## INTERNET FREEDOM AND E-GOVERNMENT: THE CONTRADICTORY IMPACT OF THE ICT REVOLUTION ON DEMOCRACY

by

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Submitted to Central European University Department of Political Science

In partial fulfilment of the requirements for the degree of Master of Arts Supervisor: Professor Matthijs Bogaards

Budapest Hungary, 2016

#### Abstract

Information and communication technology can help form public opinion and promote democracy, but it can also strengthen authoritarian regimes. A growing number of countries around the world has invested in e-government. This may be a positive development in itself, but it should not be mistaken for political liberalization, let alone for signs of impending democratization without this bringing democracy any closer. This thesis examines the nexus between internet freedom and e-government. A case study of Kazakhstan demonstrates the gap between e-government (highly developed) and internet freedom (largely absent) in an authoritarian state that strategically uses ICT to enhance its performance legitimacy.

The analysis demonstrates variations in the relationship between e-government and Internet freedom across countries. The puzzling issue is that authoritarian states have high levels of e-government implementation and high levels of repressive Internet freedom, which is not common to democracies.

Interestingly, from the analysis we can see that some authoritarian states: Azerbaijan, Bahrain, Belarus, China, Kazakhstan, Russian Federation, Saudi Arabia, Sri Lanka, Turkey, United Arab Emirates, and Venezuela do invest in e-government. Hence, they lead in the UN rankings with high level of e-government projects, but make no improvements in either ICT channels or democracy.

#### Acknowledgments

I am grateful for all the faith in me.

I would like to express my gratitude to my supervisor, Professor Matthijs Bogaards for positive environment, patience during my hesitation and guidance in the field, both the research design and process of the research.

I would like to mention the Academic Writing Centre, especially Eszter Timar for being supportive, critical and encouraging me to write better. Thank you for reading my drafts many times.

I would like to express my words of gratitude to the whole board of Political Science Department for guidance, and criticism throughout this academic journey.

For the last not for least, I extend my gratitude to my CEU friends for friendship and this unforgettable year in Budapest! Good luck in your future endeavours!

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#### List of Abbreviations

- BIN: Business Identification Number
- **CEC:** Central Elections Commission
- CSC: Citizen Service Centers
- EAIAS: Unified Automated Information-Analytical System of the Judiciary of
- the Republic of Kazakhstan
- E-democracy: Electronic Democracy
- EGDI: E-Government Development Index
- E-government: Electronic Government
- **EPI: E-Participation Index**
- E-voting: Electronic Voting
- E-vote: Electronic Vote
- FH: Freedom House
- FHI: Freedom House Index
- G2B: Government to Business
- G2C: Government to Citizens
- G2G: Government to Government
- G2S: Government to Service
- HCI: Human Capacity Index

#### ICT: Information and Communications Technology

IIN: Individual Identification Number

- IS CSC: Integrated System for Citizen Service Centres
- ITU: International Telecommunication Union
- LLDC: Land-Locked Developing Countries
- LDC: Least Developed Countries
- NDI: National Database on Individuals
- NDLP: National Database on Legal Persons
- ODIHR: Office for Democratic Institutions and Human Rights
- OECD: Organization for Economic Cooperation and Development
- OSCE: Organization for Security and Cooperation in Europe
- OSI: Online Service Index
- PPR: Public Sector Process Rebuilding
- SIDS: Small Island Developing States
- **TII:** Telecommunication Infrastructure Index
- UNDESA: United Nations Department of Economic and Social Affairs
- UNDP: United Nations Development Programme
- UNESC: United Nations Economic and Social Council
- UNESCO: United Nations Educational, Scientific and Cultural Organization
- UNPAN: United Nations Public Administration Network

#### Introduction

#### 'Technology is neither good nor bad, nor is it neutral'

Melvin Kranzberg (1986, p. 545)

More than thirty years ago the first of Kranzber's Laws was introduced which started meaning that technology had different results in different contexts and circumstances<sup>1</sup>. In different contexts, namely in authoritarian regimes technology cannot be a tool for neutrality, because most of the time it is a tool for suppressing democracy through oppressive regulations. My case study for this thesis will show that high investments in e-government cannot improve an existing non-democratic regime and restrictive legislation towards Internet freedom.

In our global reality information and communication technology (in the following: ICT) has become a crucial part of everyday life. ICT involves new media tools, namely the Internet, blogs, online journals and newspapers, allowing ordinary citizens to become a part of the world's media system by responding to and commenting on the news through various online platforms. The development of communication technology fosters the potential influence of mass media messages on audiences, and offers countries a new approach to improve efficiency, and transparency in governments. ICT gives citizens the opportunity for greater access to government officials, and offers a voice in in the political sphere through open government initiatives to strengthen relationships between government and citizens' participation in decision-making processes. Thus, governments use ICT to improve their relation with citizens to support democracy.

In the ICT world democratic processes have been viewed as electronic democracy (in the following: e-democracy). This term is associated as a new platform for citizen participation,

<sup>&</sup>lt;sup>1</sup>Dr. Melvin Kranzberg was a professor of the history of technology at the Georgia Institute of Technology and the founding editor of *Technology and Culture*. In 1985, he delivered the presidential address at the annual meeting of the Society for the History of Technology in which he explained what had already come to be known as Kranzberg's Laws.

namely blogs, and social media to promote democracy. Moreover, ICT in politics has introduced e-government and e-governance concepts to show that governments in developed and developing countries are building open government for their citizens and civil society organizations to offer public services through electronic government (in the following: e-government), which the OECD defined as 'the use of ICTs, especially the Internet, as a tool to achieve better government' (2003, p. 63).

Since the 2000s, international scholars have been developing theoretical e-government maturity models from existing best practices in the world (Andersen and Henriksen, 2006; Fath-Allah et al., 2014; Layne and Lee, 2001; Moon, 2002; Netchaeva, 2002; Siau and Long, 2004). According to Fath-Allah and others there are the four major stages of maturity models for each country. The first stage is known as 'presence', meaning the government has a website with accessible information. Citizens need an interaction tool with government to ask questions, and raise their voice on unsolved issues. This step is called 'interaction'. The e-government portals aim to reduce time spent on payments, therefore e-government offers citizens to pay their taxes, and fines online. This step is called 'transaction'. Last but not least, 'integration' requires e-government to perform without technical problems, and that citizens' information is well incorporated into electronic databases (Fath-Allah et al., 2014, p. 86).

It would be utopian to believe that the ICT revolution has only positive aspects to promote civil society, government-citizen relations and Internet access to deliver public services as well as foster democracy. Although ICT exists in many states, it does not bring democracy to a state or even lead to the stage of e-democracy. The digital divide of ICT shows global diffusion features including limitations of the Internet that can be used as a tool of control and oppression (Kalathil and Boas, 2003). Internet freedom is a term used to show the battle over power to have access to Internet content, empower civil society, challenge government to become more open and transparent to its citizens and allow them to participate in decisionmaking processes aimed in general at 'freedom to connect'<sup>2</sup>. Therefore, ICT tools can shape public opinion and promote democracy or play an antidemocratic role.

This digital division has divided political scientists into two groups: those who believe that technology facilitates democracy and better government-citizen relations, while other scholars have a different view, because technology plays various roles in different contexts. Countries with more wealth are willing to expand ICT investments (Moon et al., 2005; Rose, 2005), thus e-government has been successfully implemented in a number of non-democratic countries. Therefore, ICT sceptics' concerns over e-government's high ranking by the UN were not unwarranted.

The empirical literature shows that the political impact of e-governments is different in different regimes (Gulati and Yates, 2011; Siau and Long, 2004; Sriramesh and Rivera-Sánchez, 2006; Stier, 2015a; Whitmore, 2012). Some studies find a positive relationship between democracy and e-government, while others find a negative impact of e-government through different factors, for example corruption (Andersen, 2009; Bertot et al., 2010; Elbahnasawy, 2014; Kim, 2007; Shim and Eom, 2008; West, 2005).

It is not surprising that there is a relationship between e-government and Internet freedom. Therefore, I want to understand the relationship between internet freedom and e-government in developing countries. These seems to be a paradox in the high adoption of e-government policies and a low level of internet freedom. I think now it is timely to reflect on e-government implementation progress in various countries and get a better understanding of the paradoxical that these two developments do not proceed in parallel. This MA thesis surveys the political science literature for explanations of this phenomenon and tries to understand

<sup>&</sup>lt;sup>2</sup> The term "freedom to connect" was first used by Hillary Rodham Clinton, Secretary of State, 'Remarks on Internet Freedom, 'speech at Newseum, Washington, D.C., January 21, 2010. Available at: http://www.state.gov/secretary/20092013clinton/rm/2010/01/135519.htm

political impact of the ICT revolution on e-government and Internet freedom, especially in the context of an authoritarian regime.

#### **Research questions**

There are two main research questions that the thesis intends to answer. Firstly, what is the relationship between Internet freedom and e-government, and what does it mean for democracy?

Secondly, why the UN has scored Kazakhstan high on e-government, what is the role of e-government?

#### Hypotheses to test

H1: In non-democracies, levels of e-government diverge from degrees of internet freedom.

H2: There will be a positive correlation between the levels of e-government and Internet freedom for advanced democracies.

#### Sources and limitations

The data used in the analysis come from a variety of databases and reports. These are the Freedom House Index (in the following: FHI) on Freedom on the Net and the United Nations E-Government Development Index (in the following: EGDI). The framework of the research will be 2014<sup>3</sup>.

The Freedom House database includes the Freedom of Indexes of Political Rights and Civil Liberties, Net and Press Indexes. The United Nations e-Government Development Database has information on public services and citizen participation from the E-Government Survey of 193 Member States of the UN in 2003. (United Nations Public Administration

<sup>&</sup>lt;sup>3</sup> The updated data on e-governance development in the world is available every two years, the data for a 2016 is not available yet.

Country Studies). Additionally, I analyse various reports on the development of e-government, e-democracy and Internet freedom from OECD, UNESCO, UNESC and World Bank.

I find the data sources reliable to measure Internet freedom and e-governance to answer my research questions and demonstrate the relationships. While some scholars criticize the Freedom House democracy scores bias, Nils D. Steiner (214) and many other scholars are in favour of the democracy bias score provided by Freedom House.

#### Research methods and case selection

The study will be based on a case study methodology. This method is used in social science disciplines to reveal, and explain observations, evidences through different sources, namely empirical data, public reports, and interviews (Dunning, 2008; Gerring, 2006a; Gillham, 2000; Yin, 2013). The case study is a fundamental method to analyse evidence on processes, sequences and conjunctures to develop, test or modify hypotheses (Andrew and Checkel Jeffrey, 2015; Beach and Pedersen, 2013; Collier, 2011; Halperin and Heath, 2012; Rohlfing, 2013).

In Comparative Politics there are many scholars who use a single case study with concepts that are applicable to many other contexts (Halperin and Heath, 2012, p. 205). The choice of cases depends on research goals. Therefore, case study is good, if research is oriented towards hypothesis-confirming, hypothesis-developing and hypothesis-modifying (Rohlfing, 2012). Thus, research goals should help to select cases according to nine techniques, which mostly known as case study types: *typical, diverse, extreme, deviant, influential, crucial pathway, most-similar and most-different* (Gerring, 2006b).

My choice of case study methodology for this thesis is based on the aim of the research to study the contradiction between Internet freedom and e-government with in-depth singlecase analysis. Therefore, I am doing hypotheses-confirming case study in order to show my crucial case. For this I will run a statistical quantitative regression analysis with two variables.

Since my aim is to investigate the impact of ICT revolution on democracy and understand the paradox of Internet use and e-government in authoritarian rule, I have come to the decision to apply my analysis to the case of Kazakhstan in Central Asia. Central Asia is known for its long lasting authoritarian regime, corruption and repressive rule of law as well as wealth of natural resources. Therefore, the case study of Kazakhstan will be under the examination for this thesis to illustrate the paradox and the role of ICT development in an authoritarian regime. Kazakhstan seems to be a particular case study in authoritarian contexts, where the contrast between highly developed e-governance and very low Internet freedom is strongest. According to Gerring, Kazakhstan is a most-likely case where 'all dimensions except the dimension of theoretical interests, is predicted to achieve a certain outcome', meaning that the case fits a theoretical prediction and disconfirms a theory by providing significant arguments (2007, p. 232).

#### Structure of thesis

The thesis's framework includes three chapters for overview and analysis. The first chapter will provide a literature review and theoretical framework on ICT, its key aspects for and against democracy, and e-government models that travel around the world. I will discern the impact of ICT, features of democracy and definitions of e-government, theoretical maturity models of e-government, and e-democracy through various existing publications.

The second chapter will include the answer to the first research question about the contradictory relationship between Internet freedom and e-government in authoritarian context through quantitative analysis.

The third chapter gives in-depth analysis on development of e-government programs in Kazakhstani case. In addition to features of ID cards, it identifies a governmental blogosphere, why e-voting experience is stopped as well as examines the paradox of e-government. The chapter identifies the strengths and weaknesses of e-government and offers policy recommendations for further improvements to meet international regulations to foster democracy.

#### Background information about Central Asia

The Internet diffusion in the 1990s occurred at the time of the collapse of the Soviet Union. The Internet use had a potential to bring democratic changes in Eastern Europe, Russia and Central Asia and other countries of the Union (Simon et al., 2002). The Central Asian States – Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan have developed uniquely and attracted the interest of global actors throughout their history. Central Asia is known for the notion of awkward states for its long lasting authoritarian regime, corruption and repressive rule of law as well as wealth of natural resources (Kavalski, 2010; Legvold, 2003).

All five Central Asian countries pursue diverging policies toward the Internet (McGlinchey and Johnson, 2007). The Soviet and Post-Soviet experiences differently influenced the development of ICT and democratic institutions in the region. There are many factors that affected the late emergence of ICT in Central Asia. For instance, large and isolated geographical locations and the poor quality of Soviet telecommunication infrastructure made states respond to technological development with rapid involvement in wireless and mobile communication technologies. Likewise, presidential political regime which gives veto over all policy decisions and leading state leadership (Cummings, 2013, 2006; Hale, 2014; Johnson and Kolko, 2010; Ro'i, 2004; Roy, 2000). Governments should meet free competitive elections (Linz and Stepan, 1996a), but none of the five Central Asian states have been engaged in free and fair elections (OSCE/ODIHR).

#### Overview on Kazakhstan

Kazakhstan delivers an ambitious mission of implementing the state strategy to be among the 50 most competitive countries in the world. The mission requires the country to have huge steps towards building digital economy, information society with open, transparent and accountable government.

Previously Kazakhstan was a part of the USSR and inherited the Soviet legacy. This legacy transformed into a dominant top-down role of governing the country, even though the country has made a huge contribution to the implementation of ICT.

In 1994 Kazakhstan registered the Internet country code .KZ and in 1996 and 1998 had the first websites in Kazakh and Russian<sup>4</sup>. Moreover, Williams (2014) points out the policies regarding the status of the Kazakh language in the Constitution<sup>5</sup>. The current Constitution of Kazakhstan, which was ratified in September 1995, declares, 'The Republic of Kazakhstan proclaims itself a democratic, secular, legal and social state whose highest values are an individual, his life, rights and freedoms'. Additionally Article 20 lays down 'the freedom of speech and creative activities shall be guaranteed. Censorship shall be prohibited; Propaganda of or agitation for the forcible change of the constitutional system, violation of the integrity of the Republic, undermining of state security, and advocating war, social, racial, national, religious, class and clannish superiority as well as the cult of cruelty and violence shall not be allowed' (Constitution of the Republic Kazakhstan, 1995)<sup>6</sup>.

In 1997 Kazakhstan introduced the long-term strategy: 'Kazakhstan 2030: Prosperity, security and improved living standards for all Kazakhs', which identified seven priorities for the country's development: (i) national security; (ii) domestic stability and social cohesion; (iii)

<sup>&</sup>lt;sup>4</sup> Article 7 of the Constitution of Kazakhstan 'the Russian language is officially used on a par with Kazakh'.

<sup>&</sup>lt;sup>5</sup> Law of the Republic of Kazakhstan on languages on July, 11 1997.

<sup>&</sup>lt;sup>6</sup> The Constitution of Republic Kazakhstan was approved by referendum on August, 30 1995.

economic growth; (iv) health, education and welfare for the citizens if Kazakhstan; (v) energy resources; (vi) infrastructure, transport and communications, and (vii) a professional state (UNESC, 2008, p. 6). In 2013, Kazakhstan adopted the new state program *Informational Kazakhstan-2020*, which became a national priority in the development of digital policies<sup>7</sup> (State Program, 2013).

The main ministries and agencies on regulating ICT were established in 2004 and 2005. However, the President's centralizing power through institutional changes, new reforms and state programs, also so-called reorganizations created massive chaos within the institutions to understand and divide responsibilities. Since January 1, 2016 Internet resources are subjected to mandatory registration based on the amendments from November, 2015 to the initial Mass Media Law dated 1999<sup>8</sup>. Internet resources are considered as mass media tools, if these two conditions are met: (i) information and communication infrastructure of the Internet resource is in the territory of Kazakhstan, (ii) operates in the territory of Kazakhstan. Recently in April, 2016 the President created a Ministry on ICT to monitor Kazakhstan's Internet resources, social networks and mass media as well as work with information policy, public opinion research on the most topical issues and improving the quality of domestic information.

The next chapters will provide a range of literature that need to be investigated, all of which pertain to relationships between technologies and the way they influence each other. If two hypotheses proposed in this thesis are confirmed, it is more in the direction that investment in ICT do not bring democracy or liberalization to countries, but more strengthening authoritarian regimes.

<sup>&</sup>lt;sup>7</sup>State Program is based on Decree 922 of the President of Republic of Kazakhstan from February, 1 2010. <sup>8</sup> The Mass Media Law dated 1999, it considered as a traditional mass media: newspapers, magazines, journals and TV.

# Chapter I. Theoretical background on possibilities and challenges of information and communication technologies

Advances of information and communication technology have increased opportunities for people to participate in governmental activities of their country. Governments throughout the world are trying to be more transparent by creating online platforms and giving citizens the opportunity to participate through such channels and make an impact on their communities, solve collective challenges, comment and send their feedback to governmental officials.

Information and communication technology is considered to be an effective tool to democratize societies which gave birth to a number of concepts, namely e-democracy, e-government, e-governance, e-services, e-participation, and e-voting and many others. The definitions of each concept overlaps between the terms. Although, the concepts have different implications and therefore should be distinguished. E-democracy directly connects ICT with politics to support the democratic decision-making process by electronic means. Therefore, only in democratic societies e-government/e-governance can be implemented with its full potential to connect citizen's interaction with governments.

However, contradictions appear in non-democratic countries where ICT is widely used for different purposes. Given the idea that the Internet has its potential to spread democratic values in the world, examples of authoritarian countries demonstrate a different reality with high levels of censorship and repressive regimes. Moreover, this appear to be politically motivated to have a tighter control over the Internet, while e-government with its potential to challenge governments shows also a contradiction with high levels of implementation. Consequently, the relationship between e-government and Internet freedom has to be studied to find a better understanding of the ICT revolution in both democratic and non-democratic societies. It is time for us to analyse the role of the Internet in our life, especially in the context of Internet freedom and e-democracy. ICT and politics have divided scholars into two main groups: those who believe in technology supports democracy, and political scientists who have a sceptical view (Fung et al., 2013). Therefore, I will discuss possibilities and challenges of ICT and the role of the Internet and e-government in promoting democratic governments. I will concentrate on Internet freedom as it has peculiar characteristics that can destroy authoritarian regimes through open and transparent government initiatives and good governance. I will give a definition of e-government, and e-democracy in order to get a correct understanding of the relationship with government and society as well as the main functions and how to use, analyse and describe the terms that travel around the world. Moreover, this chapter gives a critical overview on characteristics of democracy and access to free and open information, illustrate ICT impact on the global political change towards democracy.

## 1.1 Information and communication technology for and against democracy

Information and communication technologies development includes new media tools, namely the Internet, blogs, online journals and newspapers. Many scholars claim that the technology and Internet might bring democratic transition to developing countries, because ICT reduces the distance between countries and people, messages may reach the whole population, rather than limited audiences and can have an impact on authoritarian regimes (Allagui and Kuebler, 2011; Anderson, 2000; Diamond and Plattner, 2012; Ghareeb, 2000; Howard, 2010; Hudson, 2000; Huff, 2001; Shirky, 2008).

Diamond and Plattner (2012) show ICT potential to raise democracy and promote democratic transitions in authoritarian regimes. They show that the liberation of digital tools can create a pluralistic place for news and information. Authors prepared a publication for a

Stanford University conference titled as *Liberation Technology in Authoritarian Regimes*<sup>9</sup> where the 'liberation technology' approach appeared in. The authors, namely Xiao Qiang, Patrick Meier, Philip Howard and Muzammil Hussain, Walid Al-Saqaf, Mehdi Yahyanejad and Elham Gheytanchi maintained empirical standpoints about using liberating technology in China and the Middle-East agreed that ICT is powerful in improving transparency and accountability (2012). Diamond (2008) explains that in 2007, ICT enabled civil society to go on streets with the purpose to control and confront authoritarian regimes by raising democratic consciousness and promoting democratic transition. Moreover, citizens wanted to liberate society from regimes imposed by dictatorships. Shirky (2008) also voices an optimistic view over technology, pointing out that digital media's power has a positive influence on democratic change.

For example, in the early 2000s some scholars described opportunities of ICT in the Arab context. For example, Anderson (2000), Hudson (2000), Huff (2001), Ghareeb (2000) broadly discussed positive democratic transitions in developing countries. In Arab countries by 2010 people joined the anti-state youth based opposition movements and digital tools were used to mobilize street protests which led to the Arab Spring revolutions in Tunisia and Egypt. Likewise, Allagui and Kuebler (2011) demonstrate the crucial power of ICT that challenged authoritarian regimes through leading civil society and citizen journalism to the revolution. Howard (2010) analyses new information technologies that facilitate democratic transition in countries with large Muslim communities by using the comparative method to determine where ICT made authoritarian states stronger and where it caused unclear democratic outcomes. He concludes that ICT diffusion made authoritarian Muslim states in the regions more authoritarian

<sup>&</sup>lt;sup>9</sup>In 2009, the program on Liberation Technology was launched by Stanford's Center on Democracy, Development, and the Rule of Law. The program's aim is to understand how information technology can be used to improve governance, empower the poor, defend human rights, promote economic development, and pursue a variety of other social goods.

Available online at http://cddrl.fsi.stanford.edu/docs/about\_libtech.

rather than democratic, because there is a consistent pattern of using new information technologies through censorship strategies and Internet content control. He claims civic debate is occurring through online blogs and he is in favour of e-democracy.

Some scholars express a very sceptical view on the ability of the Internet to bring democratic changes (Christensen, 2011; Deibert and Rohozinski, 2010; Fung et al., 2013; MacKinnon, 2012, 2011, 2008; Morozov, 2011a; Singh, 2013). MacKinnon claims that the Internet will not bring fundamental political change and democracy(MacKinnon, 2008). She develops a new model of Chinese 'networked authoritarianism' that can be replicated by other states in Russia, post-Soviet states, and in some Middle-Eastern countries (MacKinnon, 2012). The innovation of her model is that digital communications coexist with a systematic and technically sophisticated state surveillance and control. The Chinese government uses cyberattacks tactics such as network control and blocks Internet activities to disconnect and restrict participation in protests, demonstrations with the main aim to stop any political threats against government.

Morozov (2011a) argues against the notion of the Internet as a liberating tool. Even if the Internet facilitates to overthrow authoritarian regimes, he believes that it would not facilitate the consolidation of democracy. Instead, he claims that the dark side of the Internet is a capacity for authoritarian regimes to use it for surveillance, repression, propaganda and control over the digital media, because government and academia representatives do not have the answer whether the Internet has any impact on democracy or not. For example, the case of America's restrictions on websites like WikiLeaks in 2010 show the contradictory approach, when Western governments have desire to 'promote freedom of the Internet, rather than freedom via the Internet' (2011a, pp. 229–236).

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Christensen (2011) argues that Twitter and Facebook Revolutions are techno-utopian. He claims that states in authoritarian regimes use social media for the purposes of repression. Moreover, he analyses the Swedish government to identify the relation between social media and political engagement, because the Swedish government favoured the idea of finding a way to digital activism and launched a call for proposals with the topic how new information and communication technologies would lead to democratic change in developing countries. In addition to the call for proposals, the Swedish government offered financial support to improve the freedom of speech and democratization. The author finds that the Swedish government was naïve to believe in the technology discourse in North Africa and Middle East, therefore the Swedish administration created a 'public call for project proposals on net activism, suggesting an opportunistic, ad hoc political strategy'(2011, p. 250)

I find interesting that Fung, Russon Gilman, and Shkabatur presents (2013) six models where they bring these conflicting two opposed viewpoints for examination by using their hypotheses. The first model '*The Muscular Public Sphere*' works with communication in the public sphere which aims to provide the opportunity to voice in order to improve democratic quality in democratic societies. But this model does not lead to a digital revolution, moreover it does not work in non-democratic countries, where governments control political contents in the Internet, radio and television (2013, p. 33). The second model '*Here Comes Everybody*' emphasizes digitally facilitated self-help or self-organized production to solve public problems. However, this model requires inputs such as money, authority and capacity (2013, p. 35). The third model '*Direct Digital Democracy*' intends to contribute to democracy through direct connections between citizens and politicians, policymakers. This model works if politicians and politicy-makers desire to interact directly with citizens. Moreover, it requires political innovations (2013, p. 37). The fourth model '*Truth-Based Advocacy*' brings salient issues and important truths on an online platform. Moreover, these truths can reach traditional and new

media, which lead to incremental, but not revolutionary impact. For instance WikiLeaks is a good example of the model (2013, p. 38). The fifth model '*Constituent Mobilization*' shows that Facebook and Twitter allow people to learn about upcoming protests from social media, because ICT lowers transaction prices and time for signing petitions and mobilize people. Therefore they are tools of mobilization for political advocacy groups (2013, p. 40). The last model '*Social Monitoring*' helps NGOs, journalists to bring public problems to the attention of government and public. The models relies on crowdsourcing idea, where every citizen can create information without financial contribution (2013, p. 42). The authors suggest to test last three models because they can lead to democratic governance through ICT. However, it seems that these six models are relevant when the scope of the research discusses the possibilities of regime change through technologies.

Overall, these scholarly debates stress the importance of democratic government that the Internet and ICT policies should be transparent, accountable and open for reforms to enhance democracy. For this thesis, the case study of Kazakhstan's e-government aims to ascertain transparent and open government paradigms.

#### 1.2 The role of e-government in the global context

We are already aware that ICT has the potential to raise trust and activate public participation, satisfaction with public services and public confidence in the political and administrative performances of governmental officials, reducing the information gap to promoting good governance through electronic government initiatives, because the egovernment model is one of the significant ways to build unambiguously open and transparent government. It is known as an interactive asset with governmental officials which has the aim to lead to democracy and public trust in government. Moreover, there are terms such as 'accountable', 'transparent' and 'open' used to describe good and open government.

Since the 1990s the information and communication technologies have affected many people's life, for example in education, economy and politics. Accordingly, a letter 'e' in front of words emerged in regards to ICT, for example e-democracy, e-government, e-commerce, eservice, e-business and so forth. Research on the concept of electronic government firstly appeared in the 1990s (Moon, 2002). The notion was introduced as a solution to challenges in the public sector in dealing with political participation and fostering democracy. E-government starts from a web presence of public institutional agencies for citizens to facilitate an access to government information and services (Bhuiyan, 2010; Carrizales, 2008; Netchaeva, 2002; Siau and Long, 2004). Governments in the whole world recognize e-government for sustainable development and the linkages between government and citizens' interaction in discussions, policy-making procedures and debates (Bannister and Connolly, 2012; Bovaird, 2003; Calista and Melitski, 2007; Lai and Haleem, 2002; Palvia and Sharma, 2007). Based on the literature, we know that technologies have opened up new frontiers to shape governments' activities and contribute to building public trust in government and raising the quality of democracy and civil society. According to the Organization for Economic Co-operation and Development<sup>10</sup> (in the following: OECD), good governance is recognised as one of the main factors for stable economic and social development. It defined electronic government as 'the use of information and communication technologies, and particularly the Internet, as a tool to achieve better government' (2003, p. 63). Likewise, the American Society for Public Administration<sup>11</sup> (in the following: ASPA) defines e-government as 'the pragmatic use of the most innovation and communication technologies, like the Internet, to deliver efficient and cost effective services,

<sup>&</sup>lt;sup>10</sup>Development of public policy fields is the core task of the Organization for Economic Co-operation and Development to increase policy dialogue and share best experiences among both member and non-member states. Available at: <u>http://www.oecd.org</u>

<sup>&</sup>lt;sup>11</sup>The American Society for Public Administration is the largest and most prominent professional association for public administration in the world since 1939. It is dedicated to advancing the art, science, teaching and practice of public and non-profit administration.

Available at: <u>http://www.aspanet.org</u>

information and knowledge' (Boyne, 2006, p. 291). My research will define e-government definition that fits the scope of this thesis.

#### 1.2.1 Difference between e-government and e-governance

Many scholars have proved ICT's advancements in public administration, in government affairs, in democratic activities (Bhuiyan, 2010; Carrizales, 2008; Fang, 2002; Johnson and Kolko, 2010; Larsson and Grönlund, 2014; Moon, 2002; Netchaeva, 2002; Palvia and Sharma, 2007). There is a discourse among many researchers and scholars about the correct usage of e-government and e-governance terminologies because some researchers use these two terms as synonyms although they have different objectives. For the purpose of the thesis e-government term is applied for my research topic.

Some authors emphasize that the right term is e-governance (Bannister and Connolly, 2012; Bovaird, 2003), because it has broad activities of government and enhances governance through ICT at various levels of a government and public and private sectors (Palvia and Sharma, 2007). Some scholars define e-governance is a broader concept that deals with the whole spectrum of the relationship and networks within government regarding the usage and application of ICT, whereas e-government is limited to the development of online services and information (Fang, 2002; Sheridan and Riley, 2006). According to the works, e-governance is a procedural approach for cooperative administrative relations, it has more implications than e-government which is an institutional approach for jurisdictional and political functions.

After the examining literature, scholars conclude that there is no major difference between e-governance and e-government (Calista and Melitski, 2007; Layne and Lee, 2001; Moon, 2002; Netchaeva, 2002; Palvia and Sharma, 2007; Singh and Sharma, 2009). Table 1 presents characteristics of e-government and e-governance made by Singh and Sharme (2009, p. 2). Therefore, I will use e-government term to show a good governance and improvement in communication between a state and citizens.

E-GOVERNMENT	E-GOVERNANCE
electronic service delivery	electronic consultation
electronic workflow	electronic controllership
electronic voting	electronic engagem ent
electronic productivity	networked societal guidance

Table 1. Characteristics of E-Government and E-Governance. Source: Singh and Sharma (2009, p.2).

It seems to me that in the early 2000s many scholars debated on the origins of egovernment and e-governance, while I believe that understanding the distinctions between two different concepts give us clarification how to use the definitions, and help to identify the scope for further direction to study the concept in-depth. Scholars' definitions are correct and egovernment without any doubt is a platform for online services among citizens and other governmental agencies.

#### 1.2.2 Theoretical models of e-government

In political science literature e-government is a relatively new concept and has a multidisciplinary approach. The limited literature on theoretical characteristics of e-government creates a division between scholars for and against ICT to foster democracy. Many scholars (Hiller and Belanger, 2001; Layne and Lee, 2001; Moon, 2002; Netchaeva, 2002) from early 2000s prepared e-government development models which still holds its power.

Layne and Lee (2001) present a four stage model for e-government development based on the US experience. The model covers (i) 'cataloguing': when government has a web presence, (ii) 'transaction': transaction services for citizens, (iii) 'vertical integration': integration with other systems, and (iv) 'horizontal integration' covers the whole integration of all governmental agencies, the e-portal is fully used by citizens (2001, p. 124). Figure 1 briefly illustrates each stage.



Figure 1. Dimensions and stages of e-government. Source: Layne and Lee (2001, p.124).

Andersen and Henriksen (2006) propose a new updated the Public Sector Process Rebuilding (in the following: PPR) model of e-government by examining previous Layne and Lee's model. The authors emphasize that the PPR model reorients e-government development based on ITC usage in governments, in Denmark. Figure 2 shows the four phases of the PPR maturity model and highlights major citizens and government activities in the last stage 'revolution'. The first stage is 'cultivation' that combines vertical and horizontal integrations with Intranet use by governments. The second stage 'extension' shows wide usage of intranet and customized the web interface. The third stage 'maturity' demonstrates transparency process, the stage when governments abandon the Intranet. The last stage called 'revolution' which shares information with organizations and vendors (2006, pp. 241–244).



Figure 2. The PPR maturity model: activity and customer centric stages. Source: Andersen and others (2006, p.241).

Later, the first comprehensive theoretical model was developed by Lee (2010). The author claims that the qualitative meta-synthesis helps to reveal the underlying metaphors and concepts of e-government. Lee finds twelve stage models of e-government from the literature. Rana and others (2012) demonstrate a systematic analysis of all existed literature on e-government adoption and diffusion in the world. They have revealed the lack of theoretical development about e-government across different countries. Recent Fath-Allah and others (2014) provide 25 e-government maturity models from existing literature and compared the best practices which cover all the aspects of e-government. Table 2 shows the main focus of the model. The first stage is 'presence on the Web', the second stage is covers main information for citizens such as 'interaction', 'enhanced information' and 'transaction' services in the

portal<sup>12</sup>. The stage covers information when citizens can use the governmental website to interact and make transactions with their government by making the portal as a one stop shop. The fourth stage is similar to the third stage, but it provides more complete stage of using e-government website. The fifth stage covers 'e-participation' and 'integration' sub categories that allow people use online voting, participate in online conferences, where forums and the website work properly without technical problems. The last stage involves 'political participation' and 'integration' which give citizens right to participate in decision-making processes of the government through voting, filling survey and etc (2014, pp. 82–86). Overall, they claim that for each country it is important to have the four major areas for e-government such: online presence, interaction with government and citizens, transaction stage as well as integration that allows use the e-government website without any technical issues. These major areas of development define the scope of e-government, namely, Government-to-Citizen (in the following: G2C); Government-to-Business (in the following: G2B); Government-to-Government (in the following: G2G); Government-to-Services (in the following: G2S).

<sup>&</sup>lt;sup>12</sup> The term web portal is used on equal basis with terms such e-government website, governmental website, e-gov website.

Maturity stage	Focus	Maturity models
1	Presence	All models expect Andersen and Henriksen and Wescott
2	Interaction	Alhomod, Hiller and Belanger, Gartner, Moon, World Bank, Deloitte and Touche, Howard, Shahkooh, Siau and Long, Chandler and Emanuel, Kim and Grant and Windley.
	Enhanced information	UN, Almazan and Gil-Garcia and UK.
	Transaction	Layne and Lee, Cisco, Chen and Reddick.
	Transaction	UN, Alhomod, Hiller and Belanger, Gartner, Moon, World Bank, Howard, Shahkooh, Siau and Long, Wescott, Chandler and Emanuel and Kim and Grant.
3	Interaction	Almazan and Gil-Garcia.
	Integration (transformation, single point of entry)	Layne and Lee, Cisco, West, Deloitte and Touche, Chen and Windley.
4 Integration (transformation) Transaction	Integration (transformation)	Layne and Lee, Andersen and Henriksen, UN, Alhomod, Hiller and Belanger, Gartner, Moon, Shahkooh, Siau and Long, Chandler and Emanuel, Kim and Grant, and Windley.
	Transaction	Almazan and Gil-Garcia, UK and Netchaeva.
	Personalization	West, and Deloitte and Touche.
5	E-participation (political participation)	Hiller and Belanger, Moon, Shahkooh, Siau and Long, Wescott, Kim and Grant and Netchaeva.
	Integration	Almazan and Gil-Garcia, Deloitte and Touche and UK.
6	Political participation	Almazan and Gil-Garcia.
	Integration	Deloitte and Touche, and Wescott.

Table 2. E-government maturity stages. Source: Fath-Allah and others (2014, p. 85).

#### 1.3 Factors of e-government development

Scholars examine e-government implementation under various factors, and investigate the UN measurement method(Gulati and Yates, 2011; Kim, 2007; Moon et al., 2005; Siau and Long, 2004; Sriramesh and Rivera-Sánchez, 2006; West, 2005; Whitmore, 2012). Whitmore (2012) evaluates the best research methods to measure e-government, and variables to use. He uses the United Nations E-Government Survey for 2010 and claims that empirically the three components of EGDI ranking (OSI, TII, and HCI) are not justifiable and the UN e-government ranking needs factor analysis to describe selected variables. Scholars write that e-government is an effective tool aimed at combating corruption, controlling governmental officers behaviour, and can boost economic growth in both developed and developing countries (Andersen, 2009; Bertot et al., 2010; Elbahnasawy, 2014; Kim et al., 2009; Shim and Eom, 2009, 2008). In general, corruption appears with accountability shortage, governmental officials are involved in corrupt behaviour. For example, in South Korean e-government an anti-corruption system called online procedures enhancement<sup>13</sup> for civil application was tested, the system showed a significant progress in reducing corruption and it has become a national prototype to battle with corruption (Kim et al., 2009).

Developing countries require more investments in human resource trainings for governmental representatives, to increase citizens' IT literacy to adopt e-government services efficiently, and reduce lack of information awareness. Therefore, ICT infrastructures support egovernment as in developed countries (Elbahnasawy, 2014). Interestingly, Aladwani (2016) discusses the failures caused by e-government initiatives in developing countries. The author believes that corruption is deeply rooted in political, economic, cultural, and judiciary systems. E-government turns out to be ineffective tool, influences on e-government fiasco and it is not a weapon against corruption.

Furthermore, the literature provides that there are contradictory opinions about the role of e-government in developing states. Stier (2015a) questions why e-government in authoritarian states are not worse than in democracies based on the last UN editions. He claims that e-government become more technological sophisticated which means online presence of counties increase, e-government needs qualified staff and administrative recourses to perform efficiently in professional behaviour.

<sup>&</sup>lt;sup>13</sup> This system is also called OPEN in short.

Any government by implementing e-government policies and norms admits democracy as *de jure*. Therefore, governments with high level of e-government rates should be democratic as a result of the ICT revolution. But factors of e-government implementation progress in different regions show that the UN data and ranking assessments need changes, adjustments to measurement method, because many governments successfully develop e-government and highly ranked in the UN reports, although, these countries far from being democratic. By identifying this paradox, my case study will help understand the role of e-government in authoritarian context.

#### 1.4 Features of democracy in the digital world

Since the Internet is a communication tool, there is a possibility to assume that it has power to provide a new tool for democratic practices. Some scholars assume future of democracy is connected to information technology. Despite the prevalence of popular opinion among scholars, some old-school political scientists' work on ICT's democratizing effects (Diamond, 2002; Huntington, 1991; Linz and Stepan, 2011, 1996b; Schmitter and Karl, 1991). Some address the question of the media and civil society democracy or democratization (Bertot et al., 2010; Voltmer, 2013). I rely on democratic theory to build strong claims to conduct a critical investigation of the empirical bases for democratic features. Because it is important to consider ICT and the Internet in the context of democracies where citizens enjoy at the same time face significant limitations on political freedom influenced by government regulations. I will describe features of democracy and the role of civil society and media, new e-democracy trend as well as my understanding of democracy for this thesis.

#### **1.4.1 Briefly about the Internet in authoritarian regimes**

In the past four decades, political scientists (Diamond, 2002; Huntington, 1991; Levitsky and Way, 2010; Linz and Stepan, 2011; Rustow, 1970) wrote the influence of ICT on authoritarian regimes, political elites and their role in transitions to democracy. This stage has been called the third wave of democratization which transformed authoritarian regimes to more democratic forms of government. Scholars mostly show the importance of democracy, describing the shift of transition, factors contributed to successful and unsuccessful consolidation of democratic regimes.

There is no government regime that wants to be recognized as non-democratic, in Rustow's article on democracy 'is acquired by a process of conscious decision at least on the part of the top political leadership' (1970, p. 356). Democratic transition, democratization and regime types in authoritarian regimes are well written by Schmitter and Terry Lynn Karl (1991), Linz and Stepan (1996) where they illustrate four types of non-democratic regimes such as: authoritarian, totalitarian, post-totalitarian and sultanistic. Tilly writes about sings of democracy with main pitfalls and unsuccessful implementation of democratic norms and future predictions of developing of states under the loop (2007). Levitsky and Way (2010) demonstrate an institutional weakness and give a common knowledge to understand an authoritarian persistence. Throughout the history many countries after the transition period shifted back to past regimes towards authoritarian, which happened to the most post-Soviet countries. On the other hand, in reality Internet-democratic rhetoric meets more critique by scholars (Kalathil and Boas, 2003, 2010; Lebkowsky and Ratcliffe, 2005; Morozov, 2011a, 2011b, 2009). They provide comparative works by examining the Internet in authoritarian regimes and argue that the Internet and technology cannot help destroy authoritarian regimes.

Repressive measures over the Internet affect political environment to transform governing regimes, because the Internet can be a tool for self-expression, and collective social mobilization against governments. Moreover, civil society activists can contribute to social movements by sharing their contentious activities both online and offline, therefore the Internet can make social movements successful through recruiting new members online, and promoting common identity among their followers (Benford and Snow, 2000). In addition, in a highly controlled environment, the Internet can foster political discourse through online discussions. Frequently the literature refer to blogosphere attracting Internet users' attention to the specific government action or reform, and policy (Golkar, 2011; Rahimi, 2011). These all can bring political change. Although authoritarian states have technological capabilities to block all politically incorrect content.

Democracy is a universal concept of political legitimacy. In order to understand the functions and relations of ICT and a state, it is important to define the role of the civil society and media, whether ICT lead to democracy or not.

#### 1.4.2 Citizen participation, what does it mean?

Active civil society, non-governmental groups and institutions are one of the characteristics of democratic society (Bermeo and Nord, 2000; Dahlberg and Siapera, 2007; Howard, 2002, 2014; Luong and Weinthal, 1999; Matveeva, 2008; Nye et al., 1997). In old day, which are not that long, civil society explored through grassroots associations, and voluntary organizations to raise their voices, influence politics and institutional policy changes. Almost all international organizations and donors support civil society, because it is viewed as 'an answer to problems ranging from participation, accountability, good governance, and good values to service delivery'(Matveeva, 2008, p. 3). Bermeo and Nord (2000) write that development of different voluntary associations on various topics such as political and economic, professional, scientific, sport clubs, and charity funds. Al these have a significant impact on building liberal minded and pro-democratic traditions. However, scholars observe a decline in levels of satisfaction, and trust in government. Public mistrust and disappointment in political and economic policies decrease public interest and citizen participation, which can be a danger democracy (Dahlberg and Siapera, 2007; Howard, 2002; Nye et al., 1997).

While with ICT evolution, public participation exposures in different forms of technologies (Aikins and Krane, 2010; Elsheikh and Azzeh, 2014; Jaeger et al., 2007; Joaquin, 2012; Porumbescu, 2016). We have learned that the Internet with its potential can enhance online citizen participation through websites features, the e-government websites relate to increase trust in government by providing comprehensive information, opening various platforms for citizen and government interaction, and offering convenient public services to reinvigorate civil society. Based on the literature citizen participation is defined as citizen involvement in the public policy and service delivery. Therefore, they can voice their public demands and interests. Various opportunities are opened up for citizen participation in political processes.

#### 1.4.3 The role of free and open media

The Internet as subset of ICT also facilitates democratic values in relations between government, society and media. Media is obliged to provide information to citizens, give right to free public opinion, criticism and conduct a role as a watchdog (Coleman and Norris, 2005; Coronel, 2003; Giannone, 2014; Himelboim and Limor, 2008; Rodrigues, 2010). Growing numbers of social networks and political blogs, economic blogs, and online news agencies promote more online engagements and informed citizens' environment (Diamond and Plattner, 2012; Howard, 2010; Kline and Burstein, 2005; MacKinnon, 2008). Hence, the Internet has become a superpower to enlighten citizens' consciousness, and a tool for collective power to challenge regimes. Coronel writes that media 'buttressing and deepening democracy' in democratic societies (Coronel, 2003, p. 9).

At the same time, the Internet creates dangers to existing governmental regimes and institutions. Governments have learned to use ICT to control, restrict Internet freedom in order to protect citizens from misuse of media. In non-democratic countries media faces brute force by state control through restricted laws, limited access to information and other regulations. The notions of internet freedom or freedom of the press are deeply rooted in the defence of freedom of expression to understand the relations between democracy and governance. In this respect, I am interested how governments encourage citizen participation, freedom to comment, and criticize policies to influence on decision making.

#### 1.5 Understanding e-democracy initiatives

Theories of e-democracy envision use this new phenomenon in relation to the role of IT in democracies to create public involved inclusive dialogue and new forms of governance (Coleman and Norris, 2005; Dahlberg and Siapera, 2007; Fung et al., 2013; GLA, 2014; Gronlund, 2003; Hague and Loader, 1999; Hiebert, 2005; Lee, 2010; Lidén, 2015; Norris, 2001; Singh, 2013; Wilhelm, 2000).

The term of e-democracy is viewed as 'if it had a clear and given meaning (...) associated with certain usage and technical applications and opportunities' (Gustafsson, 2003, p. 125). Some defined as 'disseminating more political information for enhancing communication and participation (...) these initiatives can include e-forums, e-town hall meetings, e-consultations, e-referenda, e-voting, e-rule making and other forms of e-participation' (Coleman and Norris, 2005, p. 7). Lidén investigates the definition of e-democracy as 'the possibility of suing ICT in political processes concerning information, discussion, and decision-making, and in addition comprises all the political and civil rights that are characterized as democratic' (2015, p. 700).

Some authors claims that e-democracy provides a limited knowledge about ICT as it covers only governmental web portals, there is the limitations of e-democracy by state surveillance and control, because 'future of e-democracy does not depend on the technology itself, but rather on the structures of power that the technology produces and
maintains' (Gustafsson, 2003). Singh uses the meta power approach to demonstrate cultural processes based on works of Habermas and Friero (2013, p. 6). The author claims that in hierarchical and authoritative regimes information technologies cannot change the meanings in global politics. Furthermore, many countries guarantee available online services for voting, service delivery and online direct interaction with governmental officials.

The lack of clarity among scholars' work on e-democracy definition, causes troubles to operationalize the term as a common concept, because political actors themselves can create its own definition or actively use ICT in their governments. Some scholars investigate the term, found that it developed first in the United States through non-hierarchical network to offer people a space for information exchange and bureaucracy and restrictions free decision-making processes for individuals, so called cyberspace (Dahlberg and Siapera, 2007, p. 3). Whereas some scholars empirically analyse the level of e-government and e-democracy in the world (Lee et al., 2011; Lidén, 2015; Siau and Long, 2004). These scholars believe there is a global diffusion of public policy that travel around the world. Four factors, namely, learning, political norms, competition and citizen pressure have a strong connection to countries with highly adopted e-government policies, while e-democracy development is linked to political and citizen pressures (Lee et al., 2011, pp. 448–450).

Some scholars debate e-democracy's final stage. Lee's article uses the meta-power system to identify a final step of e-government based on a comprehensive theoretical model (2010), while Van Der Meer, Gelders, and Rotthier claim that e-democracy is not a final step of e-government. E-government is characterized by e-services and e-democracy both (2014). Today, e-services develop quicker based on information, interaction and transaction services. Therefore, in many countries e-government's final stage is e-service development rather than e-democracy. This thesis aims to understand what e-democracy means, whether advanced egovernment will lead inevitably to e-democracy or not.

#### 1.6 Concluding Remarks

Given these previous studies we have learned that ICT in advanced democracies are important for those who promote open government with public dialogue, and those who sought to control. Based on examples from Arab world, Internet freedom contributes to political changes. However, authoritarian governments such Russia and China are seeking to limit Internet freedom. Their implemented restrictive policies, laws have a crucial impact on other neighbouring regions.

Many political systems in the world have implemented political programs on combatting corruption and non-transparent decision-making processes, inequality and hierarchical power distribution (Dahlberg and Siapera, 2007). E-government with its potential for democratic governance, the Internet with its relations to state regulations relate to the relationship that considers e-democracy and e-government going hand in hand.

For this thesis, it is important to define characteristics of e-democracy and e-government models. We know that democracy must meet three basic procedural criteria: (i) There must be active and strong civil society, which can have access to public policy making procedures. (ii) Free and open media without governmental censorship and regulative laws. (iii) Competitive elections without fraud and coercion, with access to e-voting system. Therefore, e-democracy can have both top-down and bottom-up approaches, while e-government models have different names or contents, but cover four major aspects : (i) e-portal of government, (ii) interaction with government and citizens, (iii) transaction and (iv) integration that covers political participation and allows citizens vote, participate in opinion surveys and public forums (Fath-Allah et al., 2014). Based on these characteristics further chapters will critically investigate the relationship of e-government and Internet freedom, and define the role of ICT in authoritarian regimes to reveal any forms of legitimacy that countries have built through their own regulations.

## Chapter II. Contradictory relationship between Internet freedom and e-governance

Many states, including the authoritarian ones, invest in ICT development policies and consider the Internet an important factor in governance, academia and science. ICT also prompted the emergence of new modes of regulation and governance. Technical and political governance are becoming more intertwined. There is a radical reappraisal of the nature of governance structures, traditional mechanisms of power, and regulatory rules for mass media. These precedents later converged with ICT diffusion by means of the learning process from authoritarian states to censor and control the Internet.

In the Western world, Internet freedom and democracy tend to go together. In contrast, this thesis will show how the ICT revolution has been embraced by authoritarian regimes. We know from Freedom House reports that there is a large concentration of authoritarian regimes in Africa, the Middle-East, and Central Asia. We also know from UN publications on e-government performance that surprising progress has been made in non-democracies. This chapter will use a bivariate linear regression to answer the research question about the relationship between internet freedom and e-government in authoritarian states. The results will challenge the idea that e-government and Internet freedom are two sides of the same coin.

#### 2.1 Data description

The data used in the analysis come from a variety of databases and reports. These are the Freedom House Index (in the following: FHI) on Freedom on the Net and the United Nations E-Government Development Index (in the following: EGDI). The next sections present background information about both measures.

#### 2.1.1 Freedom House Index: background information

Freedom House (in the following: FH) is an independent watchdog organisation which dedicated to the expansion of freedom in the world. Annually FH measures political rights and civil liberties and publishes its reports about freedom in the world, press and the Internet (Freedom House, 1941). Based on FH methodology countries receive scores and ratings from a country and regional experts that range from 0 to 100. A rating of 0 indicates the highest degree of freedom and 100 the lowest.

From 2009, FH measures the Internet and digital media freedom in 65 countries in the world and publishes its report annually. The methodology of the reports is that these 65 countries are chosen based on political and media freedom levels, geographical diversity and economic development factors. For this report FH applies the same methodology tool to show the scores and ratings for each country. A rating from 0 to 30 means a *free* Internet and digital media environment; *partly free* refers to countries with 31 to 60 points, and from 61 to 100 points countries become *not free*. For this research I use FHI as an independent variable that represents the level of Internet freedom. The advantage of the variable is that the data is available for a large sample and covers Central Asia.

#### 2.1.2 E-Government Development Index: background information

The second database I use as a dependent variable for e-government capacity is the United Nations E-Government Development Index (in the following: EGDI), which is also known as the UN e-government readiness Index. From 2001 the United Nations started assessing the global e-government development: 'Benchmarking E-government: Assessing the United Nations Member States' (UN, 2014). The UN publishes its EGDI reports every two years from 2003 to measure 'how willing and ready governments around the world are to employ the vast opportunities offered by e-government to improve access to – and the quality of – basic social services to the people'(UN, 2003, p. 11). Also, it is the only report in the world

that assesses e-government development rank, policies, emerging trends and challenges. The methodology for EGDI combines three components into the survey, namely online services (in the following: OSI), telecommunication infrastructure (in the following: TII) and human capacity (in the following: HCI) indices in order to show sustainable development of e-government. For this countries are divided into three groups, namely the least developed countries (in the following: LDCs), small island developing states (in the following: SIDS), and land-locked developing countries (in the following: LLDCs).

The OSI is a four stage assessment of the scope and quality of online services, and the OSI is the core feature of this survey, evaluating the national e-government web presence of governments, their ministries and sources that portals provide to its citizens. The TII consists of the number of subscriptions to (i) mobile, (ii) fixed-telephone, (iii) wireless broadband, (iv) fixed broadband and last one for (v) individuals using the Internet in percentage of the population, while the HCI measures (i) adult literacy, (ii) gross enrolment ratio, (iii) expected schooling years, (iv) mean years of schooling (UN, 2014).

#### 2.2 Research methodology

In order to answer the first research question of this thesis, it is important to determine the relationship between e-government and the level of Internet freedom in the world. For this, I use a linear regression analysis to model the relationship between Internet freedom and egovernment based on 65 countries from the FH report on the Net. The aim of this statistical method is to compare and determine the effects of the independent Internet freedom variables on the dependent e-government variable. We are already aware that the FH produces annually its report, while the United Nations e-government reports are available every two years. Thus, 2015 is a gap year between 2014 and 2016, but the data for 2016 from the UN is not available yet. Therefore, the framework of the analysis is 2014, which covers both FH and UN Indexes. These variables are not measured on a matching scale, therefore I used z-scores transformation to obtain comparable numbers. The z-score standardization converts all indicators to a common scale with an average of zero and standard deviation of one. Furthermore, my analysis is limited to 65 countries, for which both analysed variables are available, out of a total N from 193 of countries covered by either of the two variables. The unit of analysis for data collection is a nation-state.

#### 2.2.1 Discussion and Results

In both democratic and non-democratic societies, countries use digital technologies for various purposes. Generally, the relationship between Internet freedom and e-government is assumed to go together, therefore we expect increase in one variable to be matched by the growth in the other variable in a linear fashion.

The primary finding from the regression is that Internet freedom is robustly related to e-government outcomes. Governments with higher levels of access to the Internet have higher EGDI measured by the UN. This correlation is both statistically significant (p=0.0002) and quite robust (r = 0.46). Perhaps the most interesting finding is a relatively high number of clustered outliers. The results are presented in Figure 3.

Testing the hypotheses using bivariate linear regression, we find that the independent variable (Internet freedom) explains ( $R^2$ ) about 21% of the variance in e-government. In line with expected combination of relatively high e-government in authoritarian states with tight government control over Internet use, the scatter plot identifies 11 counties (Azerbaijan, Bahrain, Belarus, China, Kazakhstan, Russian Federation, Saudi Arabia, Sri Lanka, Turkey, United Arab Emirates, and Venezuela) as outliers. These form a distinct cluster from developed democratic societies with developed e-government and high levels of Internet freedom on one hand as well as less developed authoritarian societies with low levels of Internet freedoms and meagre e-governance on the other.



Figure 3. The regression analysis of Internet freedom and e-government.

#### 2.2.2 Analysis of regression

Empirically, we know that authoritarian states are using radical measures to monitor, censor and filter the Internet by including more legal measures on Internet control policies, assuming that Internet freedom may lead to raising uneven voices, assembly and elections results. Such measures aim to protect copyrights through prosecuting individuals for critical content online, personal comments, blocking and shutting down NGOs' websites, inventing Internet behaviour rules not only for individuals (Rohozinski, 2004; Teitelbaum, 2002). Furthermore, the digital divide exists within and across countries (Norris, 2001). Some scholars find a positive relationship between democracy and e-government (Bussell, 2011; Gulati et al., 2012; Gulati and Yates, 2011), but some scholars (Moon et al., 2005; Yildiz, 2007) believe that authoritarian states are not investing in e-government as it is an expensive project and governments do not want to enhance a transparent communication with the public, which this statistical analysis contests. For example, Saudi Arabia invested 800 million US dollars (Gasco, 2012, p. 39), Russia invested 2.4 billion US dollars in e-government (Expert Online, 2003).

Interestingly, from the analysis we can see that some authoritarian states do invest in egovernment, and use e-government to improve services (in following: G2S), but make no improvements either in ICT channels, or democracy. Therefore the hypothesis H1 (H1: In nondemocracies, levels of e-government diverge from degrees of internet freedom) is confirmed.

Drawing on this line of reasoning, e-government in various countries has a different impact. For example, in Austria, Canada, France, Germany, South Korea, United Kingdom of Great Britain and Northern Ireland, United States of America and other democracies the results prove that e-government and Internet freedom go together, meaning states are free. The hypothesis H2 (H2: There will be a positive correlation between the levels of e-government and Internet freedom for advanced democracies) is confirmed. Whereas, partly free and not free states, but leading in the UN ranking with high level of e-government projects are outliers such as: Azerbaijan, Bahrain, Belarus, China, Kazakhstan, Russian Federation, Saudi Arabia, Sri Lanka, Turkey, United Arab Emirates, and Venezuela (see Figure 3).

There are countries with a very low Internet and low e-government by meaning that countries less invest in e-government, but at the same time censor Internet freedom.

The analysis demonstrates variations in the relationship between e-government and Internet freedom across countries. The puzzling issue is that authoritarian states have high levels of e-government implementation and high levels of repressive Internet freedom, which is not common to democracies. Hence, Morozov notes that authoritarian states such as China and Iran want to have more power and tight control, because the Internet is a powerful tool for Americans to start social movements against their governments (2011a, p. 234).

Based on my results of analysis authoritarian regimes have undertaken vast efforts to filter the information their citizens can access and prevent dangerous information from being created and posted. I use the case study of Kazakhstan in Central Asia, because the Internet has an impact to improve the lives of citizens and raise unaddressed issues. Moreover, the case study attempts to analyse the political and legal reasons of having a very low Internet freedom score in the country.

#### 2.3. Kazakhstani case of ICT revolution

#### 2.3.1 The UN E-Government Survey and Freedom House results

Based on the 2014 UN E-Government survey, Kazakhstan was ranked 28th and categorized in high EGDI, remained the sub-region's leader in e-government in Central Asia.

Table 3 illustrates Kazakhstan's improvements between 2012 and 2014 with 0.72<sup>14</sup> EGDI (see Table 3). This means the country advances e-government with smart investment<sup>15</sup> in ICT infrastructure. It is a good achievements for Kazakhstan as a developing country, however there are still a lot of things to be improved in comparison to democratic countries in Europe and Asia. For example, the limited access to world markets and high transport costs, administrative and infrastructure costs show lower TII, while online service delivery is ranked high in the middle income group, which combines high-level political support, e-government leadership, accountability and citizen engagement, and ICT infrastructure and education (see Table 4).

<sup>&</sup>lt;sup>14</sup> The reports shows the breakdown of countries grouped by EGDI. Very-high-EGDI (more than 0.75), high-EGDI (between 0.5 and 0.75), middle-EGDI (between 0.25 and 0.5), and low-EGDI (less than 0.25).

<sup>&</sup>lt;sup>15</sup> Smart investment considers when ICT solutions are integrated to local information systems such investments in economics, natural resources, human and social capital, quality of life, and participation of citizens in the governance.

Country	Level of Income	EGDI	2014 Rank	2012 Rank	Change in Rank	
	Very	High EGDI				
Republic of Korea	High	0.9462	1	1		•
Singapore	High	0.9076	3	10	Ť	7
Japan	High	0.8874	6	18	Ť	12
Israel	High	0.8162	17	16	4	1
Bahrain	High	0.8089	18	36	t	18
	Hig	h EGDI				
Kazakhstan	Upper Middle	0.7283	28	38	1	10
United Arab Emirates	High	0.7136	32	28	1	4
Saudi Arabia	High	0.6900	36	41	Ť	5
Qatar	High	0.6362	44	48	Ť	4
Oman	High	0.6273	48	64	Ť	16
Kuwait	High	0.6268	49	63	Ť	14
Malaysia	Upper Middle	0.6115	52	40	1	12
Georgia	Lower Middle	0.6047	56	72	Ť	16
Cyprus	High	0.5958	58	45	4	13
Armenia	Lower Middle	0.5897	61	94	Ť	33
Mongolia	Lower Middle	0.5581	65	76	Ť	11
Azerbaijan	Upper Middle	0.5472	68	96	Ť	28
China	Upper Middle	0.5450	70	78	Ť	8
Turkey	Upper Middle	0.5443	71	80	Ť	9
Sri Lanka	Lower Middle	0.5418	74	115	Ť	41
Regional Average		0.4951				
World Average		0.4712				

Table 3. The top 20 countries in Asia with high E-Government Development Index (EGDI). Source: The UN E-Government Survey results, 2014. p.47.

The most interesting part of the 2014 UN E-Government Survey is that Kazakhstan was ranked among the top 50 performers in e-participation<sup>16</sup> (see Table 5). The methodology of the survey for e-participation assessment includes three major areas: (i) *'e-information'* where information prepared for citizens in order to give public information, (ii) *'e-consultation'* is used to engage people in contributions to and deliberation on public policies and services and (iii) *'e-decision-making'* empowers people through co-design and co-production of service, and policies (UN, 2014, p. 63).

<sup>&</sup>lt;sup>16</sup> There is no country order.

Country	Online Service Index	Income group
Rwanda	0.5118	Low
Colombia	0.7874	Upper Middle
Ethiopia	0.4567	Low
Kazakhstan	0.7480	Upper Middle
Могоссо	0.6929	Lower Middle
Kenya	0.4252	Low
Sri Lanka	0.6535	Lower Middle
Malaysia	0.6772	Upper Middle
Tunisia	0.6378	Upper Middle
Mongolia	0.6142	Lower Middle

Table 4. High online service performance relative to income. Source: The UN E-government survey, 2014. p. 56.

Most empirical literature argues that the UN EGDI reveals weaknesses of the UN index methodology, because it has inconsistent results and its methodology is not reliable (Stier, 2015b). Here I agree that the UN results show inconsistency. According to FH report on the Net (2014a) the Kazakhstani government was a partly free country with 60 points, which means there is a political demand to control content both directly and through online self-censorship. At this point, it appears from the country report on the Net that enduring instance of strict regulations comes from leading state leadership because 'the president signed amendments to the communications law that allow the authorities to block websites or shut off communication networks without a court order' (Freedom House, 2014b, p. 1). In such context, it is also evident that the role of blogosphere has a limited point to raise clearly criticism and posting information online.

The most interesting to note that the government attempts to attract 'popular and loyal bloggers to engage in "special coverage" propaganda campaigns' (Freedom House, 2014b, p. 14). From positive perspective, Internet usage is increasing in Kazakhstan '10 million Kazakhstanis use the internet' which is more than 62 percentage of the total population(Freedom House, 2014b, p. 3).

Table 5. The top 50	) performers in	e-participation.	Source the UN e-government	t survey (2014, p. 65)
---------------------	-----------------	------------------	----------------------------	------------------------

Netherlands	Colombia	Spain	Norway	Belgium
Republic of Korea	Israel	Estonia	Russian Federation	India
Uruguay	United Arab Emirates	Kazakhstan	China	Republic of Moldova
France	Bahrain	Brazil	Ireland	Slovakia
Japan	Canada	Finland	Kenya	El Salvador
United Kingdom	Costa Rica	Germany	Lithuania	Mexico
Australia	Greece	Latvia	Portugal	Qatar
Chile	Morocco	Oman	Sri Lanka	Sweden
United States of America	Italy	Peru	Tunisia	Georgia
Singapore	New Zealand	Mongolia	Austria	Montenegro

#### 2.3.1. Internet freedom violations

The realization of e-government program requires international and national standards in the information security sphere. In order to meet information security standards government has to provide judicial support in technological innovations policies, reorganize its regulations, because we have learned that Internet repression varies across non-democratic regimes with repressive regulations to promote their own political agendas and rule of law (Kalathil Boas, 2003). According to Goldstein in many countries where Internet-specific legislations have not been enacted, 'legal or de facto constraints on freedom of speech and of the press have a chilling effect on what is expressed online, especially in public forums like open bulletin boards and chat-rooms' (1999, p. 1). Starr (1999) writes that non-democratic states adopt constitutionally limited form of government, which applies to the Kazakhstani case too. For example, The Kazakhstani government adopted non-democratic legislative laws and acts which restrict freedom of expression and assembly, especially the legislation regulating the usage of Internet was adopted in 2009 (Kassen, 2015).

In the new criminal code of Kazakhstan criminal charges go for 'spreading false information' (Human Rights Watch, 2015). Based on the law mass media includes websites, online shops and other types of digital media. Citizens who express ideas and thoughts in social media, and chat rooms are considered as journalists, who can be imposed to criminal and civil penalties (Janenova, 2010).

Several examples demonstrate violations of the right to freedom of expression based on various reports international observations. According to Human Rights Watch report (1999) Kazakhstan passed the law on National Security, which had broadly formulated provisions to restrict freedom of expression in 1998. Therefore, Article 22 defines measures to protect informational security and power to close any media outlet, and restricted distributing foreign media that might have any potential threat to national security. This has been a cause for alarm among international organisations, however nearly two decades passed, and there is no a major changes in legislation, even Kazakhstan adopts more key articles and amendments to restrict fundamental speech, assembly, association, and religious freedoms.

The OSCE Institution on Freedom of the Media<sup>17</sup> expressed concerns about disproportionate legal action initiated against media outlets in Kazakhstan (2015a). For example, the independent online portals, namely Ratel.kz <sup>18</sup>and Zonakz.net <sup>19</sup>are blocked or

<sup>&</sup>lt;sup>17</sup> The OSCE Institution on Freedom of the Media observes media developments in all 57 OSCE participating States. Kazakhstan is a participating member state.

<sup>&</sup>lt;sup>18</sup>The online portal Ratel.kz is found by journalists Beneditskii, Mekebayev, and Asipov. The source functions in Russian.

Available at: <u>http://ratel.kz/</u>

<sup>&</sup>lt;sup>19</sup> The online portal Zonakz.net is created in 2000. The source works in Russian.

Available at: https://zonakz.net/

'the Nakanune.kz <sup>20</sup>portal was ordered to pay damages in the amount of 20 million KZT (approx. 75,000 EUR)' (OSCE, 2015b).

#### 2.4 Concluding Remarks

This chapter has discussed the relationship e-government and free Internet access in 65 countries. The results of regression analysis have mainly supported the assumption that e-government development will not necessarily democratize society and lead to a regime change. This rationale was based on the governance approach to democratization. The findings of Kazakhstani case support the assumption that authoritarian regimes can implement ICT in the governing process without enhancing democratic process or losing control over the citizens.

An important lesson to be drawn from this analysis is the complementary role of egovernment in democracies more public deliberation, offering them e-participation in decision making and policy making processes, on the one hand, in non-democracies a more bureaucratic approach with highly repressive regulations, on the other. For instance, the analysis showed that Kazakhstan is among top 50 countries with e-participation performances, meaning there is high level of online services in which Kazakhstan has offered various public services to use and produce collective e-decision making processes. In contrast, Internet access to independent news agencies' websites and online broadcasting is blocked in response to criticism. The next chapter will show the role of e-government with a more in-depth investigation in order to answer the second research question.

<sup>&</sup>lt;sup>20</sup> The portal Nakanune.kz is not available.

### Chapter III. What is the role of e-government in Kazakhstan?

Technologies in the authoritarian context have a high risk in a digital divide and a potential to marginalize the ICT revolution. The previous chapter showed the contradiction between Internet freedom and e-governance. Kazakhstan's e-government index results show high achievements contradict democracy. This chapter reveals the role of e-government, its development stages as well as the strengths and weaknesses of the Kazakhstani model.

#### 3.1. Brief introduction to e-government emergence

Kazakhstan's accomplishments in fostering e-government program started in early 2004 following a presidential address to the nation, giving the national strategy towards 'competitive Kazakhstan, competitive economy, and the competitive nation!'(Nazarbayev, 2004). The e-government program promised to promote democracy, open dialogue between government agencies and civil society, active citizen participation, and transparency, receiving national political support and national priority with generous budgeting. Kazakhstan has an impressive record in terms of e-government, and it is proud of its achievements.

In 2015, Kazakhstan hosted the UN's third Global E-government Forum in the capital Astana with the topic 'Smart Governance for Sustainable Development: New Opportunities of Partnership Networked Society' (Sarybay, 2014). Highly ranked officials from all over the world gathered to share their best practices, future plans to develop 'smart governance', 'e-government 3.0<sup>21</sup>', or 'mobile government' introduced during the previous two international forums conducted in South Korea in 2012, and 2013 (Kassen, 2015, pp. 16–18). Kazakhstan's government illustrated its success of the four-stage model and declared that the country would develop a mobile phone government with digital signature recorded to a citizen's SIM card as the next stage.

<sup>&</sup>lt;sup>21</sup> This is another term associated with e-government.

In April 2016, Kazakhstan celebrated 10 years of e-government, since the official launch of the e-government portal in 2006. The Vice Minister of Investments and Development Saken Sarsenov said that the government invested 46 billion tenge<sup>22</sup>, he updated citizens on recent egovernment achievements. Figure 4 shows that 2015 mobile government results had 50 eservices on the Android, iOS, and Windows Phone operating systems (Sarsenov, 2016). The government is working on its improvements to make all telecommunications operators of the country to provide its citizens with recorded digital signature on SIM card.

All these show Kazakhstan's substantial progress in the public sector, recognize country as the leader of Central Asia as Kazakhstani e-government was the first among the Commonwealth of Independent States with a budget of 380 million USD\$ (World Bank, 2006, p. 24). In this regard, the country learned from the best practices of South Korea, Canada, India, Germany, Denmark and Estonia.

Admittedly, by receiving national priority support, e-government acquired judicial support too. There have been national e-government development programs for 2005-2007, 2008-2010, 2010-2014,<sup>23</sup> and present time until  $2020^{24}(2016)$ , in long term till  $2050^{25}$  (2013).

<sup>&</sup>lt;sup>22</sup>Tenge is a national currency. The 2015 devaluation of national currency causes troubles to calculate the sum in USD.

<sup>&</sup>lt;sup>23</sup> Each e-government development program has an action plan for its implementation.

<sup>&</sup>lt;sup>24</sup> State program 'Informational Kazakhstan – 2020'.

Available at: http://www.akorda.kz/en/official\_documents/strategies\_and\_programs

<sup>&</sup>lt;sup>25</sup> Annual Message of the President to the nation of Kazakhstan: 'Strategy Kazakhstan – 2050: New Political Course of the Established State'.

Available at: <u>http://strategy2050.kz</u>



Promoting excellence in social security

#### **MOBILE GOVERNMENT CAPABILITIES**



Figure 4. Mobile E-government capabilities of Kazakhstan. Source: The e-government portal, presented by S.Sarsenov (the slide number 8).

#### 3.1.1 The first step of e-government portal launch

We already know that the first stage of e-government is when the government creates a state website to provide information about governmental agencies, their policies and procedures. The web presence is also a positive sign of increasing citizens' trust (Porumbescu, 2016). In this regard, Kazakhstan has four official web-portals to represent the government online, namely the government of Kazakhstan<sup>26</sup>, e-government<sup>27</sup>, parliament<sup>28</sup> and president administration<sup>29</sup>. These portals are tri-lingual: Kazakh, Russian and English.

<sup>&</sup>lt;sup>26</sup> The portal of national government of Kazakhstan was launched in 2007.

Available at: http://www.government.kz/en/

<sup>&</sup>lt;sup>27</sup> The website of electronic government of the Republic in short E-Gov.

Available at: http://egov.kz

<sup>&</sup>lt;sup>28</sup> The portal of parliament of Kazakhstan.

Available at: <u>http://www.parlam.kz/en</u>

<sup>&</sup>lt;sup>29</sup> The president's administration website.

Available at: http://www.akorda.kz/kz

In 2006, Kazakhstan's e-government portal: <u>http://www.egov.kz</u> was launched, providing one of the most successful illustrations of strategy development to join the 50 most competitive countries in the world by 2030. According to the World Bank blog by Kaulanova 'more than 2.6 million users registered (...) accounting for almost 30 percent of Kazakhstan's economically active population' (Kaulanova, 2014). Figure 5 illustrates the number of registered users which is doubled within two years since 2014, now it is at 4.2. million or 46 percent of the active population (Sarsenov, 2016).



*Figure 5. E-government statistics and services. Source: The e-government portal, presented by S. Sarsenov (the slide number 4).* 

#### **3.1.2 E-participation through blogosphere**

In answer to the second research question, this sub-chapter intends to show eparticipation and civil society activism. First from 2006, the official blogging requires all executive governmental officials to open their own accounts at the e-government portal. Perhaps, the interesting part is that the Kazakhstani government obliged all ministers and highranking government officials to create their accounts in order to host online discussions, and online press conferences (Abazov, 2012). The so-called blogosphere explosion started when Prime-Minister Karim Massimov, started his personal and official blog on the government website in 2008<sup>30</sup> and told all ministries to do the same 'so I order all ministers (...) to start personal blogs where people will be able to ask you questions that you must answer' (Auyezov, 2009). From that time, middle-ranking civil servants have opened personal web pages and actively use them in Kazakh and Russian in social media Facebook, Twitter, Gonzo<sup>31</sup>, Instagram, Vkontakte<sup>32</sup>, Youtube, and Yvision<sup>33</sup>. Thus, blogs started to serve politics.

Numerous internet based conferences, public discussions, appointments to the ministries aimed to enhance e-participation through the e-government portal, which means people have to open a personal user account there. These e-services give the opportunity to raise questions, solve problems and receive answers even at the regional level. For example, since 2012 154 conferences have been organized, 184, 289 questions have been received and 133,153 responses have been sent (Sarsenov, 2016). Within this cooperation between government officials and civil society people can track their requests and receive official confirmation of letter deliveries and responses from the agencies (Kassen, 2015, pp. 80–84). In addition, citizens have an option of sending feedback, writing directly to a ministry or any agency. Sending questions about issues of concerns or raising voices at social media has become a problem solving platform.

<sup>&</sup>lt;sup>30</sup> The personal website of the Prime-Ministry.

Available at: <u>https://primeminister.kz</u>

<sup>&</sup>lt;sup>31</sup> Kazakhstan's blogging platform.

Available at: http://gonzo.kz/

<sup>&</sup>lt;sup>32</sup> Russian version of Facebook.

Available at: <u>http://vk.com/</u>

<sup>&</sup>lt;sup>33</sup> Kazakhstan based Your Vision blog platform in Kazakh and Russian. The website was created in 2008. Available at: <u>http://yvision.kz/</u>

#### 3.1.3 Public digitalization process

Kazakhstan introduced the next component for e-government infrastructure to illustrate its progress in records management of all government agencies. From 2003 traditional paperwork was attempted to be replaced by electronic documents with the digital signature. The same year, 2003, the National Database on Legal Persons (in the following: NDLP) and the National Database on Individuals (in the following: NDI) introduced a common centralized electronic database which consisted of one key number for individual identification (in the following: IIN) and a business identification number (in the following: BIN). The BIN was designed to assist in legal entities, while the IIN contains data on individuals, and has been placed on the ID card of citizens. The ID cards make people able to travel to neighbouring countries, to Russia, Kyrgyzstan, and Belarus.

Another step of digitalization of e-government programs was the Integrated System for Citizen Service Centers (in the following: ISCSC) in 2009. It was introduced to improve the quality of the public service centres and governmental agencies with the aim to ensure transparency and improve information security. As a result, today eleven specialized CSCs are open in various regions of the county which are also called a one-stop shop in the literature ("SPECIALIZED CITIZEN SERVICE CENTERS," 2015).

From 2013, integrated call-center<sup>34</sup> is available to deliver the public services through the phone number 1414. The call-center operates 24/7 with the aim to promote e-government and active citizen participation through delivering e-consultation and e-information. According to the news from the e-government portal, the call-center receives from 10 to 15 thousand calls daily ("Electronic government of the Republic of Kazakhstan," 2006).

<sup>&</sup>lt;sup>34</sup> The Call Center 1414 was established in 2013, delivers free e-consultation from any telecom operator within country at 1414 and 8-800-080-7777 phone numbers. In addition, citizen can leave feedback on www.1414.kz, or to send questions by e-mail: sd@nitec.kz, sd\_pki@nitec.kz, egov@nitec.kz.

The next ambitious plan of the country is to make the judiciary system work through communication channels. From 2014 the judicial office information operates to develop ICT in courts. For these purposes, 326 courts are equipped with audio-video devices to ensure transparency, fair and free judicial practices to eliminate violations and reduce corruption among judges. Moreover, the unified automated information-analytical system of the judiciary of the Republic of Kazakhstan (in the following: EAIAS) has been introduced to create a database in the whole judicial practice.

#### 3.2 Report on e-voting experience

One of the next e-government policies covered administrative reforms with introducing electronic voting in 2004 to avoid non-transparent paper voting. This reform aimed to make the political system more transparent, accountable, efficient, reliable, and open to independent verification. The e-voting model called 'Sailau'<sup>35</sup> can be described as 'an indirect-recording electronic voting system. In a direct recording voting system, a single mechanism is used both to capture the voter's intention and to record or tabulate the voter's ballot' (Jones, 2010, p. 76).

I assume this attempt had sought to advance e-democracy, because e-democracy merges ICT use in politics with democracy. Government officials should have been assumed that democratic potential of ICT would imply to create a better type of democracy in the country. Eventually, all citizens had been offered the option to vote electronically, which aimed to contribute to the democratic processes too. However, the definition of e-democracy means strong democracy in existing democracies with Internet freedom, expression, and assembly. The most impressive issue is that the model was decided to be piloted for parliamentary (2004 and 2007) and presidential (2005) elections, prior the local elections and one year after the general use of ID cards including the IIN.

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<sup>&</sup>lt;sup>35</sup> Sailau in Kazakh means voting.

The launch of the e-voting had contradictory outcomes when the government adopted new regulations and amendments to the election law, in 2004 when the constitutional law was changed (Kassen, 2015). The next contradictory consequence is observed when in 2011 Kazakhstan decided to stop using e-voting(OSCE/ ODIHR, 2011). The Central Election Commission<sup>36</sup> is the governmental agency which is responsible for elections, reported that evoting needs improvements in jurisdiction and infrastructure. According to the National Democratic Institute (in the following: NDI) election technologies concerning voting and counting are developing throughout the world.<sup>37</sup> Recent research project (I Esteve, Goldsmith, Turner, 2012) demonstrates that 31 countries around the world have used non-remote electronic voting machines for binding political elections; electronic voting mechanisms are in use in 20 countries. However some countries piloted electronic voting mechanisms and decided not to continue, Kazakhstan is in this group. The reasons are still not clear, and I believe it is reasonable to ask the government why.

According to the OSCE final reports on elections, the new amendments to the election law were adopted prior to the parliamentary election 2004, before the presidential election 2005 that showed significant progress at the same time the government did not agree to amend prior 2004 recommendations on freedom of expression and assembly, and elections laws. The final report by OSCE/ ODIHR Observation Mission reports on presidential elections 2005 'e-voting was offered as a choice in 15 per cent of polling stations, in addition to the possibility to vote by paper ballot. Less than 15 per cent of voters who had the option of e-voting chose to utilize this method' (OSCE/ODIHR, 2006, p. 2), while final report on parliamentary

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<sup>&</sup>lt;sup>36</sup> Elections are administrated by Central Election Commission.

Available at: http://www.election.kz/eng/

<sup>&</sup>lt;sup>37</sup> Since its founding 1983 NDI is a non-profit, nonpartisan, nongovernmental organization and its local partners have worked to establish and strengthen political and civic organizations, safeguard elections, and promote citizen participation, openness and accountability in government. The Institute also works to find better technological solutions for constituent services. Available at: https://www.ndi.org

election 2004 reports 'the late decision, just prior to the first day of elections, to offer the choice of parallel paper balloting in the 10 per cent of polling stations where electronic voting was implemented led to organizational difficulties, the potential for multiple voting, and added unnecessary complexities to the tabulation process' (OSCE/ ODIHR, 2004, p. 2). In 2007, the final report on the parliamentary election showed a good progress 'e-voting was used in 1,512 polling stations, covering approximately 33 per cent of the total electorate'(OSCE/ ODIHR, 2007, p. 23), however voters had to download the ballot card to their private laptops, which questions the confidentiality. Overall, Kazakhstan was not ready technically for e-voting, even this a unique method and has its positive aspects to eliminate fraud and errors. One of the criticisms against of e-voting might be that using ID cards during elections is the secrecy of each individual vote and decision.

# 3.3 The models of e-government: understanding the e-government paradox

Kazakhstani experts maintained four stages of e-government implementation, namely informational, interactive, transactional and transformative for the project implementation. According to the literature these stages can have different methods, names, although the stages are similar to international scholars' models (Andersen and Henriksen, 2006; Fath-Allah et al., 2014; Hiller and Belanger, 2001; Layne and Lee, 2001).

Kazakhstan's model of e-government summarizes and evaluates the organizational and administrative changes. It seems to me Kazakhstan initially planned to implement all four stages of e-government models that scholars suggested in 2000s (Moon, 2002; Netchaeva, 2002). Although after comparing the theoretical maturity models, I have observed that the Kazakhstani four-stage model has more similarities with Gartner's four stage maturity model introduced by Baum and Di Maio in 2000 (see Figure 6), which is well analysed by Fath-Allah and others (Fath-Allah et al., 2014). This assessment is grounded on that both Kazakhstni and Gartner's models have the same names, stages according to the focus and features of the models. Figure 6 describes the four-stage e-government model.



Figure 6. The four-stage model of e-government development in Kazakhstan. Source: E-Government website of Kazakhstan.

For example, the first stage is '*informational*' where governments create a state website to provide information about governmental agencies, their policies and procedures. This is also known as a basic principle of e-government to ensure accessible state services for citizens 24 hours a day, seven days a week, regardless of geographical location and time-zone. The second stage is '*interactive*' which empowers e-services for ordinary citizens to build an online interface through having a direct connection with the government system. This stage enables citizens to send a request to governmental agencies from personal computers or CSC's information desks to receive responses from government. The governmental electronic database, and electronic licensing database are aimed to provide high level confidentiality for Kazakhstani people. The third stage is '*transactional*' when the process of automating and digitizing is improved for citizens to pay their fees, fines, taxes and utility services. The fourth

is *'transformational'* that is aimed to provide maximum efficiency services. This stage in Kazakhstan requires the last two stages (transaction and transformational) to work effectively. For example, these days citizens can register a legal entity within 15 minutes, apply to get a personal ID card, passport or driver's licenses, use e-learning and e-notary ("Electronic government of the Republic of Kazakhstan," 2006).

I find it interesting to note that according to Layne and Lee's model, the last two stages (vertical and horizontal integration) of e-government development require the integration of databases, resolving technical conflicts and automated fingerprint identification to build a state finger print system database. Government should guarantee the high level of privacy and confidentiality of personal information issues, the Kazakhstani model misses the last two stages, because fingerprint is not in wide usage, it is used only in bank systems and privacy concerns are under question.

The maturity model by Fath-Allah and others that I apply for this thesis illustrates that Kazakhstan attempted to fulfil all stages of development. But I have observed a contradiction in the e-participation part of e-government. For me it is interesting to know how citizens are supposed to use e-government, when e-participation, literally, involves e-information, econsultation, e-decision making, I find in this respect e-government is unstructured, untrustworthy for citizens' trust in government.

From one side, it seems that Kazakhstan provides consultations, information and platforms for online discussions, although it is not clear at what extent feedback and responses to queries have an influence on policy making process. In addition, the stopped e-voting supposed to have the digital signature to confirm the choice during elections, and supposed to be viewed the anonymous for CEC, and Kazakhstan did not offer such high level adopted system. These might be one of the reasons why the last stage 'integration' of the maturity e-

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government model by Fath-Allah and others (2014, p. 86) demonstrates that the Kazakhstani egovernment model is not mature and does not involve full e-participation and e-voting features to the current four-stage model.

Some Kazakhstani experts and scholars might questions my arguments, referring that e-voting was introduced and tested in 2004, 2005 and 2007 elections; there are online services that allow people to freely participate in online conferences and discussions. But my main argument is that during 2004-2007 Kazakhstani ICT infrastructure was developing as well as from the FH report we have learned that Internet freedom, press and freedom of expression are restricted and censored to elicit more candid comments and suggestions. Moreover, the large territory of the country could not guarantee full Internet coverage for e-participation, and the evoting implementation, which led to mistrust in government.

There are scholars from academia who aim to identify transparency and e-government policies in Central Asia. For example according to Johnson and Kolko's article (2010) e-government content is created and controlled by government and the content is full of information and services that help to enhance state's strategy in Central Asia. Maerz<sup>38</sup>(2016) aims qualitatively analyse the web presence of all e-governments in Central Asia, in order to see how countries use the e-governments portals to strengthen their ruling power. The author's qualitative outcome is that 'Kazakhstan's current web presence is still revealing an electronic face of authoritarianism (...) e-government portal, intensively propagate the president's achievements and personality by using glaring pictures, national symbols and hortative language' (p. 15). Therefore, it seems that Kazakhstan has no intention to involve citizens into the e-decision process in order to support smarter governance (Johnson and Kolko, 2010).

<sup>&</sup>lt;sup>38</sup> Preprint submitted to Government Information Quarterly April 6, 2016.

#### 3.4 Policy recommendations

This chapter examines the role of e-government in Kazakhstan and reveals features of development and judicial support that contributed to rapid e-government implementation as well as to the weaknesses of the state program.

The paradox of e-government development is that it has a top-down approach with all development stages (2005-2007, 2008-2010, 2010-2014, 2014-2020, and until 2050) of the realization funded and implemented by the government. Electronic and paperwork documentation are still unsolved, as both hard and electronic versions should be kept in archives. Online blogs cannot guarantee democratization, because governmental officials create the content for e-government website and governmental blogs, therefore official blogs have one-way interaction. The law on the Internet has strict control over comments at chat rooms, social pages by putting individual bloggers at risk. There is a weak civil society to challenge current government to produce transparent policies and open data availability. According to election results with e-voting showed less political will to improve the system for further elections in the country. It seems e-government for Kazakhstan means e-services G2S, because all development stages are inhomogeneous.

Steir claims that 'an autocratic regime like Kazakhstan legitimizes itself internationally and attracts foreign investment by advertising with its good ratings in the UN Index' (2014, p. 9-10). Therefore, theories from comparative politics reveal that e-government has a contradicting results in various contexts. In some states e-government helps to move forward and strengthen democracy, and combat corruption, while in other states it requires more research.

Global e-government diffusion and ICT innovations have a potential to reach the last stage of e-government development: e-democracy(Lee et al., 2011). International organizations

and NGOs offer their recommendations to Kazakhstan to update its legislation. However, the government instead of reducing its regulations, enhances control over them as a means of limiting freedom. There is a very low probability of getting this policy recommendations to be accepted by country, but it is better than no probability at all. Therefore, after examining e-government stages and comparing to the Fath-Allah's maturity e-government model, this policy recommendations have been developed for the purpose of implementing the state program on e-government to reach full implementation in accordance with the Fath-Allah e-government maturity model to promote democracy and e-democracy.

#### I. Privacy of personal information

The e-government portal should ensure a high level of privacy for all users. Citizens should be offered free training to improve the computer literacy.

#### II. The civil society awareness

The Government should involve citizens in the e-government processes of decisionmaking, using numerous tools, such as comment forms, government surveys on public services, laws, e-voting, and activate civil society participation through e-petitioning.

#### III. Legislation

- a. The Government should take into account all recommendations from international organizations and NGOs in order to update state legislation on open and free media through allowing citizens and journalists to freely express their opinion in social media, and in various online platforms.
- b. The law on elections should consider e-voting for the next elections to become more transparent and accountable. This has the aim to protect from fraud and errors.
- c. The law on peaceful assembly should allow civil society to freely participate in peaceful demonstrations.

I hope that my policy recommendations will provide the basis for a clearer dialogue between governmental officials and citizens.

#### Conclusion

This thesis has investigated the nexus between internet freedom and e-government from the empirical literature on comparative politics where the digital division among scientists took place.

I started off with an idea that restricted governmental regulations on the Internet should have an impact on the level of e-government implementation. I began my research by conducting the linear regression on 65 countries with free, partly free and not free Internet. The results demonstrate a paradoxical relationship with high level e-government development and low level (not free) of Internet freedom in authoritarian regimes.

The empirical findings demonstrate that the democratizing or liberalizing potential of e-government has been overstated because authoritarian countries invest in ICT. Therefore, this thesis highlights eleven countries: Azerbaijan, Bahrain, Belarus, China, Kazakhstan, Russian Federation, Saudi Arabia, Sri Lanka, Turkey, United Arab Emirates, and Venezuela as outliers where this trend with investments in e-government development has a contradictory relationship with Internet regulations. These observations appear to lead to the conclusion that the current understanding of democratic systems is outdated. Thus, countries formed a tendency that they can only invest in e-government and be placed together with advanced democracies in the UN rankings.

Among these eleven countries, I picked the case of Kazakhstan, because it was ranked 28th and categorized in high EGDI, remained the sub-region's leader in e-government in Central Asia. For the purposes of understating why the UN has scored Kazakhstan high on egovernment, I have examined the political and legal reasons aimed to implement e-government in the county. I have found that online services play the most important role in Kazakhstan, which requires a high rate of using the e-government portal for paying transactions, interaction with governmental officials and using an ID that contains a one code system in the electronic database of the country. Thus, e-government improved G2S relations by means of transactions.

In terms of interaction, governmental officials were encouraged to start online presence to foster the dialogue between government and citizens. Numerous press conferences, online questions and answers sessions have been organized. In this case, e-government has come in handy for the effective management of information tools, and for solving existing problems. However, overall this makes it doubtful that such activities can really be seen to constitute improved e-government policy.

Interestingly, I found that Kazakhstan stopped using e-voting, implying that it needed updates in ICT infrastructure and investment to ensure wide usage. But there is no clear explanations what kind of updates are needed for e-voting to function.

Furthermore, I found that Kazakhstan hosted the 3<sup>rd</sup> the UN conference on egovernment, where Kazakhstan presented its next stage of e-government plan as the mobilegovernment with recorded digital signature on SIM cards. This idea is beyond the four stage of maturity model, where Kazakhstan had not completed all the four stage maturity model by Fath-Allah et al. (2014) which I have applied to this thesis.

There has been a reference to the civil society and citizens' will to participation in edecision making processes through e-government. We believe that governments will give a foundation for e-participation and e-decision making processes. Although tight control over the Internet deprive Internet users, and civil society members of their willingness and right to contribute and act in online networks. Overall, the average citizen in the country is allowed to create any information, however ICT is not serving as a platform between citizens and government, and it also does not mean that it will be used for democratic purposes.

All these observations suggest that the key aim of e-government fails to meet the last stage of e-government - e-democracy, meaning e-government cannot promote democracy in non-democracies, on one hand, strengthening authoritarian regime, on the other.

We have learned that ICT might be challenging, changing and threatening. For example, in Arab world technology helped to liberate the regime. Therefore censorship might be a threat for authoritarian states through active civil society and Internet access to information. These would give us promising chance to liberate authoritarian regimes.

I have illustrated my main arguments proceeding from what political scientists have debated over the ICT's potential. If my arguments have been accepted so far, a whole range of questions arise that need to be investigated, all of which pertain to relationships between e-government and Internet freedom. It would be interesting to compare the online services of each country and make a quantitative text analysis of governmental websites. Further research can also be done among Central Asian countries, as from 2016 to 2018 Uzbekistan is investing 145 million USD in e-government (East Time, 2016). We know from the empirical literature and the FH report that in Central Asia the Internet regulations are not free and are becoming more restricted. Moreover, e-government experiences travel around the world. Therefore, it would be useful to observe which e-government model Uzbekistan would apply in order to make a comparative analysis to see e-government diffusion in neighbouring states.

Finally, I will return to Evgeny Morozov's book and his view that the major problem with the 'technology is neutral' statement 'is its complete uselessness for the purposes of policymaking' (2011a, p. 297). Therefore, I ague these days technologies cannot be neutral. I hope with this study I have managed to emphasize the importance of studying e-government

and internet freedom in political science, and have inspired not only myself to continue the investigation, but fellow researchers and policy makers.

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