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ENGAGING YOUTH VOTER PARTICIPATION WITH INTERNET VOTING IN ESTONIA

Master's Thesis

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HÄÄLEÕIGUSLIKE NOORTE KAASAMINE INTERNETI TEEL HÄÄLETAMISELE EESTIS

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Author's declaration of originality

I hereby certify that I am the sole author of this thesis. All the materials used, references to the literature and the work of others have been referred. This thesis has not been presented for examination previously.

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Abstract

Young people in Estonia have the opportunity to vote via the Internet, as Estonia the only country in the world that offers universal, legally binding Internet voting. This research is an attempt to discover if Internet voting is a motivator for youth voter participation. We seek to uncover if Internet voting will overcome youth voter disengagement, and how effective Internet voting is at enfranchising voters, ages 18-25, using qualitative survey data collected after each of the elections from 2005-2015 by the Estonian National Election Survey.

This thesis is written in English and is 46 pages long, including 5 chapters, and 9 tables.

Annotatsioon

Hääleõiguslike noorte kaasamine interneti teel hääletamisele Eestis

Eestis on noortel võimalus hääletada interneti teel, kuna Eesti on ainus riik maailmas mis pakub ülemaailmset ja juriidiliselt siduvat interneti teel hääletamist. See magistritöö uurib kas interneti teel hääletamise võimalus on hääleõiguslikele noortele motivaatoriks valimisaktiivsuse osas. Autor uurib kas interneti hääletamise võimalus tõstab noorte valimisaktiivsust ja kui efektiivne on interneti teel hääletamine hääleõiguslike noorte seas, vanuses 18-25 aastat. Magistritöös kasutatakse kvalitatiivse uuringu andmeid, mis on kokku kogutud pärast kõiki hääletamisi alates 2005 kuni 2015 aastani Eesti Rahvusliku Valimiste Uuringukeskuse poolt.

Lõputöö on kirjutatud ingles keeles ning sisaldab teksti [lehekülgede arv] leheküljel, [peatükkide arv] peatükki, [jooniste arv] joonist, [tabelite arv] tabelit.

List of abbreviations and terms

ENES	Estonian National Election Survey
ICT	Information and Communications Technology
FCC	Federal Communications Commission (US)

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1 Chapter: Introduction

This thesis is about the enfranchisement of youth voters through the use of online voting in Estonia. The idea of studying youth voter motivation and the effects of online voting came purely out of the desire to ensure my sons, aged 18 and 24, would continue to vote. They do everything online, which inspired me to look deeper into why young voters in Estonia choose online voting, and if online voting would engage them into participating in the political process. My home state of Oklahoma has recently seen youth voter registration and participation drop to an all time low after years of steady decline (Felder, 2015). Youth voters should not be isolated from the political process, and if voting online will stimulate their participation, it should be available to them.

1.1 Problem Statement

Political participation, primarily voting in Western democracies, is still rooted in the old, outmoded ways of the past (Krimmer, 2012). The use of Information and Communication Technology (ICT) has not fully caught on in the area of voting, causing a disconnection with younger citizens. This disconnect is viewed as apathy; however, research shows that offering voting services to young people using tools that are rooted in the digital space in which they live, could help to improve their lagging political engagement (Schaupp & Carter, 2005).

The lack of civic participation among youth voters, or Millennials, born between 1981 through 1997,' has become a consistent topic among researchers and journalists (Harris, Wyn, & Younes, 2010; Henn & Foard, 2013; Norris, 2004), (Henn & Weinstein, 2006). However, we believe that youth voters are not politically apathetic, but in fact, they are active and utilizing technology to organize and create new places for discussion and mobilizing for action (Harrigan & Nice, n.d.; Vromen, 2014). Youth participation is important, because it is through participation that the issues that affect them will be heard (Harrigan & Nice, 2008). As of April 2016, the Millennial generation is the largest living generation, surpassing the 'Baby Boomer' generation, those born between

1946-1964. If immigration to the US continues, the Millennial demographic will swell to a projected 81.1 million in 2036 (Fry, 2016). Thus, researchers keep searching for a way to motivate them toward the polling station. We believe the answer may be, instead, we should focus on getting them to the polling station to them.

1.2 Research Objectives

The goal of this research is to determine if the use of Internet voting has helped to enfranchise youth voters in Estonia. Through analysis of post-election surveys, we will determine why youth voters, between the ages of 18 and 25, use the Internet voting system. We will also look at the reasons they are using the traditional paper voting. Through this, we hope to determine a clear picture of what motivates online voting behavior; and if the online service delivery is a motivating factor. Overall, youth participation in Internet voting has held steady at an average of around nine percent since 2005 (vvk.ee, 2015).

1.3 Research Questions

To determine if online voting promotes engagement among youth voters, we formulated the following research questions. We began with a simple question about 'why' do young people vote online. From there, we derived our main research question and three sub-questions to better understand how youth view political participation, what factors influence them to participate, and what is the current characterization of political participation.

We also wanted to see how having the availability of Internet voting has changed the perception of voting for youth, and has there been a change in this over time. Lastly, we wanted to explore ways that can potentially engage youth into political participation. In order to properly answer our main research question and our corresponding sub-questions, we have structured them into "how" and "what" questions. The "how" questions are the broader questions and the "what" questions are structured to help with the granularity of the "how" questions. The main research question and corresponding sub-questions will be answered in the conclusion.

Main Research Question: How effective is online voting in enfranchising voters, aged 18-25, into the political process? For this question, we looked at the collective data from the survey responses, the online voting studies from other countries, and the studies regarding youth participation.

Sub-question: How to study the motivations, urges, fears, drives, etc. which influence the degree of political participation among 18-25 year-olds? We chose to focus on the motivating factors and barriers for political participation of voters within our target demographic.

What internal and external influences affect political participation among youth?
There are internal and external factors that will inspire youth voters to participate in the political process or not: these include the level of education, parental and peer engagement, political efficacy, and the concept of what constitutes political participation as defined by the Millennial generation (Norris, 2004).

What is characterized as political participation in the 21st century?
Youth civic participation is changing as times have changed. Harris et. al says they are participating in ways there are defined as more 'ordinary' (Harris et al., 2010), for example posting in social media or choosing to recycle.

Sub-question: How to categorize usage or non-usage of online voting based on current survey data?
The survey data included, not just the fact that a voter used the Internet channel, but was also able to record youth voter's impressions of using the service. We were able to aggregate the data and find common themes that could then be coded for evaluation.

What are the findings from the ENES post-election surveys?
Youth voters did use both technology-enabled and traditional methods when voting. Many youth voters chose to vote using the traditional method. They opted to walk to the polling station with family or friends, while many experienced difficulties with the system due to technical issues.

What are the changes noted in the survey data over time?

Some of the reasons for using the online channel changed over time. Youth voters became less concerned with the newness of the service, and focused more on the convenience.

Sub-question: How to increase the participation in the political process of the target age group?
Studies have shown that increasing participation has many factors (Henry, 2003). We explore several of the factors including the participation in youth service organizations is a factor in future political engagement.

What would enhanced civics education do to improve youth voter turnout?
Increasing civics education could help educate youth about the importance of voting, however it must be done in a way that is comfortable for them, and actively engages them to actively participate (Barber, 2003).

What is the frame of political participation and is it shifting from the old model to a new one? There must also be a consideration for the change in the framing of what political participation is within the current technology-enable society. The classification of what is considered political participation was formed decades ago (Nie, Verba, & Kim, 1974). Technology is changing youth interaction and communication (Vromen, 2014).

What is the role of technology in engaging youth voters?
We will consider Social media its role in changing the face of participation among youth today (Bond et al., 2012). Activism in social movements may longer mean taking to the streets, but logging into Twitter or Facebook (Bond et al., 2012; Lim, 2012).

1.4 Context

Estonia is not the only country in the world that has used Internet voting. Many countries have held trials or offer Internet voting in regions or states (M. Alvarez & Hall, 2004). In the late 90s, the US Congress introduced legislation, HR3232, which allowed the president to appoint a committee to study the feasibility of Internet voting. After which President Bill Clinton instructed the National Science Foundation to form a panel and generated a report about the risks and possible benefits of Internet voting

(Clinton, 1999). Since that report was issued in 1999, only a handful of Internet voting trials have occurred in the US; the most recent one in March, 2016 in the Utah Republican primary (Phillips, 2016).

However, Estonia is the only country that has nation-wide, legally binding Internet voting. Estonia is known for its use of ICT in e-governance and has a developed system of online services (Breuer & Trechsel, 2006). The country has established a technological and legal framework that allowed for the implementation of online voting (Madise & Martens, 2006; Vinkel, 2015). The Estonian ID card system is the cornerstone of the Estonian digital life and allows for user authentication and digital signature verification for online voting (Martens, 2010). Offering a digital way to cast one's vote is a positive step into creating a digital space where young voters can then utilize their technology skills and apply them to the democratic electoral process (Bochsler, 2010). As Trechsel et al. discovered in their 2007 analysis of the system, those aged 18-29 did capitalize on the new technology (Trechsel, Alexander, 2007). Youth voters found the use of Internet voting to be convenient and easy to use (A. Trechsel, Schwerdt, Breuer, Alvarez, & Hall, 2007). Internet voting technology is now more than 10-years-old in Estonia and is diffused across the population (Slovak & Vassil, 2016).

1.5 Empirical data and previous overall analysis

The Estonian Internet voting system provides an opportunity to see the emerging patterns in areas of adoption, diffusion, impacts, and security of the systems over time. We are building upon the previous works on this topic, including Wolfgang Dreschler and Ülle Madise (2004) with the overview of Internet voting in Estonia, which included the political, legal, technological, and social frameworks (Drechsler & Madise, 2004). E-voting in Estonia was also addressed in 2005 by Ülle Madise and Tarvi Martens in their report concerning the success of the 2005 Local elections with the online voting component. With the proper legislative framework, Estonia was set to continue the program in 2007. In 2005, Fabian Breuer and Alexander Trechsel conducted a study of the newly implemented system. The goal was to determine the "political, demographic, and socio-economic effects of the introduction of Internet voting (Breuer & Trechsel, 2006)." Alexander Trechsel et al. in 2007 studied the impacts of Internet voting in

Estonia. The report to the Council of Europe (CoE) included a wide range of topics to give an overview of how the Internet voting impacted the voters and political parties. The data was collected in a post-election survey that included coded and open-ended questions (A. Trechsel et al., 2007). After two consecutive, successful elections using the Internet voting channel, Maaten and Hall looked at the need for transparency in the system to protect the legitimacy for the voter (Maaten & Hall, 2008). Hall, Alvarez, and Trechsel wrote a comparative analysis of the Estonian system in 2009, which discussed the sophistication of the Estonian system compared to other larger countries attempting to implement similar Internet voting trials, including the UK, Norway, and the US (R. M. Alvarez, Hall, & Trechsel, 2009).

In 2010, Trechsel and Kristjan Vassil et al. published another report outlining "the determinants that lead some citizens to opt for e-voting and others for traditional means of participation (A. H. Trechsel, 2010)." Daniel Boschler posed the question, "Can Internet voting increase political participation?" in his 2010 study of the Estonian system. Boschler concluded that Internet voting has the potential to bring in more youth voters based on the first two elections, but it seems to enhance participation by those who would already vote (Bochsler, 2010). He also discovered that as distance to the polling station increased the more interest there was with the opportunity to vote online (Bochsler, 2010). Robert Krimmer published his study on the effects of technology in voting and technology's effects on democracy (Krimmer, 2012). Priit Vinkel studied the legal aspects, impacts, and trust in the Estonian system in 2015. He gave an overview of the legal framework and constitutionality of the system, as well as gauging the impacts with that of other Internet voting trials and the importance of building voter confidence (Vinkel, 2015). Most recently, Mihkel Slovak and Kristjan Vassil published a comprehensive book on the diffusion of Internet voting throughout the population of Estonia; no longer is Internet voting just attractive to the younger generations (Slovak & Vassil, 2016). Regarding security, Sven Heiberg gave an overview of the security systems in place, both in terms of technical security of the system and environmental security in the form of location security of servers and hardware (Heiberg, 2010). Security must be a consideration to build trust into the system, so citizens trust using the system (Vinkel, 2015). Internet voting in Estonia is not without its critics, Sprinhall et al. gave a critical analysis of the security of the Estonian system in 2014 touting the risks outweigh the rewards (Springall et al., 2014). However, log analysis conducted in

2013 and 2014 as been useful in determining the security of the system by seeking to find anomalies, the conclusion being no events were noted to indicate an attack (Heiberg, Parsovs, & Willemson, 2015).

Internet voting and the potential impacts have also been the subject of numerous articles regarding youth political engagement. Finding solutions to lagging participation among youth throughout Western democracies continues to be a frequent topic. Most begin by looking at youth apathy. Pippa Norris in 2004 wrote about the changing of types of participation or 'repertoires' by younger generations, giving us perspective on the changing methods of participation (Norris, 2004). Matt Henn et al. looked at youth disengagement in Britain; they concluded that "…young people in Britain are sufficiently interested in political affairs to dispel the myth that their apparent disconnection from formal politics is as a consequence of their general apathy (Henn, Weinstein, & Forrest, 2005)." Henn and Oldfield found that "today's youth are anxious that there exist only relatively few available opportunities for them to meaningfully participate in formal politics…(Henn & Oldfield, 2016)." Whereas Anita Harris et al. focused on what she characterizes as youth that participate in 'ordinary' means of civic participation (Harris et al., 2010).

The inclusion of ICT into the political process has been widely discussed. Ann Macintosh in 2003 studied the creation of political participation website for youth in Scotland, she found that it is possible to actively engage youth using technology (Macintosh, Robson, Smith, & Whyte, 2003). Macintosh continued the theme in 2004, by discussing the potential of ICT to expand the participation (Macintosh, 2004). Stephen Coleman and Jay Blumler published their book *The Internet and Democratic Citizenship* in 2009. They discussed the possibilities that could come from governments embracing technology to foster better communication between the political stakeholders and more participation from citizens, especially youth (Coleman & Blumler, 2009).

The potential for increased voter participation has also had attention since the early 2000s. Susan Henry wrote in 2003 of the possibility of enfranchising voters with the Internet voting trials in the UK (Henry, 2003). Later, in 2005, US researchers Schuapp and Carter studied the factors that would influence youth voters 18-24 in the adoption of Internet voting (Schaupp & Carter, 2005).

The system of Internet voting in Estonia may not be an exact fit in the other countries. However, the experiences gained by utilizing the technology for over ten years can be useful for building a framework. According to Trechsel, the Internet voting system in Estonia did have early success with voters age 18-29 (A. Trechsel et al., 2007), which bolsters our theory that Internet voting could be a way to engage youth voters by moving the voting process forward into the "Age of Information and Telecommunications (Perez, 2009)."

Looking at all the previous work regarding the Estonian Internet voting system, youth participation, and technology-enabled participation, our goals is to view the qualitative data from the Estonian National Election Survey, pertaining to young voters, and determine if the Internet voting technology is a motivator for them. We will also consider if the frame of political participation has shifted.

1.6 Theory

This study builds upon participatory democratic theory and deliberative democracy theory. "Political participation is any activity that seeks to influence the selection of government officials or the actions that public officials take" (Nie & Verba, 1987). Voting is but one of the activities considered as political participation, "…the vote is the one participatory act for which there is mandated equality: each citizen gets one and only one. Other forms of political activity necessitate no such equality of inputs (Verba, Schlozman, Brady, & Nie, 1993)."

According to Carole Pateman, "Individuals learn to participate by participating…Thus, individuals need to interact within the democratic authority structures that make participation possible (Pateman, 2012)." Pateman also calls for changes in undemocratic structures that are failing (Pateman, 2012) and for improving the system so it allows for more decision making, what she calls 'democratizing democracy (Pateman, 2012).'

Often youth voters are labeled apathetic by older generations, but apathetic implies that they participated and dropped out, if we use Lester Milbrath's classification of political

participants which are: *apathetics*, *spectators* and *gladiators*. Milbrath's theory states that *apathetics* are no longer a part of the political process, *spectators* are those involved at a minimum level, and *gladiators* are wholly active in politics (Milbrath, 1981). Youth voters today struggle with political efficacy (Norris, 2001), they feel as if their voices are not heard, and their issues not discussed (D.K., 2014).

One can also say that youth cannot be apathetic by looking at the *life cycle* theory by Norman H. Nie et al. which states that youth are not in the part of their 'life cycle' that makes political participation practical (Nie et al., 1974). Life cycle theory articulates that political participation begins to rise as a citizen reaches early to middle age and then falls again in late age. Nie et al. attribute this to the "startup" and "slowdown" of a person's life. Youth have less interest in politics, because they are starting out and still finding their way in society, by completing their education, finding a job, creating relationships etc. Whereas, older citizens are more vested in politics because they are in stable locations with more commitments (Nie et al., 1974). So, categorizing young people as apathetic may be considered premature on this basis (Norris, 2004).

Sherry R. Arnstein describes citizen participation as a "ladder of citizen participation." Her idea is through earnest engagement of citizens, governments can create "citizen power." She describes the level of engagement that citizens can be given by developing a corresponding vocabulary which she places on an eight-rung ladder (Arnstein, 1969). The bottom rungs are passive ways that those in power placate people without empowerment. Then she works up the ladder to more inclusive acts, such as informing and consulting; to actual engagement through genuine control (Arnstein, 1969). Through real engagement and transferring control, bonds can be formed and participation is then assured.

We will also use Barber's theory of 'strong democracy' which is a bottom-up approach to participation, where the impetus of decision making falls on the polity, not just their representatives. Barber calls on citizens to 'not only vote' but be involved in the community at all levels of government (Barber, 1989). New research shows, youth voters are more likely to volunteer than older people. And yet, their ties to community organizations are lower than the preceding generations (A. Smith, 2013).

1.7 Thesis Structure

This thesis is structured as follows: Chapter 2 will describe elements of that frame our perspective regarding youth political engagement. This background includes defining our target demographic, the Digital Natives. We will discuss how youth participate in civil society. We will touch democracy and how then best to describe eDemocracy. As political participation moves online, we will define and discuss aspects of eParticipation, and then touch on some barriers to participation. Then we will give an overview of the methodological structure in Chapter 3. Next in Chapter 4, we will discuss the results of our analysis of our data and some general observations regarding Internet voting usage by youth voters in Estonia. Lastly, Chapter 5 will give our overall conclusions and relate our conclusions to existing work. Also covered, will be the implications and impacts of our findings and potential of future research.

1.8 Conclusion

Chapter 1 introduced the topic we will cover in this thesis: our reasoning, research questions, literature review, and our underlying theory. We also discussed our context and motivation for the overall research. The foundation of research on Internet voting is growing and we attempted to cover the pivotal works that we used.

2 Chapter: Background

2.1 Introduction

In this chapter, we will give our background narrative. In this we will look at what is considered political participation and civic engagement, and discuss the concepts of eParticipaiton and eDemocracy. Also, we will define our target demographic, the "Digital Natives" and discuss their connection with technology.

2.2 Digital Natives

The generation designated as the "Millennial generation" goes by many nicknames. Marc Prensky coined the term "digital natives" in 2001 in an article published in *On the Horizon*. Prensky defined them by their ability to speak the digital language fluently. He contrasted them with the older generations who are "digital immigrants (Prensky, 2001)." This group has been called the "Internet Generation", the "N(et)-Generation" and the "Digital Generation". As Susan Herring puts it, this is the first generation to grow up in a world where the Internet was always present (Herring, 2008).

"I do think it matters whether someone grew up living a digital life. Digital natives are often less wedded to existing ways…they are far more willing to take the kinds of risks that produce breakthrough innovations," says Alec Ross, one of America's leading experts on innovation (Ross, 2016). Digital natives are inherently open to using technology, and one would theorize eager to use technology to revolutionize democracy.

Carlota Perez's theory of "Technological Revolutions and Techno-economic Paradigms" gives us some perspective regarding how technology transforms, not only the business and economic landscapes, but radical innovation can change society as

well. If we consider how steel changed the 19th century and how oil changed the trajectory of the 20th century, we can more fully grasp what technology and the proliferation of ICT is doing in the 21st century. Information and communications technology has reshaped not only how business is done; but also how we communicate, transfer data, and created new pathways of service delivery for governments. Within these new technological systems change occurs, as Perez says, "New rules and regulations are likely to be required, as well as specialized training, norms and other institutional facilitators." Currently, we are living in the Fifth Technological revolution- the Age of Information and Communication, it seems only fitting that the scope of political participation, whether institutional or social would also be transformed (Perez, 2009).

We can begin to paint the full picture of how the utilization of technology, specifically Internet voting, could be a way to allow for increased participation from those dubbed as "digital natives."

2.3 Youth and Technology

The rallying cry for the technical revolution to finally make it to electoral systems has not ceased. Recently, the Atlantic Council published a report called "Democracy Rebooted: The Future of Technology in Elections." In the report, McCormack states plainly, "…the lives of younger voters are increasingly defined by the digital world, and they will want the elections process to reflect the rest of their lives." (McCormack, 2016) The technology is available, and many companies are actively developing custom software that will accommodate various existing governmental computer infrastructure.

The characterization of the Internet is as a way to actively engage youth voters in the online realm in which they are most accustomed. In this way, the Internet has the potential to foster citizenship, as expressed by Coleman and Blumler "affective citizenship" by creating a sense of community. Online community groups are the norm today. A recent Pew study showed that 72 percent of all Americans use Facebook, and 82 percent of those are aged 18-29 and 70 percent of all users stated they use the site daily (Duggan, 2015). These avenues of engagement could foster a sense of unity around issues that are social and political in nature, and thus, create a more actively

engaged citizen. “Technology itself will not automatically determine the path of the future or the nature of the political process, although it is bound to have an enormous influence on both (Grossman, 1995).” Online forum communities, like Reddit, have millions of users, currently they have around 231 million unique visitors each month (C. Smith, 2014).

Young people today are issue-centric; there are many issues that youth are passionate about, for example Internet Freedom. “…freedom on the Internet is potentially a more volatile political issue among youth than laws governing labor unions (Youniss et al., 2002).” Twelve years after Youniss and her colleagues wrote those words, Millennials, in fact are still fighting for ‘Net Neutrality’. When the issue was to be debated by the US Federal Communications Commission in September of 2014, the FCC opened their website to comments. 3.7 million comments were received with Millennials playing a large role (Kabal, 2014).

In 2008, the Obama campaign harnessed the power of social media in an unprecedented way. Obama’s 2008 campaign was the first time any candidate had utilized social media as a tool for fundraising, mobilizing volunteers, and disseminating messages. His presence on social media eclipsed his rival Senator John McCain and was integral to his winning the election (Aaker & Chang, 2010). This mass online organization translated into votes, as 66% of those 18-29 voted for Obama, and his ability to capture the youth vote continued in 2012, though to a lesser extent. Through coordinated efforts, the Obama organization showed that youth mobilization could create change, thus creating tangible results.

The stories of technology-enabled activism are not just found in the US. The political movement in Egypt in 2011 was fueled in part by an active, young population that mobilized through social media. “…the power of networked individuals and groups who toppled [the] Mubarak presidency cannot be separated from the power of social media that facilitated the formation and the expansion of the networks themselves (Lim, 2012).”

2.4 Factors to Participation

There are other factors that can determine whether youth will participate in the political process. A study conducted in 2013 indicated that race, education, and gender all factor into youth participation (Henn & Foard, 2013). The researchers also discovered that youth voters are not apathetic or apolitical, but disengaged due to the alienation by the current political system. They are also skeptical of the system, and yet they are still "supportive of the notion of elections (Henn & Foard, 2013)." Political efficacy is also an issue with young voters; they are more likely to assume that their representatives are out of touch, and thus will not feel motivated to vote (Vromen, 2014). Education is a factor in whether or not young people have faith in the political process; those with higher education are more likely to be 'supportive' of elections (Henn & Foard, 2013)

A similar study of youth participation in Australia found that young people are "…disenchanted with traditional politics that is unresponsive to their needs and interests, but they remain interested in social and political issues and continue to seek recognition from the political system (Harris et al., 2010)." The Australian study also mentions that there is a gap between the youth and the current representative bodies. Youth voters are not completely disengaged, yet there is a barrier of a common language that prevents them from expressing their concerns or connecting the government actors that would address those concerns (Harris et al., 2010).

Though the numbers of youth voters in Western democracies are in decline, it seems that they are not apathetic; however they are engaging in online venues (Vromen, 2014). The Internet is used in online participation primarily in three forms: a source of information, as a communication mechanism, and a virtual meeting place (Vromen, 2014). Participation is just a click away for today's youth.

Studies have shown that when parents actively participate in political activities, youth will likewise be more engaged, this is one idea that is advancing the concept of lowering the voting age to 16 (Henn & Oldfield, 2016). Similarly, when the close community circles that youth participate in are actively engaged in political processes, there is an increased chance of participation (Bond et al., 2012).

We also cannot discount the influence of peers. Helen Margetts' study on participation based on collective actions tells us there may be some correlation between participation and the number of actual participants (Margetts, John, Escher, & Reissfelder, 2011).

2.5 Civic Engagement in the Digital Age

Civic engagement carries certain benefits to the community. "Civic engagement and social connectedness produce such results—better schools, faster economic development, lower crime and more effective government…(Putnam, 1995)." As youth voters disengage from this process (Henn & Foard, 2013), the structure of civil society is weakened. This lack of engagement has been categorized as a 'crisis of democracy' though most researchers concur this may be a fundamental shift in what civic engagement looks like in the 21st century (Farthing, 2010; Furlong & Cartmel, 2012).

The young voters not only communicate in a different way as their predecessors, but they also learn differently, and thus changes in voting technology would be more logical for them. Technology is enabling many facets of civic participation from organizing to fundraising to online deliberation (Vromen, 2014).

Coleman and Blumler give us three reasons for civic participation: First, citizens can actively work to influence the government. Secondly, participation manifests itself as a sense of duty. Lastly, citizens can come together to further a cause or issue that is meaningful (Coleman & Blumler, 2009). Technology helps to organize and facilitate such interactions between citizens and government, representatives and citizens, and citizens with activist groups (Vromen, 2014).

There are other types of civic engagement or participation beyond voting and marching. To fully understand the shift in political and civic participation, we must also note the distinction between the digital natives and, their counter-parts, digital immigrants. Prensky identifies the difference between those that grew up in the digital age and those who did not; the digital immigrants are still in positions of authority, such as educators and civic leaders. They speak with an "accent" that is not clearly comprehended by the youth today. This gap between the digital immigrants and digital natives becomes more pronounced as technology moves forward. "…our Digital Immigrant instructors, who

speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language (Prensky, 2001)." These are the educators that are trying to inform the next generation about the importance of voting and active engagement in civic life based on past recollections of what participation is.

W. Lance Bennett elaborates on how the younger generation is shirking the old activities for a new "personalized" way of participation through the use of social media. He also makes note of the gap between the older generation and the younger generation in types of political activities. "Part of the gap is surely due to the fact that civic authorities continue to be drawn from the older generations who practice dutiful civic virtues and who understandably think they work just fine (Bennet, 2012)." This individualization of youth voters is what Furlong and Cartmel called 'atomised' political engagement (Furlong & Cartmel, 2012).

The incentive for youth voter's civic engagement does not only fall only on the citizens. Politicians also have to redefine themselves in this new political space being shaped by the younger generation and the technology they utilize. "For politicians, re-engaging the public entails a return to norms, perhaps using new tools and technologies to recreate a society in which those elected to govern are trusted by the represented (Coleman & Blumler, 2009)."

One must note that political activism is "multidimensional with many distinct forms of involvement" according to Norris; she includes voting, campaign-oriented, cause-oriented, and civic-oriented activities (Norris & Curtice, 2006). The Internet has provided another channel for these activities. When we think of political activities, most are based on the types of activities that formed in the 1950s and 1960s, thus finding ways to entice youth to become more politically active is challenging since times have changed (Harrigan & Nice, 2008; Putnam, 1995).

We see civic participation is transforming into eParticipation due to the increased use of ICT (Berlatsky, 2015). "eParticipation describes efforts to broaden and deepen political participation by enabling: citizens to connect with one another and with the their elected representatives and governments using Information and Communication Technology (Macintosh, Coleman, & Schneeberger, 2009)." Krimmer describes eParticipation as

"new, deliberative forms of e-democracy instruments (Edelmann, Krimmer, & Parycek, 2008)."

2.6 eParticipation

Ann Macintosh, professor Emeritus of Digital Governance, defines more precisely the facets of eParticpation into the subcategories of E-enabling, E-engaging, and E-empowering. E-enabling is making access to information available through the use of the Internet, and then making that information understandable. Often low voter turnout is blamed as a function of low voter knowledge (Lupia, 2015). E-enabling is one way to inform voters better, so they can feel more a part of the process. E-engaging means that there is a deliberative space for collaboration between citizens. Lastly, E-empowering gives citizens an opportunity to affect change from the "bottom up" by having the ability to create initiatives through various processes, such as petitions or referenda (Macintosh, 2004). ICT development has aided in this idea, with examples such as government e-petition websites and growth of online organizing, such as MoveOn.org and Democracy for America.

The possibility of engaging youth in the political system using technology seems to be a logical step. The youth voters are comfortable with technology and spurring them into activity needs to be a priority. This demographic has been "characterized as apathetic or even anti-political, with neither the aptitude nor the inclination for participating in any form of collective social endeavor, and with no sense of civic responsibility (Henn & Foard, 2013)." However, this frame was given to them by the older generation who may be largely unaware of the form Millennial engagement takes today. The political system is not going to the youth where they are, but expecting them to come into the system fraught with out-dated ideas and methods (Henn & Foard, 2013).

2.6 Democracy

Before delving into eDemocracy, we must be aware of the foundations of democracy. Democracy, as we know it today, began in the time of ancient Greece. The word democracy itself comes from the Greek words "demos" "kratia", which means the rule of the people. In the original form, democracy would allow those in the city-state

govern themselves. As these city-states grew larger, it became more difficult for the people to come together. As Fishkin says of democracy, "It (democracy) is a part of a 2,500-year quest to better adapt the democratic idea, originally suited to populations of several thousand in a Greek city-state, to populations of many millions in a modern megastate (Fishkin, 1993).

The Greeks consider those able to participate in the democracy the polis, and the polis would need to have certain qualities. As Dahl notes, in order to have this perfect democratic state, there are several factors that must be in order. These include a manageable population size, lack of income inequality, harmonious meetings of the polis and the ability of all participants to also share in the actual administration of the city, and the city-state must remain relatively autonomous (Dahl, 1989). Direct democracy works in theory, but is more difficult to practice in modernity. For all of the talk of equality within the polis, we would be remiss not to include a few exceptions to who could participate. Women, those of foreign birth, youth (by today's standards) and slaves were not included in the democratic process. The inequality of democracy lingered on throughout the 20th century.

The democratic ideal formed the Greek state continued to evolve. Dahl points out there are three factors that shaped modern democratic ideas and institutions; "republican tradition, the development of representative governments, and certain conclusions that tend to follow from the belief of political equality (Dahl, 1989)." The Romans also had their form of government. The Romans, aptly named their form of government, a republic, from the Latin "res and publicus" meaning belonging to the people (Dahl, 1989). Like the Greeks, the Romans were initially ruled by the aristocracy, however later included more of the plebs, or common people. Still, there were groups who were not included, such as women.

The Roman democracy, like the Athenian democracy, began small. However, as time passed and the Roman Empire expanded, so did the reach of the democratic government; it was not a perfect system as only those who could manage to travel to the capital could participate. Thus, like many democracies, it was ruled more by the few, than the many. Eventually, the Roman republic would cease as the emperors took over.

The people-centric governments would not reemerge until 1100 CE, with the city-states in Northern Italy (Dahl, 1989).

Assembly style and representative democratic assemblies did not only center in the region of the Mediterranean Sea. The Nordic people were also creating a system by which those who were considered equals would meet to discuss laws and settle disputes (Dahl, 1989). Iceland founded its Parliament of Althing in 930 CE. Though this representative style of parliaments spread through the Nordic countries of Demark, Norway, and Sweden, these countries still had monarchy governments. Like the Greeks, Romans, and Italians before them, the Nordic countries also excluded participation by certain people, including women and slaves.

The creation of a parliament in England did not happen spontaneously, but rather developed over time. “A product less of intention and design than of blind evolution, Parliament grew out of assemblies summoned sporadically, and under the pressure of need, during the reign of Edward I from 1272 to 1307 (Dahl, 1989).” Others point to the signing of the Magna Carta of 1215; which required the king to ask before levying taxes. Nevertheless, this system would later be the foundation of the democratic system in the newly formed republic in the New World, which would then lead to changes in France.

There is an intersection between voter participation and technology. Dahl pointed to the use of technology, specifically telecommunications, in growing the ability of citizens to participate Dahl called it the “Third Transformation (Dahl, 1989).”

“As access to the new communication and information technologies have diffused through post-industrial societies, the idea of using electronic tools to modernize electoral administration has been widely debated…(Norris, 2003)” One would theorize that growing accessibility to information would benefit democracy as a whole, from better-informed voters to easier service delivery for voting.

2.7 eDemocracy

eDemocracy is a term often synonymous with Internet voting. However, eDemocracy is a far broader term that includes voting and deliberation (Macintosh, Ann, Robson, Edmund, Smith, Ella, & Whyte, Angus, 2003). The Council of Europe defines e-democracy as "the support and enhancement of democracy, democratic institutions and democratic processes by means of ICT, and linked to the engagement and re-engagement of citizens in democracy (Council of Europe (CoE), 2009)."

As voter turnout among youth declines, engagement of youth becomes an issue for governments and citizens alike. As Macintosh says, "Involvement of otherwise disenfranchised young people is becoming increasingly important to policy making, not just because young people are the 'voters of tomorrow' but because they are already citizens (Macintosh, Ann et al., 2003)."

In 2005, the Council of Europe predicted opportunities for reforms of democratic policies in Europe (Conseil de l'Europe, 2005). Even then, they saw impending challenges to democratic structures; this included globalization, European integration, inner-cultural migration, and state capacity; all issues which Europe is facing today (Conseil de l'Europe, 2005). For these reasons, democracy must be dynamic. With democracy, it is not a 'one-size fits all' and we cannot use a cookie cutter approach when attempting to implement improvements to the democratic process.

The power of ICT to facilitate a greater level of democracy can be categorized, according to Pippa Norris in the book *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*, by two types of individuals. The 'cyber optimist' and the 'cyber skeptic (Norris, 2001).' The cyber-optimist believes that the Internet is a space of deliberation and issue formation, which leads to active participation and voting. The cyber-skeptic, on the other hand, sees a space of division, not inclusion; it may also "marginalize the apathetic and underprivileged (Norris, 2001)."

Benjamin Barber was a not so much a proponent of the technological revolution overtaking deliberative democracy. In fact, he felt quite strongly that there may be danger in technology fostering individualism and turning citizens away from building

community (Barber, 1997). “If good fences make good neighbors, virtual neighbors may turnout to make good fences against real neighbors (Barber, 1997).”

2.8 Barriers to eDemocracy

There are barriers to eDemocracy; among them are political, social, technological, institutional, and deployment barriers (Wimmer, Codagnone, & Ma, 2007). Examples of these barriers are: lack of trust in the government, lack of political will to incorporate new technologies, lack of legal framework, issues around digital divide and infrastructure and stakeholder apathy.

Youth voters, though they have limited interest in the formal political structures, still would like to have their voices heard (Harris et al., 2010). They suffer from lack of trust in the political system, that they feel, fails to listen to their issues (Harris et al., 2010), and government officials feel there is no reason to consider the youth issues because of their lack of participation (Coleman & Blumler, 2009).

One concern regarding the use of Internet voting is the issue of ‘digital divide.’ However, in the developed and the developing world access to the Internet is becoming more available. Some 46.4 percent of the world’s population is now connected to the Internet (ICTFacts, 2015).

Access to online governmental services is a genuine concern. However, as Internet access has increased forcing this barrier to come down. The digital divide issue should be considered during the development of any online voting system. With the Estonian system specifically, digital divide was addressed early on. “The principles of fair elections require formal equality of voting conditions, not material equality. It is generally impossible to guarantee strictly equal conditions for all voters… (Madise & Martens, 2006).”

For youth voters, comfortable with technology, their concerns regarding legitimacy are not about the service delivery and more about the actual process and those participating (Henry, 2003; Norris, 2003). “…it would appear that the political system and the established parities and politicians that dominate it, are together failing to provide the

stimuli necessary to encourage young people to engage with formal politics (Henn & Foard, 2013)."

Arnstein makes the point, that there are barriers to engagement for those of poor socio-economic standing, such as "inadequacies of the poor community's political socio-economic infrastructure and knowledge base, plus difficulties of organizing a representative and accountable citizen's group in the face of futility, alienation, and distrust (Arnstein, 1969)." This coupled with the life-cycle theory give us a portion of the story regarding youth disengagement.

2.9 Conclusion

This chapter was structured to discuss more in depth the concepts of democracy and political participation. We introduced our target demographic, the Digital Natives and how they interact with technology. Also, considered were how eDemocracy and eParticipation are changing the model of traditional participation (Vromen, 2014). The barriers to participation and the factors of participation were also addressed. The next chapter we will briefly discuss case study methodology.

3 Chapter: Methodology

3.1 Introduction

Estonia was chosen as the focus of this study due to its decade-long history of nationwide, legally binding online voting. The adoption of Internet voting in Estonia is not out of the ordinary; for Estonia has a high utilization of ICT within the government, a willingness of citizens to adopt new technology, and forward-thinking leaders. Also, there is a substantial amount of aggregated data available about the elections, including socio-political facts and figures. Our objective of this chapter is to introduce what a case study is, what factors lead us to choose the case study method.

3.2 Case study methods

To conduct the research, we chose the single case study method. “A case study is an empirical inquiry that investigates a contemporary phenomenon in depth within its real-world context, (Yin, 2013).” The features of a case study, as described by Yin, are that there are multiple variables that must be linked together in a coherent way to summarize the various perspectives which leads to an overarching narrative; case studies answer “how and why” questions (Yin, 2013). There are three conditions that are applicable to the case study, when using research questions, when the event is more contemporary and the amount of control the researcher has over the actual events. For this project, we chose the single-case study method. In single-case studies, one must satisfy certain conditions. These ‘rationales’ are critical, unusual, common, revelatory and longitudinal. Two of these rationales satisfy our research, unusual and longitudinal. An unusual case is one where there is an occurrence that is out of the norm. The instances in our research occurred over a period of time at regular intervals, this is the nature of the ‘longitudinal’ case (Yin, 2013). All these factors make single-case study the applicable methodology.

Within case studies, there are three different types: exploratory, descriptive, and explanatory. Exploratory case studies typically involving looking at contemporary phenomenon and crafting a hypothesis, which is then tested based on research (Yin, 2013). Descriptive case studies usually involve observational survey or archival research to answer the questions 'how' and 'why'. Thirdly, there is explanatory case study research, which usually involves complex histories or experiments to gather data.

In the case study, one must also determine the unit of analysis. There are two approaches to viewing unit of analysis. One is the holistic approach, the other the embedded approach. "The holistic design is appropriate where the theoretical framework supporting the study is itself holistic in nature (Runeson, 2012)."

A case study can also have a theoretical framework. The underlying theory gives the researcher a lens in which to focus the data through. The theory allows the researcher and reader to derive a clearer focus of the topic (Runeson, 2012).

In the case study method there are various types of sources that can be used, such as documents, artifacts, participant observations, and archival records (Yin, 2013).

3.3 Conclusion

Chapter 3 establishes the case study methodology and how we will apply this to the research project. Chapter 4 will further explain our specific case, and more clearly define the elements we used to create our study.

4 Chapter: Results

4.1 Introduction

In Chapter 4 we will discuss the results of the analysis. This chapter includes background information on the Estonian ICT ecosystem and the Estonian Internet voting system. Then, we discuss further our case, including the data analysis procedure and the limitations. Lastly, we will detail the analysis of results and the discussions and conclusions.

The concept of Internet voting is not new, having first been considered in early days of the Internet (M. Alvarez & Hall, 2004). The Estonian e-government system is unique in its design and usage. Where other countries struggle to offer online services to citizens, Estonia excels (Say, 2016). Since the introduction of the National ID card, Estonia has created an ecosystem of services for its citizenry (R. M. Alvarez et al., 2009).

4.2 Background

After regaining its independence in 1991, Estonia built its fledgling government, in part, on a base of Information and Communications technology competencies. Forward-thinking leaders laid the legal foundation for an ICT-enabled government, and highly skilled technicians began designing the system (R. M. Alvarez et al., 2009). Using an ICT system that was privately designed, but government regulated, they were able to build a platform that would later support the introduction of the National ID card. This ID card is the cornerstone of the infrastructure and makes an array of ICT activities from online tax declarations to Internet voting possible. The ID card allows citizens to log securely into the state-administered system, and ballots are cast once the citizen has securely digitally signed their ballot.

The uniqueness of the Estonian ID card is that it includes certificates of authentication and a valid digital signature necessary for many of the government transactions, including Internet voting. The certificates are encrypted using Public Key Infrastructure (PKI) technology. PKI was designed in the 1970s and is standard cryptography for

authentication. The citizen then is issued PIN codes, which are their private key to using the system (Martens, 2010).

The ID cards are available to citizens 15 years of age or older. Although all citizens are required to have an ID card, there are no enforced penalties for non-compliance. The active PIN codes are supplied with the card, but these numbers can be changed. The first PIN is a minimum of four digits, though the system allows a number up to 12 digits. PIN 2 is a minimum of five digits and can also be changed to up to 12 digits (Heiberg, 2010).

The first PIN is for authentication and the second is for digitally signing documents, in this case, their ballot. Digital authentication and signing ensures the Internet voting systems is similar to the physical voting system in that a voter will identify his or herself and then, once the ballot is cast, secure it with a signature (A. Trechsel et al., 2007).

Before each election, a new voting software application must be downloaded from the election committee website. The user must then use his valid ID card with current certificates to utilize the online voting system. Another important aspect to access of the system is the ID card reader. Some computers in Estonia come with an internal card reader already installed. Nevertheless, external card readers can also be purchased and attached to any computer using a USB (R. M. Alvarez et al., 2009).

All of these elements are needed for the Estonian Internet voting system, the secure authentication method with the valid certificates, the voting software, and necessary hardware.

Because of the functioning technological infrastructure, Internet voting has now become widely used in Estonia. Estonia holds the distinction of being the only country worldwide that holds elections, which include an online channel of service delivery. The first election that included the Internet voting option was the 2005 local election (Heinsalu, et al., 2016). Adoption of Internet voting was not immediate, only 1 percent of the population used the service in the beginning. However, over a 10-year period usage has grown to 30% and remains steady at that point (Heinsalu, et al., 2016).

4.3 Estonian Internet Voting

Internet voting was not introduced first in Estonia, even though Estonia is the only country that has continually used it since its introduction. The first known use of the Internet for voting was in the US in 1996 in the primary elections (Gritzalis, 2003). More trials of Internet voting were done in the US and the UK (Krimmer, 2012). The early trials were marred with issues and most were scrapped. There are still a limited number of active sites of Internet-enabled voting which include areas in Switzerland, Canada, India, and Australia (McCormack, 2016). However, these cases are limited, and are not nation-wide, like the system used in Estonia.

The development of Internet voting started 2002 with the legal framework necessary to facilitate the new voting technology. The legislation was approved by the legislature and the Supreme Court (Metcalf, 2014; Vinkel, 2015). In 2012, amendments were made to the legislation to establish the electronic voting committee. "The committee was made responsible for setting up and carrying out electronic voting, and for determining the results of e-voting (Heinsalu, et al., 2016)."

Internet voting is viewed in contrasting lights. There are those who see it as the future of democracy (M. Alvarez & Hall, 2004) while others see it as a security risk (Spakovsky, 2015). Most view it as a vehicle for participation by the younger generations who grew up in a world of connectivity. "Perhaps the most important and influential argument concerns the claim that remote electronic voting will make the process more convenient and thereby strengthen electoral turnout and civic engagement, especially for the wired younger generation."(Norris, 2003)

4.4 The Estonian Case

The Estonian case is unique in that where other countries have tried and failed to sustain long-term, national Internet voting initiatives; only Estonia has successfully implemented Internet voting and maintained it. These factors lead us to use the case study method to further exam Internet voting in Estonia. The unit of analysis within the

case is online and traditional voters aged 18 to 25. We will be evaluating qualitative responses given in post-election surveys that were conducted between 2005-2015.

There is an established body of literature concerning various aspects of Internet voting in Estonia (R. M. Alvarez et al., 2009; Drechsler & Madise, 2004; Trechsel, Alexander, 2007, 2007; Vinkel, 2015),(Bochsler, 2010) (Madise & Martens, 2006), as mentioned in the previous section; and youth civic engagement (Harris et al., 2010; Henn & Weinstein, 2006; Henn et al., 2005; Norris, 2004). The aim of this study is to discover the views of youth voters by examining the qualitative data given in the surveys.

4.5 Data collection procedure

Name	Date	Type	Topic	Num. of Participants	Authors
E-voting in the 2005 Local Elections in Estonia	March 2006	Report	Analysis of the 2005 introduction of Internet Voting	938	Fabian Breuer; Alexander Trechsel
E-voting in Estonia 2005	2006	Report	Detailed Analysis of the first Internet voting-enabled Election	N/A	Ülle Madise; Tarvi Martens
Internet voting in the March 2007 Parliamentary Elections in Estonia	July 2007	Report	Analysis of the Elections in 2007 with Internet Voting	978	Alexander Trechsel; Guido Schwerdt; Fabian Breuer; Michael Alvarez; Thad Hall
Internet voting in Estonia	January 2010	Report	Comparative of Four Elections since 2005	3368	Alexander Trechsel; Kristjan Vassil; Guido Schwerdt; Fabian Breuer; Michael Alvarez; Thad Hall

Can Internet Voting Increase Political Participation	May 2010	Impact Study	Data Analysis on online voter participation	1000	Daniel Bochsler
Remote Electronic Voting in Estonia: Legality, Impact and Confidence	July 2015	Comprehensive report	Multiple Viewpoint Analysis of the Estonian Internet Voting System	N/A	Pritt Vinkel
Log Analysis of Internet Voting 2013-2014	2015	Analysis Report	Log File Analysis of Internet Voting Users	N/A	Sven Heiberg, Arnis Parsovs, Jan Willemson

Table 1: Documents

We began by researching current reports pertaining to the Internet voting system used in Estonia. This yielded numerous journal and academic articles, reports from governmental and non-governmental agencies and we were able to use the raw, qualitative data from the ENES.

Our study is loosely related to that of Trechsel et al. by continuing to focus on the qualitative data of the ENES survey. However, we differentiated by looking at the only youth voters. The datasets considered were only the qualitative responses.

For this study, we are focusing on three variables from ENES survey: age of voter, why they voted online and why they did not vote online. We are only using the responses given for those voters ages 18-25. Each survey also includes voters and non-voters; we will analyze solely at the responses of those who did vote and their channel of casting their vote.

The data has been collected over a ten-year period as post-election surveys. In the first few elections, finding voters who had used the online option was a challenge. Though, it has gotten easier over time (A. Trechsel et al., 2007). According to the 2007 CoE report, one of the main research questions was to determine if Internet voting was "changing the nature of political discourse in Estonia." (Trechsel, Alexander, 2007)

The data was collected in the form of a telephone survey. The survey done in 2007 was collected using a computer-assisted survey service. In 2007, the service included 987 responses. The questionnaire in 2007 was similar to the one in 2005 with the addition of qualifying questions on participation in the 2005 election.

The surveys included the qualitative questions regarding Internet voting usage. The compilation of survey data is the data we will be utilizing.
The methodology for the 2013 survey changed due to the increased use of the Internet voting channel. As the online voting technology diffused throughout the population, they were able to change the collection method.

> "The 2013 survey was done after local elections which took place on 20.10.2013. The sampling method was stratified random sampling. Respondent selection was by random route method and the youngest male – female selection rule within household. Fieldwork was done by TNS Emor in the period of 6-25.11.2013. A total of 1042 CAPI interviews were done, the response rate was 57.6%" (Vassil & Slovak, 2014).

The methodology changed to stratified random sampling; this means that now they were dividing the country into strata or areas. The areas chosen were Tallinn, Põhja-Eesti, Lääne-Eesti, Tartu County, Lõuna-Eesti, and Virumaa. By breaking the territory into smaller parts there is a better chance of getting a more diverse group (Kaplan, 2014).

The survey collectors then employed the random-route method of selection, which is best get the appropriate distribution of age groups for the survey. This involves asking for the youngest male or female in the household to participate. If the youngest person were not available, then they would ask the next person.

The data sets are broken up into sections based on the how the data was originally collected and stored. The first data set is labeled "2005-2011." This data was aggregated by previous researchers and included some translation. The original responses in Estonian and Russian were removed.

Subsequent surveys were then divided into separate spreadsheets and retained the original languages. Surveys from the 2013 Local Elections, the 2014 European Parliament Elections, and the 2015 Estonian Parliament Elections are listed as individual worksheets and retain the original responses in Estonian and Russian.

4.6 Analysis procedures

The earliest data was partially translated and coded for the previous studies. The original Estonian and Russian were lost. However, the later survey collection and storage methods retained the original answers given by respondents. We had the ability to translate it, and use our coding method.

The data sets were divided into years: 2005-2011; 2013; 2014; 2015. Each set included the year of the elections, participation in previous elections, online voting, voting at a polling station, reasons for using those channels, and demographic information.

For this study, we were focused on the following open-ended questions:

- **v4-Why did you vote online?**
- **v6-Why did you *not* vote online?**

We also retained the age of the respondents, but we did not subdivide the responses by gender or language spoken.

First, the data was sorted by age range. Then we proceeded to translate each line. The data sets included respondents within our age range who did not vote; these numbers are included in the analysis.

Most of the translation was done utilizing translation software. However, some of the translation had to be done through interpreters due to the complexity of the Estonian language. The responses in Russian also were translated using software with only minimal interpreters needed. We evaluated each response individually. The translation was not done word-for-word; instead we translated the words into the context of what was trying to be communicated.

Once translation was done, the responses were coded using a numbered coding system. For this study, we used pattern coding. "In larger and complete data sets, you will find that several to many of the same codes will be used repeatedly throughout (Saldaña, 2012)." The responses from online and offline voters tended to include repetitive words and phrases. From the repetitive responses, we were able to draw some clear topics that translated into themes. The responses were then put into the themes this technique is called 'lumping' (Saldaña, 2009).

Coding system for Internet voting responses

- 0—Other/nonanswers
- 1—Convenient
- 2—Easy
- 3—Wanted to try/new
- 4—Away from home
- 5—Time savings

Coding for Traditional Voter responses

- 0—No Internet/computer
- 1—Tradition
- 2—Like to go in person
- 3—Don't trust/fear
- 4—ID card issues
- 5—No ID card reader
- 6—Missed the online voting period
- 7—Did not want to try/Did not know

Some responses contained multiple explanations. In this case, the first response was the one coded. For example, several people responded online voting was "convenient and easy." This response was coded as 'convenient' since this was the primary response. There are more themes in the data for the 'Offline voters' than those of the 'Online voters.'

4.7 Limitations

This study was conducted as an analysis of pre-existing data, thus we had no input into the design of the survey or the questions. The survey was altered in 2013 to include more questions regarding the use of the Internet voting in previous elections and to include questions about reasons for non-participation. We also drew the line of "young voters" at 18-25-years of age, where other studies consider youth 18-29. Respondents contacted for the surveys seemed to have all been physically present in Estonia; no Estonians from abroad were included. There are also some limitations within the context of translating the Estonian language. We are making some assumptions regarding actual meanings of the responses, by translating the content of the statements not word-for-word translations. We are also assuming that participants answered the questions honestly without encumbrances.

4.8 Analysis of Results

The first data set was combined elections from 2005-2011. There were 541 total in our 18-25-year-old category: 154 online voters, 256 offline voters, and 131 non-voters. However, these early data sets were selected to include more online voters specifically. The samples were not selected randomly as the later sets.

Looking at the data from 2005-2011, as previously stated, this data had been used prior, and the original text was replaced with English translation. Most of the previous translations were on the survey responses from 2005 and 2007, leaving the 2009 and 2011 intact.

	2005-2011 Online voters
Number of Responses	
112	Convenient
15	Easy
12	Wanted to try/new
5	Away from home
9	Time savings
1	Other/non answer

Table 2: ENES Survey Data 2005-2011

The respondents were consistent with their reasons for using Internet voting. One response that frequently appeared in the data set is the word "mugav." In Estonian, "mugav" means "comfortable" or "convenient" depending on the context of its usage. We sought to translate the meaning as accurately as possible. For Estonians, technology is comfortable to use. We consulted twenty people from the technology, government, business, and law sectors regarding this word. The consensus was that although the word does have dual meanings, within the context of Internet voting the most accurate translation of "mugav" is "convenient." The hope is to capture the intent of the meaning of all the responses, bearing in mind the differences in language.

The target group also considers online voting easy, which was another frequent response that is corroborated by the previous studies (Trechsel, Alexander, 2007). The new technology was another reason for young people to use the online channel. Other responses included the subjects 'were away from home,' and 'it saved time.' There were only a limited number of non-responses in the data set, and were previously coded as "other."

	2005-2011 Traditional Voters
Number of Responses	
13	There was no Internet
5	Tradition
28	Like to go in person
2	Do not trust
32	An ID-card issue
28	No ID-card reader
20	Missed the online voting period
21	Didn't want to try/Didn't know

Table 3: ENES Survey Data 2005-2011

The respondents who voted offline had more varied reasons for voting at the polling station. For the first few elections, technical problems were more prevalent. Difficulties with ID cards were the most frequent response; this included no PIN codes, outdated certificates, no ID card, and lost ID cards. Not owning or having access to an ID card reader was another issue. Though not having an ID card reader could be classified with the ID card problems, we chose to separate this as a specific issue. During the

introduction and dissemination of the ID card program, many banks offered the ID card readers as an incentive or sold them at a discount. However, despite these efforts, the problem of not having an ID card reader has lingered. Many voters enjoy walking to the polling place; we saw several responses regarding "walking with family" or "going with a friend." There were limited responses regarding trust, though some did list "safer" as a second or third response.

Another subject that sends people to the polling station on Election Day is missing the time period for online voting. Missing online voting is a matter that continues throughout the scope of the data sets.

The Local Elections in 2013 gave us the smallest data sets. Only 91voters in our target group were contacted for the survey with 50 non-voters. This leaves us with a mere 9 voters who used online voting, and 34 voting offline. Despite the small numbers, I was able to determine the important aspect of the online voting option through one respondent who used the service because she was 'in the hospital with her child.' The majority of the respondents indicated convenience as the reason for voting online.

	2013 Online voters
Number of Responses	
5	Convenient
0	Easy
0	Wanted to try/new
2	Away from home
2	Time savings
0 N=9	Other/non answer

Table 4: ENES Data 2013

The offline voters mostly reported wanting to go to the polling station in person, indicating walking to the polls was preferred and easier. Problems with ID cards and the lack of an ID card reader were still mentioned as issues as well.

	2013 Traditional Voters
Number of Responses	
1	There was no Internet
0	Tradition

15	Like to go in person
3	Do not trust
4	An ID-card issue
4	No ID-card reader
3	Missed the online voting period
4 N=34	Didn't want to try/Didn't know

Table 5: ENES Data 2013

In 2014, Estonia held the European Parliament Elections. Historically for Estonia, the European Parliament election yields low turnout, as overall turnout was only 36 percent. For the survey, there were 11 online voters, 24 offline and 73 non-voters in the 18-25-year-old age bracket. The number of online voters in the sample was around ten percent.

	2014 Online voters
Number of Responses	
7	Convenient
1	Easy
2	Wanted to try/new
0	Away from home
1	Time savings
0 N=11	Other/non answer

Table 6: ENES Data 2014

Online voters were decisive about convenience being a motivating factor. ‘Easy’ and ‘wanted to try’ were also noted responses.

	2014 Traditional Voters
Number of Responses	
1	There was no Internet
0	Tradition
7	Like to go in person
2	Do not trust
1	ID-card issue
4	No ID-card reader
4	Missed the online voting period
5 N=24	Didn't want to try/Didn't know

Table 7: ENES Data 2014

Offline voters continued to prefer going to the polling station. There are still many who do not want to try the service, they are having issues with ID cards, or missed the online voting window. Lack of an ID card reader is still a problem for some.

The 2015 Estonian Parliament election had a better overall turnout. Thus there were 18 online voters, 49 offline voters, and 42 non-voters in the target demographic. The increase in online voters did not increase the variation in responses. The online voters found the service to be convenient, easy, and time saving.

	2015 Online voters
Number of Responses	
13	Convenient
3	Easy
0	Wanted to try/new
0	Away from home
2	Time savings
0 N=18	Other/non answer

Table 8: ENES Survey 2015

For traditional voters, the data shows that they wanted to go to the polling station. The technical issues are continuing in the data set. No Internet or computer, No ID Card reader, and technical problems with the ID card account for 20 percent of the issues identified as to why they didn't vote online. Trust, not wanting to try online voting, and tradition were included in this group.

	2015 Traditional Voters
Number of Responses	
3	There was no Internet
6	Tradition
18	Like to go in person
4	Do not trust
4	An ID-card issue
3	No ID-card reader
3	Missed the online voting period
8 N=49	Didn't want to try/Didn't know

Table 9 : ENES 2015

4.9 Conclusions

The data shows mostly known information. Voters use the online voting channel due to its convenience and ease of use. The earlier data sets included more responses regarding the “newness” of the technology and timesaving as motivators. As time has passed the issue of convenience remains an important factor.

For offline voting, the responses were relatively stable over time. Early on, the data shows more voters responded they could not vote online due to technical issues, mostly in regards to problems with ID cards, lack of access to the Internet and lack of ID card readers.

I noted that there were many in our 18-25-year-old group that felt like voting was a tradition, and they enjoyed participating in community with others, be it family or friends; this shows the importance of others in sharing the experience. Many in this group were voting for the first time; they too wanted the experience of going to the polling station to cast their ballot. Voting is an important act of civic participation (Nie & Verba, 1987), so going in person could be an outward expression of participation.

Forgetting about online voting or missing the opportunity for online voting is another issue for young voters. Also, several respondents said they were just not interested in trying the new system.

5 Chapter: Conclusions and future work

5.1 Introduction

The concluding chapter will include a discussion of the findings and the relation to other work. Our goal is to bring together the elements from the data analysed and youth participation in today's society. We will also discuss the impacts and implications of our finding and discuss a holistic approach to voter youth engagement. Finally, we will end with future work, looking at other opportunities for research and development.

5.2 Summary of findings

Main Research Question: How effective is online voting in enfranchising voters, aged 18-25, into the political process? Youth voters have more excuses for *not* voting online, than they have reasons why they *do* vote online. The availability of online voting does not increase the chances that young people will vote. Youth participation in voting overall is lower than their middle-aged counterparts, which can be explained by several theories we have posed previously, such as life-cycle theory and political efficacy issues. We concede that young people have less interest in traditional politics; and that the youth view of political participation is not only concerned with voting. As Nie et al. says, "In many respects, voting is the least useful political activity for testing the relationship between age and political participation (Nie et al., 1974)."

Sub-question: How to categorize usage or non-usage of online voting based on current survey data? Youth voters, who do vote online, use online voting for the same reasons that older people vote online; it is convenient and easy. The technology is unique, and they enjoy the speed of being able to log in, vote, and it is done. They can access the service at home, work, or abroad.

However, youth voters also vote traditionally as well. In nearly every data set we analysed, the number of traditional voters was double that of online voters. They enjoy walking to the polling place, seeing how voting works, appreciating the tradition of voting with family or friends, or wanting to vote for the "first time" in person.

Early on, we would expect technical issues to be a barrier. The problems with not having an ID card or the PIN codes or not having an ID card reader were thought to be issues that would abate over time. The issues with not having PIN codes and ID card readers are still included in the datasets through 2015. These are issues that have not been relieved over time. Access to the Internet or a computer, though occurs less, is also a barrier for some youth.

Overall, the use of Internet voting in Estonia falls in a normal distribution, where the peak of usage comes from those between the ages of 30 to 55-years of age. Log file analysis conducted on the 2013 and 2014 elections also concluded that "the most active voters are between the ages of 30-40. (Heiberg et al., 2015)."

From the data, we believe it is not the technology of online voting that gets young people to vote. Making voting easier does not alleviate the current disconnection young people feel towards the current political system. The research indicates that youth are issue-centric voters (Norris & Curtice, 2006). They turn out to vote and activate around causes that are important to them. "The online population is most predisposed to engage in cause-oriented forms of activism, characteristics of petitioning, demonstrating, and contacting the media over single-issue politics and civic-oriented activities such as belonging to voluntary associations and community organizations (Norris & Curtice, 2006)."

Sub-question: How to study the motivations, urges, fears, drives, etc. which influence the degree of political participation among 18-25 year-olds? Youth voting apathy can be attributed to the disconnection young people feel with current state of politics (Henn & Weinstein, 2006; Henn et al., 2005; Norris, 2004). The disconnection between the current political structure and youth seems to be one of the biggest barriers to voting. Youniss et al. describe the disconnect from a globalized perspective, that decisions made on a world-wide scale often affect people in various ways, the example given is "…a common complaint heard among Europeans is that they are denied the opportunity to vote for the political figure who has the most influence on their lives: the U.S. President (Youniss et al., 2002)." Youth voters do not feel that they are powerless to change the current structure, so they chose other methods of political participation (Lim, 2012).

The research also points out that the idea of 'political participation' may be changing. Technology is expanding the concept of political participation. Activism today comes in more forums than a picket line or a sit-in. Today's youth are engaged in online forums like Reddit and consider social media a platform for issues that are important to them (Berlatsky, 2015; Lim, 2012; Vromen, 2014).

They are not defined by the technology they use; it is a natural part of their world (Macintosh, Ann et al., 2003). When they are engaged in a cause, it does make a difference. However, we cannot just apply technology to a system and expect youth to flock to it. Youth political engagement cannot only be measured by the ballot box; as this does not paint the full picture of the engagement of young people.

The correlation between educational attainment and political participation is also relevant. Education is a factor in political participation, that being said young people today should be more active as they are more informed. Within the life cycle model, younger and older generations participate less with the peak participation in middle-age, around 31-61-years old. Older generations participate less, according to Nie due to lower educational levels, if you adjust for different educational levels; then older people participate on average. However, as Nie discovered, "…the young seem to be 'genuine' underparticipants. If it were not for their somewhat higher than average educational level, youth would participate even further below average (Nie et al., 1974)!"

5.3 Relation to existing work

This study closely aligns with that of Trechsel et al., who utilized the initial survey and used the qualitative data to explore the reasoning behind the adoption of online voting in Estonia, he found that young people age 18-29 did use the service more initially (A. Trechsel et al., 2007). However, our research shows that the support for Internet voting picked up with those 25-29. Boscheler discovered the correlation between the opportunity costs of voting online versus going to the polling place and the increase in the chance of voting online. But, actual increase of participation in his study was inconclusive (Bochsler, 2010).

Pippa Norris and John Curtice studied the impact of the Internet on the traditional systems of political participation. They found the likelihood of Internet engagement significantly impacting participation to be small, and that online engagement would just continue to revolve around issue-driven causes and social movements (Norris & Curtice, 2006)

> As Henn and Oldfield conclude, "there is no single solution to the ongoing young citizen-state disconnect in Britain…the introduction of electoral administrative arrangements intended to make voting more accessible would likely have some impact; critically, however, those youth determined to abstain at the next election appear to not be convinced by the prospect of such new electoral methods (Henn & Oldfield, 2016)."

Based on the 2003 Internet voting trials in the UK in 2003, Norris concluded that all postal voting had more of an impact on voter turnout than electronic voting. "…while younger people do use the new electronic voting channels, nevertheless they remain less likely to vote than older generations (Norris, 2003).

5.4 Impact and implications

Young Estonians who use the Internet voting channel find it convenient and easy to use. However, proportionally there are more of this demographic that still walk to the polling station on Election Day or vote offline at an early voting location. The results are similar to results of the trials in the US and the UK, that this age group continually is underrepresented at the polls. As Susan Henry says of the 2002 trials in the UK, "The government's intention to attract the under 25s out to vote with the Internet was not realized (Henry, 2003)."

There is no magic bullet to solving the issue of youth disengagement. Internet voting should be one piece to the puzzle. Enhanced civics education, eliminating technical barriers (lack of ID cards, PIN codes, and readers), better communication between those governing and the governed, etc.

We cannot place our desires for increased participation in a "Field of Dreams" space, where "if we build it" they will come (Norris & Curtice, 2006). Technology enables connection into the democratic process; it however, does not inherently foster a desire to participate in the system as it is. The Estonian example is clear regarding participation rates among youth voters; there has not been a notable increase in youth participation just because the technology is available.

That is not to say the Internet voting channel should not be offered due to the lack of increase in overall youth turnout. On the contrary, improving service delivery should be considered when developing online services; which includes bettering service delivery to those who want to participate actively in the democratic process. Internet voting also makes it possible for those living abroad to participate more easily and efficiently without the expense to the voter of mailing a postal ballot. In the most recent Estonian election, votes were cast via the online channel from 115 different countries (Heinsalu, et al., 2016). Technology can assist in the issue of disenfranchisement by creating avenues of participation (Mercurio, 2003).

To increase voter turnout will take a concerted effort and a holistic approach. We will conclude that youth voters are not necessarily apathetic in their political leanings, but have a different interpretation of what *is* political engagement. Henn and Foard discovered that young people are not anti-political or apathetic, but instead 'disenchanted' with political parties and the current political elites (Henn & Foard, 2013).

Sub-question: How to increase the participation in the political process of the target age group?

Their remedy to youth disengagement includes policies that would expand educational participation and reduce "social class differences and social exclusion (Henn & Foard, 2013)." As Barber stresses, the type of civic educational programs must be concentrated on activity; "We need programs that require students to perform community service, that empower them in pertinent school decision-making processes, that give them practical experience…(Barber, 1989)." However, Barber's concept of civics education is rigorous, as he advocates for not just an enhanced curriculum, but also civic participation, such as serving on community boards and interest groups. He says to have

strong democracy there must be a "forceful dose of civic education and civic experience (Barber, 1989)."

The individualistic notions of young people today (Furlong & Cartmel, 2012) may be a part of the story to their disconnection. The lack of partaking in organized groups is corroborated by Robert Putnam's theory regarding the lag in community activism, which includes lower participation in unions, organized religion, and community groups (Hamilton, 2015).

Consequently, youth voters view community service very highly (A. Smith, 2013). Though, they are more likely to volunteer for a cause than to join a particular organization (Zieger, 2013). A 2012 Pew Research survey reported that Social Networking Sites were a used by youth voters to discuss political ideas (A. Smith, 2013). Youth today are more involved in participating online using technology in the space that it is normal for them.

Increasing civics education could help teach young people the importance of civic participation, but this must be undertaken in a way that engages younger people in the frame in which they view participation. "Given this, any framework used to understand young people's political participation needs to be entirely reshaped and reconceptualized, starting from today's generation (Farthing, 2010)."

Also, we cannot continue to measure youth participation only by the number of votes they cast, but we must be mindful of the changes in political participation as the definition may be changing (Berlatsky, 2015; Lim, 2012; Valenzuela, 2013).

One thing that must also be considered when discussing engaging voters, "…in Western countries popular confidence in the old-established institutions is fading, voters are disaffected, trust in government is declining, and a very wide gap has opened up between citizens and governments and political elites…(Pateman, 2012)." Technology can help close that gap, by allowing for a greater exchange of dialog between stakeholders (Coleman & Blumler, 2009). To bridge this divide there must be the political will to do so (Pateman, 2012). Harris et al. quote Lasse Siurala, "We should

develop new forms of participation which would revitalize the interest of young people into democratic decision making processes…"(Harris et al., 2010).

Opponents to Internet voting have used the idea Internet voting diminishes the power of voting because it would be "too convenient" (Mercurio, 2003), that being able to vote from home would somehow diminish the act of voting as something less important or that there could be a problem with "de-ritualizing" of voting (Gerlach & Gasser, 2009). To those, a response could be framed by the US Supreme Court case *Texas v. Johnson* from 1989. In this case, the Supreme Court held that, though there was a particular sacredness to the American flag, burning it did not diminish its reverence and, in fact, desecration was an act of free speech ("Texas v. Johnson," 2013). For, if the reverence of the flag were undone by the act of burning it, then any use of the flag, be it on bathing suits or paper goods, would also take away its symbolism.

As to Internet voting diminishing the importance of voting, to this we disagree. Offering a convenient way to vote that is user-friendly has nothing to do with the sacredness of the actual vote. The act of voting by mail, by the same token, would also dilute the power of the vote. Nevertheless, studies have shown that postal voting increases turnout (Norris, 2003), thus enfranchising more people. And, there is little argument about postal voting lessening the legitimacy of voting.

In 1996, Steve Jobs granted an interview to *Wired Magazine*, in the interview, the discussion turned to education and the role of technology. Jobs had been supporting putting computers in schools, but he found just giving them technology was not the answer (Wolf, 1996). Technology alone is not the complete answer to engaging youth voters. As Jobs learned, there is more that goes into producing better outcomes in education, because the teachers still have to do the work to educate children. The same can be said for engaging youth voters. Technology alone does not exonerate people from doing the work needed to engage youth voters; because anytime you rely solely on one solution to fix all the problems you will fail. For youth voter engagement, technology can be part of the overall solution, but it is not the only solution. "It's not as simple as you think when you're in your 20s – that technology's going to change the world. In some ways it will, in some ways it won't (Wolf, 1996)."

5.5 Future Work

This study was strictly focused as to why youth voters did or did not use Internet voting as a channel. However, there are more open-ended questions within the original ENES survey. Firstly, some non-voters gave responses as to why they do not vote. The non-voter's responses might paint an even broader picture of the underlying reasons for abstaining from the voting process.

There are also responses in the ENES datasets, from 2013-2015, concerning why people do not trust Internet voting. These responses are very insightful regarding voter's opinions of the online service.

Another possible study could be done to survey Estonians who vote from abroad. For example, determining how the service works for them, their trust of the system, and if they would still participate in Estonian elections if the service were not available.

Could eliminating the technical barriers increase participation? This could potentially be studied further.

More research could be done in the area of youth disengagement from the other types of citizen engagement. For instance, could factors like more 'right to work' laws and anti-union sentiment have disrupted the collectivist idea? Millennials have grown up in a world where there has been a decline in unionization in industrialized countries. Gray and Caul looked at the decline of voter turnout as a function of a decline of group mobilization, specifically in the area of unions, from 1950-1997 (Gray & Caul, 2000).

The frame of political participation and what constitutes political participation was developed in the middle of the 20th century (Hampton, 2011). Now, living in the digital age, the frame may need to be redrawn since mobilization now comes in the form of #hashtags on Twitter (Berlatsky, 2015) and civic activation happens in real time on social media (Settle et al., 2016). This may involve creating a stratum of participation that includes social media participation as a legitimate actor in civic engagement.

More work might also be done on the ability of some candidates to activate youth voters more successfully. Obama in 2008 and Bernie Sanders in 2016 (Silver, 2016) both drew many supporters from the Millennial generation (Tumasjan, Sprenger, Sandner, & Welpe, 2010); maybe through their community building efforts, both online and offline or possibly they framed their campaigns around more single issues with which youth voters are more engaged, such as Obama's message of "change" and Sander's message of "income inequality."

5.6 Conclusion

In conclusion, Internet voting has many attributes, it is convenient and easy, and the use of Internet voting in Estonia has grown over the past decade. However, its ability to enfranchise and mobilize youth voters to participate has not been realized. The issue of youth voter motivation is complex, and is not solved by the introduction of technology alone.

To overcome youth voter disenfranchisement, requires a holistic approach that will involve multiple stakeholders from all the concerned institutions, which should include, but not limited to: government, education, political advocacy, and youth advocacy.

The youth of today should no longer be characterized as apathetic, but issue-centric advocates of their technology-enabled generation.

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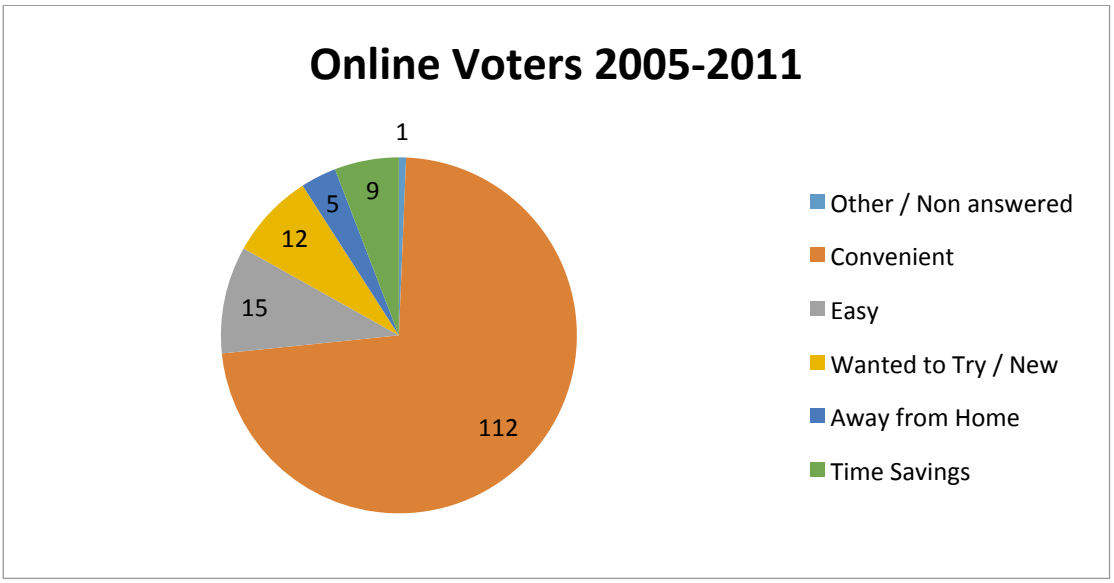
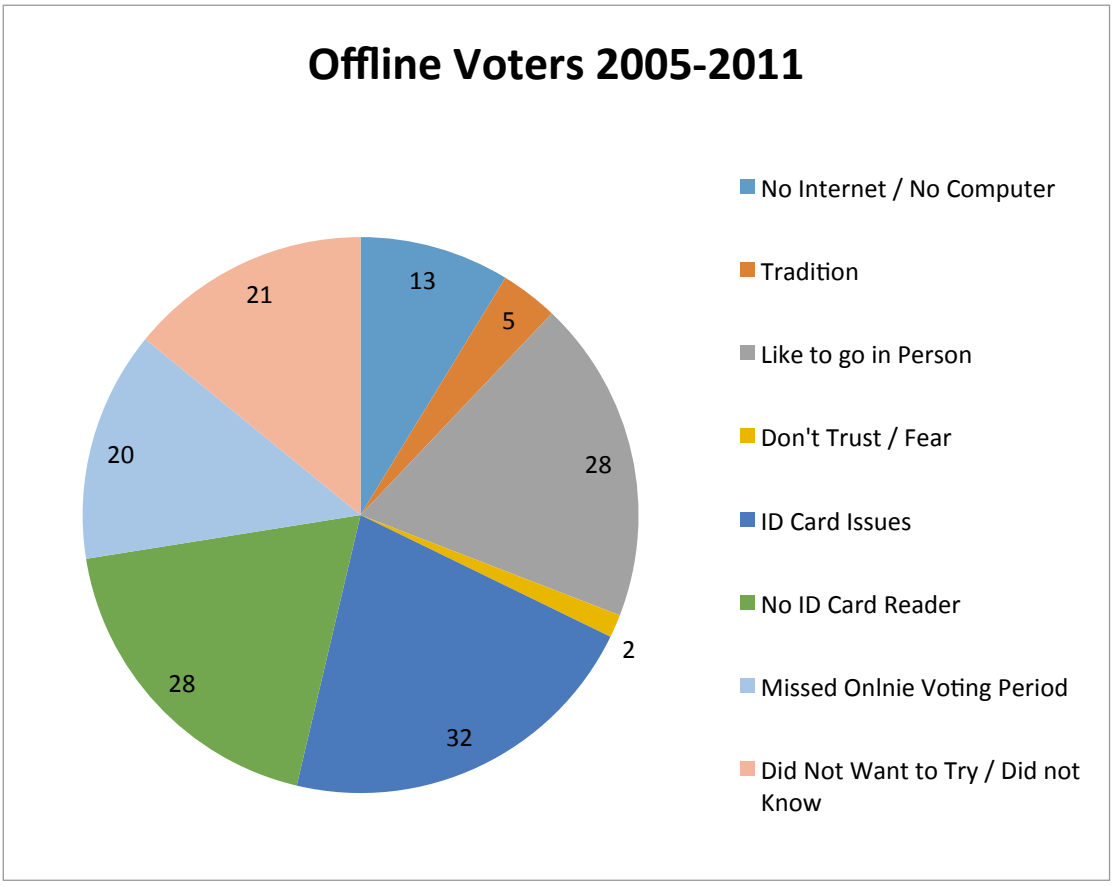
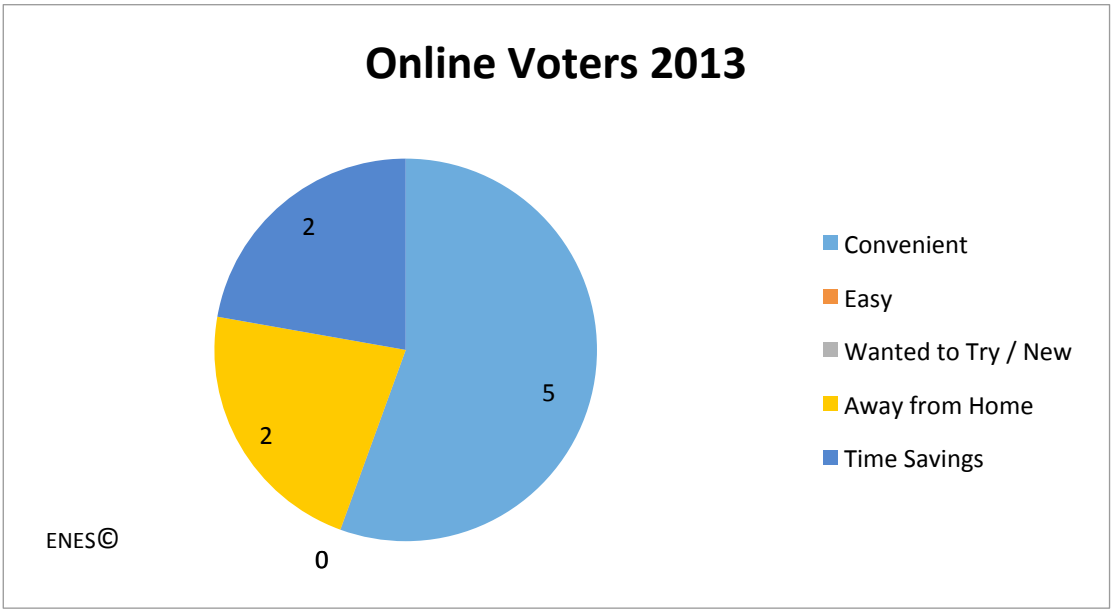
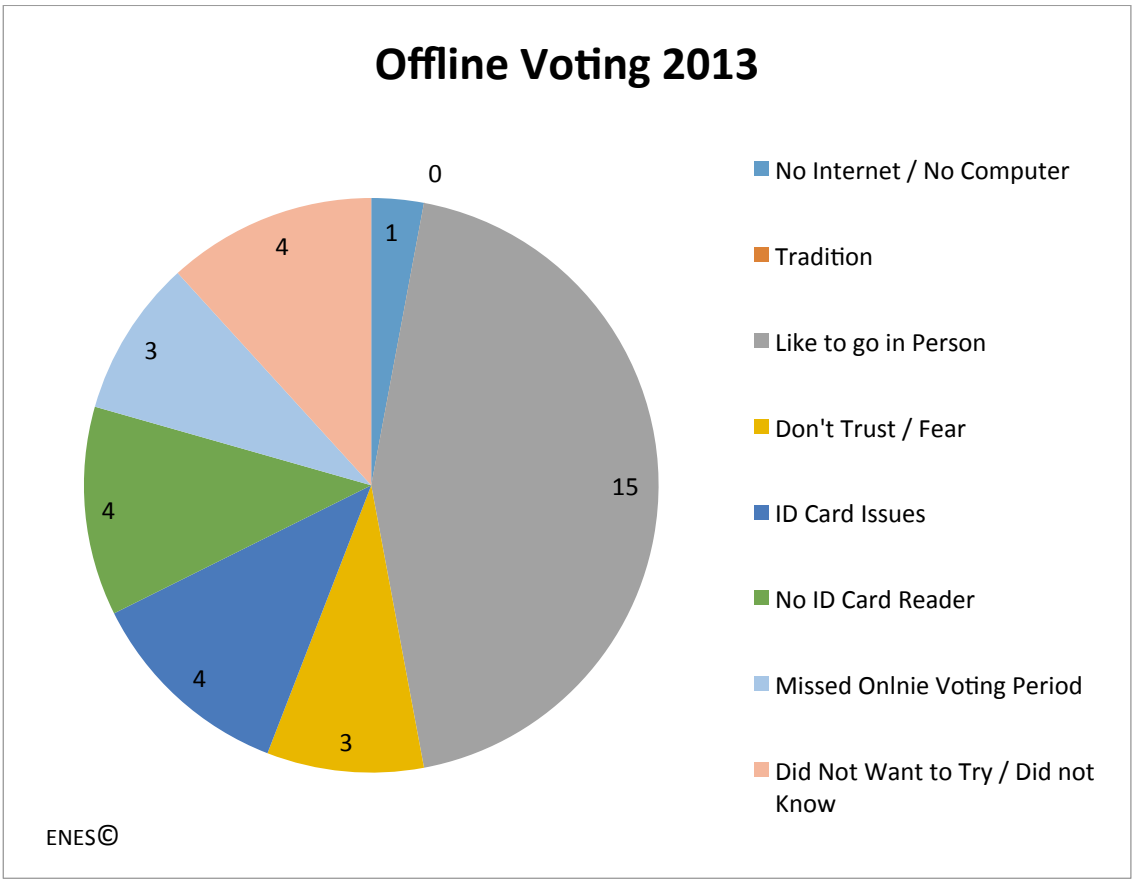
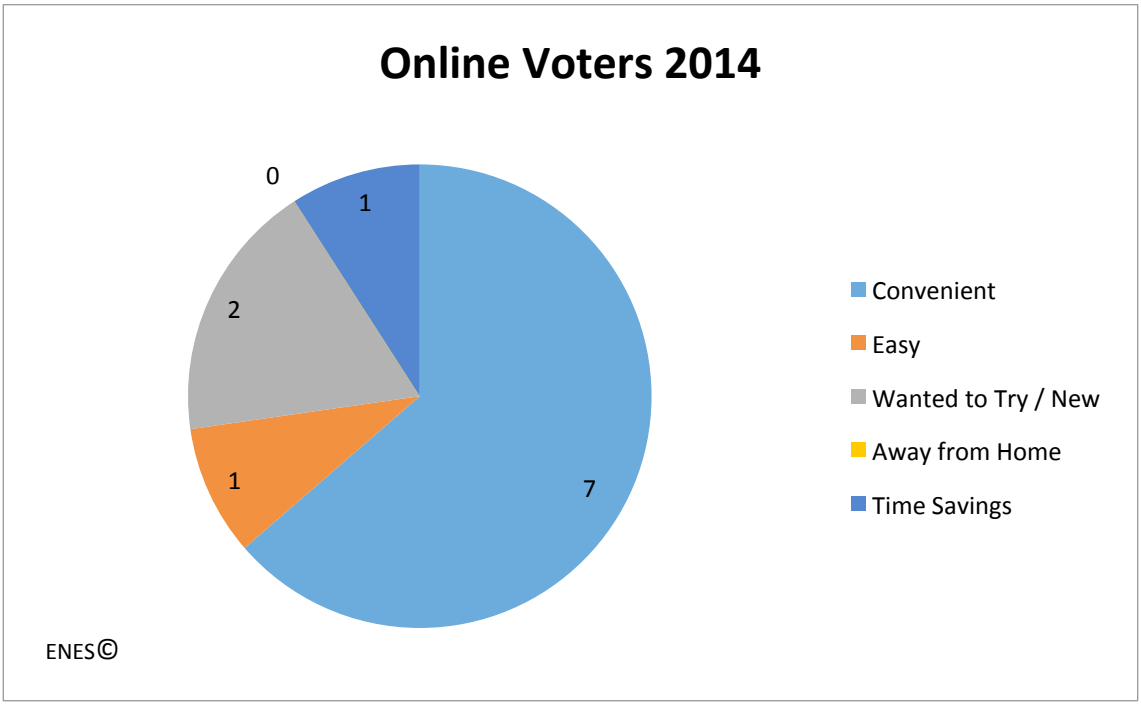
7 Appendix

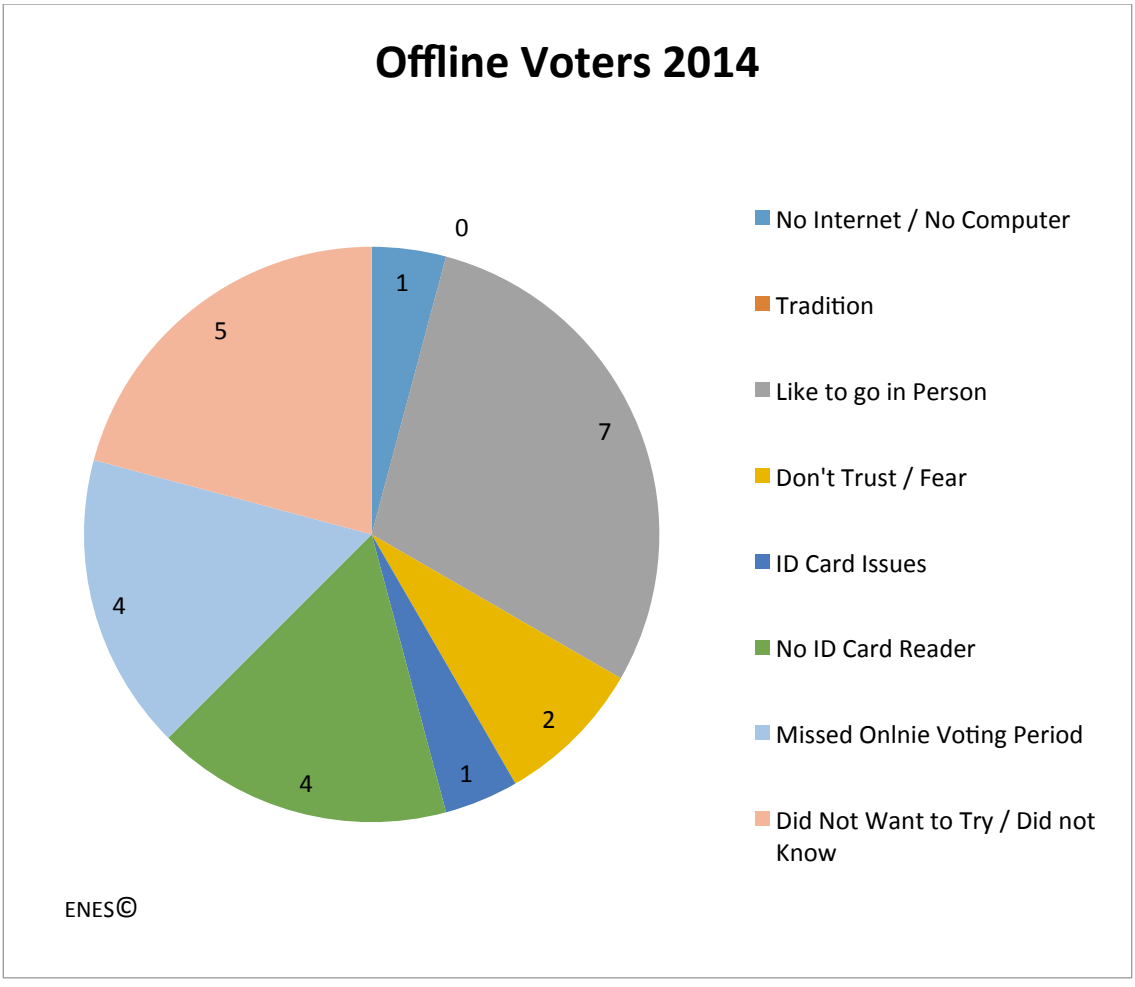

Online Voters 2005-2011
1
9
5
12
15
112
Other / Non answered
Convenient
Easy
Wanted to Try / New
Away from Home
Time Savings

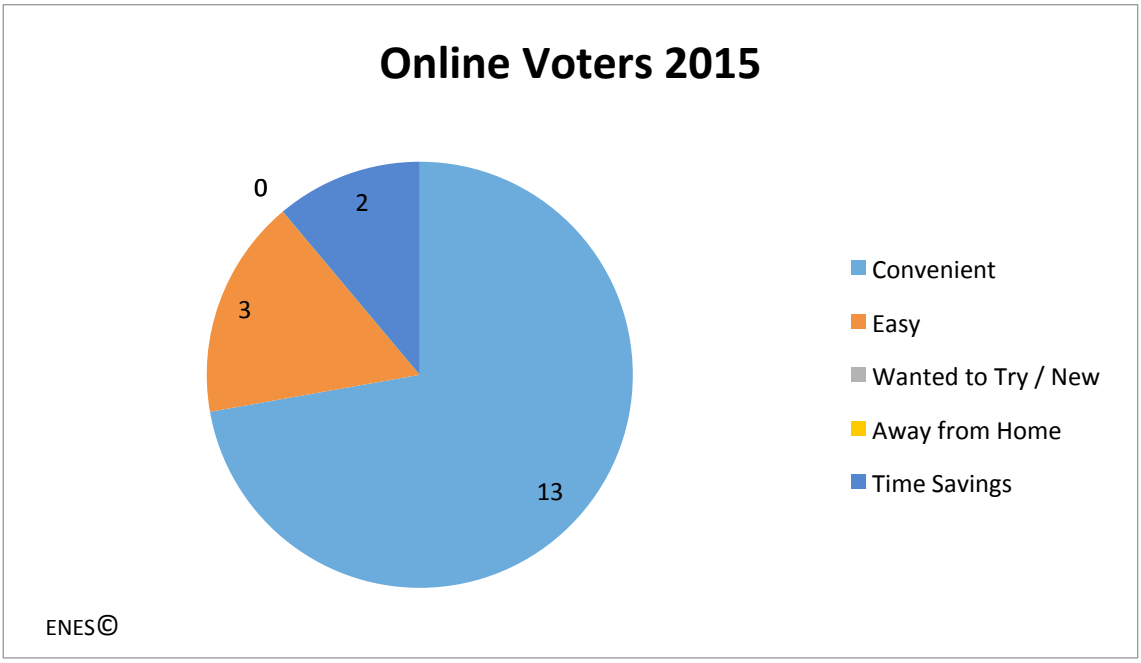

Offline Voters 2005-2011
13
5
28
2
32
28
20
21
No Internet / No Computer
Tradition
Like to go in Person
Don't Trust / Fear
ID Card Issues
No ID Card Reader
Missed Onlnie Voting Period
Did Not Want to Try / Did not Know


Online Voters 2013
2
5
2
0
Convenient
Easy
Wanted to Try / New
Away from Home
Time Savings
ENES©


Offline Voting 2013
0
1
4
3
15
4
4
3
No Internet / No Computer
Tradition
Like to go in Person
Don't Trust / Fear
ID Card Issues
No ID Card Reader
Missed Onlnie Voting Period
Did Not Want to Try / Did not Know
ENES©


Online Voters 2014
0
1
2
1
7
Convenient
Easy
Wanted to Try / New
Away from Home
Time Savings
ENES©


Offline Voters 2014
0
1
7
2
1
4
4
5
No Internet / No Computer
Tradition
Like to go in Person
Don't Trust / Fear
ID Card Issues
No ID Card Reader
Missed Onlnie Voting Period
Did Not Want to Try / Did not Know
ENES©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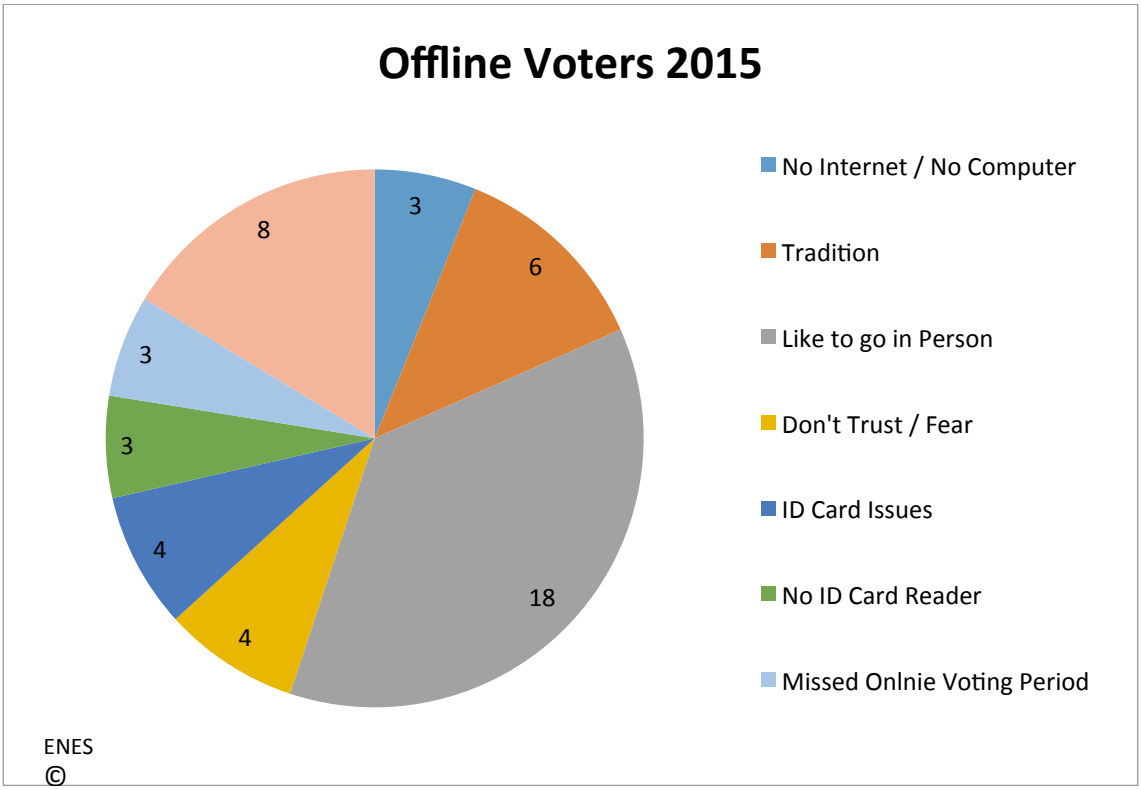
0
2
3
13
Convenient
Easy
Wanted to Try / New
Away from Home
Time Savings
ENES©


Offline Voters 2015
3
6
18
4
4
3
3
8
No Internet / No Computer
Tradition
Like to go in Person
Don't Trust / Fear
ID Card Issues
No ID Card Reader
Missed Onlnie Voting Period
ENES
©

2005 Local Elections Online Voters		Number of Responses
0	No answer	
1	Convenient	21
2	Easy	2
3	Wanted to try/New	4
4	Away from home	
5	Time savings	1
		28

Table 10: ENES 2005

2007 EU Parliament Elections Online Voters		Number of Responses
0	No answer	1
1	Convenient	31
2	Easy	1
3	Wanted to try/New	3
4	Away from home	
5	Time savings	
		36

Table 11: ENES 2007

2009 Parliament Elections Online Voters		Number of Responses
0	No answer	
1	Convenient	14
2	Easy	6
3	Wanted to try/New	2
4	Away from home	
5	Time savings	3
		25

2009/Local Election Online Voters		Number of Responses
0	No answer	
1	Convenient	26
2	Easy	2
3	Wanted to try/New	
4	Away from home	3
5	Time savings	4
		35

2005 Local Elections/Traditional Voters	
	Number of Responses
There was no Internet	2
Tradition	1
Like to go in person	4
Do not trust	1
An ID-card issue	4
No ID-card reader	7
Missed the online voting period	1
Din't want to try/Didn't know	4
	24

2007 EU Parliament Elections Traditional Voters	
	Number of Responses
There was no Internet	4
Tradition	
Like to go in person	5
Do not trust	
An ID-card issue	6
No ID-card reader	8
Missed the online voting period	
Didn't want to try/Didn't know	3
	26

2009/Local Elections Traditional Voters	
	Number of Responses
There was no Internet	5
Tradition	3
Like to go in person	9
Do not trust	
An ID-card issue	8
No ID-card reader	4
Missed the online voting period	5
Didn't want to try/Didn't know	3
	37

2009/Parliament Elections Traditional Voters	
	Number of Responses
There was no Internet	
Tradition	
Like to go in person	4
Do not trust	
An ID-card issue	5
No ID-card reader	6
Missed the online voting period	5
Didn't want to try/Didn't know	7
	27

2011 EU Parliament Elections Traditional Voters	
	Number of Responses
There was no Internet	2
Tradition	1
Like to go in person	6
Do not trust	1
An ID-card issue	9
No ID-card reader	3
Missed the online voting period	9
Didn't want to try/Didn't know	4
	35