

Online Participation in Estonia: Active Voting, Low Engagement

Meelis Kitsing
Department of Political Science
University of Massachusetts Amherst
Amherst, MA 01003, USA
mkitsing@polsci.umass.edu

ABSTRACT

This paper discusses online participation in Estonia. Even though Estonia's e-government initiatives are often presented as examples for other countries to be followed, this analysis finds high degree of variation in the outcomes. The availability of innovative platforms for online political participation has led to increasing use of internet voting in the last five elections, while they have consistently failed to engage public in the legislative process. Furthermore, the internet voting can be seen as transactional. It has not made substantial contribution to online democratic participation other than making voting more convenient for certain segments of society. The government portal for encouraging citizens to express their views about new laws suffers from both unwillingness of citizens to participate and most ministries to make new laws available.

Categories and Subject Descriptors

K.4.1 [Computers and Society]: Public Policy Issues – *Ethics, Privacy, Regulation*. K.5.2 [Legal Issues of Computing]: Governmental Issues - *Regulation*. K.6.5 [Management of Computing and Information Systems]: Security and Protection-*Authentication*

General Terms

Management, Performance, Human Factors, Legal Aspects

Keywords

Electronic government, internet voting, electronic voting, remote electronic voting, elections, online participation, Estonia, Central and Eastern Europe, rationality of voting,

1. INTRODUCTION

Estonia is only country in the world where citizens have voted online in the municipal, national and European elections. The internet voting is not just one unique initiative that makes Estonia to stand out. Its citizens have used internet banking since 1996, submitted their online tax declarations since 2000, bought bus tickets with their mobile phones for many years and done various other remote electronic transactions for a long time that have not been available in many parts of the world. These examples are

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

ICEGOV2011, September 26–28, 2011, Tallinn, Estonia
Copyright 2011 ACM 978-1-4503-0746-8...\$10.00

substantiated by recent reports of international organizations, which have given Estonia high scores for the implementation of e-government [1]. This research explores how the Estonian e-government efforts have engaged Estonian citizens online by analyzing the outcomes of internet voting as well as participation in public consultations concerning legislation at a government sponsored portal. It explores how substantial has been the contribution of Estonian government to the online engagement by tackling whether its efforts have increased participation in the democratic process. The study analyzes these two government initiatives in order to see whether they are primarily transactional mimicking “services first, democracy later” type of thinking or do they give an indication that the government has gone beyond “fallacy of electoralism” by managing to engage citizens in a substantial way.

The paper starts by discussion of internet voting in the last five elections from 2005 to 2011. After that the paper will analyze the online participation in legislative processes through the government portal osale.ee from 2007 to 2009. The paper concludes by highlighting key findings and offering suggestions for the future research.

2. INTERNET VOTING

Internet voting is the most well-known initiative to engage public in democratic process in Estonia. As Estonia is the only country in the world where citizens have voted online in the municipal, national and European elections, then the internet voting in Estonia has received a considerable scholarly attention [2][13][15]. Particularly, the 2007 parliamentary elections have been scrutinized from various angles. This contribution offers an overview of last five elections, highlights key elements of voting process and discusses briefly some major debates concerning the internet voting in Estonia.

The possibility to vote online was first used in October 2005 when almost two percent of all voters, which translates into one percent of the electorate, used this opportunity in the municipal elections. This experiment was followed the parliamentary elections in April 2007 where 5.4 percent of casted votes were submitted online. In June 2009, the European Parliament Elections were held where close to 15 percent of votes were submitted online. In the last municipal elections in October 2009 almost 16 percent of the votes were casted online. In the 2011 elections to the Estonian parliament internet votes made up more than 24 percent of all votes (see Table 1 below). The core idea behind the Estonian internet voting system is that the provision of these online channels for voting removes another barrier by making voting more “convenient” [2]. Proponents of remote electronic voting in

Estonia, however, often extend their argument beyond convenience and insist that this type of voting will increase turnout in elections. Electronic voting will reduce transaction costs and enhance efficiency in the voting process. Citizens find it easier to cast their vote and they face lower costs of voting.

Of course, benefits of electronic voting such as reduced transaction costs are only one side of the coin. On the other side, the electronic voting has also costs – e.g. reduced civic engagement, privacy and security concerns. Indeed, these costs are not just technical or emerge from a particular civic republican and/or communitarian theoretical perspective.

Table 1. Internet Voting in the Estonian Elections (2005-2011).

Type of elections	Date	Internet votes (% of all votes)	Turnout (% of electorate)	Internet voting turnout (% of electorate)	First time users of ID card online (%)
Municipal elections	Oct 2005	1.9	47.4	0.9	61
Parliamentary elections	April 2007	5.5	61.9	3.4	39
European Parliament	June 2009	14.7	43.9	6.5	19
Municipal elections	Oct 2009	15.8	60.6	9.5	18.5
Parliamentary elections	March 2011	24.3	63.5	15.4	N/A

Source: Composed by the author on the basis of data from National Electoral Committee [3].

2.1 Rationality of Internet Voting

Rationality for remote electronic voting can be assessed from a variety of perspectives both conceptually and empirically. Since the arguments for electronic voting are essentially instrumentalist, then conceptually it would be best assess them on the grounds of same instrumentalist logic on the basis rational choice schools of thought. The arguments put forth by other schools can be assessed in the future research.

Most importantly, the instrumentalist case that making voting convenient will contribute to increased turnout does not hold on the grounds of instrumentalist logic. First, the instrumentalist view of voting assumes that a key barrier for low turnout is cost faced by individual voter. This assumes that individuals are self-interested utility-maximizers who engage in cost-benefit analysis in the voting process. Following philosopher Joel Feinberg (1958) this notion could be labeled as “psychological egoism-based” approach to voting behavior [4]. However, if we assume that individual voter is self-interested in this manner, then the best way to minimize costs would be not to vote at all. One vote will not change the outcome [5]. Hence, whatever benefits outcome of elections will deliver will be the same regardless whether one vote is submitted or not. Reduction of transaction costs and increasing efficiency of voting process delivered by the availability of remote electronic voting will not change this calculation. Any kind of voting – online or offline – will still imply cost for individual voter however insignificant it may or may not be.

Second, motivation of individual voter may not necessarily stem from the outcome of elections but rather from the voting process. Self-interested voter may maximize utility by acting on the basis of the sense of civic duty. If community and friends consider voting important, then participation in the elections delivers benefits related to a social standing. Indeed, rational choice literature has demonstrated that citizens may cast a vote simply because of a personal need which is not material, sense of civic duty which makes them feel good and reputational gains as others see them in the voting booth [6]. In other words, it may be rational to vote in a particular institutional context. Most importantly, the benefit of reduced transaction costs in casting a vote through electronic means may be offset by the cost of not being able to show to others the act of voting – e.g. the fulfillment of civic duty. Thus if participation in the process is important, then remote electronic voting has opposite effect. It does not allow demonstrating participation in the voting process to a peer-group. Internet voting is all about cutting the time spent for voting ritual. Third, voter’s motivation comes from imperfect knowledge and understanding of voting process. Individual voter may believe that one vote matters – even if it does not. Voters have imperfect information which may imply that they are misled about the importance of voting [7]. However, assumption of “rational ignorance” would not lead to increased turnout resulting from electronic voting. Voters who vote anyway may change the method of voting from offline to online but it does not affect turnout.

The rationale for electronic voting cannot come from a calculative singular approach where we assume perfect rationality and utility maximization. Voters have many different identities and they have multitude of preferences. Some voters may be encouraged to vote simply because remote electronic voting is available. This does not imply that they will vote next time. For many others the availability of remote electronic voting is not even necessary (not to mention sufficient) condition for submitting their vote. Hence, we should assume “bounded rationality” instead of perfect rationality when approaching theoretically and analyzing empirically internet voting [8]. Electronic voting might be a good substitute for offline alternatives for some people but certainly not for everybody. From purely theoretical grounds it is difficult to see how the remote electronic voting contributes to increased turnout.

Let’s turn to the Estonian experience to see how these conceptual insights fare with empirical evidence. The discussion is based on data from the Estonian National Electoral Commission, secondary sources and personal experience. The author observed both municipal and European Parliament elections in 2009 and voted online in the European Parliament elections as well as in the 2011 parliamentary elections. An attempt was made to vote also in the municipal elections in 2009 but it failed as the author was not a permanent resident of Estonia (this is not required for national and European elections). In addition, the author has experience of voting remotely by mail in the previous national and European elections as well as voting by traditional way in the municipal and national elections.

2.2 ID-Card and Internet Voting

Internet voting reduces some transaction costs for voting while it increases some others. Estonian voters do not simply need the access to the computer but the use of national ID-card is required as well. The use of ID-card requires a purchase of ID-card reader.

Cheaper versions of the reader can be purchased for slightly less than \$10 dollars. More expensive versions can cost \$40-50 dollars. The ID-card itself costs slightly more than \$20 dollars. Certainly, the ID card is not only necessary for online voting but can be used of a variety of online services provided by public and private sectors. In addition, the ID-card can be used as a regular identification document within Estonia and it serves as a substitute for passport for traveling within the 27- countries of the European Union.

One reason why the government introduced ID-cards in 2002 was to provide a more secure and sophisticated substitute for online identification method provided by the internet banking, where cards with numerical codes were used. Even though government had issued half million ID-cards by March 2005, the new identification method did not gain immediately considerable following in online environments [9]. People used these cards primarily offline. The bank-issued cards have been used in parallel and before the ID-card as an identification method for government provided online services. In recent years banks have actively supported the use of ID cards in internet banking by lowering the amount of daily transactions that can be made by older internet bank identification methods and also charging smaller fees for transactions made with the ID-cards. In addition to private sector, ID cards have become widely used by municipalities as a method for buying bus tickets. At the website www.pilet.ee people can purchase bus passes by using their ID card. The purchase of ticket can be controlled on the bus by swiping the ID-card through the card reader. Other ways of using the card have also sprung up. For instance, the ID-card can serve as a substitute for library card in entering to the National Library.

However, these are more recent developments, which build on the initial success of identification method used by the banks, which became an influential IT innovator by introducing internet banking in 1996. The quality, security and simplicity of its service attracted the majority of Internet users as its customers. Already in 2002, 57 percent of Estonian internet users used internet banking [10]. Many state agencies started to use the identification verification system used in internet banking, thereby enabling government services to work online. Since 2000 Estonians have been able to file their taxes online, using the identification system offered by electronic banking services. The study on use of government online services conducted in 2002 already indicated then that the 48 percent of Estonian internet users pay for e-government services through the internet banking [11]. Other ways of using e-government services were less exploited by the people.

Since most people use banking services often, then it has created habit to make transactions online. This habit has made the adoption of ID-card and, consequently, internet voting easier. It has been rational for the banks to cooperate with the government because it allows reaping benefits from the internet as a network good. Essentially, banks such as Hansapank (it was renamed Swedbank in 2008) became hubs in the network. Clients are able to access services of government agencies as well as other services provided by private sector with a few mouse clicks while being logged onto the online banking environment. Citizens accessing government agencies are directed to the websites of banks if it was necessary to identify his or her identity. It was rational for government agencies to rely on this solution and cooperation because it was efficient, secure, simple and kept costs

minimal. Both internet-banking based solutions as well as new ID-card avoided the necessity to create different identification systems for private and public sector organizations. Most importantly, banks have considerable power to influence behavior through price discrimination, then banks have really been key drivers of the ID-card adoption process.

This context allows understanding the role of ID-card in the elections. Naturally, it follows that one of the main reasons for low participation in online voting in the municipal elections of fall 2005 is simply the fact that the online use of ID card was not as widely spread back then than it was in 2009 and 2011. Many people did not use ID-card for online transactions because they used old identification techniques. As the table 1 shows above, 61 percent of all internet voters were first online ID card users in the 2005 elections. In the 2007 elections the first time online users of ID-card users made up 39 percent. Overall, only 25 000 ID card-owners used their cards online in 2006. In 2009 the number of online users of ID-card had increased ten-fold to about 250 000 [12]. Subsequently, the percentage of first time online ID-card users in the European elections dropped to 19 and in the municipal elections to 18.5. So this is a story of typical adoption process where early adopters proved the ID-card to be a reliable way to conduct transactions online.

2.3 The Internet Voting Process

Hence, it is obvious that the adoption of ID-card and its reader did represent significant costs in the early voting experiments in 2005 and 2007. However, it does not represent significant costs for the considerable proportion of voters anymore as they have adopted this technology already as consumers. But the cost of ID-card and its reader represent only the surface of the iceberg. Any analysis of costs has to consider the whole internet voting process.

The voting procedure is relatively simple and less complicated than conducting transactions with the government in some other online environments such as the business register. The voter starts by inserting the ID-card into card reader and opening the webpage for voting (www.valimised.ee). Then the voter verifies his/her identity using the first four-digit personal identification number (PIN1) of ID-card. This number is given to voter when the card is issued together with PIN 2 and PUK code. Both PIN codes are used also for all other online transactions with the ID card that require digital signature. After entering the first PIN number the server checks whether the voter is eligible by using the data from the population register. Once the eligibility is verified, the voter is shown the candidate list of the electoral district and can click on her/his choice which is encrypted. This decision has to be confirmed by inserting digital signature in the form of second five-digit PIN code (PIN 2). The submission of the vote concludes the process for individual voter. If the voter changes its mind, then there is a possibility of electronic re-vote: internet voters can cast their votes again electronically and in that case, their previous votes will be deleted. As far as privacy and security are concerned, then at the vote count, the voter's digital signature is removed. The members of the National Electoral Committee can together open the anonymous internet votes and count them.

Certainly, voters may experience difficulties in this otherwise straightforward process. Voters have different levels of sophistication in using internet, they have different computer skill levels, their computers may be configured differently and they may use software that is not always compatible with the ID-card

reader. The practice in Estonia has shown that cheaper ID-card readers may be sometimes unreliable and not work always properly. These experiences may not be a representative of the average ID-card user. However, it does point out that this technology may create additional barrier for voting for some individuals rather than to move the barriers. It creates uncertainty as this way of voting may not always be reliable. One way of tackling these challenges is to vote early and not to leave it for the last minute. While most people go to polls on Sundays, internet voting is spread over seven days (it used to be three days in 2005 and 2007). Hence, internet voters can cast their vote already six days before the elections. If any technical difficulties occur, there is sufficient time to solve these problems or vote by the traditional way at the ballot box.

2.4 Political Biases of Internet Voting

The qualities of ID-card reader, computer hardware and software as well as skill-level in using these technologies are important factors in determining whether internet voting makes voting easier to citizens. The role of resources and knowledge, of course, raise the issue of digital divide and its effects on internet voting in Estonia [13]. The segments of society with a lower income, and insufficient computer skills are less likely to submit their votes online than wealthier and better educated citizens. One way to analyze these distributional biases is to consider the influence of internet voting on political parties. The disagreement about the e-voting among Estonian parties is based on the notion of such distributional divide. Parties representing less fortunate segments of population were skeptical about the internet voting, while center-right parties were the main champions of the internet voting initiative [14].

However, Alvarez et al [2] argue that the results of Estonian internet voting have not introduced socio-economic and political bias when controlling for other variables [2]. Nevertheless, their own data about the 2007 elections shows that only 9.1 percent of internet voters voted for the Keskerakond, which received 26.1 percent of overall votes. The Keskerakond is a populist, left of the center political party, which represents older, more Russian-speaking and economically challenged segments of Estonian population than other main parties. Naturally, it might be that the supporters of this party have lower levels of computer skills and this is the reason for lower share of internet votes. Nevertheless, seeing skills as more important explanatory variable than socio-economic status is just a restatement of the argument. It is clear that there is an uneven distribution of internet votes along the party lines. Particularly so as the Reformierakond received 34.5 percent of internet votes while its total score was 27.8 percent of votes. Similarly, the Isamaa and Res Publica Liit (IRL) received 26.7 percent of internet votes in comparison with 17.9 percent of total votes [2]. In other words, two main center-right parties which make up the current coalition government received a total of 62.3 percent of e-votes while their share of total votes was 45.7 percent. Both of these parties were actively pushing for the implementation of remote electronic voting and the results show clearly they have benefited more than other main parties. Similar pattern has been persistent also in all other elections in 2005 and 2009 and 2011 [3].

One way how the Keskerakond tried to minimize these biases was by setting up special internet voting booths in Tallinn, a capital city of Estonia, whose municipal government they control. Even though such actions were not technically violation of electoral law

as long as it was not done directly by political party but by city government or other organizations, such booths do raise the question of privacy and introduce additional political biases into the voting system. Ironically, it turns the whole idea of internet voting on its head as the process reminds more of traditional voting. Instead voting in their home or office, people will go to special internet voting booth to cast their vote. Nevertheless, such internet voting booths are good at promoting civic engagement and offering an opportunity for people without home computer to cast their ballot online. Of course the privacy and security standards for voting have to be followed.

2.5 Turnout and Internet Voting

The previous discussion showed that the electorate of center-right parties used more internet voting than center-left parties. However, the crucial question is whether these gains came by increasing turnout or simply substituting internet voting for ballot-box. Alvarez et al [2] argue on the basis of data from the 2007 parliamentary elections that online voting mobilized "more casual voters" [2]. They found that 11 per cent of online voters probably would not have or for sure would not have voted without this option. Similarly, Vassil [15] found that 14 percent of internet voters would not have voted in the 2007 parliamentary elections by other ways than internet [15]. Both of these studies relied on survey data which is of limited nature and cannot properly estimate substitution effects.

In a methodologically more sophisticated approach Bochsler [13] estimated the magnitude of substitution effect and found that the internet voting in 2007 elections did not lead to increased turnout but attracted the same social groups who usually vote [13]. This is also consistent with more qualitative preliminary conclusion drawn from the early experiments in the 2005 municipal elections is that it did not increase participation in the election but was used as an alternative method to cast one's vote [14]. The 2011 elections saw a rapid increase in the percentage of internet voters but overall turnout stayed relatively constant in comparison with the 2007 parliamentary elections [3]. Nevertheless, the last results of municipal elections in 2009 were correlated with increased participation –almost 16 percent of voters voted online and over 60 percent of the electorate participated. The turnout is unusually high for a municipal election which seems to suggest that internet voting might have contributed for the increased participation. However, online voters made up almost 15 percent of voters also in the European Parliament elections at the same year, where the turnout was close to 44 percent. Correlation between increased percentage of internet voters and higher turnout in the 2009 municipal elections does not necessarily equal causation. There might have been other factors at play such as economic recession and dissatisfaction with municipal governments in explaining the high turnout.

The data also suggests that older people and more women are using online voting option, which reveals that this method of voting is becoming more widespread and ordinary voters may simply use it as a substitute for offline options. In the 2005 municipal elections 54 percent of online voters were men. In the 2009 municipal elections 53 percent were women. In the 2007 parliamentary elections and the 2009 European Parliament elections distribution was more even. The share of people over 55years increased from 15 percent to 18 percent in the 2009 municipal elections. While the share of age group of 25-34 years

decreased from 33 percent to 28 percent [3]. Share of all other age groups stayed the same.

It is possible to conclude that electronic voting does not necessarily increase participation in the elections. In democracies, adult citizens can vote but large minorities or even majorities choose not to exercise this right even if the transaction costs are low. Similarly, internet voting may decrease transaction costs but it does not necessarily lead to increased participation. In many cases, it may simply serve as a substitute for citizens already actively engaged in political participation. Certainly, a more careful causal analysis of the 2009 and 2011 elections is needed for explaining the turnout. The next part of the chapter explores how fruitful have been government efforts to encourage online participation in the legislative process.

3. ONLINE ENGAGEMENT IN LAW MAKING

While internet voting has received considerable attention from scholars, then Estonian government efforts to increase online public participation has been more known in policy circles. The most well-known early innovation was a portal called TOM (abbreviation of the Estonian name “Täna Otsustan Mina” – “Today I Decide”), which was launched in 2001 and allowed members of the public to submit proposed laws and/or proposed amendments to the laws over the internet. In the beginning, the whole concept was so haphazardly implemented that the most active contributors of new laws and changes to the laws were Mickey Mouse and other cartoon characters. Ironically, government ministers often had to start their responses to the proposals by addressing “Dear Mickey Mouse.” Later on the process required each submitter to reveal his or her real identity, but the portal’s impact on encouraging participation is marginal at best. The portal had 6742 registered users in the beginning of 2007 [16]. By comparison, Estonian population is about 1.4 million and over 100 000 people have casted their ballots online in the last elections

In 2007, the government opened a new portal called Osalusveeb (meaning participation web). Initially, the portal at www.osale.ee offered opportunities for expression of opinions on the new laws and other pieces of legislation prepared by the ministries. More recently, the functions of TOM and osale.ee have been integrated and osale.ee now offers opportunity for registered users to vote on different ideas concerning public policy. Since, the voting on ideas is relatively new phenomena in the portal, the analysis of osale.ee focuses on one of its function as a platform for engaging public in the legislative process.

3.1 Demand for Public Consultations

The analysis starts by exploring public demand for offering input into new laws. It does so by simply counting the number of comments received by each posted law. There were 65 new laws and other government documents posted for consultations at the portal www.osale.ee from June 28, 2007 to May 15, 2009 [17]. The number of posted comments gives an indication of public engagement. As it turns out by counting the number of posted comments the portal fails to engage public in the legislative process. About one third of all posted laws acts received no comments. 19 received one comment, seven laws received two comments, four laws received three comments and three laws received four comments.

Nevertheless, it must be pointed out that a small minority of proposals received significantly more comments. The EU Policy for 2007-2011 received ten comments, law concerning well being of animals received seven comments, law concerning the regulation of work conditions received 27 comments and law concerning forestry seven comments. A competition for ideas on how to make public sector services simpler organized by the Ministry of Social Affairs received 20 posts. A law about regulating public service work conditions from the Ministry of Justice received eight comments. Nevertheless, a random newspaper article in Estonia on any given day can generate several times more comments than some of these most commented laws.

While the eagerness to contribute may be limited the readership of different legislative acts is much greater. For instance, on May 16, 2009, www.osale.ee posted results which indicated that 17012 people had read document about the rights in e-state, 10019 people had read law concerning labor contracts, Estonian EU Policy for 2007-2011 was read by 5436 people, Strategy on innovation policy was read by 4932 people and Estonian integration strategy by 4517 people. These were top five documents read by people [17].

3.2 Supply of Documents for Public Consultations

Since the success of such portal depends on both demand by citizens and supply of new material by ministries, then data on number of new legislative materials submitted by different ministries offers an indication of supply. The count of number of laws posted for consultation at www.osale.ee reveals that some ministries are significantly more eager to promote public engagement than others. Ministry of Interior Affairs had posted 14 new laws and legislative acts for consultation in this time period and Ministry for Economy and Communications had posted ten documents. These two ministries were followed by relatively meager postings by others: Ministry of Social Affairs (6), Ministry for Environment (5), Ministry of Education and Science (5). State Chancellery, Ministry of Agriculture, Ministry of Justice, Ministry of Finance, Ministry of Foreign Affairs, Ministry of Culture and Ministry of Defense posted all less than five documents [17]. Essentially, all ministries have submitted at least one document to the public consultation. However, the overall outcome is signaling a low level of interest among the ministries to use the portal. Clearly, the number of legislative acts that could be posted for public consultations exceeds significantly the numbers which are actually posted.

This data demonstrates clearly that the practice of e-government can be radically different than some nominal variables would suggest. In a large N-study which would among other variables try to analyze online engagement Estonia would simply get a certain score for having such portal. The findings are also consistent with a broader study on public engagement in the legislative processes conducted by Praxis in 2011. The role of osale.ee was insignificant in comparison with offline methods of engagement [18]. Thus, the actual practice reveals that it is not sufficient to provide technology and some ground rules for engagement. Role of specific government officials is important. Even if the broad structural context is the same, then some ministries are more eager than others in promoting engagement. Citizens are more motivated to comment on a small minority of legislative acts while show no interest of vast majority of acts

posted for consultations. Most citizens may not be even aware that such portal exists.

4. FUTURE RESEARCH DIRECTIONS

This paper offered a brief overview of key initiatives to engage citizens online in the democratic process. As this account is relatively descriptive, then future research on the same topic would benefit from explicit theorizing about internet voting and online participation. Empirical evidence should be analyzed within this theoretical framework. Both internet voting and online engagement can be explored by multi-method approach. Survey research would give a better understanding of citizens' motivations to use internet for voting and political participation. Semi-structured interviews can be used to supplement this survey research as well as find out more about decision-making processes in the government. In order to gain a more comprehensive understanding of online deliberation it should go beyond mere counting of comments but engage in textual analysis in order to reveal the nature of these comments. Furthermore, comparisons with other countries would benefit analysis of online participation. Comparisons would be difficult for analyzing internet voting as Estonia remains unique country in this respect.

5. CONCLUSION

This study assessed participatory aspects of Estonia's e-government. It showed that the online participation varies considerably depending on the particular initiative. The research highlighted the difference between online opportunities and actual exploitation of these opportunities. Some Estonian public sector bodies have been more eager to engage citizens online than others. On the one hand, constantly increasing number of Estonians has used opportunities to vote online in the last elections. Even if this result may be reducing quality of democracy by making voting purely transactional, it has not decreased the turnout in the elections. Most importantly, it has made voting more convenient for constantly increasing number of voters online. On the other hand, Estonian government officials have proudly demonstrated their interactive online tools such as TOM and osale.ee for engaging citizens in online consultations, but in reality these tools are used by insignificant amount of citizens. Furthermore, some of their functions such as providing platforms for online consultation in the legislative process have clearly failed as most ministries do not even supply sufficient amount of materials that public could access. In spite of rapid diffusion and use of Internet, it is clear that actual use and value of technologies in government depends on solutions on micro level. That is where citizens experience a great divergence in their actual experience. Such outcome does not indicate a failure of government to engage public online but rather brings attention to the fact that actual practice of online participation is significantly more heterogeneous than some aggregated indicators would suggest.

6. REFERENCES

- [1] United Nations. *UN E-government Survey 2008: From E-Government to Connected Governance*. United Nations, New York, NY, 2009.
- [2] Alvarez, R. M., Hall, T. E., and Trechsel, A. H. Internet voting in comparative perspective: The case of Estonia. *PS: Political Science and Politics*, 42, 3 (2009) 497-505.
- [3] Vabariigi Valimiskomisjon. *Elektronilise hääletamise statistika*. Retrieved April 10, 2011, from <http://www.vvk.ee/index.php?id=10610>
- [4] Feinberg, J. Psychological egoism. In J. Feinberg, & R. Shafer-Landau (Eds.), *Reason and responsibility: Readings in some basic problems of philosophy*. Thomson Wadsworth, California, 2008, 520-532.
- [5] Olson, M. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press, Cambridge, MA, 1965.
- [6] Merrill, S., & Grofman, B. *A Unified Theory of Voting: Directional and Proximity Spatial Models*. Cambridge University Press, Cambridge, UK, 1999.
- [7] Moon, D. What you use still depends on what you have: Information effects in presidential elections, 1972-1988. *American Politics Quarterly*, 20 (1992) 427-441.
- [8] Simon, H. A. A Behavioral Model of Rational Choice. *The Quarterly Journal of Economics*, 69, 1 (Feb., 1955) 99-118.
- [9] E-User. *E-government country brief: Estonia* No. 8/2005. E-User: Public Online Services and User Orientation, 2005.
- [10] Lustsik, O. E-pangandus eestis: Kiire kasvu põhjused ja tegurid. *Kroon Ja Majandus*, 3 (2003).
- [11] Krull, A. *ICT infrastructure and E-readiness assessment report*. Praxis Center for Policy Studies, Tallinn, Estonia, 2003.
- [12] Rudi, H. E-valimised töid juurde 11 222 ID-kaardi kasutajat. *Postimees*, (June 23, 2009).
- [13] Bochsler, D. Can internet increase political participation? Remote electronic voting and turnout in the Estonian 2007 parliamentary elections. *Conference "Internet and Voting"*, (European University Institute, Fiesole, Italy, May 2010).
- [14] Drechsler, W. Dispatch from the future. *Washington Post* (November 5, 2006).
- [15] Vassil, K. *E-valimistest osavõtmise kogemuse ja tegurid. E-valijate võrdlev analüüs 2005. aasta ja 2007. aasta*. M.A. Thesis, University of Tartu, Tartu, Estonia, 2007.
- [16] Täna Otsustan Mina. *Data on users*. <https://tom.riik.ee> (This website is no longer available). Retrieved January 30, 2007.
- [17] Osalusveeb. (2009). *Data and information*. www.osale.ee Retrieved July 1, 2009.
- [18] Praxis and Institute of Baltic Studies. *Valitsusasutuste kaasamispraktikate analüüs*. Tallinn, Estonia, 2011.