control variables in the regressions. Finally, the main findings are discussed in light of previous empirical studies.

5.1 The effect of internet usage on voter turnout

The results of the OLS and the fixed effect regressions of the model outlined in equation (1) in section 4.1 are presented in table 5.1. The simple regression estimates without including the control variables are presented for the OLS and the fixed effect model in column (1) and column (4), respectively. All regressions include voter turnout as the dependent variable and internet usage as the independent variable with fixed effects to capture aggregate effects that vary across years.

The regression estimates for both OLS and the fixed effect model have positive and statistically significant coefficients at the one per cent level of 0,221 and 0,200 respectively. Controlling for the variable year, which is also significant at the one per cent level in both cases, the results suggest that internet usage has a positive effect on voter turnout throughout the period from 1990 to 2016. These results are in line with earlier empirical evidence suggesting a higher degree of political exposure through internet usage, an advantage for voters to gain more political knowledge, which in turn increases the voter turnout (Besley & Prat, 2006; Strömberg, 2004).

Table 5.1: The effect of internet usage on voter turnout

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) Fixed Effects	(5) Fixed Effects	(6) Fixed Effects
Internet usage	0.211***	0.134**	0.115**	0.200***	0.107*	0.0891
	(0.0440)	(0.0554)	(0.0533)	(0.0452)	(0.0567)	(0.0549)
Year	-1.408***	-1.248***	-1.148***	-1.368***	-0.988***	-0.877***
	(0.171)	(0.245)	(0.250)	(0.176)	(0.289)	(0.279)
GDP per capita		0.824			1.147	
		(1.407)			(2.206)	
Population		-2.706**	-2.536**		34.19***	35.25***
		(1.085)	(1.174)		(9.848)	(8.389)
Female		-5.433***	-5.648***		-0.430	-0.397
		(1.260)	(1.308)		(2.168)	(2.170)
Age 15-24		-2.115**	-1.541		-2.321**	-1.616
		(0.962)	(0.975)		(1.014)	(0.989)
Age 25-34		-2.693***	-1.933**		-3.179***	-2.350***
		(0.931)	(0.837)		(1.000)	(0.810)
Age 35-44		-2.814**	-2.235*		-4.587***	-3.942***
		(1.188)	(1.204)		(1.270)	(1.231)
Age 45-54		-1.789	-1.008		-3.956***	-3.017**
		(1.168)	(1.169)		(1.300)	(1.239)
Age 55-64		-1.105	-0.242		-2.794*	-1.913
		(1.321)	(1.332)		(1.433)	(1.407)
Age 65-74		1.519	0.969		-0.00269	-0.474
		(1.454)	(1.452)		(1.608)	(1.577)
Unemployment			-0.0317			-0.150
			(0.129)			(0.130)
Constant	2,884***	2,946***	2,742***	2,805***	1,627***	1,377**
	(341.7)	(487.8)	(496.6)	(350.0)	(576.7)	(564.5)
Observations	205	195	194	205	195	194
R-squared				0.478	0.540	0.541
Number of countries	28	28	28	28	28	28
Fixed Effect	NO	NO	NO	YES	YES	YES

All variables standardized on their standard error

Standard errors clustered on parliamentary level in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The complete regression model includes control variables for both OLS and the fixed effect models, which are presented in columns 2 and 3 for the OLS estimates and columns 5 and 6 for the fixed effects models. The GDP per capita and the unemployment rate correlates negatively with each other over the business cycle. Therefore these two variables are separated in the regression estimates, such that columns 2 and 5 include estimates with GDP per capita and columns 3 and 6 include estimates with the unemployment rate. The estimated effect on voter turnout decreases in the case of OLS regression in columns 2 and 3, from 0.211 to 0.134 and 0.115, respectively. The coefficients are still positive and in both cases the estimates are statistically significant at the 5 per cent level. This makes the causal effect of internet usage on voter turnout somewhat less precise compared to the model without control variables. Considering the estimated effects of the control variables, the GDP per capita has a positive effect, while the unemployment rate has a negative effect on voter turnout. This suggests that an increase in GDP per capita for a member country in the European Union increases citizens' participation in election, while the opposite happens in case of the unemployment rate. However, in all cases the estimated effects are not statistically significant at conventional levels.

All the estimated effects of the age groups excluding the age grop between 65 and 74 are negative, where only the effects of the youngest voters are statistically significant. As described in section 2.2 the voter turnout has had a declining trend throughout the sample period, where the youngest voters have the weakest participation at the parliamentary elections. These findings are consistent with the findings discovered in a *World Value Survey*, where the research suggested that citizens younger than 25 tend to have a lower participation rate compared to older citizens (IDEA, 2016). The population variable and the female variable are both negative and statistically significant when using the GDP per capita and not the unemployment rate as the control variable in the OLS regression. The estimates on the population size are consistent with the findings in Benny Geys research (2006), which paper argues that an increase in the population size has a negative effect on the voter turnout. The same conclusion was drawn in a study by IDEA (2016), where the authors argued that countries with smaller populations, the impact of each vote is greater and thus more people turn out to vote in an election (IDEA, 2016).

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In columns 5 and 6 the fixed effect estimates are presented, which takes in contrast to the OLS estimation unobserved characteristics such as demographical, individual and year differences into consideration. Only the model that includes GDP per capita (column 5) has a positive and statistically significant effect of internet usage on voter turnout at the 10 per cent significance level. The effect of internet usage on voter turnout in column 5 is somewhat weaker compared to those found in the OLS estimates in column 2. There is a small decline in the estimated effect from 0.134 in the OLS estimation to 0.107 in the fixed effect model when taken the possible endogeneity problem into account in the fixed effect model. The fixed effect model in column 6 has a positive coefficient of 0.0891, but is not statistically significant at conventional levels. Among the control variables, only GDP per capita and the age group 45-54 give the same conclusions with respect to both the sign and the magnitude of the estimated effects from the fixed effect approach and the OLS estimation. There is, however, one remarkable change in which the effect from the population variable now becomes positive and huge in magnitude. Hence, the findings in the fixed effect estimates about the population size differ from the findings in Geys (2006). In addition, the effects from the age groups differ a lot between OLS estimation and the fixed effects models. For instance, the effects from the age groups 25-34 and 35-44 change from negative using OLS to positive using the fixed effects models. The effects from the unemployment variable, on the other hand, do not change much between the OLS estimation and the fixed effect models.

To summarise the findings in table 5.1, the coefficients for the internet usage in both the OLS estimates and the fixed effect models cuts approximately to the half when including the control variables in the regression analysis. The effect of internet usage on voter turnout is almost identical in the OLS estimates compared with the fixed effects models. The estimated effect of internet usage on the voter turnout is positive and huge in magnitude in all regressions estimates. Due to the fact that OLS estimates and the estimates from the fixed effect models provide almost the same results, the simultaneity problem is most likely negligible in the empirical case at hand. Interestingly, the results from the fixed effect model are in line with existing literature in many respect. However, the estimates of the population size contradict the findings in Geys (2006).

5.2 Sensitivity analysis

As already argued, the variable GDP per capita and the unemployment rate are separated in the regression analysis because the variables correlate negatively with each other. The same argument could be used for the population variable and the female variable. Therefore, as a sensitivity analysis, I have looked at the effect of internet usage on voter turnout when the control variable female is excluded from the regression analysis. Table 5.2 shows the results from the OLS estimation and the fixed effect models without female as a control variable.

The effect of internet usage on the voter turnout differs only slightly compared to the findings in table 5.1. More precisely, the OLS estimates in column 2 and 3 both increases from 0.134 to 0.166 (column 2) and from 0.115 to 0.149 (column 3) and the estimates are statistically significant. The same conclusion applies for the fixed effect models, where the estimates in column 5 increase from 0.107 to 0.110 and the estimates in column 6 increase from 0.0891 to 0.0919. The fixed effect model now becomes positive and statistically significant in both regressions. In addition, the effect of the population variable in the fixed effects model hardly changes, where the findings in both column 5 and 6 are still positive and huge in magnitude.

The result in the fixed effects model indicates that the female variable does not affect the population variable pretty much, which means that it does not matter if the female variable is included in addition to the population variable in the regression analysis. To conclude, the results reported in table 5.1 are fairly robust to the choice of the population variable.

Table 5.2: The effect of internet usage on voter turnout without female as a control variable

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) Fixed Effects	(5) Fixed Effects	(6) Fixed Effects
Internet usage	0.211***	0.166***	0.149***	0.200***	0.110**	0.0919*
	(0.0440)	(0.0567)	(0.0540)	(0.0452)	(0.0548)	(0.0526)
Year	-1.408***	-1.232***	-1.137***	-1.368***	-0.991***	-0.885***
	(0.171)	(0.259)	(0.264)	(0.176)	(0.287)	(0.275)
GDP per capita		1.256			1.119	
		(1.487)			(2.195)	
Population		-2.093*	-1.601		34.81***	35.96***
		(1.216)	(1.409)		(9.303)	(7.416)
Age 15-24		-2.221**	-1.690*		-2.336**	-1.647*
		(0.995)	(1.001)		(1.008)	(0.971)
Age 25-34		-3.083***	-2.247***		-3.194***	-2.373***
		(0.959)	(0.852)		(0.994)	(0.797)
Age 35-44		-3.495***	-3.129**		-4.643***	-4.016***
		(1.218)	(1.216)		(1.235)	(1.160)
Age 45-54		-3.137***	-2.278*		-4.034***	-3.086***
		(1.177)	(1.183)		(1.235)	(1.178)
Age 55-64		-2.329*	-1.364		-2.853**	-1.967
		(1.347)	(1.359)		(1.398)	(1.370)
Age 65-74		0.581	-0.0969		0.000219	-0.472
		(1.512)	(1.515)		(1.603)	(1.572)
Unemployment			-0.0546			-0.153
			(0.132)			(0.128)
Constant	2,884***	2,648***	2,443***	2,805***	1,604***	1,363**
	(341.7)	(511.5)	(523.4)	(350.0)	(562.6)	(557.5)
Observations	205	195	194	205	195	194
R-squared				0.478	0.540	0.541
Number of countries	28	28	28	28	28	28
Fixed Effect	NO	NO	NO	YES	YES	YES

All variables standardized on their standard error

Standard errors clustered on parliamentary level in parentheses

*** p<0.01, ** p<0.05, * p<0.1

As mentioned in section 2.2, Belgium, Cyprus, Luxembourg and Greece have compulsory voting, such that internet usage may have no or small effects on voter turnout. This is most likely the case for Belgium and Luxembourg due to the observed flat-curve of the voter turnout in period from 1990 to 2016. Even though there is compulsory voting in Cyprus and Greece as well, there have been notable changes in the turnout through the period in both countries, as described in appendix B. Therefore, as a final robustness check, the results presented in table 5.3 are based on 26 countries, excluding Belgium and Luxembourg, to see whether these countries have any significant effects on the overall findings in table 5.1

The findings in table 5.3 are almost identical to the findings in table 5.1. The estimates of the internet usage are still positive in all cases and the coefficients are either totally identical or have a small decrease. In addition, all regressions remain the same with respect to statistical significance of estimated effects of the different variables. There is only one change in the OLS model, where the effect of the age group 55 to 64 goes from negative to positive. In the fixed effect model, the effect of the population variable remains positive and huge in magnitude. There are however, some notable changes for effect of the age groups in the fixed effects model both in column 5 and 6. All the effect of the age groups between 25 and 54 and 65 to 74 changes from negative in table 5.1 to positive in table 5.3.

As the effect of internet usage on voter turnout remains more or less identical in table 5.3 compared with the findings in table 5.1, excluding Belgium and Luxembourg from the data set in the regressions are not important. The results in table 5.1 are thus also fairly robust when controlling for compulsory voting in Belgium and Luxembourg.

Table 5.3: **The effect of internet usage on voter turnout without Belgium and Luxembourg**

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) Fixed Effects	(5) Fixed Effects	(6) Fixed Effects
Internet usage	0.194***	0.125**	0.102*	0.186***	0.107*	0.0853
	(0.0466)	(0.0577)	(0.0555)	(0.0481)	(0.0602)	(0.0583)
Year	-1.370***	-1.298***	-1.203***	-1.340***	-1.040***	-0.925***
	(0.179)	(0.254)	(0.259)	(0.184)	(0.313)	(0.306)
GDP per capita		0.678			0.998	
		(1.439)			(2.312)	
Population		-2.650**	-2.460**		32.15***	33.67***
		(1.127)	(1.226)		(10.65)	(8.932)
Female		-5.191***	-5.310***		-0.304	-0.298
		(1.240)	(1.300)		(2.267)	(2.268)
Age 15-24		-2.180**	-1.629		-2.398**	-1.701
		(0.990)	(1.002)		(1.054)	(1.036)
Age 25-34		-2.445**	-1.734**		-3.087***	-2.285***
		(0.954)	(0.864)		(1.042)	(0.845)
Age 35-44		-2.603**	-2.072*		-4.477***	-3.874***
		(1.224)	(1.240)		(1.334)	(1.293)
Age 45-54		-1.682	-0.914		-3.801***	-2.890**
		(1.182)	(1.187)		(1.376)	(1.307)
Age 55-64		-0.548	0.355		-2.395	-1.503
		(1.355)	(1.367)		(1.561)	(1.527)
Age 65-74		2.429	1.967		0.578	0.0759
		(1.538)	(1.557)		(1.856)	(1.820)
Unemployment			-0.0385			-0.151
			(0.131)			(0.134)
Constant	2,807***	3,023***	2,823***	2,747***	1,748***	1,484**
	(356.8)	(505.3)	(515.5)	(367.6)	(632.9)	(621.9)
Observations	193	183	182	193	183	182
R-squared				0.488	0.542	0.543
Number of countries	26	26	26	26	26	26
Fixed Effect	NO	NO	NO	YES	YES	YES

All variables standardized on their standard error

Standard errors clustered on parliamentary level in parentheses

*** p<0.01, ** p<0.05, * p<0.1

6.0 Conclusion

In this thesis, the purpose has been to investigate the effect of internet usage on voter turnout on cross-national parliamentary elections in the European Union including 205 elections over the sample period from 1990 to 2016. The hypothesis that the internet usage has a causal effect on voter turnout in the European Union has been examined by both OLS estimation and fixed effects models in which the dependent variable is voter turnout and the independent variable is the internet usage. Both socioeconomic variables such as population, gender (female) and age, in addition to macroeconomic variables such as GDP per capita and the unemployment rate have been used as control variables in the regressions.

The findings from the OLS estimation and the estimation of the fixed effects model without including the control variables suggest that internet usage has a positive and statistically significant effect on voter turnout at the one per cent level. In addition, the findings are almost identical irrespective of using OLS or the fixed effects model, which makes the simultaneity problem less likely in this thesis. Moreover, when including the control variables in the regressions, the estimated effect of the internet usage on voter turnout remains more or less unchanged, both with respect to sign, magnitude and statistical significance. The robustness of the main findings have also been tested in this thesis by means of sensitivity analysis with respect to the control variables. When excluding the female variable as a control variable and Belgium and Luxembourg from the data set due to compulsory voting in these countries the estimated effect of internet usage on the voter turnout is hardly affected and is still positive, huge in magnitude and statistically significant at conventional levels.

It is argued in this thesis, based on the empirical findings, that voter's political knowledge and ability to participate in parliamentary elections in the European Union is positively affected by the exposure to online news and political information. The findings correspond to existing literature, for instance Bimber (2003), Tolbert & McNeal (2003 & 2008), Czernich (2012) and Poy and Scüller (2016). That said, all findings presented in this thesis should be considered with some caution as more comprehensive sensitivity analysis with respect to control variables not used in the empirical analysis may be conducted. Such

comprehensive sensitivity analysis has been beyond the scope of this thesis and is left for future research. Another interesting hypothesis left for future research – in line with the study by Della Vigna & Kaplan (2007), Falck et al (2014) and Poy & Scüller (2016) who find a positive effect of new media introduction on vote shares of political parties and Campante et al (2013) who find a negative effect for ideological extreme parties outside the mainstream coalitions in Italy – is the possible effect of internet usage on voter turnout share of, right, centre and left wing parties in the European Union.

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8.0 Appendix

Appendix A

Table A.1: Individuals using the Internet (% of population), in last 3 month

Year	Average	Standard Deviation	Minimum by country		Maximum by country	
2016	80.07	10.42	Romania	59.5	Luxembourg	98.14
2015	78.14	11.47	Romania	55.76	Luxembourg	97.33
2014	76.89	11.94	Romania	54.08	Denmark	95.99
2013	75.2	12.82	Romania	49.76	Sweden	94.78
2012	73.17	13.32	Romania	45.88	Sweden	93.18
2011	70.84	14.21	Romania	40.01	Sweden	92.77
2010	69.06	14.59	Romania	39.93	Netherlands	90.72
2009	65.84	15.07	Romania	36.6	Sweden	91
2008	62.33	16.37	Romania	32.42	Sweden	90
2007	58.44	16.53	Romania	28.3	Netherlands	85.82
2006	53.98	17.78	Romania	24.66	Sweden	87.76
2005	49.26	18.8	Bulgaria	19.97	Sweden	84.83
2004	45.06	18.72	Romania	15	Sweden	83.89
2003	39.4	18.78	Romania	8.9	Sweden	79.13
2002	33.09	17.63	Romania	6.58	Sweden	70.57
2001	23.96	13.62	Romania	4.54	Sweden	51.77
2000	19.2	12.6	Romania	3.61	Sweden	45.69
1999	13.93	10.88	Romania	2.7	Sweden	41.43
1998	9.37	7.99	Bulgaria	1.84	Sweden	33.47
1997	5.74	5.58	Romania	0.45	Sweden	23.73
1996	3.34	3.67	Romania	0.22	Finland	16.78
1995	1.92	2.81	Latvia	0	Finland	13.9

Source: (WDI, 2018)

**Appendix B – Election systems in the European Union**

The purpose of appendix B is to give the reader more detailed information about the parliamentary election systems in all the European member states, where it includes the timeline from 1970 to 2017 (the most recent elections). All information is based on the European Election Database (NSD).

B.1 Austria

Austria is a federal republic with a parliamentary democracy, where the parliamentary system is bicameral. The country is divided into nine constituencies or provinces (Länder), which are in turn divided into 43 regional constituencies (Regionalwahlkreise). The government of Austria consists of three branches of powers; legislative, executive and judicial. The legislative branch is held by a bicameral Federal Parliament, both at National and Federal Council. The National Council (Nationalrat) consists of 183 members, who are elected for a 5-year term by the general population through a proportional representation of the parties with preferential voting. The Federal Council (Bundesrat) consists of 61 members elected by state legislatures (provincial parliaments) to serve a 5 to 6-years term. The number of seats allocated to each constituency depends on its population who are determined at the last census, with a range from 7 to 36 seats each. The voting system is characterized by a three-tier system, where at the first tire; seats are allocated at the regional level by quota (Hare). Only parties or candidates that have received at least four per cent of the nation-wide votes or those that gained a direct mandate at the regional level are allocated a seat at the second tire. The same applies to the third national tire, after the D'Hondt formula. The executive power in Austria is for the President, the Chancellor and a cabinet of Ministers. The Presidential elections are being held every six year, where the election system is based on the majority principle (a minimum of 50 per cent plus one vote). The government is characterized by the two-round system (TRS).

As it can be seen from the figure below, between 1970 and 1986 the national voter turnout was approximately 92 per cent, while from 1990 to 2002 is was approximately 84 per cent, and from 2006 to 2017 the level was approximately 78 per cent on average. In addition, the average was 85,6 per cent for the whole period.

Since 1970 the turnout at national elections has declined almost year on year, with the lowest level around 75 per cent in the 2013 election. From 2013 to 2017 there is an increase in the number of people who participate in the election, from 75% to 80 per cent, which is an increase of 5 per cent. For the presidential election, there has been a decline from 74 per cent in 1998 to 53 per cent in 2008, which can indicate that the voters are more willing to participate in the national election rather than presidential elections.
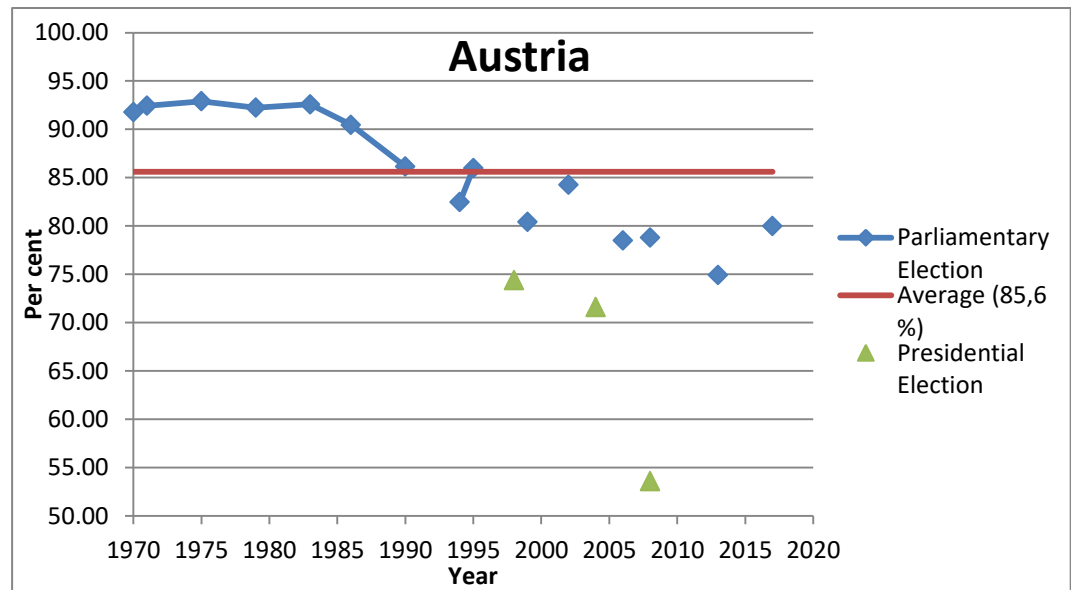
The Austrian political landscape consists of three major blocs, the Austrian people's party (ÖVP) with the ideology Christian democracy, the social democratic party of Austria (SPÖ) and the Freedom party of Austria which is a right-wing party (FPÖ). In addition, there are several small parties like the NEOS – The new Austria which is a liberalism party, The Greens with green politics and Liste Peter Pilz which is a left-wing party. In the 2017 national election, the ÖVP received 32 per cent, and both SPÖ and FPÖ respectively 26 per cent.

B.2 Belgium

Belgium is a bicameral federal parliamentary democracy under a constitutional monarchy. It is made up of three parts: The federal, regional, and linguistic community division. Belgium has four elections in addition to the European election. Firstly it has a federal election, where they vote for the federal parliament. Secondly, they have a regional election. This is for the legislative bodies of the federated regions. Lastly, they have a provincial and municipal election for their respective councils. These elections take part every sixth year.

While the other elections take part every fifth year. The federal parliament consists of two parts, The Chamber of Representatives and The Senate. The Chamber of Representatives has 150 members. The Senate has 60 members, where 50 are chosen by the community and regional parliaments, and 10 are appointed by other senators. The Senators are chosen from the regional elections, while the parliament is chosen from the federal elections.

The elections for federal parliament in Belgium are compulsory. As we can see from the graph, the voter turnout has been steady above 90 per cent, until 2010 when it for the first time went below 90 per cent, at 89.22 per cent in 2010, and 89.37 per cent. However, Belgium has among the largest voter turnout rate in the world, even though it has somewhat declined. Because Belgium has a compulsory election, they have managed to keep an average of 92 per cent, without any noticeable decline, and is not quite relevant.
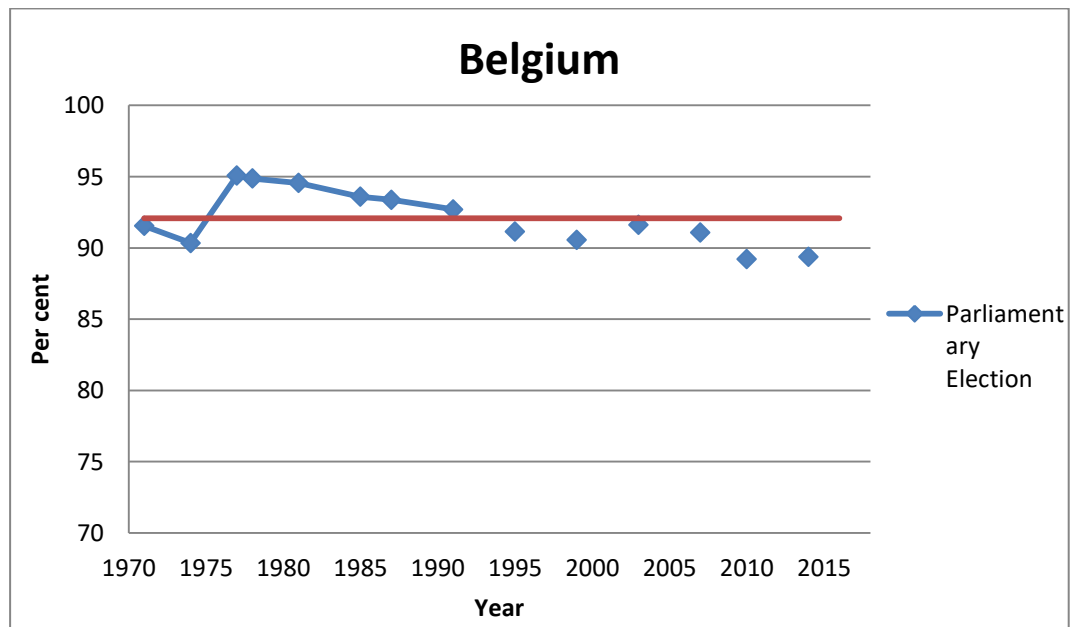
In Belgium, there are one huge political party and several political parties above the election threshold. The New Flemish Alliance is the biggest party with pool from 25 per cent to 30 per cent in the period between 2017 and 2018. Smaller parties with turnout from 2 per cent to 19 per cent are respectively; Socialist Party (PS), Reformist Movement (MR), Christian Democratic and Flemish (CD&V), Open Flemish Liberals and Democrats (Open Vld), Workers' Party (PVDA/PTB), Green (Groen), Socialist Party Different (sp.a), Ecolo wich are Greens/EFA, and Flemish Interest (Vlaams Belang).

B.3 Bulgaria

Bulgaria is a parliamentary republic governed by The National Assembly, which is unicameral parliament. Although The National Assembly is a permanent acting body, it is directed by a board of Chairpersons. The National Assembly is externally represented by The Speaker, who is also a part of the board of Chairpersons. The election for The National Assembly is held every fourth year. The chief of the state is the President, while the head of government is the Prime Minister, who leads a political coalition. Lastly, Bulgaria has The Councils of ministers, who decides on the foreign and domestic policies. This is lead by the Prime Minister. Bulgaria has three government branches. The executive branch, mainly directed by the President and the Prime Minister, the judicial branch, governed by the constitutional court, and the legislative branch, governed by The National Assembly. The President is elected every fourth year, the National Assembly every fourth year, and the Constitutional court every ninth year.

As we can see from the graph, the voter turnout has dropped significantly since our first number in 1991. Even though the number was 83.87 per cent in 1991, the average for the last 28 years is only 62.04 per cent. That is a dramatic decline, which can be presumed to have started in 1997, where the voter turnout fell from 75.23 per cent to 58.87 per cent, in one election cycle. This could have been an anomaly, but when we see that the average for the elections in 2013, 2014 and 2017 is 52.46, it can be assumed that this is a trend.

Another noticeable feature is that the voter turnout has not been over 70 per cent a single time since 1991. However, since Bulgaria became a democratic republic in 1990, there are has only been eight elections. The first being in 1991, it is natural to assume that this number may have been inflated, and the following elections to be the trend.
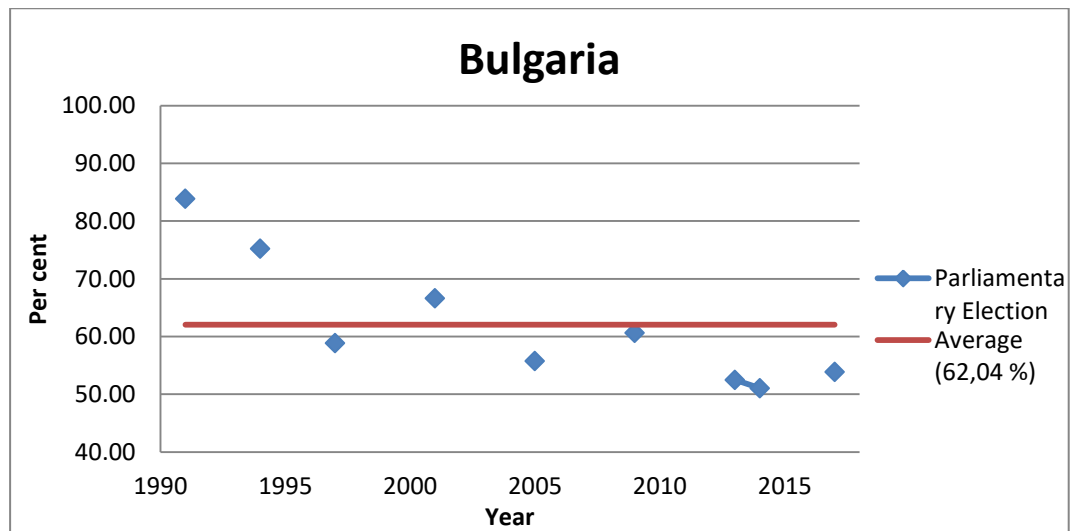
The Bulgarian political landscape consists of two major blocs, GERB with 31-37 per cent on polls from 2014 to 2018, and BSP with 31 to 34 per cent. In addition, there are several small parties; United Patriots, DPS - Movement for Rights and Freedoms, Volya, Alternative for Bulgarian Revival, Yes, Bulgaria!, and Reformist Bloc with polls from 2 per cent to 11 per cent since 2014.

B.4 Croatia

Croatia is a unitary republic with parliamentary democracy. Based on the principles of power, the state is dived into legislative, judiciary, and executive power. The head of the government is the Prime Minister, who is appointed by the President, with consent from the parliament. The Presidential election is held every fifth year, and a President is limited to a maximum of two terms. The Government holds the executive power and is led by the Prime Minister. Along with deputy ministers, the Prime Minister form the Inner Cabinet, who are responsible for supervising the governments according to the Prime Ministers demands. The parliament, Sabor, is unicameral and has the legislative power. Sabor also appoints the deputy ministers. Sabor is consists of 151 representatives, who are elected every fourth year. 140 of the seats come from multi-seat constituencies, 8 from minority votes, and 3 from the Croatian diaspora. The Croatian diaspora consists of creation communities outside the borders. Formerly a part of Yugoslavia, they gained independence in 1991 and held their first presidential election in 1990.

All though holding their first election in 1990, they did not gain independence until 1991 and was acknowledge by Europa in 1992. As previously with Bulgaria, Croatia had its highest voter turnout their first election. 84.54 per cent voter

turnout in 1990, and 75.61%, in a time that can only be categorized as a transitional period. These are numbers that correlate well with other countries who gain democracy and holds an election, as previously stated. These numbers also continued nine years later, even though they had been under 70 per cent in 1995. This might prove that there is some consistency to these numbers and not just a result of recently gaining independence.
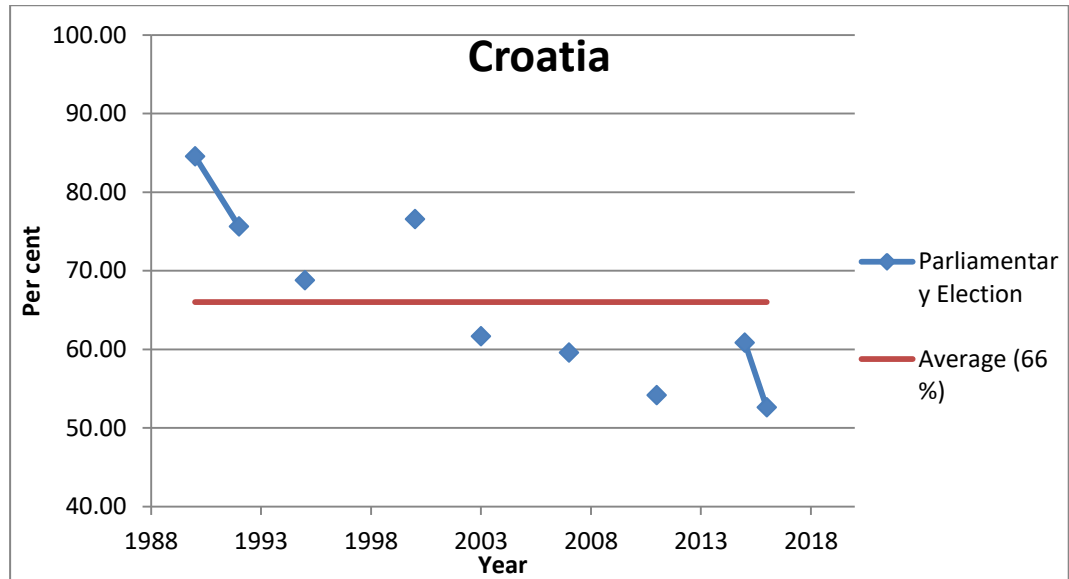

However, the numbers in the years following clearly gives us a different impression. Steady voter turnout at about 60 per cent is amplified by the all-time low 52.59 per cent in 2016. The numbers clearly visualize a clear difference before and after the election in 2000. After barely being under 70 per cent once the first four elections, they suddenly only managed above 60 per cent twice in the next 5 elections.

B.5 Cyprus

Cyprus is a unitary republic with a presidential government, with the President both head of state and government. As most democratic republics they have an executive power, the government, legislative power, the government and the parliament, and judiciary power, which is independent of the government and parliament. It has been an independent state since 1960, but divided state since Turkey's military operation in 1974, which in reality means that the Turkish faction does not attend the government, leaving their seats vacant.

As with most countries, Cyprus had a very high voter turnout after gaining their independence. However, their voter turnout kept rising in the elections following, having about 95 per cent voter turnout in 1981, 1985, and 1991. These are

remarkable numbers, compared to other countries in the European Union who do not execute compulsory election. However, the voter turnout since then has fallen dramatically. In the next two elections, spanning only ten years, the voter turnout is down 22 per cent points, to 66.74 per cent. This is about the average for many European countries, but Cyprus has an average of 86.2 per cent. Regularly this might be scuffed as an outlier, but as one can see from the graph, there has been a decline in the last three elections, and one might speculate that it is a trend.
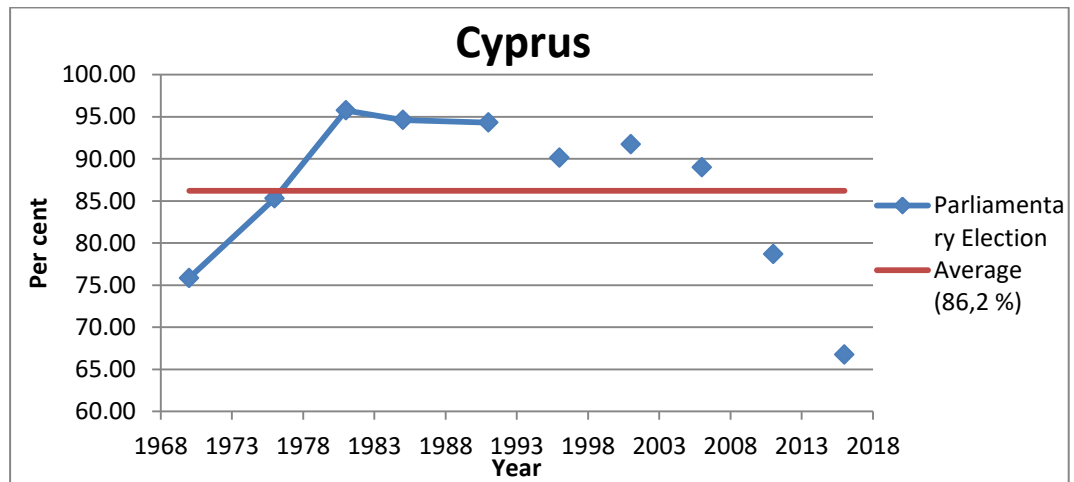
In Cyprus, there is one major bloc, and two middle size parties and multiple small parties. The major bloc is Democratic Rally (DISY) with 33 to 40 per cent turnout in the period between 2016 and 2018, and the Progressive Party of Working People (AKEL) with 31 to 25 per cent and the Democratic Party (DIKO) around 15 per cent. In addition, the small parties had turnout from 2 per cent to 7 per cent; National Popular Front, Movement for Social Democracy, Citizens' Alliance, Solidarity Movement, and the Movement of Ecologists - Citizens' Cooperation.

B.6 Czech Republic

The Czech Republic is a unitary parliamentary republic. The President is the head of state, while the Prime Minister is the head of government. The Czech Republic was previously a unitary democracy as the former country Czechoslovakia and had their first election as a sovereign in 1998.

As with most states holding their first democratic election, the Czech Republic had an extreme voter turnout with 96.33 per cent. However, as a recurrent pattern among these states, the voter turnout fell the following elections. Although it maintained steady at about 75 per cent in 1996 and 1998, the voter turnout then

took a plunge in the next elections. Despite this, it must be emphasized that the number has been steady between 60- and 65 per cent in the following 5 elections.

As one can see from the graph, the average voter turnout is 70.7 per cent, however, the median is 64.47%. This clearly visualizes how the high voter turnout affected the overall average when there have been relatively few elections.
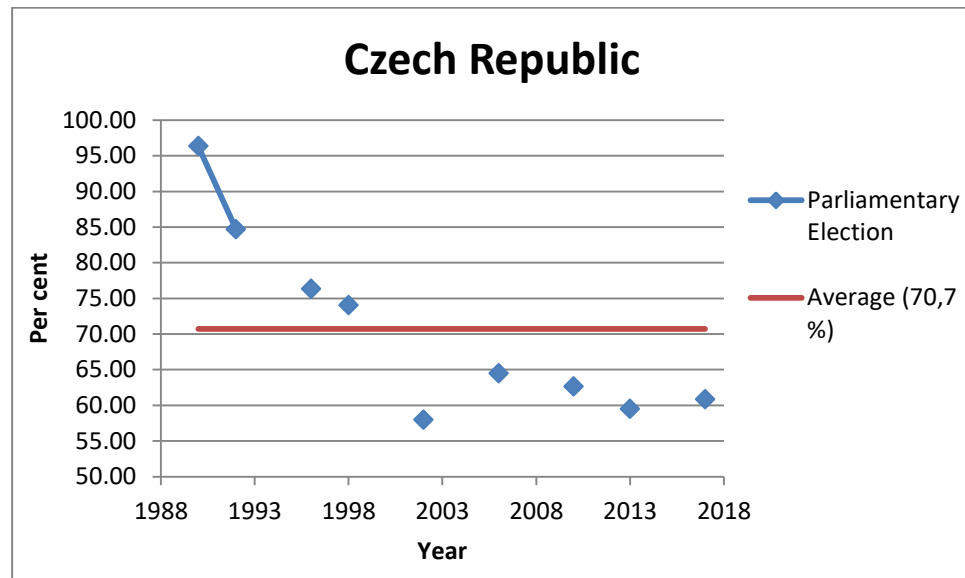
Czech Republic

The political landscape in the Czech Republic consists of one major bloc, the ANO – YES 2011, with 29 per cent turnout at the last election in 2017. There are several smaller parties with the turnout from 2 per cent up to 14 per cent. These are respectively, Civic Democratic Party, Czech Pirate Party, Communist Party of Bohemia and Moravia, Czech Social Democratic Party, Freedom and Direct Democracy, Christian and Democratic Union – Czechoslovak, TOP 09, Mayors and Independents, and the Green Party.

B.7 Denmark

Denmark is a constitutional monarchy, where the parliamentary system is unicameral. The country is divided into 10 multi-member constituencies corresponding to counties, which are in turn divided into 92 nomination districts. The Danish parliament (Folketing) is elected according to the principle of proportional representation, where 135 out of 179 parliament seats are allocated to reflect the vote share obtained by the candidates or their respective parties, by the modified St. Lagüe method. The remaining 40 seats are distributed among the qualified parties according to the Hare Quota, in order to increase the overall vote-to-seat proportionality. In order to get a compensatory seat, a party must either win a seat directly in any of the electoral districts, or, obtain a number of votes

that reflect the vote-seat ratio in two of the three electoral regions or get a minimum of 2 per cent threshold of valid national votes. For Greenland and Faeroe Islands, they elect two Member of Parliament each according to the separate rules. Members of the parliament are elected for a four-year term, and voting is not compulsory in Denmark.

As it can be seen from the figure below, between 1971 and 1987 the national voter turnout was approximately 88 per cent on average, and from 1988 to 2001 it was approximately 85 per cent, while from 2005 to 2015 the level was approximately 86 per cent. In addition, the overall average was 86.6 per cent from 1971 to 2015. The voter turnout has declined and increased over the period, with 82,85 per cent as the lowest turnout in 1990 and the highest level in 1973 at 88.72 per cent of the votes.
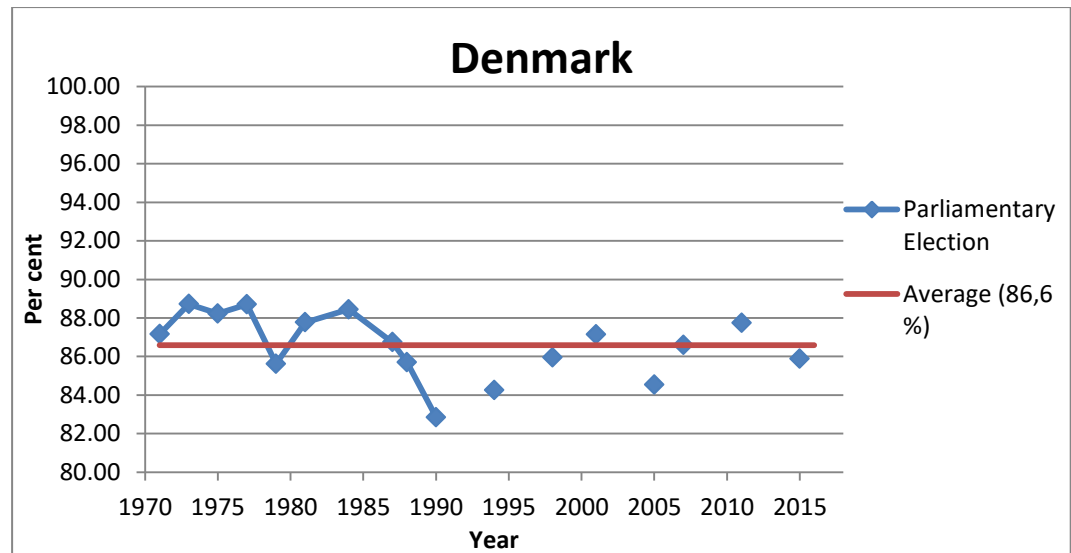
The political landscape in Denmark consists of three major blocs, the Social Democrats, Danish People's Party and Venstre - Danish Liberal Party, with turnout from respectively 26, 20 and 16 per cent the turnout at the 2015 election. In addition, it is several small parties, Red–Green Alliance, Social Liberals, Socialist People's Party, Liberal Alliance, The Alternative, Conservative People's Party, Christian Democrats, with the turnout from 1 to 9 per cent.

B.8 Estonia

Estonia is a republic, where the parliamentary system is unicameral. The country is divided into 12 multi-member constituencies, with the range from 6 to 13 seats, according to its population. In addition, there were 11 multi-member

constituencies for the 1995 and 1999 elections. The Estonian parliament (Riigikogu) has since 1994 been elected according to the principle of proportional representation, where 75 out of 101 members are allocated a seat after three rounds of counting according to the electoral quotient. The remaining 26 seats are distributed after the modified d'Hondt method. In order to determine the electoral result, each district gets a calculated quotient where candidates who obtain more votes than this quotient is declared elected. In addition, those that received the most votes are also declared elected. Moreover, mandates not assigned at the district level are distributed as national "compensation mandates", if the candidates obtained at least five per cent of the national votes. Members of the parliament are elected for a four years term, and voting is not compulsory in Estonia.

As it can be seen from the figure below, the overall voter turnout on average between 1990 and 2015 was approximately 65 per cent. The voter turnout had its highest level in 1990 with 78.2 per cent and dropped down to 57.4 per cent in 1999. Since then, the turnout has increased from election to election, where at the last election in 2015 the turnout was 64.2 per cent.
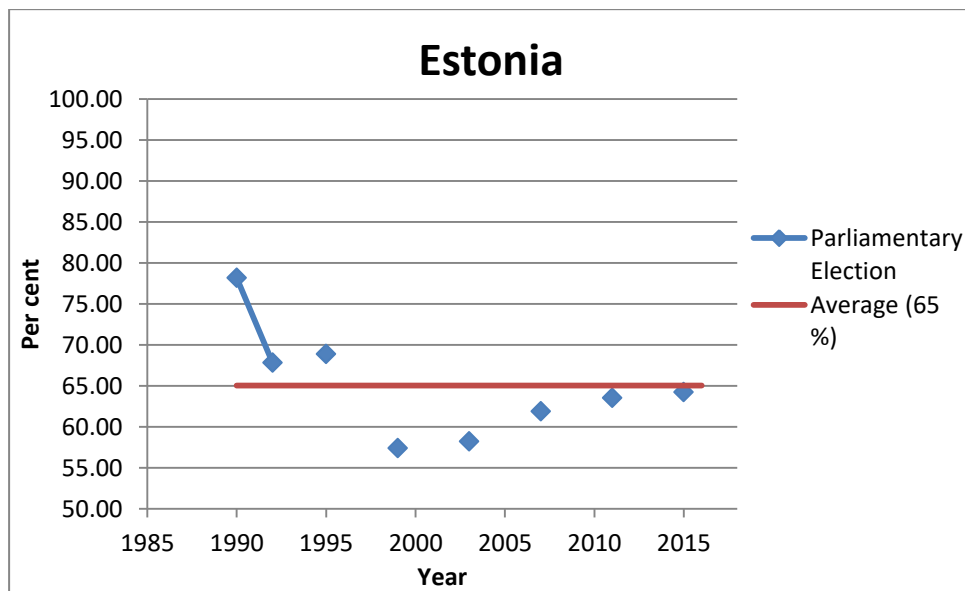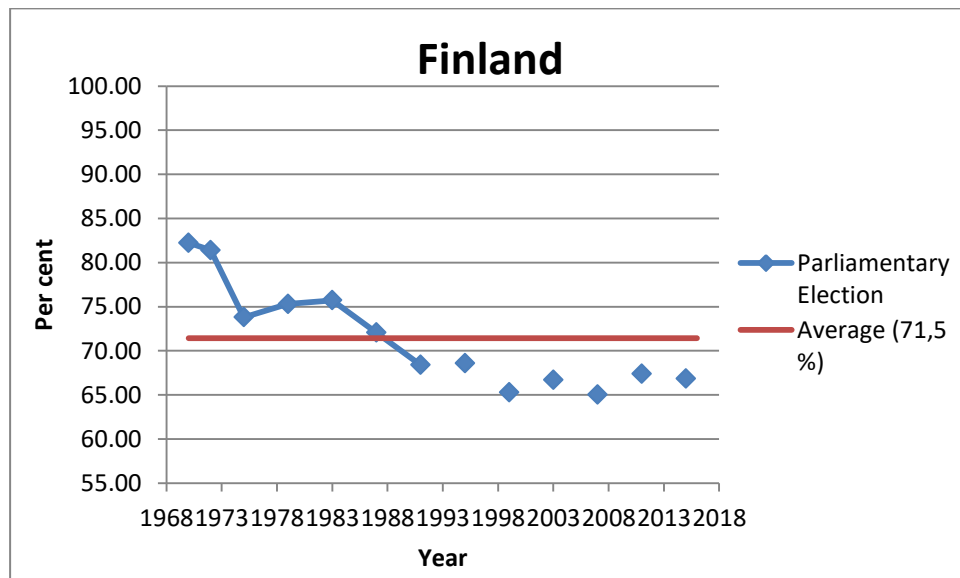

The political landscape in Estonia consists of three major blocs, the Estonian Reform Party, Estonian Centre Party and Conservative People's Party of Estonia with recent polls from 21 per cent to 30 per cent. In addition, there are some smaller parties with polls from 3 per cent to 13 per cent, Social Democratic Party, Pro Patria and Res Publica Union, Estonian Greens and Estonian Free Party.

B.9 Finland

Finland is a republic, where the parliamentary system is unicameral. The country is divided into 14 multi-member provincial constituencies, in addition to one single member constituency, the province of Åland. The Finnish parliament (Eduskunta/Riksdagen) is elected according to the principle of proportional representation, where 199 out of 200 members are elected in the 14 constituencies, and the last member is elected by simple majority vote in the province of Åland. The seats are distributed among the parties, according to the d'Hondt method, where the candidates are ranked according to the number of personal votes they have polled. The candidates are elected for a four years term, and voting is not compulsory in Finland. The presidential election in Finland is being held every six year, where the president has been elected through a direct popular vote based on the majoritarian two-round system.

As it can be seen from the figure below, the overall voter turnout on average between 1970 and 2015 was approximately 71.5 per cent at the national election. The voter turnout had its highest level in 1970 with 82.2 per cent, and since then have the turnout decline slowly down to its lowest level in the 2007 election with 65 per cent.
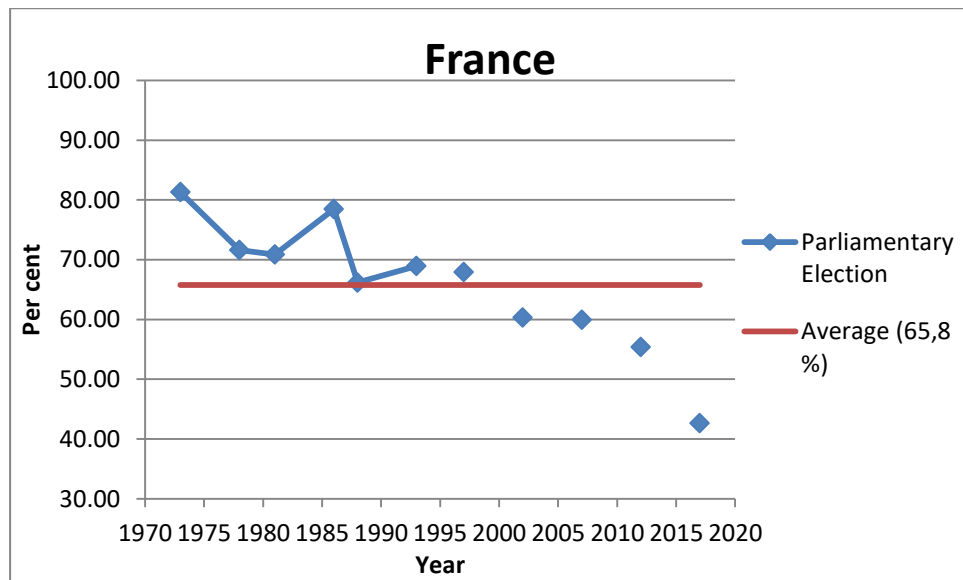

The political landscape in Estonia consists of several middles/major blocs, the Social Democratic Party of Finland, National Coalition, Centre Party of Finland and Green League, with polls from 14 per cent up to 21 per cent. In addition, there are some smaller parties with polls from 1 to 9 per cent, Finns Party, Left

Alliance, Swedish People's Party of Finland, Christian Democrats and Blue Reform.

B.10 France

France is a republic, where the parliamentary system is bicameral. The country is divided into 577 single-member constituencies, which are in turn divided into three, the first is metropolitan France with 555 members, the second is for overseas departments with 17 members, and the last 5 members are for overseas territories. Members of the parliament in France are elected according to the single-member majoritarian systems in two rounds. In order to be elected in the first round, a candidate must obtain an absolute majority of the total votes, where the amount is equal to a quarter of the number of registered voters in the particular constituency. Candidates who have obtained a number of votes equal to at least 12.5 per cent of the total number of registered voters are eligible for the second round. However, if only one candidate fulfils this condition, the person with the second largest number of votes may also participate in the second round to be elected. Members of the parliament are elected for a five years term, and voting is not compulsory. The presidential election in France is being held every fifth year, where the president has been elected through a direct popular vote based on the majoritarian two-round system.

As it can be seen from the figure below, the overall voter turnout on average between 1973 and 2017 was approximately 65.8 per cent. The voter turnout had its highest level in 1973 with 81.3 per cent and has since then declined almost year on year, to the lowest level of turnout in the 2017 election with 42.6 per cent.

The political landscape in France consists of one major bloc, the Forward! (LREM), with 32 at the recent poll. In addition, there are several smaller parties with polls from 2 per cent up to 21 per cent; The Republicans, National Front, Unsubmissive France, Socialist Party, Europe Ecology - The Greens, French Communist Party and France Arise.

B.11 Germany

Germany is a federal parliamentary and federal republic. The head of state is the President, which is chosen by the Federal Convention. This is the only task the Federal Convention has, and it consists of the current Bundestag, the parliament, and an equal amount of electors, who are elected by the sixteen state parliaments. The federal legislative power lay with the Bundestag and Bundesrat, which is the German Representative Body.

The government consists of the executive, legislative, and judiciary branches. The Executive branch is made up of the federal president, the federal government, most prominent with the Chancellor, and state governments.

Even though the President is the head of state, the role is mostly ceremonial, as he or she will have to sign all federal laws to come into effect, but does not have the right to veto. The president gives direction to general political and societal debates and has some important "reserve powers" in case of political instability (such as those provided for by Article 81 of the Basic Law).

The Federal Chancellor is the one who runs the government. There are no limits to how many times a person can be elected Chancellor.

In Germany, the first vote for their representative, a local member of parliament, and then vote for a political party. These votes do not have to be identical.

The parliament, Bundestag, consists at least of 598 seats. This number may vary as "balance seats", also known as overhang seats, may be included to get the correct proportion according to the votes. 50 per cent of the votes consist of the first vote for local politicians from Germany's 299 districts. The other half is made up of the second vote on the political parties. A party needs at least 5 per cent of the votes to gain a seat in the parliament. The elected members then form the coalition and choose a Chancellor. The parliament election is held every fourth year.

The legislative power is divided between the Bundestag and Bundesrat. Although the Bundestag is elected every fourth year, the Bundesrat is not elected, but rather delegated by the respective state government. However, they only serve as long as they are representing the state. The number of votes for a member in the Bundesrat depends on the number of inhabitants they are representing. Each state is allocated with at least three votes and a maximum of six. A state with over 2 million inhabitants have 4 votes, over 6 million inhabitants have 5 votes, over 7 million inhabitants have 6 votes. All representative from the same Bundesrat has to vote identical.

The voter turnout in the general elections in Germany has declined since the all-time high in 1971, with a 91.1 per cent voter turnout. In 2009 they registered their lowest voter turnout with only 70.8 per cent of eligible voters casting their vote. It barely increased in 2013, and in 2017 it was 76.2 per cent. This means that the last four elections had the four lowest voter turnout since the elections began in 1949.
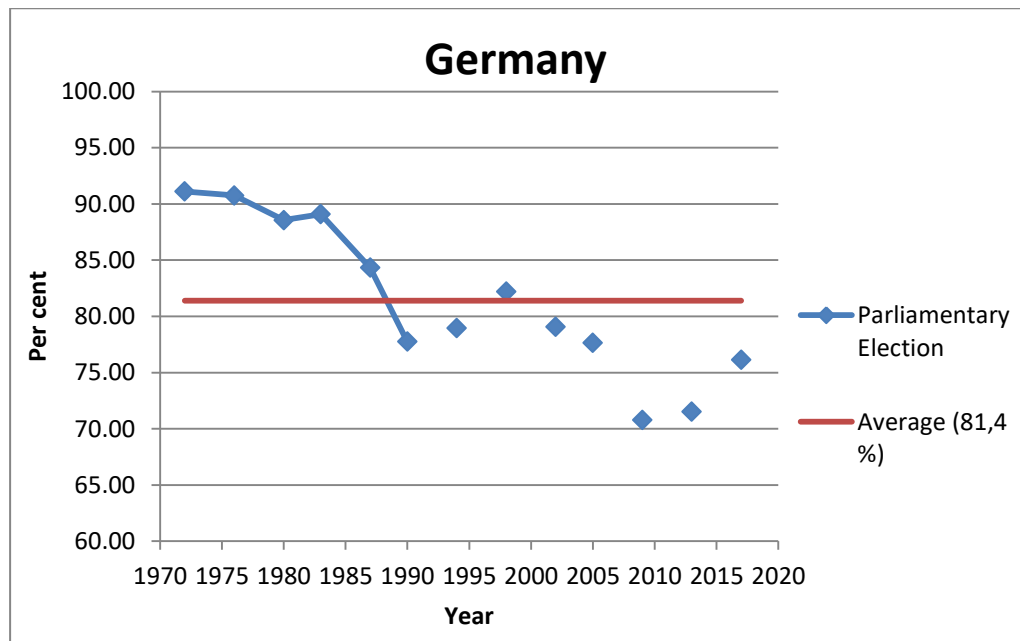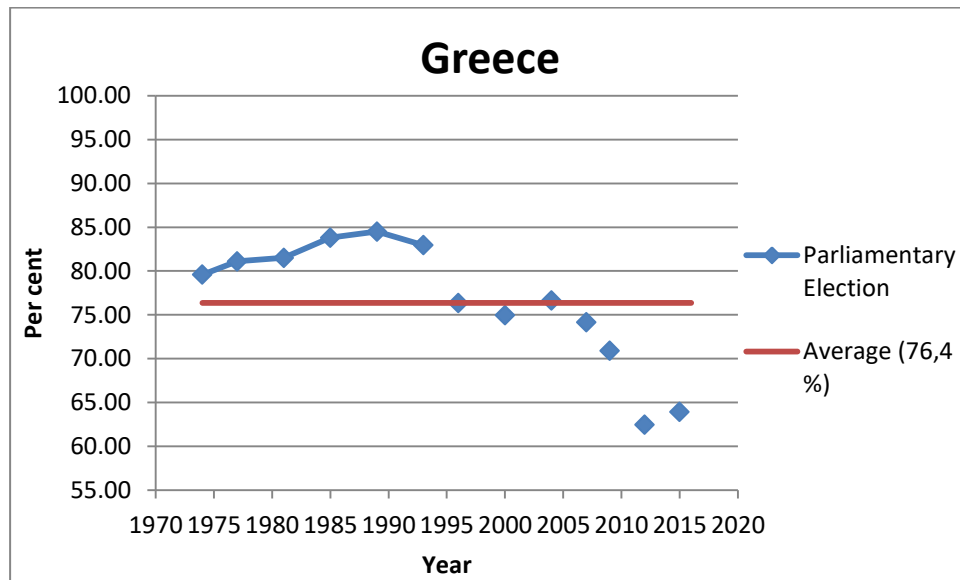
The political landscape in Germany consists of one major bloc, the CDU/CSU, with 33 per cent turnout at the last election in 2017. In addition, there are some smaller parties at the parliamentary, with the turnout from 9 to 18 per cent. Those are respectively, Social Democratic Party of Germany, Alternative for Germany, Alliance '90/The Greens, The Left (Germany), and Free Democratic Party (Germany).

B.12 Greece

Greece is a republic, where the parliamentary system is unicameral. The country is divided into 56 single- or multi-member constituencies for 288 out of 300 seats, where the 12 remaining seats are for the one multi-member nationwide constituency. The voting system in Greece is through a single round of voting with the Hagenbach-Bischoff system of proportional representation, with a preferential vote. Further, remaining seats are allocated in 13 principal electoral districts after the same system. If there are any remaining sets, they are allocated at the national level by means of a simple electoral quotient. Under some circumstances, if there are any remaining seats, parties have to obtain at least 3 per cent of the votes at the national level, which gives a maximum of 6 seats at the parliament. Members of the parliament are elected for a four years term, and voting is compulsory until the age of 70, where failure to vote is punishable. However, no one has ever been prosecuted.

As it can be seen from the figure below, the overall voter turnout on average between 1974 and 2015 was approximately 76.4 per cent. The voter turnout had its highest level in 1989 with 84,5 per cent of the votes, and its lowest level in 2012 with 62.5 per cent. After 1993 the voter turnout declined almost year on year until the last election in 2015, which had an increase of approximately 1.5 per cent compared to the election in 2012.

The political landscape in Greece consists of two major blocs, the New Democracy and the Coalition of the Radical Left, with 29 and 35 per cent turnout at the last election in 2015. In addition, there are several smaller parties with the turnout from 2 per cent up to 9 per cent; Movement for Change, Golden Dawn, Communist Party of Greece, Union of Centrists and Independent Greeks.

B.13 Hungary

Hungary is a republic, where the parliamentary system is unicameral. The country is divided into 176 single-member constituencies and 20 territorial multi-member constituencies with 146 deputies, where the remaining 64 deputies are chosen from the national lists of candidates, in total 386 members. In the case of single-member constituencies, there are normally two rounds of voting, one for an individual candidate and one for a party list. If no candidate obtains an absolute majority, or if less than half of the registered electors have voted, a second ballot is held. In both cases, candidates with the most votes are declared elected if at least 25 per cent of the constituency's electorate has voted. Moreover, the case of territorial constituencies, seats are allocated according to the principle of proportional representation in a single ballot, unless voter turnout falls below 50

per cent. A party that gets less than 5 per cent of the votes does not gain a parliamentary seat through this system. At the national constituency, the remaining 64 seats are allotted to parties on a full proportional basis (scrap votes). Members of the parliament are elected for a four years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1990 and 2015 was approximately 65 per cent. The voter turnout had its highest level in 2002 with 70.5 per cent and its lowest level in 1998 with 57 per cent. Since 2002 the voter turnout has declined from election to election, nevertheless, that this drop is just 10 per cent, which is not dramatically, but a declining trend.
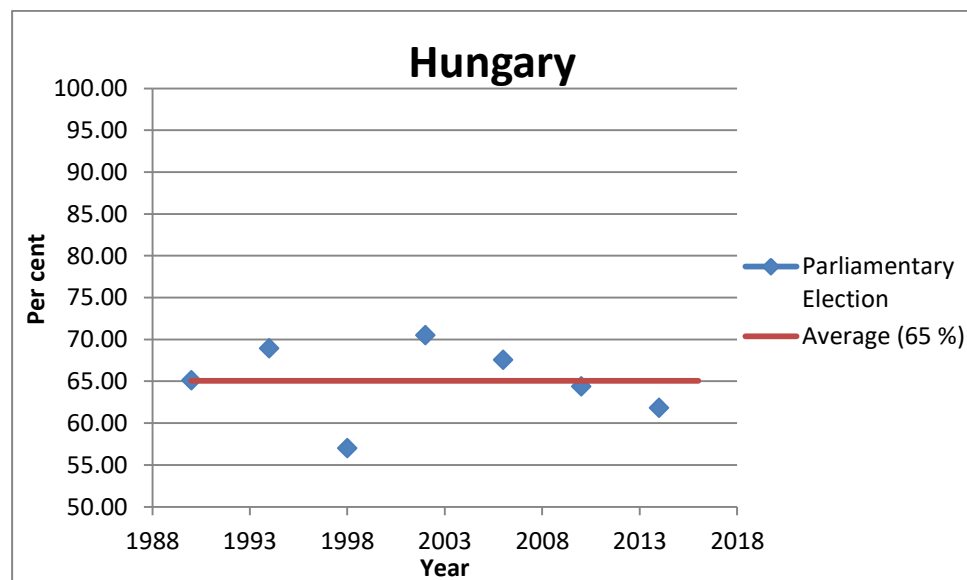
The political landscape in Hungary consists of one major bloc, the Fidesz - Hungarian Civic Union & KDNP with as much as 48 per cent turnout at the last election in 2018. In addition, there are several smaller parties, with the turnout from 1 per cent up to 16 per cent; Jobbik Movement for a Better Hungary, Hungarian Socialist Party, Democratic Coalition, LMP Politics Can Be Different, Momentum Movement and MKPP Hungarian Party of the two-tailed dog.

B.14 Ireland

Ireland is a parliamentary unitary republic. The head of the state is the President, U*achtarán*, who is elected directly through an election and serves a term of seven years. A President can sit for two terms. The President appoints the Prime Minister, Taoiseach, who is also the leader of the government. However, this

appointment is only ceremonial, and the Prime Minister is firstly nominated by the lower house of the government, Dáil Éireann, which is the Irish legislature. The President normally acts on the advice of the government, but will in some cases an advisory Council of State. The two houses of government are, as previously mentioned, Dáil Éireann, and Seanad Éireann, the Senate. The Prime Minister has the executive power in the government, and also leads the cabinet, with his deputy prime minister, T*ánaiste.*

Since the election is 1970, Ireland has had an average voter turnout at 70.3 per cent. This is not a remarkable number in either direction. However, the number has been decreasing the latest elections. Ever since the election in 1989, the voter turnout has been below the average. This clearly shows a trend, even though they only missed the average by 0.4 points in 2010. After two elections with a positive development in voter turnout, it fell once again in the latest 2016 election, down to a measly 65.09 per cent. Obviously, the overall trend is that the voter turnout is stabilizing at a lower point than in previous years, as the overall average is declining for each new election. Earlier, it was mostly between 70- and 80%, but it has been between 60- and 70% for the last seven elections, stretching back to 1989.
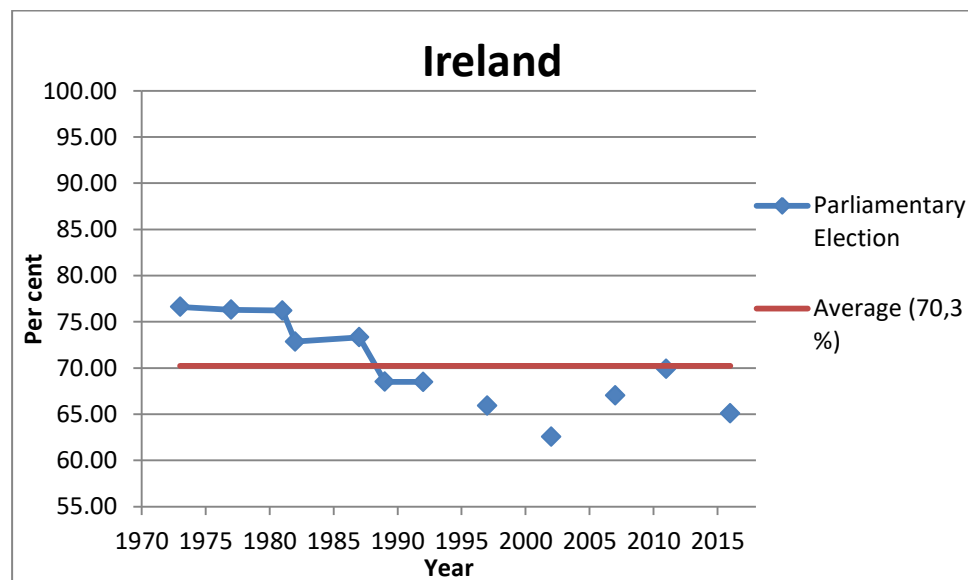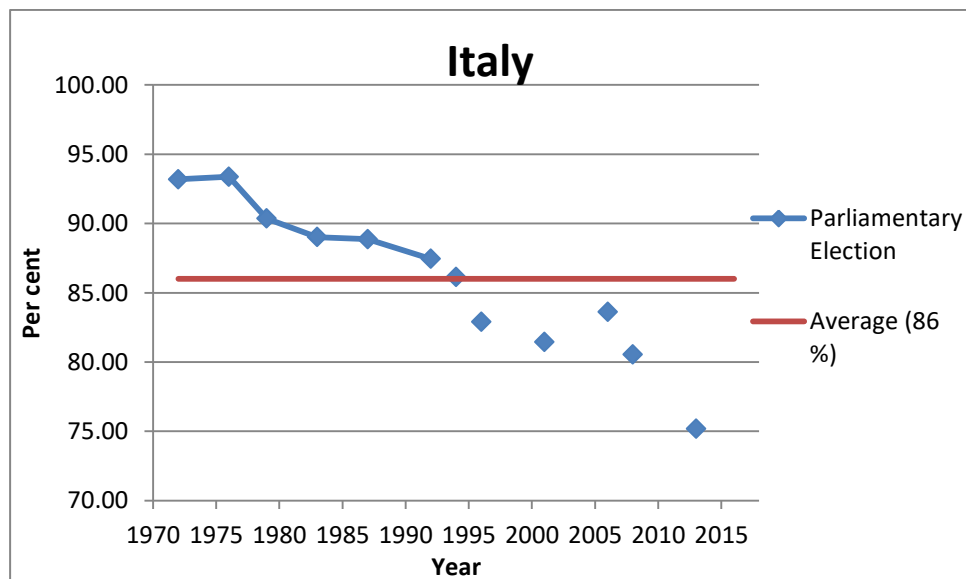

The political landscape in Ireland consists of three major blocs, the Family of the Irish, Fianna Fáil-The Republican Party and We Ourselves, with recent polls from 22 per cent up to 33 per cent. In addition, there are several smaller parties with polls from 1 per cent up to 4 per cent, which is respectively, the Independent

Alliance, Labour Party, Green Party, Solidarity-PBP, Social Democrats and Renua Ireland.

B.15 Italy

Italy is a republic, where the parliamentary system is bicameral. The country is divided into 26 multi-member constituencies for 617 seats, 1 single-member constituency in Valel d'Aosta and 1 constituency for Italians abroad representing four geographical groups consisting of 12 seats, in total 630 members. The voting system between 1994 and 2005 was through a mixed-member system, where 75 per cent of the seats were allocated by the plurality and the remaining 25 per cent by proportional representation. Since 2005, proportional representation has been used for 629 out of 630 seats, through party lists for 617 of the 630 members from Italy and for the 12 members elected by the Italian citizens overseas. In order to get a seat at the parliament, political coalition has to obtain a minimum of 10 per cent of total votes, 2 per cent of valid votes for a political party within a coalition, 4 per cent of nation-wide votes for a political party which is not affiliated with any political coalition, and 20 per cent of the votes cast in their constituency for language majority lists. Members of the parliament are elected for a five years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1972 and 2013 was approximately 86 per cent. The voter turnout had its highest level in 1976 with 93.4 per cent and its lowest level in 2013 with 75.2 per cent. Since 1976 the voter turnout has declined over the period, with the lowest turnout at the latest election in 2013.
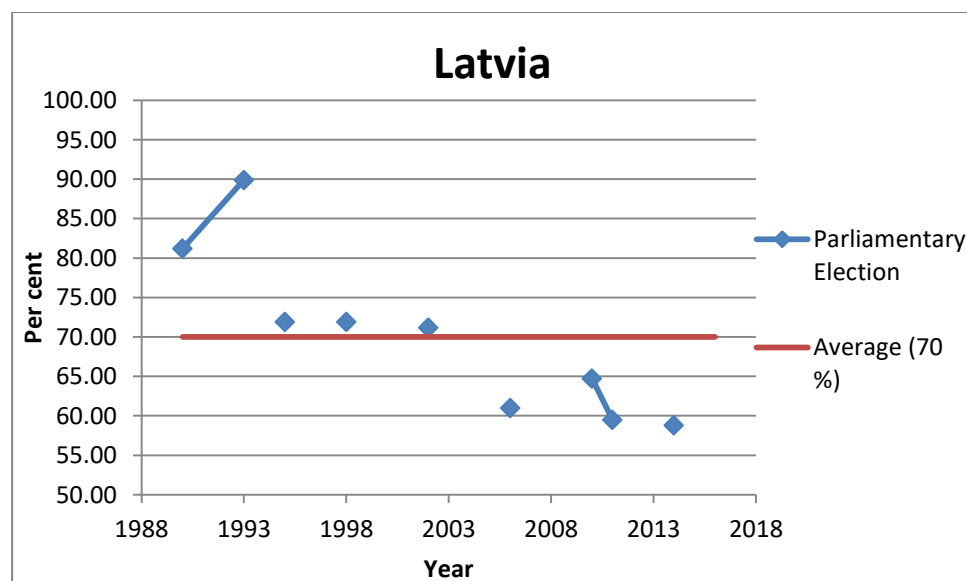
The political landscape in Italy consists of three major blocs, the League, Five Star Movement, and Democratic Party, with respectively 17, 32 and 19 per cent turnout at the last election in 2018. In addition, there are two other firms with 3 per cent turnout and 9 per cent, respectively, Forward Italy and Brothers of Italy.

B.16 Latvia

Latvia is a parliamentary republic represented by a unitary government. The head of the state is the President, and the head of the government is the Minister-President. Latvia also offers a live-internet broadcast of the cabinet meetings open for the public. Voting is not compulsory. In 1991 Latvia gained independence following the fall of the Soviet Union and gained international recognition as a sovereign state. The parliament of Latvia, Saeima, has 100 members elected for a four-year term.

From the graph, we can once again see the inflated voter-turnout in the first elections following their independence. A voter-turnout at 81.2 per cent in their first election and a record 89.88 per cent in the following election certainly skews the all-time average. This can be emphasized by looking at the next seven elections, where the voter-turnout is marginally over the average three times, and well under the average four times. Even though they had a bump of approximately 5 per cent points from 2006 to 2010, it went under 60 per cent the following election, which, at that point, was an all-time low. The trend seems to continue with reaching a new all-time low voter-turnout in the next election in 2014, which is the last election to date.
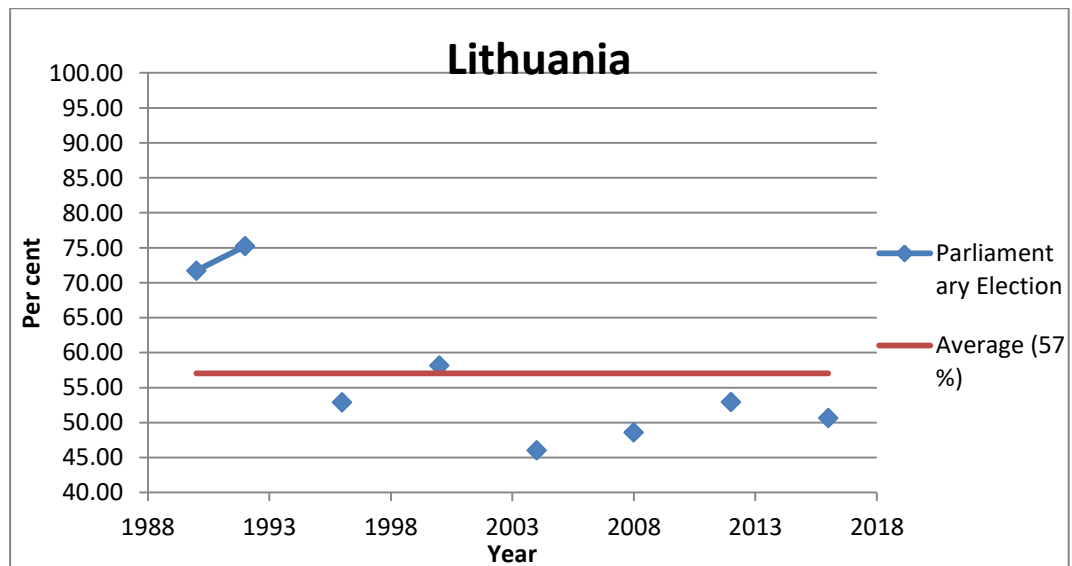
The political landscape in Latvia consists of two major blocs, the Social Democratic Party "Harmony" with 33 per cent and Union of Greens and Farmers with 22 per cent at the recent polls. In addition there are several smaller parties of influence, with polls from 1 per cent up to 11 per cent, respectively, National Alliance, Who owns the state?, Movement For!, New Conservative Party, Unity, Latvian Association of Regions, Latvian Russian Union and For Latvia from the Heart.

B.17 Lithuania

Lithuania is a republic, where the parliamentary system is unicameral. The country is divided into 71 single-member constituencies and one multi-member nationwide constituency with 70 seats, in total there are 141 members of the parliament. The voting system is mixed, where a candidate shall be considered elected in a single-member constituency if the candidate received more than 50 per cent of votes cast by the registered voters, and if not less than two-fifths of the registered voters of that constituency have participated in the election. In addition, if less than 40 per cent of registered voters of that constituency has participated in the elections, the candidate with the majority and more than one-fifth of the votes shall be considered elected. The nation-wide party list is proportional, with simple quotient and greatest remainders rules, where the country as a whole forming one constituency for 70 seats. The election is considered valid if at least 25 per cent of the electorate have used its vote. Members of the parliament are elected for a four years term, and voting is not compulsory in Lithuania.

As it can be seen from the figure below, the overall voter turnout on average between 1990 and 2016 was approximately 57 per cent, which can be considered as relatively low comparing to other European member states. The voter turnout had its highest level in 1992 with 75, 2 per cent, and its lowest level in 2004 with 46 per cent. If you look explicitly at the interval between 1996 and 2016, the average voter turnout was approximately 51,6 per cent, which is a flat curve pretty much.
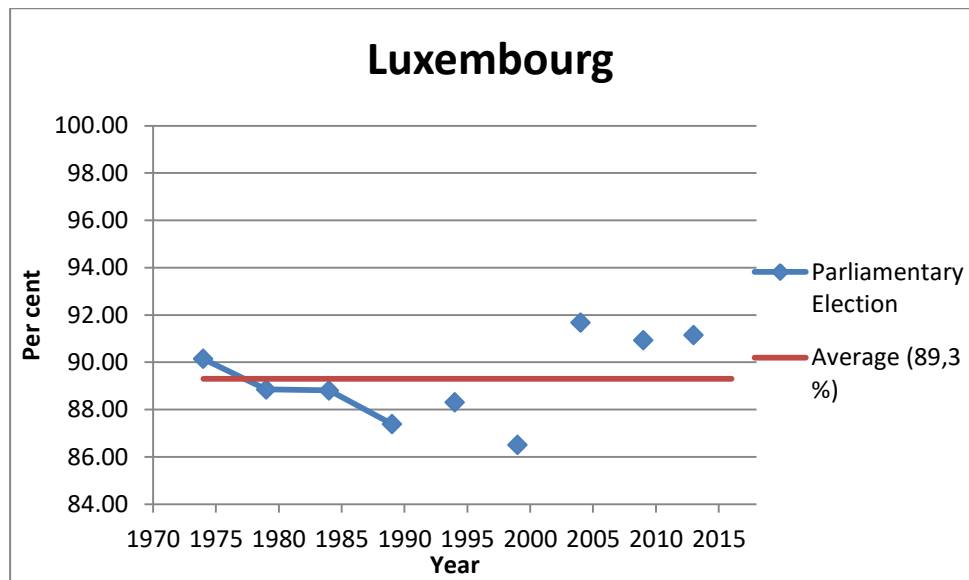
The political landscape in Lithuania consists of two major blocs, the Homeland Union-Lithuanian Christian Democrats with 23 per cent at the recent polls and Lithuanian Farmers and Greens Union with 21 per cent at the recent polls. In addition, there are several smaller parties of influence, with polls from 6 per cent up to 10 per cent, which is respectively, Party Order and Justice, Labour Party, Social Democratic Party of Lithuania, Social Democratic Labour Party of Lithuania, Electoral Action of Poles in Lithuania-Christian Families Alliance and Liberal Movement.

B.18 Luxembourg

Luxembourg is a constitutional monarchy, where the parliamentary system is unicameral. The country is divided into 4-multi-member constituencies, where the south consists of 23 seats, 21 seats for the middle, 9 seats for the north and the east have 7 seats. The members of the parliament are elected by proportional representation, according to the Hagenbach-Bishoff method. Political parties submit their candidates, where electors could cast a preferential vote or split their vote between different lists. Moreover, they can either vote for a list or for a particular candidate on any list. Remaining seats are given to parties with the highest average after the second count. Members of the parliament are elected for a five years term, and voting is compulsory for citizens until the age of 75, where failure to voting is punishable by a fine.

As it can be seen from the figure below, the overall voter turnout between 1974 and 2013 was approximately 89.3 per cent. The voter turnout had its highest level in 2004 with 91.7 per cent and its lowest level in 1999 with 86.5 per cent.
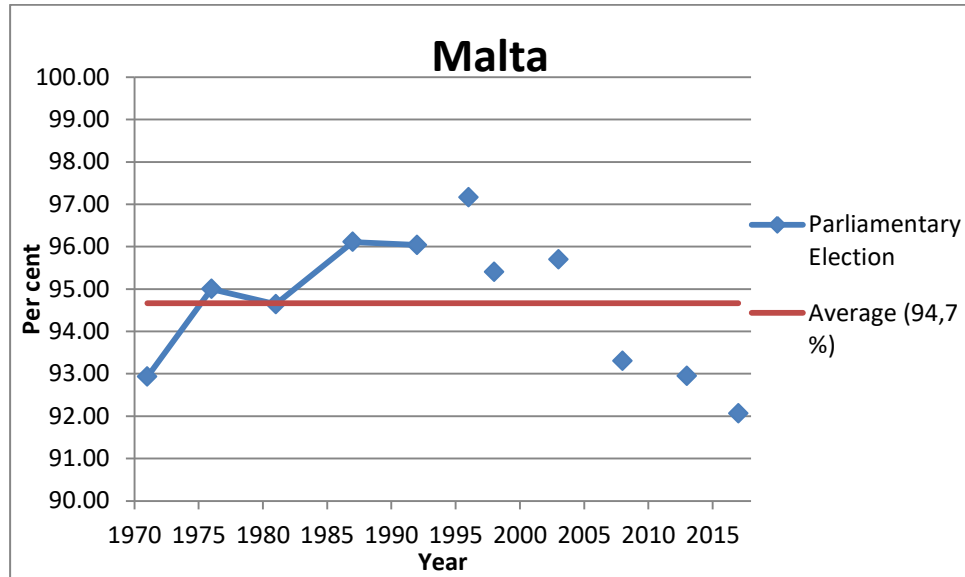
The political landscape in Luxembourg consists of one major bloc, the Christian Social People's Party with 26 per cent at the recent polls. In addition, there are several smaller parties of influence, with polls from 3 per cent up to 10 per cent, which is respectively, Democratic Party, Luxembourg Socialist Workers' Party, The Greens, the Alternative Democratic Reform Party and The Left.

B.19 Malta

Malta is a parliamentary republic represented by a unitary government where the President is the head of the state, and the Prime minister is head of the government. The President is elected by the members of the House of Representatives and serves for a term of five years. The House of Representatives is also the legislative branch and appoints the Prime minister, which is the leader of the party with the most votes. The members of the parliament are also elected for a term of five years. Malta is traditionally very polarized in its politics, and effectively created a two-party system, despite using a single transferable vote to elect.

Malta has historically an extremely high voter-turnout, despite voting not being compulsory. The average since becoming a sovereign state as part of The Commonwealth has been 94.7%. Even though there has been a somewhat decline since 1996, the lowest voter turnout is still at remarkably 92.06 per cent. This means that over nine-tenths of eligible voters have participated in the elections. Another point is that residents of only six months are also eligible to vote, which makes these results even more astonishing. Even though one may argue that there has been a decline since the top in 1997, it is still only about 1 per cent point

lower than what was recorded in 1970. However, the voter turnout has been below the average for the last three elections. Normally one would speculate in this becoming a trend, but the numbers are remarkable nevertheless, and it would be foolish to categorize this as a serious negative trend.

The political landscape in Malta consists of two major blocs, the Labour Party with 55 per cent turnout at the last election in 2017, and the Nationalist Party with 43 per cent turnout at the last election. In addition, there are some smaller parties, with turnout around 1 per cent, which are respectively, Democratic Alternative, Democratic Party and Maltese Patriots Movement.
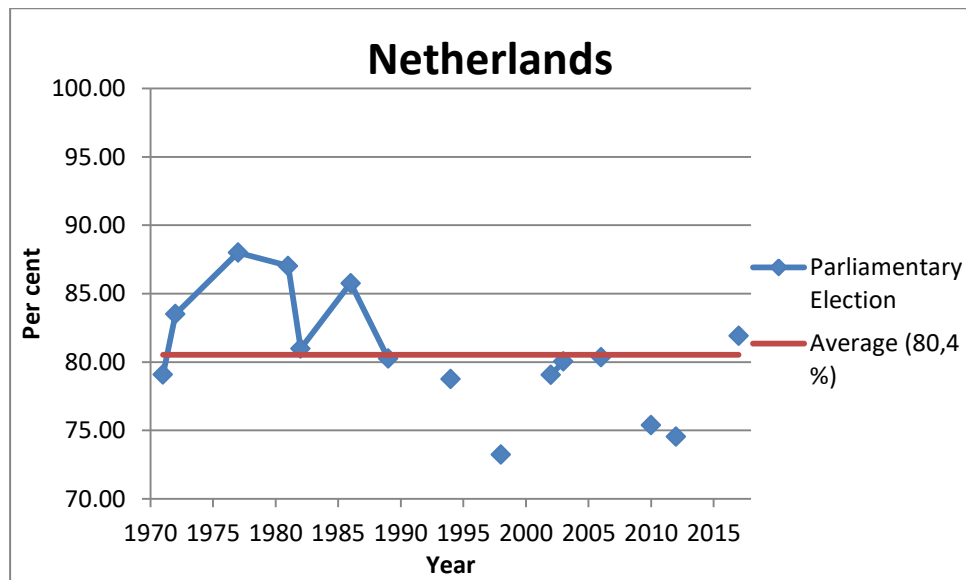
B.20 Netherlands

The Netherlands is a constitutional monarchy, where the parliamentary system is bicameral. The country is divided into 18 multi-member constituencies, in a total of 150 members of the parliament. The members are elected through a party-list system with proportional representation. Seats are distributed at the national level to those who have obtained at least 0.67 per cent at the nationwide votes. Remaining seats are allotted according to the d'Hondt method of highest average. Members of the parliament are elected for a four years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1971 and 2017 was approximately 80,4 per cent. The voter turnout had its highest level in 1977 with 88 per cent and its lowest level in 1998 with 73.2 per cent. In the 2017 election, the voter turnout was 81.9 per cent, which is above the overall average for the whole period.
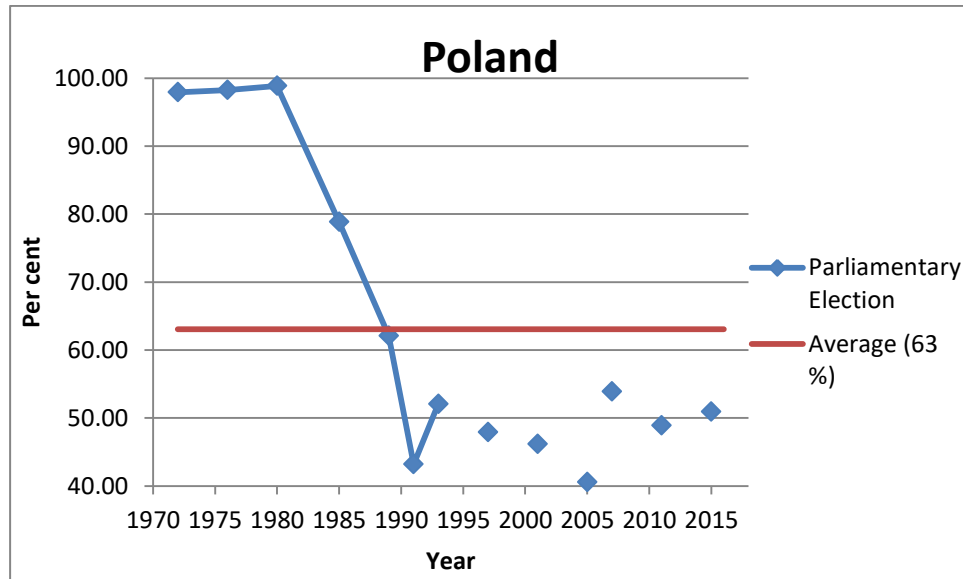
The political landscape in the Netherlands consists of one major bloc, People's Party for Freedom and Democracy with 29 per cent turnout at the last election in 2017. In addition, there are several smaller and middle/major blocs, with the turnout from 3 per cent to 20 per cent, where the recent polls indicate levels from 3 per cent up to 17 per cent, and the biggest bloc with respectively 32 per cent. The smaller/medium size parties are respectively, Party for Freedom, GreenLeft, Christian Democratic Appeal, Democrats 66, Socialist Party, Forum for Democracy, Party for the Animals, Labour Party and ChristianUnion.

B.21 Poland

Poland is a republic, where the parliamentary system is bicameral. The country is divided into 41 multi-member constituencies with seats from 7-19, in a total of 460 seats. All the members are elected through proportional representation, according to the modified Saint-Lague method. Through the aggregate vote, parties win their seats for their candidates in a constituency and then allocate them to those with highest total votes. In addition, to be able to participate in the allocation of the seats, a candidate has to allocate 5 per cent of the total votes cast for the party list or 8 per cent for a coalition list. There are only the national minorities that are exempt from these thresholds requirements. Members of the parliament are elected for a four years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1972 and 2015 was approximately 63 per cent. The voter turnout had its highest level in 1980 with 98,9 per cent and its lowest level in 2005 with 40.6 per

cent. Since the 1980's the voter turnout has declined to a relatively low level, where the average voter turnout between 1991 and 2015 was approximately 48 per cent.

The political landscape in Poland consists of two major blocs, the Law and Justice with 37 per cent turnout at the last election in 2015, and Civic Platform with 24 per cent turnout. In addition, there are several smaller blocs, with the turnout from 2 per cent up to 8 per cent, which are, Democratic Left Alliance, Kukiz'15, Modern, Polish People's Party and the Liberty party.

B.22 Portugal

Portugal is a semi-presidential republic with a unitary government. The government is called the Assembly of the Republic, which has 230 members, distributed according to the election. The election takes part every fourth year, and the elected members sit for the whole term unless some unforeseen circumstances take place. The executive power lies with the President and the Council of Ministers, and the president serves for a term of 5 years, without any limits to how many terms. The judicial branch is controlled by the Supreme Court. Voting is not compulsory in Portugal.

As shown in the graph, the average voter turnout is 71.4 per cent. That is not a remarkable number, but as visualized, the voter turnout has been steadily decreasing. Since 1970, which coincidentally is the apex, the voter turnout in the latest election has fallen 35.9 per cent. That is a massive plunge, underlined by only having 55.84 per cent in the latest election. Despite the uptake in 2002 and 2005, this was not significant enough, as the voter turnout continued to decrease

in the next three elections. Another consequence of this is that the voter turnout is now 15.56 per cent points below the average. With four elections in a row with decreasing numbers, this certainly emphasizes the overall trend, and there is no sign of the voter turnout to differ in the upcoming elections.

The political landscape in Portugal consists of two major blocs, the Socialist Party with 32 per cent turnout at the last election in 2015, and the Social Democratic Party with 33 per cent turnout. In addition, there are several smaller blocs, with the turnout from 1 per cent up to 9 per cent, which are the Left Bloc, CDS-People's Party and Unitary Democratic Coalition.
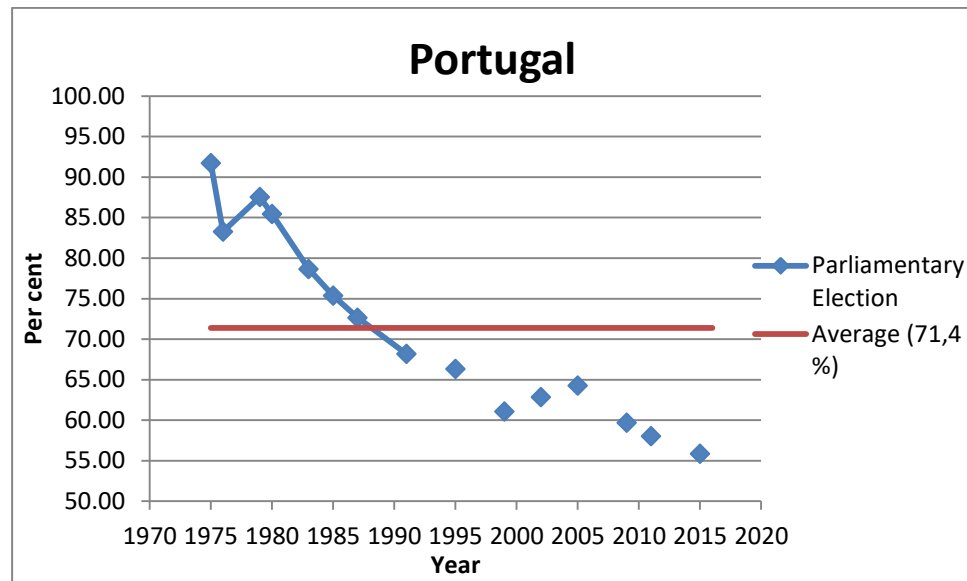

B.23 Romania

Romania is a republic, where the parliamentary system is bicameral. The country is divided into 315 single-member constituencies, where there is one deputy for every 70,000 inhabitants. The voting system in the period from 1990 to 1991 was a multi-member system with 395 seats was elected in 41 constituencies. In this period there was no electoral threshold, and the remaining seats were allocated by the unused votes in a national tier. For the period between 1992 and 1999, there were 325 seats elected in 42 constituencies, where the number of seats was depending on the size of the population. At the national level, it was a 3 per cent electoral threshold, where the Hare formula was used at the district level and the remaining seats were distributed by the unused votes with D'Hondt in a national tier. In the next period between 2000 and 2004, there were 327 seats elected in 42 constituencies. A number of thresholds were implemented, i.e. a five per cent limit if two parties form an alliance and for each additional member of an alliance,

one per cent is added to the legal threshold. Since 2010 a mixed member
proportional system is been used, where each voter votes for a candidate. The
threshold to win parliamentary representation is 5 per cent for political parties
contesting on their own. For political alliances, the threshold varies from 8 to 10
per cent depending on the number of parties comprised of the alliance. There are
reserved seats for ethnic minorities, on the condition that the organization obtains
at least 10 per cent of the average number of valid votes for an elected deputy.
Members of the parliament are elected for a four years term, and voting is not
compulsory.

As it can be seen from the figure below, the overall voter turnout on average
between 1990 and 2016 was approximately 59 per cent. The voter turnout had its
highest level in 1990, and since then it has dropped down to its lowest level in the
2016 election with 37.8 per cent.
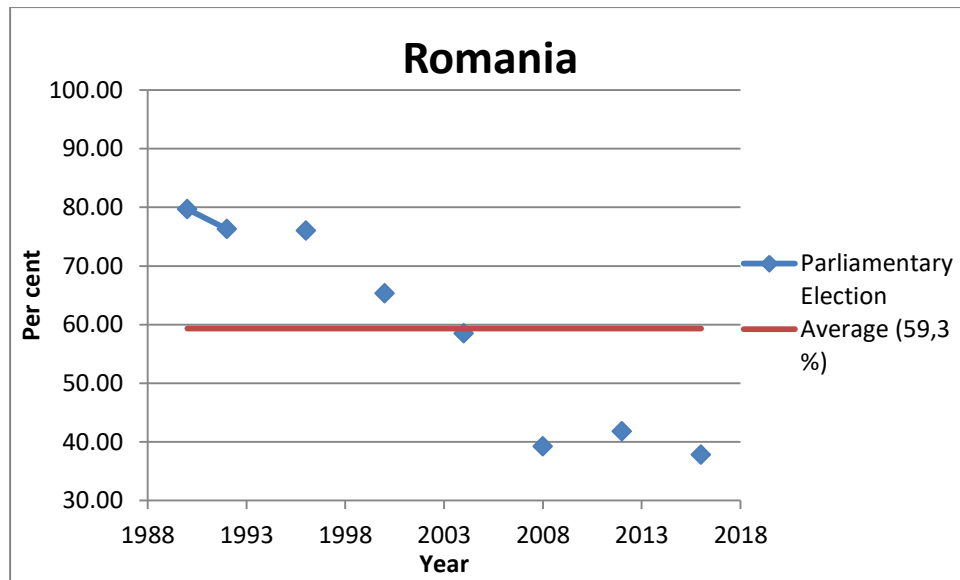
The political landscape in Romania consists of two major blocs, Social
Democratic Party with 36 per cent at the recent poll, and National Liberal Party
with 23 per cent at the recent poll. In addition, there are several smaller blocs,
with polls from 2 per cent up to 9 per cent, which are the Alliance of Liberals and
Democrats, Save Romania Union, Democratic Alliance of Hungarians in Romania
and People's Movement Party.

B.24 Slovakia

Slovakia is a parliamentary unitary republic. The head of the state is the President,
and the head of the government is the Prime Minister. The parliament, called The
National Council of the Slovak Republic, is the legislative body and has 150

members who serve for a term of four years. The President is elected through a popular vote and serves for a term of five years. In addition, the President holds the power to appoint or recall the Prime Minister. The judicial power lies with the general court and the military court. For the election of the President, Slovakia uses a majority two-round system.

Slovakia has had election ever since peacefully splitting from former Czechoslovakia. They held their first election in 1990, and a voter turnout at 96.33 per cent that year. This might seem like an abnormally high number but is rather common in states after recently gaining sovereignty. After two elections with declining voter turnout, Slovakia managed to jump back to approximately 85 per cent in 1998. However, the number has since declined quite drastically ever since, and in the latest election in 2016, the number was below 60 per cent. There seems to be a gap before and after the 1970 election, marking five elections with below average voter turnout. In addition to this, the number seems to have been stabilized between 55- and 60 per cent. However, the voter turnout has been increasing the last 10 years, but not significantly enough to actually cause any effect.
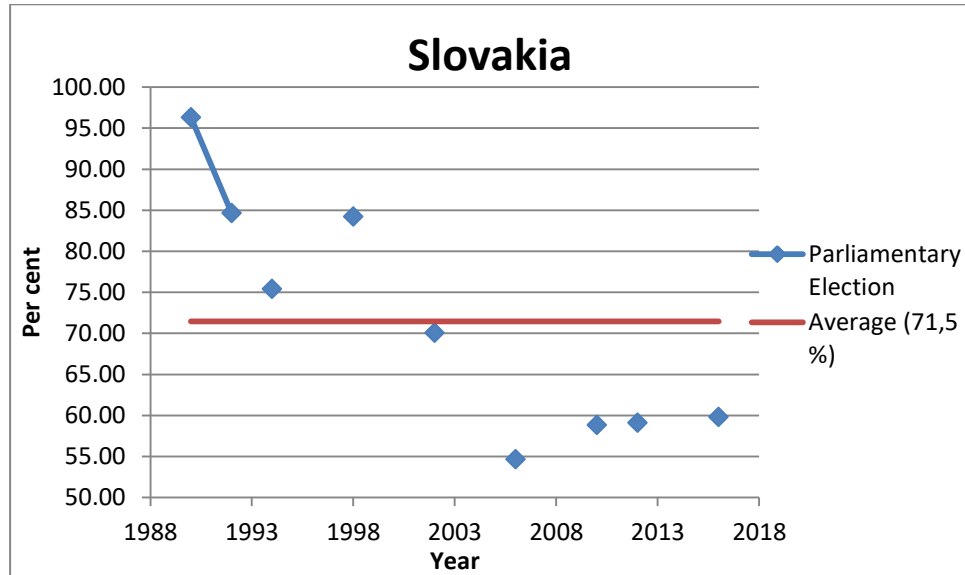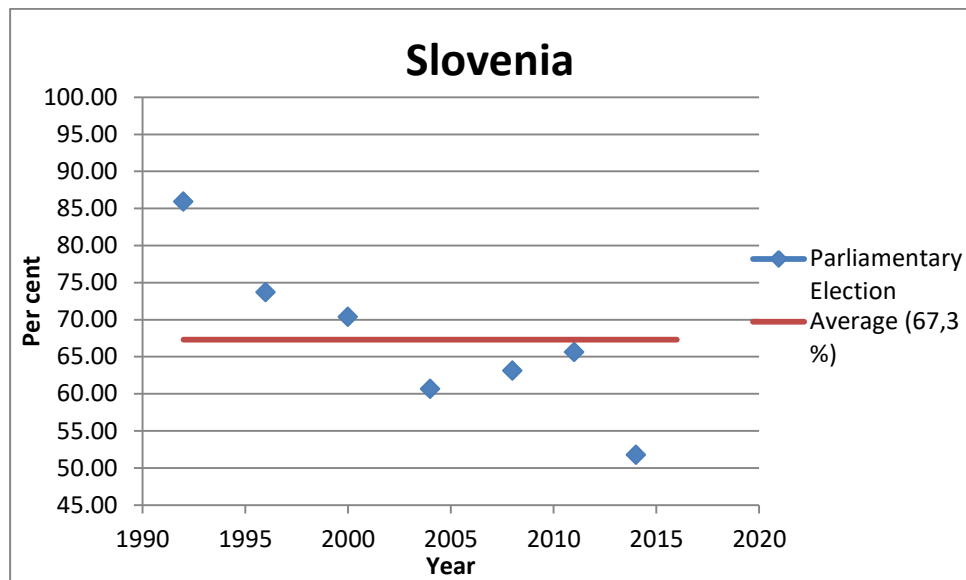

The political landscape in Slovakia consists of one major bloc, the Direction-Social Democracy with 21 per cent turnout at the recent poll. In addition, there are several smaller blocs and medium level parties, with turnout from 3 per cent up to 14 per cent at the recent polls, which are Freedom and Solidarity, People's Party-Our Slovakia, We Are Family, Slovak National Party, Ordinary People, Christian

Democratic Movement, Bridge (Most–Híd), Progressive Slovakia and Party of the Hungarian Community.

B.25 Slovenia

Slovenia is a republic, where the parliamentary system is bicameral. The country is divided into eight electoral units, which are in turn divided into 11 single-seat constituencies, in a total of 88 seats and the last two seats are for the Hungarian and Italian minorities, which gives a total of 90 seats at the parliament. Members are elected through proportional representation by using quotient and preferential system, with a threshold for the 88 members of 4 per cent. Both male and female candidates must be represented by at least 35 per cent of the total number of candidates on the party list, which were implemented the first time in the 2008 election. Any remaining seats are distributed at the national level by using the d'Hondt method. Members of the parliament are elected for a four years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1992 and 2014 was approximately 67 per cent. The voter turnout had its highest level in 1992 with 85.9 per cent and has then declined to the lowest level at the last election in 2014 with 51.7 per cent.
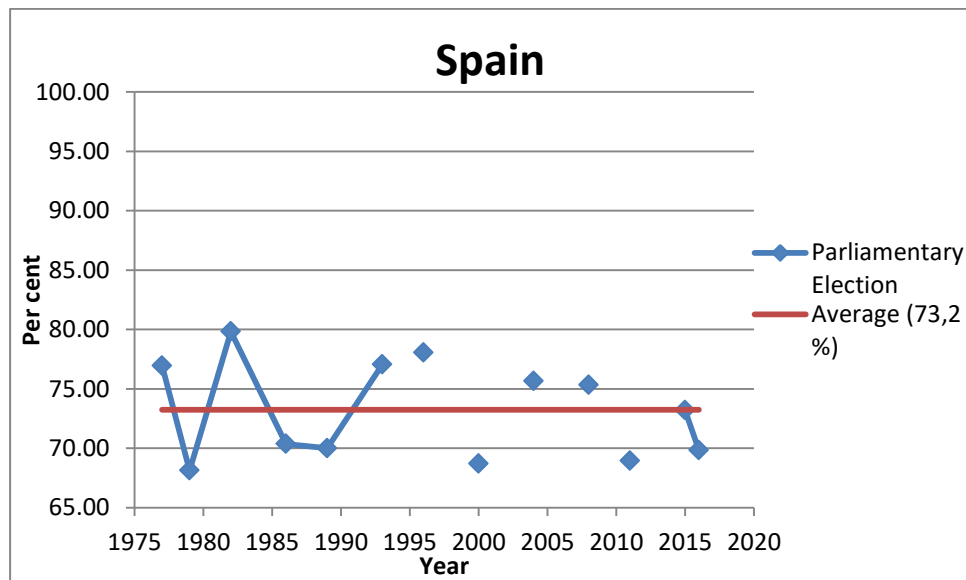

The political landscape in Slovenia consists of one major bloc, the Slovenian Democratic Party with 25 per cent turnout at the last election in 2018. In addition, there are several smaller blocs and medium level parties, with turnout from 2 per cent up to 14 per cent at the last election, which are the Marjan Šarec List, Social Democrats, The Left, Modern Centre Party, New Slovenia, Party of Alenka

Bratušek, Slovenian National Party, Democratic Party of Pensioners of Slovenia and Slovenian People's Party.

B.26 Spain

Spain is a constitutional monarchy, where the parliamentary system is bicameral. The country is divided into 50 multi-member constituencies, which corresponds to the countries provinces with a minimum of two seats per province and the rest allotted according to its population. In addition, there are two single-member constituencies for the North African enclaves of Ceuta and Melilla. The voting system is mixed, with blocked party lists and the d'Hondt system of proportional representation. Through this system, each voter chooses one list of those made available in the constituency and for the single-member constituencies a simple majority vote is used. Members of the parliament are elected for a four years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1977 and 2016 was approximately 73 per cent. The voter turnout had its highest level in 1982 with 79.8 per cent and its lowest level in the 2000 election with 68.7 per cent of the total votes.
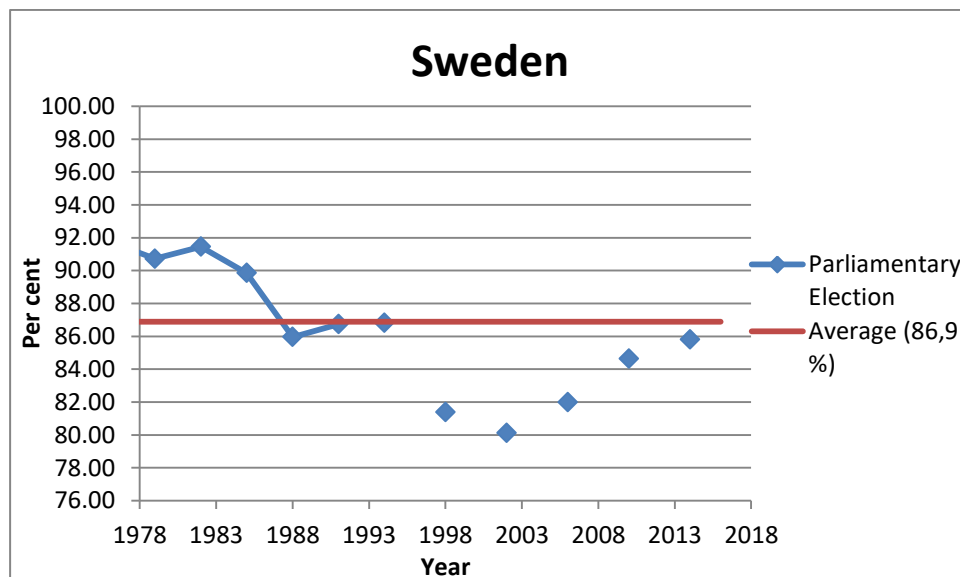

The political landscape in Spain consists of three major blocs, People's Party with 30 per cent turnout in the 2016 election, United We Can with 24 per cent turnout and Spanish Socialist Workers' Party with 22 per cent turnout. In addition, there are several smaller blocs and medium level parties, with the turnout from 1 per cent up to 13 per cent at the last election, which is Citizens-Party of the Citizenry,

Republican Left-Catalonia Yes, Catalan European Democratic Party, Vox and Basque Nationalist Party.

B.27 Sweden

Sweden is a constitutional monarchy, where the parliamentary system is unicameral. The country is divided into 29 multi-member constituencies which consist of 310 members from 2-34 seats each based of the number of eligible voters. In addition, there is one other multi-member constituency for 39 seats, which gives a total of 349 members at the parliament (Riksdagen). The members of the 29 multi-member constituencies are elected under the closed-party list system with a preferential vote. Moreover, candidates are proportionally distributed after the modified Sainte- Laguë method. A party must obtain either 12 per cent of the votes cast in a constituency or at least 4 per cent of votes cast throughout the country to be awarded a seat. The 39 remaining seats are allotted by the system of full proportional representation by the votes cast nationwide. In this case, a party must obtain at least 4 per cent of the total votes. Members of the parliament are elected for a four years term, and voting is not compulsory.

As it can be seen from the figure below, the overall voter turnout on average between 1970 and 2014 was approximately 87 per cent. The voter turnout had its highest level in 1976 with 91.8 per cent and its lowest level in the 2002 election with 80.1 per cent. Since 1976 the voter turnout has declined to its lowest level in 2002, and since then it has increased from election to election, with a turnout of 85.8 per cent in 2014.
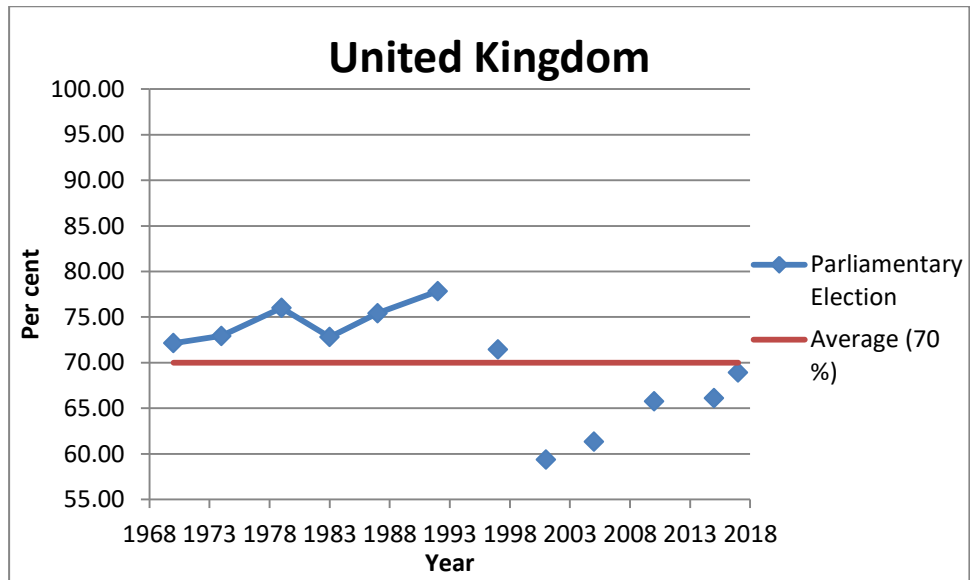
The political landscape in Sweden consists of two major blocs, the Swedish Social Democratic Party with 31 per cent turnout at the last election in 2014, and Moderate Party with 23 per cent turnout. In addition, there are several smaller blocs and medium level parties, with the turnout from 3 per cent up to 13 per cent at the last election, which are Sweden Democrats, Centre Party, Left Party, Green Party, Liberals, Christian Democrats and Feminist Initiative.

B.28 United Kingdom

The United Kingdom is a bicameral parliamentary with a devolved constitutional monarchy. The head of the state is the Monarch, while the head of the government is the Prime Minister. In addition to being the head of the government, the Prime Minister selects all other ministers. The parliament is called the House of Commons and consists of 650 members. All of the members serve a term of five years and is chosen from their respective constituency. Candidates of each constituency are chosen from their political party, or they run as an independent of a political party. There is no election of Queen or King, and the titles are inherited. The monarch formally appoints the Prime Minister. The voting system is a direct simply majority vote. Voting is not compulsory.

When it comes to the voter turnout in the United Kingdom, there clearly seems to be a big difference before and after the 1997 election. After having steady growth from 1970 to 1992, the number plummeted in 2001. It went from 77.83 per cent to 59.38 per cent in just two elections. In addition to this, the voter turnout has never been above average ever since. The 2017 election also marked the fifth election in a row with under average voter turnout. However, the trend is clear that the voter turnout is growing. In fact, the last five elections have seen an increase of almost 10 per cent points in voter turnout. Even though there is a clear growth, it is clear that it is very modest, and the change from 2015 to 2017 was unremarkable.

United Kingdom

The political landscape in the United Kingdom consists of two major blocs, the Conservative and Unionist Party with 43 per cent turnout at the last election in 2017, and the Labour Party with 39 per cent turnout. In addition, there are some smaller blocs, with the turnout from 2 per cent up to 8 per cent at the last election, which are Liberal Democrats, UK Independence Party, SNP and the Greens.

Appendix C – Preliminary thesis report

Summary

This preliminary thesis report will give a picture of the main topics and ideas I will use in order to write my master thesis; "The impact of the Internet on voter turnout". This report gives my supervisor Per Botolf Maurseth an image of how the final product will look like. It includes an introduction to the chosen topic, theoretical background, the preliminary literature review, a methodology and data part, and finally, I will outline a progression plan.

1.1 Introduction

Since the beginning of the 20th century, there has been a significant change in how people collect and acquire political information. Through a constant increase of available literature, where the emergence of newspapers, the radio, and television facilitated the distribution of information among the population. However, the selection and filters of information during the production of mass media may affect the voter's opinions and could potentially change how people vote. Immediately, if the voters are aware of the media bias and how they filter it from the information, distortions in media reporting are unlikely to have large effects on voter beliefs (Bray and Kreps, 1987). While a more recent study suggests that voters do not sufficiently account for bias in the media, so media bias could persuade voters (De Marzo, Vayanos, & Zwiebel, 2013).

Even though the 20th century was embossed by a growing availability of literature, the new mass media of the 21st century through the emergence of the Internet has changed the media once again substantially. As the Internet's primary function is to provide access to information on a global basis, as well as allowing people to share ideas. It is also more cost-effective, where information can be distributed at high speed, which gives a broad scope of opportunities; as a result, there is egalitarian access to the production and the consumption of news (Prat & Strömberg, 2011). The internet has increased the access to political information, which exposes the public to political coverage, and provides people to gain more understanding about political issues and candidates. In a more recent study, Falck, Gold and Heblich suggested that there is a small negative effect of Internet access on voter turnout, and no evidence that the Internet systematically benefits single

parties in the Germany election. However, this study only analysed the introduction of the Internet in Germany. In addition, one of their explanations was that the Internet could possibly crowd out other media that contain more or better information (Falck, Gold & Heblich, 2012).

1.2 Research question

There is little research so far known about the role of the Internet on voter turnout, in fact, there is no research about how the Internet affects the voter turnout at the Norwegian election. In my thesis, I will seek to understand how the Internet affects voter's behaviour and how electoral decisions are made by voters. By analysing voter's behaviour and participation in elections it may explain influential factors. More precisely I will try to answer whether having access to the Internet may influence the voter turnout at the Norwegian election.

1.3 Preliminary Report: Outline

This preliminary thesis report will outline my main idea of how I plan to solve and write my master thesis. Firstly, I will lay-out the theoretical background, secondly the preliminary literature review of this topic by reviewing relevant literature I expect to be using. Thirdly, I will outline the methodology and data part collected so far, and finally, I will present a progression plan.

2.0 Theoretical framework – background

The availability of information and the communication system, through the media, is the main source of information for voters about politicians, the ideological positions of parties, and the government policies. The Internet is the new technology of the 21st century that combines the television, print media and the radio through a high level of speed, which serves new opportunities. Theoretical models suggest that more information is usually an advantage for voters, due to it helps them in a more efficient way to monitor, as well as allowing people to gain more knowledge about their politicians (Besley & Prat, 2006; Strömberg, 2004). This reflects that access to the Internet gives people a freedom of information. However, the quality of information provided by the media may contain possible biases, due to regional differences which could focus on different political issues and so on.

There is still an ongoing debate among researchers on whether the Internet has an effect, if any, on political participation. They typically discuss whether the Internet stimulates new types of people to engage in the political process, political participation and mobilization through encouraging an egalitarian democracy, or whether it is just a new tool for those who primarily are already politically active and engaged (Norris, 1999). These debates have typically fallen into two different theories, mobilization and reinforcement. A summarized collection developed by Pippa Norris in 1999 effectively explains the difference between these two theories.

The mobilization theory states that the Internet will reduce the barriers to civic engagement, due to lowering the financial cost of news, expanding the opportunities for political debate, as well as allowing citizens to have group interactions (Norris, 1999). This makes it easier for citizens to engage in political debates, understand political issues, and knowing their political representatives in a much more immediate way than before, and therefore are the citizens more likely to vote. This theory assumes that the Internet will at some point overtake both the television and traditionally newspapers (print media) as the primary source of information and news, through a constant expansion, both for general and election-related news (Norris, 2002).

In contrast to the mobilization theory, the reinforcement theory states that increased Internet use will have little effect on voter participation, due to not rationally transform existing patterns of civic involvement. The main argument is due to the matter of internet access, where those who are most likely to have Internet access are most probably those with the skills to use the full potential of the Internet, and it has tended to be the more educated and well-off citizens, which could indicate that they are more likely to be politically invested. This theory suggests that the Internet contributes to strengthening political information to those who are already politically active or in the elite part of the society, which would widen the gap between them and those that are less rich or politically inactive (Norris, 1999).

3.0 Literature review

The Internet in Norway was connected to the American predecessor Arpanet first time in 1973, but the Interest for Internet came first in the mid 90's when most of the citizens became aware of the new technology. The Internet came into wide use firstly in the beginning of the 21st century. There is still little research about how the Internet affects the voter turnout and the voter's behaviour at the Norwegian election. However, several studies are developed on a more international level, which has found mixed findings of the Internet's relationship to political participation. To draw a picture of the mass media in Norway, the figure below presents how many in percent of the Norwegian population that used different mass media on an average day, between 1997 and 2015. This illustrates that the role of Internet has increased over the past decade, but it doesn't explain the relationship between Internet access and political participation, which I will try to answer in my thesis.

Figure 2. Percentage who used different mass media on an average day, age 9-79 years
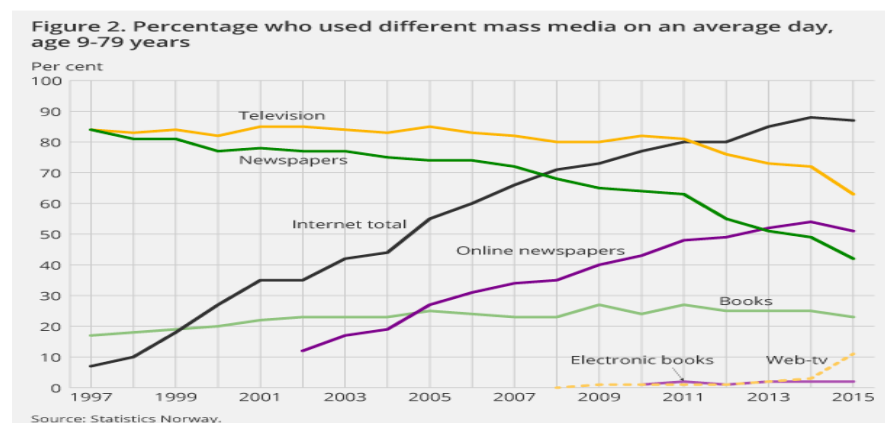
In a study developed by Rune Sørensen (2017): "The impact of state television on voter turnout" presents a comparative analysis of Gentzkow's earlier research (2006), which found that the introduction of commercial television in the US was the cause of a drop in voter turnout. In contrast, Sørensen's research on how the introduction of broadcasting television has influenced the voter turnout in both local and national elections in Norway during the 1960s and 70s found that public broadcasting television caused an increase in voter turnout. Sørensen's research is of high relevance for this paper, due to it is the most nearby study developed so far on Norwegian mass media.

Several of the first studies of the Internet's effect on political participation is conducted by Bruce Bimber, that's found a pattern of reinforcement rather than mobilization. In his earlier study from the late 1990s, he found that there is a small evidence of the relationship between Internet access and political participation (Bimber, 1990). However, in a later study by Bimber, he suggested that historically the evolution illustrates that new media and other communication tools have not resulted in an increase in civic engagement. Despite that many people had huge hopes for the Internet, and therefore he concluded with that the Internet would follow the same trends as earlier media. There has happened a lot with the Internet since the early stage, which raises a question mark to Bimber's conclusions, due to the way the world is today. However, the Internet is fundamentally different from past media evolution, both as a source of information and news. In contrast to past media evolution, the Internet consists of unlimited storage possibilities, as well as audio and visual capabilities, which provides more information to the public.

In contrast to Bimber's research, other researchers have found that there is a positive correlation between both voter turnout and political participation on Internet usage. These authors concluded that the Internet provides the public with low cost, more detailed and convenient political information in a more efficient way, which engage civic participation (Tolbert & McNeal, 2003; Weber, Loumakis & Bergman, 2003; Shah, Kwak, & Holbert 2001).

A study developed by Tolbert and McNeal (2003), examines the impact of the Internet on voter turnout in the American National presidential election in 1996 and 2000, found that individuals with access to the Internet and online election news were significantly more likely to vote in the presidential election. They concluded that Internet access does have a positive effect on voter turnout and that there was a growing distinction between those who had access and those without Internet access (Tolbert & McNeal, 2003). In a somewhat comparable study developed by Markus Prior (2001), found out that citizens who use the Internet to find information and news exchange are more likely to be politically active compared to those who have a higher preference for entertainment activities over the news (Prior, 2001).

With this in mind, it is important to note that research conducted from the late 1990's includes information from the early stage of Internet's history, which suggested that there was no link between Internet usage and political participation. Since the beginning of the Internet's history, have the number of Internet users increased at a high speed from year to year. However, almost all the mentioned research is conducted by American's, there is some research developed by Europeans.

In a more recent study, Falck, Gold and Heblich suggested that there is a small negative effect of Internet access on voter turnout, and no evidence that the Internet systematically benefits single parties in the Germany election. However, this study only analysed the introduction of the Internet in Germany. In addition, one of their explanations was that the Internet could possibly crowd out other media that contain more or better information (Falck, Gold & Heblich, 2012).

Despite recent cycles and trends, which indicate an increase in the use of the Internet, and so far developed research on the field, there are still some unanswered questions whether the Internet has had an effect on voter turnout on the Norwegian election.

4.0 Data and Methodology
4.1 Data
All data in this study will be based on each election year in the period 2000-2010. I will seek to find relevant data files that include; whether citizens have access or not to the Internet, the consumption of online news, the possible crowd-out effect on other media types, possible biases in media, voting behaviour, and political participation in the stated sample period. I also need to include independent variables to determine the effect of Internet use on voting participation (treatment-group), while controlling for previously discussed factors (control group). These factors would include some independent variable I.e. income, age, gender, education level, politically active or not, race, and other possible factors. The first figure below shows the electoral turnout at the Storting election in percent,
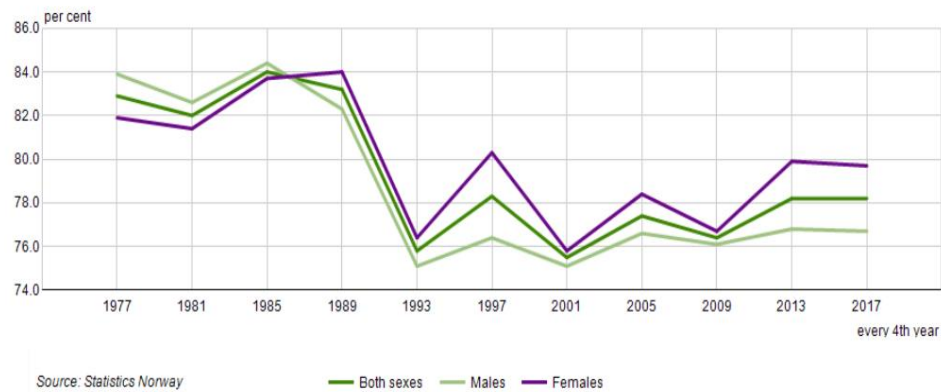
through every 4th year. The second figure shows the Storting election sorted by sex in the same period.

Storting election. Electoral turnout (per cent), by sex, age, contents and every 4th year

Source: Statistics Norway
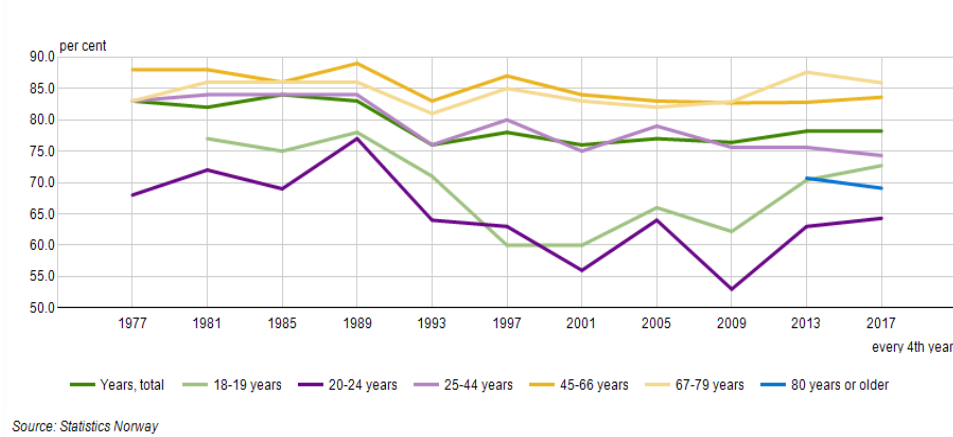
Storting election, by sex, contents and every 4th year

Source: Statistics Norway

4.2 Methodology

In this part I will explain the methods I plan to use in my research, hence the methodology part is not decided with certainty, and it is something I need to discuss with my supervisor. However, the choice of method for this thesis would be quantitative, as well as underlying theories.

4.2.1 Research design

To get a perspective that comes close to today's situation regarding the role of the Internet, and its influence on voter turnout in the Norwegian elections, I need to set up a research design that can lead to correct descriptions and data. The research design describes all kinds of processes related to the analysis that best solves the stated research question. This includes the type of data, mean of acquisition, and method of analysing the data (Gripsrud, Olsson & Silkoset,

2011). This means that I need to collect relevant information and fully understand the topic before I draw any conclusion, regarding the choice of model.

4.2.3 Regression Model

Sørensen (2017) developed a baseline regression model in his study on the impact of the introduction of state television on voter turnout in Norway. Sørensen separated the estimations related to this baseline model for both the local and national election. This model regress levels of voter turnout against a dummy intervention variable, where $TV_{it} = 0$ before television signals could be received in a municipality i in year t, and equal to 1 when the signals could be received. The share of the eligible population who cast their votes in municipality i in election year t, is defined by $Turnout_{it}$. Sørensen used a logistic transformation of the response variable in his estimated regression model, which takes the fractional character of the response variable into account. Sørensen's baseline model includes: specification employs fixed effects for municipalities (ϑ_i), election years (τ_i), and a random error component (ω_{it}). His key hypothesis behind this model was that the television has a positive effect on voter turnout (α>0). Sørensen's baseline regression model are as follow (Sørensen, 2017):

$$ ln\left(\frac{Turnout_{it}}{1 - Turnout_{it}}\right) = \propto TV_{it} + X_{it}\varphi + \vartheta_i + \tau_t + \omega_{it} $$

In my thesis I will use a similar model as the one used in Sørensen's research, to estimate the effect of the Internet on voter turnout. The most obvious variable I need to change is the TV_{it}, with a new variable $Internet_{it}$. The new variable $Internet_{it}$ would then be equal to zero for those who do not have Internet access (or equal to zero before Internet access could be received in a municipality i in year t), and equal to 1 for those who have Internet access (or equal to 1 when the Internet access could be received). All other variables would be exactly identical to those used in Sørensen's baseline model. The regression model for this thesis would then look something like:

$$ ln\left(\frac{Turnout_{it}}{1 - Turnout_{it}}\right) = \propto Internet_{it} + X_{it}\varphi + \vartheta_i + \tau_t + \omega_{it} $$

Sørensen also tested for "the persuasion effect (PF)", which indicates the percentage of receivers that change the behaviour among those that receive a message and are not already persuaded" (Sørensen, 2017). In this model, Sørensen tested the difference in voter turnout in the treatment group and control group, represented by $Turnout_{TV} - Turnout_0$. Further, those who received the television broadcast was measured by the share of households with TV license ($License_{TV}$), assuming that people did not buy the licence if they couldn't receive TV signals ($License_0 = 0$). Those who did not vote in the last election and were exposed to TV signals is measured by ($1 - Turnout_0$). The number 100 measure the total (100 percent). This persuasion effect model looks like:

$$PR = 100 \left(\frac{Turnout_{TV} - Turnout_0}{License_{TV} - License_0} \frac{1}{1 - turnout_0} \right)$$

In my thesis, would a PR-model test the difference in voter turnout in the treatment group and control group, represented by $Turnout_{Internet} - Turnot_0$. Those who received Internet access measured by the share of households with Broadband ($Broadband_{Internt}$), assuming that people did not buy Broadband if they couldn't receive Internet access ($Broadband_0 = 0$). The PR model for my thesis would then look something like:

$$PR = 100 \left(\frac{Turnout_{Internet} - Turnout_0}{Broadband_{Internet} - Broadband_0} \frac{1}{1 - turnout_0} \right)$$

Another possible model I am going to discuss with my supervisor is a model which includes: Internet access or not, age, gender, college or not, race, politically interest or not, income and other possible variables.

$$Voted = B_0 + B_1 Internet_{Acess} + B_2 Race + B_3 Political_{Interest} + B_4 Age \\ + B_5 Gender + B_6 College + B_7 Income + B_8 Other_{variables} + \varepsilon$$

4.2.4 Validity

Validity refers to how accurate you measure the objective you seek to measure (Gripsrud, Olsson, & Silkoset, 2011). As a contribution to this thesis, there may be reasonable to include the mobilization effect, due to it could cause a disturbance in the estimates, based on voters that normally would participate in the election. This effect could potentially result as a threat to the estimates I will carry out in this thesis. I.e. the King's Bay incident, which was an accident at Svalbard in 1962 where 21 people died, as a result, the voter turnout increased in the 1963 and 1966 elections in Norway.

5.0 Progression plan

15th of January – Hand in the preliminary report.

16th-31th of January – Deeper studies of the topic and collecting data, as well as discussing the preliminary report with my supervisor.

01th – 15th of February – Prepare presentation and work on the analysis.

15th of February to the end of April – Complete the first draft for feedback.

May-June – Correct and improve thesis after feedback.

01th of September – Hand in final thesis.

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