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How can E-Government   facilitate the process of immigrants' integration? The case new labor immigrants in Estonia

MA thesis

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I have written this Master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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Abstract: Immigrant integration is an integral part of contemporary policy. Yet, while various studies have discussed different factors that might affect integration, relatively few existing studies have devoted their attention to the impact of E-Government on migrant integration. This study intends to measure E-Government impact on immigrants' integration. The research presents the conceptual framework for examining the linkage between E-government and integration, namely on the first stage of integration – acculturation. This is a crucial stage of integration, as identified by Favell, 2003. This paper demonstrates the experience of new Estonian labor migrants. The findings illustrate Estonian new labor migrants' experience of the adaptation process, indicating the positive and negative impacts of E-Government. The study contributes a valuable illustration of new migrants' experience in Estonia, and recommends a series of solutions, such as improved access to alternate languages, and access to e-Governance awareness training, as part of the welcome programme for new migrants to Estonia.

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INTRODUCTION:

Migration has been always an important component of the contemporary world, which plays a key role in setting the political and social agenda. In recent years, the migration influx has also been affected by economic and political events that consequently had an impact on society's functioning. Notwithstanding ups and downs of the migration influx, it is still evidently clear that the migration flow is steadily growing and need to be taking into consideration by the state. The recent trends have led proliferation of studies that aimed to reconcile the migration impact on the society by elaborating and implementing the regulation policy, like policy on integration. A considerable amount of studies shed light on different aspects of integration. These studies present the comparison of integration of different national minorities (Berger, M., et. al. 2004), or generations (Röder, A., & Mühlau, P. 2012). Previous researches also suggest different indicators to measure integration (Farwell, A. 2003; Bill, R. & Verweil, A. 2012; Maxwell, R. 2010) as well as provide with different stage divisions of the integration process (Bjerre, L, et al. 2015; Erdal and Oeppen 2013; Gemi 2015). Recently, researchers have shown an increased interest in E-Government and ICT and their social impact. Thus, several attempts have been made to draw the linkage between ICT and migration. The study conducted by Khvorostianov (2016) showed that ICT could be used by immigrants to keep connected to their place of origin. Meanwhile, the survey on migrants in the EU countries suggested that ICT skills increase the chances for migrants employability (Diminescu, D., et. al. 2009). Despite a notable amount of researches, much of them up to now has been mainly covering some minor aspects, yet not explicitly investigating on E-Government impact on the integration. In a sense, the current studies are mainly descriptive and present the existing opportunities for migrants but to do not holistically investigate the role and impact of E-Government on the process of immigrant's integration.

In light of this, the aim of this research project has therefore been to try and establish what is the impact of E-Government on the process of integration of immigrants. This study aimed to address the following research questions: *What is the impact of E-Government on the success of the integration of migrants?* In particular, the research seeks to examine supportive questions: 1. *How to measure the impact of E-Government on the integration of immigrants*; and 2. *What impact does E-Government have on new labor immigrants in Estonia on the first stage of their integration process*? This study was exploratory and interpretative in nature taken a form of single

case study on newly arrived labor migrants in Estonia. By employing qualitative modes of inquiry, I attempted to illuminate the holistic approach to measure the impact of E-Government on the first stage of immigrants' integration (acculturation) and test the instrument of the case of Estonian newly arrived immigrants. Therefore, this study provides an exciting opportunity to advance our knowledge of new aspects of immigrants integration, namely the impact of E-Government. Nevertheless, due to practical constraints, this paper cannot provide a sufficient for the generalization results, yet it still presents the research instrument that can be used for further research implications.

My thesis is composed of four themed chapters. First, it gives a theoretical overview of the key phenomenon of the study. It briefly discusses the migration processed followed by elucidating on the integration models, ending with a review on the E-Government models and its linkage with integration. The second chapter aims to justify the case selection by showing the Estonian E-Government and integration models. The third chapter concerns with the methodology used for this study. The fourth section presents the findings of the research, focusing on the six key themes that are the economic dimension, education, healthcare system, accommodation, legal system, and political participation; and includes a discussion of E-Government impacts and the implication of the findings to future research and policies into this area. Finally, presents a summary and critique of the findings.

CHAPTER I

1.1. CONCEPT OF IMMIGRATION

Since migration has existed for many centuries, it can be divided into several historical stages. In this regards, King (2012) suggests five stages: pre-modern traditional society, early transition society, late transition society, advanced society, and superadvanced society. The first stage is signified with a limited migration flow within local areas. The second stage is associated with active rural-urban tradeoff and a start of emigration influx. Meanwhile, in late transition society, the urban-rural flow slows down. Advance society is remarked with the beginning of mass migration, whereby the lion share of migrants consists of low—skilled workers fleeing from less to more developed counties. This stage is also implied with a notable increase of as professional migration. The author also draws the conclusion that on the last stage of future superadvanced society, it is anticipated human circulation reduction by establishing better communication and delivery systems. Another significant notion is the migration trends in the superadvanced society will remain, yet strictly regulated (ibid).

Migration is one of the valuable driver for developing the society as it interwinds with cultural exchange, business development opportunities and else (IOM 2018). Improving the economic impact on individual welfare is one of the positive outcomes. In addition, migration can have a positive impact on the reduction of unemployment and underemployment rates. Moreover, it should not be neglected remittance sent by emigrants are one of the important economic resources from the state's developments and prosperity(ibid). Meanwhile, it is worth noting that migrant influx ebbs and flows as a response to economic and political changes. For instance, the economic crisis in 2008 created a condition for migrants to return to their home countries while the political instability in Arabic countries 2011 boosted the emigration flow (Bijl, R., & Verweij, A. 2012). This explicates that migration is a multifaceted phenomenon led by different micro and macro factors.

Therefore, scholars pay great attention to studying the motives of migrations. Castles and his collegues (2013) made a great contribution to understanding different theories of migration by outlining the most essential. Correspondingly to scholars, the first set of vision is embodied within the neoclassical theory, also known as a "push and pull" theory. The key idea of the theory lies in justifying the decision to migrate is a rationally individual choice. Admittedly, the idea was

criticized as a contrast to it, the new economics labor migrants approach asserts that the choice is made under numerous circumstances and influenced by the surrounding of migrants which makes the decision rather common than the individual. (ibid). Another interesting approach to investigate migration is presented by Massey and the colleagues (1993) who introduces the network theory. The theory highlights the importance of strong ties of kinship or friendship as a key driver to migrate. In this sense, the availability of the social network in a foreign county creates a safety belt for lowering the costs and lessening potential risks (Massey, D. S., et. al. 1993). In recent years, it has been widely discussed the impact of migration on the self0iedntity of immigrants. In these lights, the transnational theory discusses how the impact of globalization on shaping a dual-identity among migrants. In other words, transnational theory contemplates a migrant as a transmigrate who statrs associate themselves as a part hosting society, yet remains to belong to the home society (Castles, S., et. al. 2013). The variety of theories shows that the decision to migrate is shaped under different factors. It can be individual characteristics, social conditions, ecological and geographical conditions, life events that can critically affect the decision of a migrant (Greenwood, M. J. 1985). Thus, there is no universal explaining of migration motivations.

Consequently, different approaches to explain migration engenders numerous ways of migrants definition. For instance, King (2012) suggests dividing into internal and international; temporary and permanent; regular and irregular groups. Migrants can be characterized by motivation, nature of source and destination, by the length of stay, by mechanisms, by a model of importation (Iredale, R. 2001). Migrants also can be defined as 'economic' migrants (those who consisted of a permanent stay), refugees (involuntary migrated) and guest workers (temporary workers) (Gibson, M. A. 1997). In the light of different approaches, it still remains unclear how to define a person whose birthplace or prior residence and citizenship are different or how to quantify 'undocumented' migrants (King., R. 2012). Correspondingly to definition by International Organization for Migration, migrant is any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person's legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of the stay is" (IOM 2011). Further migrants can be split into emigrants, who leaves the country of origin, and immigrants, who enter a hosting country (ibid). The United Nations Recommendations on Statistics of International Migration also suggests outlining international migrant to 'short-term migrants' (who has residence no less than

three months but no more than a year) and 'long-term migrants' (who has a residence more than a year) (IOM 2018). In the meantime, the International organization acknowledges that the state can employ their own definition of migrants. Thus, Estonia denotes migrants by the length of stay (short-term and long-term) and by motives of migration like a family reunion (spouse resetting, relative resetting), study, employment, setting business (Politsei- ja Piiriveamet).

Today, migration is becoming simpler: travel costs decreases and travel conditions improve what makes the opportunity more appealing (Bijl, R., & Verweij, A. 2012). In 2018, the World number of migrants was 258 million which represented 3.3% of the World population (IOM GMDAC 2018). Being politically and economically sustainable, Europe, in terms of migration, is one of the most favorable migration destinations (Bijl, R., & Verweij, A. 2012). In 2008 more than 30 million people were considered as foreigners in the EU27 including 11,3 million who were not EU-citizens (Herm, A. 2008). The number of foreigners increased in 2010 to 32.5 million which represented 6.5% of the total population of the EU (Eurostat 2011). The recent statistics show that in January 2017, 4.4 million immigrated to one the EU States from the EU28 group (Eurostat 2019). A year later the estimated number of immigrant constituted 22.4 million which represented 4.4% of the total population EU28(ibid). Working migrants constitute the lion share of worlds' migrants which were 150,3 million people in 2018. In addition, there were male working immigrant than female (55.7% compared to 44.3%) (IOM GMDAC 2018). The steady grow of migrants that are been witnessed for recent years confirms the inevitable impact of migration on the social, political, cultural and economic life of hosting and sending countries. Thus the holistic integration policy is heightened.
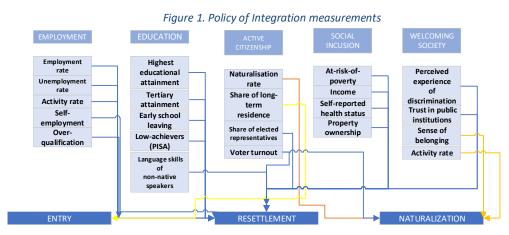
1.2. CONCEPT OF IMMIGRATION

The increasing influx of migrants has boosted the discussion on establishing the reconciling tools of migration. Apart from entry policies regulations, the states also confer their awareness of a possible cultural between immigrants and locals that must be regulated. Thus, research and policy discourses draw their attention to the integration process of immigrants. Yet, it is acknowledged that the process of integration is multifacet and it is difficult to outline a universal understanding on immigrants integration. In a broad sense integration can be characterized as a "two-way process of mutual accommodation by all immigrants and residents of

Member States" (Gilardoni, G., et al. 2015, p. 7). This signifies the positive results on integration depending on how the state and the immigrant can cooperate in order to satisfy the expectations of each other. In other words, the state anticipates immigrants to fulfill the requirements to maintain the social order of the country while immigrants request for settlement assistance from the state. In particular, integration points to "the acceptance and inclusion of the culturally different 'Other' (i.e., immigrant) within the dominant cultural system of the host country" (Gemi, E. 2015) which comprises a key tool for generating of cultural codes and the integration (ibid). Another way to understand integration can "an adaption in a new locality, set within its particular territorial and political context" (Erdal, M. B., & Oeppen, C. 2013).

Admittedly, scholars contribute with different indicators to measure the level of integration, as it covers different aspects of immigrants life, therefore it contains a variety of indicators: basic legal and social protection; formal naturalization and citizenship (or residency-based) rights; anti-discrimination laws; equal opportunities positive action; the creation of corporatist and associational structures for immigrant or ethnic organizations; the redistribution of targeted socio-economic funds for minorities in deprived areas; policy on public housing; policy on law and order; multicultural education policy; policies and laws on tolerating cultural practices; cultural funding for ethnic associations or religious organizations; language and cultural courses in the host society's culture (Favell, A. 2003). Among a wide variety of different components that different scientists include as components of integration, employment opportunities, housing and segregation, use of language, social interaction, social and political participation are the commonly studied elements of integration (Gemi, E. 2015). Bartolomeo and his colleagues (2015) suggest distinguishing integration indicators into three dimensions: labor market, education, and citizenship. Hereby, the absolute index should be interpreted as the higher the index the better integration. Integration can be also investigated within socio-economic and socio-cultural dimensions as Gemi (2015) suggests. The first encompasses employment rate, income level, and poverty, the degree of social security rights, educational level and quality of housing, whereas the latter contains the attitude toward the basic rules of the host country, the frequency of with the host society and the country of origin; mixed marriages; language skills. Based on the EU principle of integration Gilardoni and the colleagues (2015) blueprint legal-political, socio-economic and cultural-religious dimensions. The first one implies access of the migrant to the legal right protection and to political discourse. In particular, the dimension this access is supplied with

providing access to legal status and citizenship, the right to vote, legal consultation and migrant associations (ibid). The socio-economic dimension covers the key fields of social aspects of living that includes access to be employed and to earn income, access to education, access to accommodation, and access to the health services. The last cultural-religious regards cultural and religious adaptation of individual newcomers (ibid).

The integration is usually linked to the policy agenda as it plays a vital role in regulating a social life within the state. The main goal of integration policy is to provide a convenient condition for co-existing of the social groups with cultural and ethnic backgrounds (Biji and Verweij(2012). Favell (2003) argues that "integration, then, is about imagining the national institutional forms and structures that can unify a diverse population; hence imagining what the state can actively do to "nationalize" newcomers and re-constitute the nation-state under conditions of growing cultural diversity" (p. 18). In the meantime, the vision on the integration policy can vary: the state might favor the assimilation approach to remain the society homogeneous or pluralism approach to provide equal opportunities and rights to different socio-cultural groups (Bourhis, R. Y., et. al. 1997). In case, the state employs the assimilation approach, the immigrants are anticipated to commit the social-cultural norms in order to establish strong bonds with the hosting society that eventually should change their self-identity (Gemi, E. 2015). Pluralistic approach, on the other hand, aims to ensure the condition for maintaining the minority rights in the host society (Erdal, M. B., & Oeppen, C. 2013). Regardless of the approach, each policy encompasses indicators and can be divided into several stages. Here, figure 1 shows an overview of the components of the integration policy.

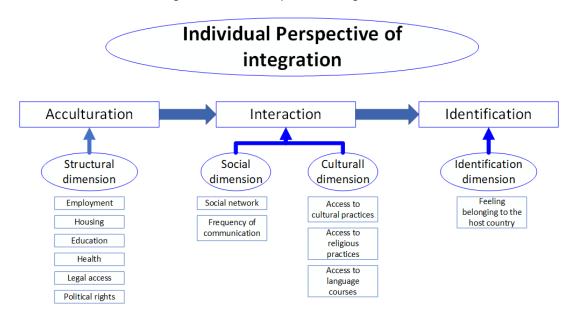*Figure 1. Policy of Integration measurements*

Sources: Bjerre, L., Helbling, M., Römer, F., & Zobel, M. (2015). Conceptualizing and measuring immigration policies: A comparative perspective. International Migration Review, 49(3), 555-600
Niessen, J., & Dag Tjaden, J. (2013). Using EU Indicators of Immigrant Integration, Final Report for Directorate-General for Home Affairs

As it is shown in the figure above, policy on immigration integration includes three main stages: entry, settlements and full membership (or naturalization) (Bjerre, L, et al. 2015). Each of the states contains a set of requirements to complete for indicating a successful integration. At the entry level, the state determines the requirements for getting entry permission. Sometimes immigrants should comply with passing the language test, a country study exam, more frequently it migrants a required to confirm their income capacity (Schinkel, W. 2013). This stage signifies a knowledge accumulation period since at this stage immigrants get priorly acquainted with the hosting county. The second stage is implied with the resettlement and familiarization process on the spot. In other words, at this stage, the immigrant determines the basic needs, like getting healthcare services of finding a job and try to satisfy them. Here, the state plays a vital role in facilitating the process of resettlement of migrants by providing the necessary aid the migrant can request. Passing the last stage, acquiring citizenship in this vein, indicates the successful integration policy (ibid). The integration policy covers many areas of the social and political life; therefore, the evaluation schemes are rather complex. European Commission defines four dominant areas to measure the immigration policy: Employment, Educations, Social Inclusion, Active Citizenship, Welcoming Society, which includes many other indicators (Niessen, J., & Dag Tjaden, J. 2013). Each of the indicators though can relate to different stages of integration. for instance, the naturalization rate can be linked to the Naturalization stage, a share of long-term residents can relate to the entry stage.

Despite a comprehensive and profound approach, the policy evaluation is rather descriptive and yet not provide with the causations. Studying the individual experience of migrant, on the other hand, shed the light on the causes and be fruitful for the futher implication. Figure 2 presents the Individual approach to integration measurement encompassing their stages and indicators.

Individual Perspective of integration

| Acculturation | → | Interaction | → | Identification |

Structural dimension
- Employment
- Housing
- Education
- Health
- Legal access
- Political rights

Social dimension
- Social network
- Frequency of communication

Culturall dimension
- Access to cultural practices
- Access to religious practices
- Access to language courses

Identification dimension
- Feeling belonging to the host country

From the individual perspective, integration can be considered as a long way from adaptation or acculturation to the new environment to the full of the identity and its adjustment to the new environment. In this vein, integration could be also regarded as a long-term process where each dimension foregoes and preconditions another. Favell (2003) understand integration as post-event. In a nutshell, he comprehends integration as a set of actions that constitute the more comprehensive process of deep social change for the country. In the lights of different aspects of integration, acculturation is signified as a front stage of integration which embodies socialization and adaptation to a wide spectrum of structural incorporation, while interaction refers to social activities, namely, building up relations and social network. Finally, identification indicates how an individual indicates themselves within a given social system, in other words, do they perceive themselves as a part of the host society (Gemi, E. 2015). Likewise, on each stage of the individual approach, we can set specific needs and areas of integration. For instance, acculturation stage can be seen as stage customization, it implies an acquirement of the new set of behavior and adjustments the daily routine activities in the new environments. Finding a job, learning about health services, finding a school for their children can be regarded as important components of daily practices. This stage can be also signified as a stage of acquiring of basic citizens habits in the host society to have a convenient life. The first stage is fundamental as it set the ground for other stages. The stage of interaction is a valuable stage to overcome the feeling of exclusion.

Building up social capital is one of the important aspects of feeling comfortable and included. However, for different migrants, the types of the network can significantly differ. For some migrants, it can me important build up the relationships with hosts, meanwhile, others need to bond their connections with their diaspora. Some migrants can suffer from the lack of friends among native, while others it sufficient to communicate only within the business. This stage is quite individual and it is complicated to define should be understood as the successful passing of this stage (Favell, A. 2003). The last stage features also some controversies as it is not explicitly clear whether migrants should completely resign their original identity to feel like a part of the society or it is a subjective feeling of belonging whether the migrants can still identify themselves in respect to their country of origin or not (ibid). This stage is tightly interrelated with integration policy and what the state anticipates from the migrant. In the case of some countries, migrant should adjust their identity to the host country's vision the citizens. The Netherlands, for example, expects immigrants to respect the values and the culture of the country. In the case of migrants who came the Middle East, accepting new patterns of behaviors and new values can be a dramatic shift in self-perception (Schrinkel, W. 2013). It is also the factor of individuals whether they want to change their identity or not. Some of the migrants would like to remain their bonds with the country of origin and therefore they will stay between as their identity will feature both cultures.

The individual approach of integration can be studied within structural and socio-cultural dimensions. As Erdal and Oeppen (2013) recommend structural dimension includes economic (access to appropriate employment and income), political (access to political participation and dual citizenship) and legal (perceived measures against discrimination) components. Furthermore, the structural integration embodies acquisition of rights and access to core institutions which are the right of access to legal status, citizenship, education, health services, labor market, and housing (Gemi 2015). Socio-cultural, on another hand, comprises emotional (degree of belonging), cultural and religious (an opportunity to practice culture and religion), and social (an ability to build up new social capital) elements. Social and Cultural integration mainly focuses on the education and networking, like access to language training, space for establishing the communication between immigrants and the native population, engaging social and political participation of migrants (Gemi 2015). It is also proposed to identify the identification dimension which signifies the subjective feeling of belonging and identification with the host society (ibid). It is worth noting that both and social and identification dimensions cover the political components. However, the

structural dimension mainly focus on providing legal access like the right to vote or sign a petition. In the meantime, social dimension regards political participation as an extensive event in the political process that embodies interest in politics and participation in the political organization. All the dimension reflects particular needs that occur on each of the stages of the integration. To some point, each of the dimension more or less corresponds to each of the stages.

Overall, the difference between the policy integration approach and individual perspective lies in different focus and intentions of the study. Focusing on immigrants from the individual perspective help to indicate subjective feeling and therefore contribute to the understanding of the personal experience. For instance, have attempted to shed a light on the political participation of migrants, Röder andMühlau (2012) draw an exciting conclusion that migrants trust more to the government than natives. The individual approach should essentially center the personal experience as the main root in evaluating their integration. The daily practices of immigrants can provide with profound knowledge on they indicate as the most important integrating factor (Erdal, M. B., & Oeppen, C. 2013). Thus, some authors suggest that it can also measure the feeling of belonging to the host country as the component of integration (ibid). Other scholars attempt to measure the subjective comfort of migrants within mainstream practices (Maxwell, R. 2010). Therefore, an individual approach is more immersive in terms of learning the experience of immigrants from different angles. Admittedly, institutional and individual approaches differ in their measurement strategies as they have different intentions behind. The institutional approach aims to see the general composition of the society that might not actually present the degree of personal integration but show the degree of sustainability of the society. Meanwhile, individual can be more accurate in terms of studying the efficiency of the integration policies as it focuses on a deep investigation of people. Thus, the individual approach can find to bring some significant insights. For instance, can the employment signify an integration or it depends on how the job complies with the skills and education of migrant? What is also important that individual approach can reveal which of the dimension is more important for the immigrants to feel integrated.

1.3. CONCEPT OF E-GOVERNMENT

In recent decades, the interest in E-Government has been steadily growing and thus it has yielded many interesting discussions. Some scholars foreseen the transformation of the traditional government to E-Government as inevitable shift which may bring positive impacts as it

comprises using innovative policies technological platforms and digital services by public administration and public sector reforms (Kassen M., 2017; Venkatesh V., et. al. 2012; Almarabeh, T., & AbuAli, A. 2010). Mark Howard (2001) argues that "[e]- -Government is the next step in the natural evolution of how government services respond to changes in the broader economy and society" (p. 80). Electronic Government is seen as a tool for information and communication access in the public sector which implies accumulation of the national data and enhancing communication between the government, public administration, and citizens (Björklund, F. 2016). E-Government is seen as a new tool that will conduct the maintaining the effectiveness, efficacy, and accountability, transparency of the govern (Al-Khateeb A., et. al. 2015).

Rossel and Finger (2007) that the process of altering the traditional government to the E-Government comprises several stages. In the beginning, traditional services are mirrored with the help of ICT, next the e-services should be improved to excel the physical services. After gaining this experience, E-Government will be able to produce new e-services. Therefore E-Government deployment is a complex process that has a different stage which can be considered from different angles. From the implementing perspective, E-Government has three main stages of technical and economical, managerial and organizational, institutional and political Salvodeli, at. el. 2014). Each stage corresponds to the barriers set of obstacles to tackle for the successful E-Government adoption. Hereby successful E-Government deployment depends on how the emerging problems are tackled on each of the stages. Kassen (2014) outlines three timelines of the global discourse E-Government adoption. The first stage lasted from 1995 to 2007 and denotes the first attempts to collect the information on online activities and shaping an initial idea of E-Government diffusion. The second stages started in 2008 and ended in 2011 and indicate the elaboration on the E-Government agenda under the auspices of the OECD. On this stage, the main focus was devoted to developing the citizen-centered approach and businesses-centricity of e-services. Although the scope of countries involvement was notably expanded, yet it was still limited to OECD members. The third stage that has started in 2011 indicates the goal of the open-government agenda that aims to expand the global scope. On this stage, the main intention is to achieve accountability and transparency as well as to boost the citizens' engagement and civic participation (ibid). In meantime, Safeena and Kammani (2013) argue that the first stage of E-Government communication starts with organizing the website with information which further

conduces developing the online transaction services to boost citizens participation in the decision-making.

E-Government structure has several features. The basic level of E-Government infostructure is providing with information online (Venkatesh V., et. al. 2012; Almarabeh, T., & AbuAli, A. 2010; Finger, M., & Pécoud, G. 2003). Although information portals do not provide the communication part, it is still a fundamental element of E-Government as qualified information is seen a significant factor of a successful deployment and citizen engagement (Safeena, R., & Kammani, A. 2013). Providing information has an educational intention that shapes the ground for further interaction. As the second element of the E-Government scholars defines interaction that is displayed through e-services activities (Finger, M., & Pécoud, G. 2003). This comprises online payment of tax, bills, filling and submission of applications for several purposes; e-voting and else (Safeena, R., & Kammani, A. 2013). Almarabeh and AbuAli (2010) suggest to list the following services as e-services:

A. Direct services to the public such as the receipt of applications for licenses and certificates, payment of taxes and real estate registration, payment of traffic fines, fines, and postal and electricity bills.

B. Facilitate the payment and implementation of public sector procurement.

C. The provision of electronic forms of public opinion on automatically information job vacancies.

D. Provide statistical data.

E. Technical support information and communication of volunteering and security centers and the courts.

F. Creating an open government that is better, such as the publication of laws and regulations on the Internet (p. 37)

The second feature of E-Government is e-services that offer the citizens to build a communication with the government though committing some activities, like filling in the form. What is important, e-services can involve several actors besides citizens and government, like banks, private business (Grant, G., & Chau, D. 2005). The last important element of E-Government is transaction (Finger, M., & Pécoud, G. 2003) that implies providing the dialogue of citizens and government via mailing or consultations.

Apparently, E-Government   adaption is regarded as a tool to increase in government performance (Almarabeh, T., & AbuAli, A. 2010) which should yield many positive impacts. Van der Wee and the colleges (2015) determine impact of the E-Government   adoption in the management (government-citizen transactions, digitalization of the communication, changes in administrative staff, providing information of citizens), time saving, social (decrease of traffic accidents, stress reduction), ecological (paper usage reduction, CO2 emission reduction). E-Government   excels the traditional government in reducing the cost of collaboration and interaction; enabling the independence and opportunity for smaller governments in providing the demanding services; lowering the restriction on information access (Howard M., 2001) E-Government   is also considered as an effective tool in increasing transparency; limiting corruption; stabling confidence; increasing efficacy; supporting sectors' development; increasing availability and else (Al-Khateeb A. and el., 2015). Additionally, E-Government   provides integration of services, reduction in administrative costs, a single integrated view of citizens across all government services and faster adaptation to meet resident's needs and also it fosters the interaction of citizens and business with the government via providing the services (Zhang J.G. and el., 2014). Bertot J. C. et. al. (2010) argues that information and communicative technologies, pushed by E-Government   , springs the reduction of corruption and increasing of transiency. He detects: "providing information on government rules and citizen rights; providing information about government decisions and actions; promoting monitoring of government actions and expenditures; disseminating information on government performance; opening government processes, like land records, applications for licenses, and status of tax payments; identifying elected officials and civil servants under investigation for corruption and fraudulent activities; and disclosing of assets and investments of elected officials and civil servants" as a main tools of fighting against corruption with a use of E-Government   s and ICT (p. 267).

E-Government   steadily spreads and penetrates in a new part of our life. The digitalization of government has thus also engendered an inevitable effect on social behavior. With the rise of E-Government   impact on our life, it has been devoted some attention to how digital communication of government is changing our perception of citizenship. Schou and Hjelholt (2018) describe a new approach of the citizenship – digital citizenship that implies "set of practices with wider political economic processes, the article contributes to further clarifying the impact and consequences of this figure for contemporary forms of statehood and governance" (p. 2). In this

regards, digital citizen behavior is understood as a technology-based communication with government and using technologies for the solutions. They also describe digital citizens as active participants who request more efficiency form the government. In this regards, digital citizens are seen as a more mature and political literate person that actively involved in the political discourse (ibid). Therefore, digital behavior is becoming an integral part of the concept of citizens in the era of E-Government . However, it also requires citizens set new requirements to citizens as a traditional like being well-informed, expressing interest in communication with government Björklund, F. 2016) as well as a new, digital, requirement like good ICT skills (Kozachenko, I. 2013).

In the meantime, E-Government also has some drawbacks that can cancel all the potential benefits. Van der Wee and the colleagues (2015) define six obstacles: digital divide; lack of legal bases; lack of policy cycle management; lack of measurement and evaluation; lack of citizens' participation; and lack of trust and transparency. Lack of interrogation of services; inconsistency; low-quality design, technology requirements; language barrier; access requirements are some of the issues that are the barrier for successful adoption of E-Government among the citizens (Bertot, J. C., et. al. 2008). Kassen (2014) argues that another important problem of failed e-adaption lies in not wide outreach and thus in bad promotion. In addition, he points out that E-Government should satisfy grounding criteria of E-Government that are fiscal transparency, access to information, disclosures related to elected or senior public officials, and citizen engagement. A good E-Government deployment depends on the frequently provided qualified training schemes for the staff; frequency in altering the management efforts; comprehensive approach in educating the society about the value and benefits of E-Government ; completeness of government IT staff; friendly-users design (Almarabeh, T., & AbuAli, A. 2010). Therefore, it should be taken into consideration various factors for successful adoption. Venkatesh and his colleagues (2012) defines usability, computer resource requirement, technical support provision, and security provision as a key factor for gaining the citizens' trust and satisfaction, meanwhile, Almarabeh and AbuAli (2010) highlight the importance of ensuring the availability and accessibility or E-Government services. For an overarching E-Government adoption, it should be also included the importance of inclusiveness of public services (Codagnone, et. al 2009).

The goal for successful E-Government adoption is bridging social gap, for instance, to be able to use the benefits from the E-Government the average citizens should have a technical

requirement like computer and internet connection that not all the citizens can afford (Vassil, K. 2016). In recent years, the main focus is devoted to eInclusion. According to the Riga eInclusion declaration (2006), inclusion means "both inclusive ICT and the use of ICT to achieve wider inclusion objectives" (p. 1). In these terms, eInclusion policy strategy focuses on improving accessibility and usability of ICT to include all the social group in the decision-making. In a sense, inclusive E-Government implies tackling the divide, providing a user-friendly design of public web portals, and raise the level of ICT skills (Codagnone, et. al 2009). The main target of eInclusive strategy is vulnerable groups of society who are elderly people, unemployed people, rural areas, people with lower education, women, marginalized young people (ibid). Due to the notable growth of the migration flow, migrants have become another important target group of eInclusion strategy. According to Kozachenko (2013), there are three stages of ICT usage among migrants. The first stage indicated the pre-migratory period when the main purpose of the use is to collect information about the future host country and establish contacts. Here the obstacle that migrants can encounter at a host country is the language barrier that excludes the migrants from the access to the information (Björklund, F. 2016). One of the solutions can be providing information in different languages as Sweden does (United Nations 2018). On the second stage, the recently arrived migrants can see ICT as a tool for adaptation in the host society (Kozachenko, I. 2013). Interestingly, in some countries using ICT can be required by the government. For instance, in Denmark, it is legally mandatory to manage digital communication (United Nations 2018). Therefore, migrants are demanded to have good ICT skills in order to be included in the social system. In this term, some come up with an educational solution to raise ICT skills of migrants, like the United Kingdom that offers digital assistance for migrants that are not capable to use online services (ibid). Digital literacy tools can be another helpful tool to include immigrants into the host society discourse, moreover, raising digital skills can go hand-in-hand with raising the language skills of migrants (Reichel, D., et. al. 2015). The final stage is a post-migratory period where migrants use ICT for establishing the bonds with the host and home society (Kozachenko, I. 2013). Referring to Diminescu and colleagues (2009) using ICT helps immigrants to bond to their families and friends as wells as it helps to develop a new relationship in a host society. In this regard, the government can provide a communication platform where immigrants can establish connections with social groups. In France, ethnic minorities from India and Morocco have their website where they can maintain the connection with other representatives from their country who

migrated (Reichel, D., et. al. 2015). Having an online platform for the minorities can be a very helpful tool as migrants can share their specific knowledge and experience and help each other to pass through the adaptation period.

Despite the concerns on the digital divide that might exists among migrants the recent studies show some significant changes. The study on ICT and its impact on Economic and Social Integration in the EU shows that the migrants' level of ICT skills is usually the same or higher compare to the general population; the recently arrived migrants are more advanced in ICT skills that settled migrants (Reichel, D., et. al. 2015). Moreover, a sufficient level of ICT skills is a pivoting factor in increasing their employability (Diminescu, D., et. al. 2009). Interestingly, the results of study migrants in Germany, Spain, France, and the UK shows that there is no ethnicity does not affect the level of digital including as some other socio-demographic aspects (ibid). One of the keys finding on using ICT skills among migrant in the EU shows that age, level of education and employment status are the key factors that affect the digital inclusion (Reichel, D., et. al. 2015). In particular, young or high skills employed migrants are more advanced in ICT skills and thus have a better opportunity to be integrated whereas elderly migrants are more likely to be digitally excluded. The main reasons for being excluded for elderly people are cost, lack of skills and interest. Therefore, it is suggested that the policy on digital inclusion should focus on developing digital literacy courses for vulnerable groups that will include them in the discourse and raise their awareness and civic participation (ibid). This shows that digitalization of the government can have a two-tails effect on the integration of migrants. On the one hand, digitalization increases their capacity for adaptation, on the other hand, it might engender the digital gap and exclude migrants even more. Despite some conducted studies, yet it lacks a more holistic approach and focuses on E-Government   impact on the integration of migrants.

CHAPTER 2

2.1. CASE OF ESTONIA

Estonia is one of the pioneers in establishing a digital government. Margetts and Naumann (2017) deem that a desire for maintaining holistic independence from the USSR was a key driver to the rapid modernization of the government structure. Since then Estonia has gained success in many aspects of E-Government adoption like being one of the most active countries in filling the e-tax declaration or launching electronic voting (Kalvet, T. 2012). Interestingly, the success of the E-Government in Estonia cannot be explained as an outcome of a well-crafted strategy (Kitsing, M. 2011). Despite adopting some legal regulation like Data Protection (1996), Strategy for information society (1998), The Estonian Public Information Act (2000), The Information Society Services Act (2004), The Estonian Information Society Strategy 2013 (2006), the strategy did not exist till 2014 when Estonian government finally adopted The Digital Agenda 2020 for Estonia (Kassen, M. 2017). Hereby, Kitsing (2012) argues that the developing of E-Government is seen as very inconsistent and has not logical development. Yet the success of the E-Government in Estonia explained with two factors. First, developing of the local IT community in the early 90th are considered as a ground base for a successful E-Government deployment (Kitsing, M. 2008; 2010). The allocation of the budget for ICT was one of the important aspects of fostering the ground for E-Government development. Another important indicator is that participation of public sector and business that has played a pivotal role in achieving the goals (Kitsing 2008; 2010; 2012; Kalvet, T. 2012; Björklund, F. 2016). Close collaboration with the private sector, in particular with the banking sector has made a significant impact on promoting E-Government as it helped rapidly change the base of the institutions' administrative system. Therefore, the private sector is an integral part of the E-Government ecosystem in Estonia.

Estonia is known for several innovations in the e-services. One of the key features of E-Government system in Estonia is its heavy centralization of the database system, mainly known as an X-Road (Björklund, F. 2016; Margetts, H., & Naumann, A. 2017). X-Road is "a national identification system of secure and reliable public key infrastructure" that unites 800 of government, public and private sectors' databases (Margetts, H., & Naumann, A. 2017, p. 7) These data exchange platforms deal with repetitive requests for the same personal information that simplifies the data administration (Vassil, K. 2016). As a follow-up, another important element of E-Government in Estonia is acquisition personal digital code, known as an ID code which

comprises date and place of birth, residence, and marital status, citizenship, legal capacity, and rights of custody (Björklund, F. 2016). The electronic ID (eID) infrastructure was introduced in 2002 that enables the citizens the access to the e-services (Margetts, H., & Naumann, A. 2017; Vassil, K. 2016). What is important is that ID card is the main identification tool and without it, the citizens are excluded from the E-Government ecosystem as they cannot verify their identity (Björklund, F. 2016). One of the most successful E-Government projects in Estonia is remote voting – iVoting which allows casting a vote online (Margetts, H., & Naumann, A. 2017). Remote voting was introduced in 2005 and so more and more people prefer voting online. The system of e-voting allows casting the vote within 10 days as many times as the voter wants and leave an opportunity to cast a paper ballot (Kalvet, 2009). In addition, Estonia also serves ePolice, eBusiness, eHealth, eNotary, eSchool (Margetts, H., & Naumann, A. 2017). As the results. the Official website of E-Estonia claims that 99% of public services are provided online which are accustomed by one-third of the population in regular (Ministry of Interior 2016).

Consequently, numerous electronic service that is available in Estonia conduces fostering transparency (Vassil, K. 2016). In the meantime. Kassen (2017) points out that Estonian open data platform provides access to the information and feedbacks under digital identification ecosystem framework which highlights the importance of obtaining the ID to participate in the discourse. Overall, the overarching E-Government system provides a convenient condition to communicate with the government and therefore it affiliates more citizens to use digital services. Thus, one-third of Estonians frequently use e-services in their daily routine (Ministry of Interior 2016). Fredrika Björklund (2016) highlights that the digitalization of E-Government has also changed the vision of citizenship from formal to moral. The scholar argues that moral citizenship differs from formal citizenship as it focuses on the citizens' competence and commitments. In a sense, moral citizenship in Estonia signifies a significant role of digital behavior as a pattern to communicate with government. Therefore, the concept of the citizen in Estonia lies in outlining their participation in digital solutions (ibid). Apparently, new or potential citizens in Estonia are also expected to comply with citizens commitments through the digital system.

As for immigration circumstances in Estonia, it is worth noting that Estonia is not regarded as an immigrant county. For a long time, the immigration devoted their attention to the integration of the Russian speaking minority (Bijl, R., & Verweij, A. 2012). Nonetheless, the level of immigrants in Estonia is constantly increasing that means that the state might consider this

demographic change as a sign for the policy establishment (Bonifazi C. et al. 2012). From 2012 the has been witnessing a slight growth of labor immigrants. For instance, 1659 immigrants received the working resident permit in 2015 while in 2016, 1807 immigrants were enabled to work in Estonia (Politsei- ja Piiriveamet). In January 2018 188,678 persons applied for resident permits (163,183 of them with long-term permits and 25,495 with fixed-term permits) (Ministry of Interior 2018, October). More importantly, despite not a big amount of immigrants, the overall share is notable. Correspondingly to Eurostat (2019), the share of foreigners to 1000 inhabitants was 13.4 which makes Estonia one of the countries with a large share of immigrants compared to the general population.

As the flow of immigrants is increasing Estonian government devote attention to the integration such category of migrants like new arrivals. According to Strategy of Integration and Social Cohesion in Estonia 2020 new arrivals are – "a foreign national having legally immigrated to Estonia who has lived in Estonia less than five years. Reasons for immigration vary and cover all grounds for issuing residence permits established in the Aliens Act of Estonia, grounds for obtaining and issuing rights for residence established in the Citizen of the European Union Act and the grounds for issuing residence permits established in the Act on Granting International Protection to Aliens" (Ministry of Culture 2014, p. 41). Currently, the residence of immigrants in Estonia are regulated by two Acts: Citizens of the European Union act for EU citizens and the Alien Act for non-EU citizens. Migrants are offered to apply for short-term and long-term residence (Politsei- ja Piiriveamet). Short-term residence and be extended u to 5 years and it allows migrants to work, as an alternative, migrants can also apply for working visa however it is limited for 1 year. The long-term permit can be acquired after complying with several criteria, one of which is living in Estonia for 5 years (ibid). As it was said above, the amount of new arrivals is increasing, the need for the adaptation program is heightened. Immigrants are offered Welcome programs which should comprise topics on working and entrepreneurship, studying, research, family life, international protection, children and young people (Welcoming programme 2015). As a basic topic, it is required to cover the topic on digital identification and main public services in Estonia (Welcoming programme 2015, Appendix 1) which is introductory to the E-Government system and a way to foster a digital behavior among newly arrived migrants. This shows that Estonia has a holistic approach on the integration of migrants and therefore it is an interesting case for study.

CHAPTER 3

3.1. RESEARCH DESIGN

The theoretical overview has shown, study the role of ICT for migration is getting more attention. Yet, there is a limited amount of studies that specifically focus on E-Government impact on integration. The shortcoming a variety of studies on the impact of ICT on Economic and Social integration (Kozachenko, I. 2013; LupiaÃ±ez, F., et. al. R. 2015; Maya-Jariego, I., et. al. 2009; Codagnone, C., & Kluzer, S. 2011) is that they narrowly focus on only some parts of integration and do not consider the impact of ICT in a holistic way. The previous researches have investigated ICT in a broader sense and did not link with the E-Government . Furthermore, the researchers were more descriptive and did not address the possible causation of E-Government on the integration process. Therefore, the goal of the research is to uncover what the impact can bring E-Government system on the adaptation process of immigrants. More specifically, I intend to elaborate on how we can measure the impact of E-Government on migrants' adaptation and test the developed instruments on Estonian new labor migrants.

As the aim of the research is explorative and intends to design and test the new measurement approach. The study will be the interpretative (qualitative) as it enables to examine the complexity of the social process and find out the implicit meanings to address research new questions for the further studies (Bhattacherjee, A. 2012). The key advantage qualitative research is in its comprehensive approach that allows to deepen into the study and attain insightful information (King, G., et. al. 1994). More specifically, qualitative research is valuable in terms of studying the constructive nature of the social reality (Denzin and Lincoln 2000), which in case of my research is a helpful tool for indicating essential features of migrants' interaction with E-Government services and measuring self-assessment of E-Government impact on their life. The qualitative research better fits the study purpose explorative research as help to immerse into the problem and expose the insights that quantitative methods are incapable to notice and interpret. The main contribution to this study will be a chance to contribute to understanding the question "how" (Denzin and Lincoln, 2000), in my case, how the impact of E-Government on Integration can be measured. Correspondingly to Bhattacherjee (2012), exploratory research will benefit in enlarging the scope of study on immigrants' adaptation and producing new 'haunches' of this issue, as well as, testing new instrument in order to ascertain its feasibility for further researches.

Hence, exploratory research is a proper method for tackling the new form of study for a future inquiry implication and theory construction (ibid).

For the inquiry, I chose a single case study as it allows dig into data within a specific context (Zainal, Z. 2007). The advantage of case study analysis is its flexibility in determining the study purpose and an opportunity to adjust the research question (Bhattacherjee, A. 2012). In addition, a single case study creates a ground for further theory building (Odell, S. J. 2001). AI narrowed down my focus on Estonia for two reasons. Firstly, the country is recognized and a pioneer and a leader in digital development (Margetts, H., & Naumann, A. 2017). The overarching list of e-Services the Estonian government provides gives a affords good opportunities to indicate the impact of E-Government   in every areas of life. Moreover, as it already been found the digitalization of governance plays a vital role in changing the citizens' behavior and their perception of citizenship (Björklund, F. 2016) whereby it can have a notable impact on the perception of immigrants commitments as an inhabitant of Estonia. Secondly, the country witnesses still flow of immigrants that constitute a notable share from the general population (Eurostat 2019). More importantly, the country experiences a rather great number of non-EU citizens (ibid) that eventually shapes the policy agenda of countries. Recently, the state has implemented new naturalization policies and, yet devotes more and more attention to immigration policies; the special attention is devoted to recently arrived immigrants as their amount is rapidly growing (Ministry of Culture 2014). The recently conducted survey on immigrants adaptation reported that the majority of recently arrived immigrants indicated their level of adaptation above the avarage (6 and higher out of 10) (Kaldur, K., et. al. 2017). This signifies the policy of integration might have a fruitful outcome in providing favorable conditions for renectly arrived immigrants. What is worth noting, is that 81% of respondents admitted that the E-Government system, namely, a fast bureaucratic process and paperwork reduction is one of the appealing factors living in Estonia. Additionally, more than half of migrants acknowledge an opportunity to prolong their stay in Estonia for more than 5 years (ibid). This result drives to possible interference that E-Government   might have a positive impact on migrants' adaptation and thus facilitate the process of integration and naturalization.

3.2. INDICATING THE MAIN COMPONENTS OF THE RESEARCH

Figure 3 presents the preliminary model of the study and indicates the main components of the study: E-Government   , acculturation, ICT skills and awareness.
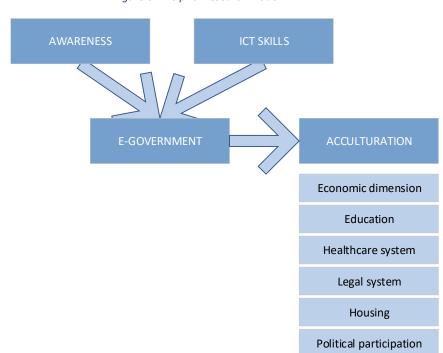
Figure 3. The prior research model

Source: complied by the author

The focus of the study is narrowed down to the first individual stage of migration which is acculturation (Erdal and Oeppen 2013; Gemi, E. 2015) in order to study the fundamental stage of integration to highlight the primary needs of a newly arrived immigrant in the country and the role of E-Government   in fulfilling them. In this term, I will focus on 6 main dimensions that encompass this stage: Economic dimension, Education, Healthcare system, Accommodation, Legal system, Political participation. In order, o achieve the study goal, I examined e-services provided in Estonia to link them with integration indicators. Table1 demonstrates the linkage between E-Government   and acculturation dimensions that I later employed for constructing the questioner and elaborating on the analysis.

Table 1. The E-Government   and Integration indicators

Dimension	Categories	Subcategories	Channels
Economic dimension	Labor market	Finding jobs	cv.ee
			cv.keskus

			workinestonia.ee
			tootukassa.ee
		Opening business	www.eesti.ee
			E-Residency
	Economic participation	E-taxes	www.eesti.ee
		Paying bills	www.eesti.ee
		Bank account	Swedbank
		Online payments	SEB bank
		Transactions	LHV
Education	Self-education		**Nortal** e-Lessons
			Bamboo Group e-School
	Obtaining high Education		**studyinestonia.ee**
			DreamApply
	Basic and secondary education		Opiq.ee
			eKool
			Stuudium
			e-Textbooks
			e-Schoolbag
Healthcare system	Heath insurance		www.eesti.ee
	General healthcare services	Family doctor	https://www.haigekassa.ee
		e-prescription	https://www.digilugu.ee
Housing	Finding accommodation		Eesti.ee
			kv.ee/
			city24.ee
			kuldnebors.ee
	Internet access		Yes
Legal rights	Identification tools		Smart ID

		E-Residency
		Mobile ID
		DigiDoc
	Legal assistance	Eesti.ee
		Riigi Teataja
	Communicating with governmental bodies	Eesti.ee
Political participation	Awareness of Political Rights	Eesti.ee
	Participation in local elections	e-voting

Economic dimension
Labor market

According to Common Basic Principles for Immigrant integration policy, employment is one of the crucial factors of the integration process as it the most direct tool to be included to the social life of the hosting country as well as to make contribution in the host country development (Council of the European Union, 14615/04, 2004). Thus, the vast attention in the EU states, therefore in Estonia, is devoted to the integration within the employment perspective. The employability can be measured in several perspectives. Some policy programs focus on finding how immigrants jobs comply with their skills, educational qualifications (LupiaÃ±ez, F., Codagnone, C., & Dalet, R. 2015). Apart from that, the most important and a blunt component of employability measurement is finding the level of employment among migrants. In most of the policy of integration concepts being employs is regarded as the successful tool of economic integration and social inclusion as it signifies many relevant issues like promoting economic independence, enhancing self-esteem, opening an opportunity for the interaction with host society (Ager, A., & Strang, A. 2008). In this light, finding a job is seen as the only solution to be employed and thus, it is essential to define which factors are significant in finding a job. One of the key findings is that ICT has a slight positive effect on employment capacity. The usage of ICT increases the probability to get a job as ICT skills are considered as an important skill for getting a job (Ferro, E., et al. 2010).

In addition, a job-finding opportunity is regarded as one of the most important connections of ICT and employment as it provides immigrants with an efficient tool to find a job like online

jobs marketplaces, CV building online tools and else (Codagnone, C., & Kluzer, S. (2011). It worth noting that more and more migrants use ICT the tool for finding a job. The research, conducted in 2009 in France claims that only 20% of immigrants use ICT to find a job offer (Diminescu, D., et. al. (2009). A year later another survey in Europe had shown that the number of immigrants who used the internet and ICT to find or apply for a job had doubled (Ferro, E., et al. 2010). In the meantime, there is a wide range of market place on the Internet presented by public and private services. In the case of Estonia, immigrants can find and apply for a job via several services, like cc.ee, cv.keskus or workinestonia.ee.

Another path to be employed in Estonia is to set up the business. Estonia in claimed to feature the best friendly environment for setting business. One of the aspects of it is the e-solution approach that declines most of the bureaucratic commitments by altering them with digital services. Therefore, most of the important activities are less time-consuming and less constraining (eEstonia) that might smooth the process of integration in terms of creating an employment space.

Economic participation

Another important aspect of the economic dimension is economic participation. Economic participation can be measured under different angles. One of the approaches to understanding economic participation is to measure the capacity of immigrants to handle with basic routine economic activities like having a bank account, online billing, paying taxes (Alam, K., & Imran, S. 2015). It is important to emphasize that in case of Estonia having an online bank account relates not only to the economic dimension but it might also facilitate the precise of a general inclusion to the hosting environment life. For instance, the main governmental portal eesti.ee which provides to the citizens' various e-services, including e-taxes submission, requires the login that can be done via your bank account (eesti.ee 2019).

Worth pointing out that Estonia offers a range of e-services to replace daily offline economic practices to online. Another important that can be regarded as a citizen obligation is taxes. Since Estonia offers an opportunity to submit taxes declaration online, e-taxes usage can be also considered as a component of immigrants' integration, in terms of complying with citizens performances. Ability to pay taxes is a crucial factor of assessing the immigrants integration in terms of obeying the grounding citizens' commitments According to § 5 of the Working Conditions of Employees Posted to Estonia Act and § 13 of the Income Tax Act, tax-payers are enabled a variety of social services provided by the government that makes it beneficial to pay

(Riigi Teataja 2004). Estonian government offers an opportunity to submit a Tax Declaration online via e-Tax/e-Customs. In addition, the state portal provides overarching information on all the grounding information about taxes, including the laws and objectives and types of taxes (eesti.ee 2019).

Another frequently done practices can be paying a regular bill online or buy online. In these terms, economic participation will be considered as successful only in case the immigrants have regular experience of economic practices, that were mentioned above, done online.

Education

Education is, probably, one of the crucial components of the long-term integration process as it mainly focusses on school students. Acquiring an education in a hosting country facilitates the future integration within economic, social, cultural and language dimension (Ager, A., & Strang, A. 2008 & Council of the European Union, 14615/04, 2004). Some finding reveals that the level of education matters in terms of integration. It mostly related to the employment capacity and how the education qualification obtained in a home country matched with expectations and requirements in the hosting country. Some of the researches stress out that the higher education of immigrants helps them to succeed in the economic dimensions. In the meantime, other scholars point out the importance of getting the education of in the hosting schools. For instance, in Germany, they divide the educational background in "alien" and "native" (Maya-Jariego, I., et. al. 2009). Obtaining German education is received as an efficient tool to cover the integration process within several aspects (ibid). In this regard, Common Basic Principles for Immigrant integration policy emphasizes the importance of include the immigrants in the education system and therefore they indicate a bridging the education gap among educational attainment as a successful indicator of integration (Council of the European Union, 14615/04, 2004). Thus, having access to elementary, secondary, higher school or additional training is regarded as a tool for the successful integration which we can distinguish to the basic and secondary education that mainly can focus on children and use, in this terms immigrants' children, and on the high education and short courses that should target the adults. In these means, using digital tools to acquire the education might be considered as an efficient way of immigrants' adaptation.

Basic and secondary education

Estonia presents a wide range of digital services connected to education. First and foremost, the Estonian government provides two digital tools for applications - eKool and Studium

(e-estonia 2019). These services are essential to build up the connection and dig in the understanding of the Estonian system. For immigrants who have children, it might be a helpful tool to keep in touch with the school authorities and elaborate on a smooth part of their children integration. In addition, there are e-Schoolbag or e-koolkott that serves with electronic-based material and textbooks that can be used for studying. Here, we should bear in mind that the services provide a two-sided impact. On the one side, it might help children to get used to the school environment fast and also it might lower schooling expenses, on that side, the family it might be a barrier that includes in the within education dimension if the family do not have access to the ICT tool or them are lacking the ICT skills LupiaÃ±ez, F., Codagnone, C., & Dalet, R. 2015). Apart from that, parents are provided with an opportunity to get an education online which, again, meets the advantages and backlashes of being integrated.

Self-education and obtaining the high eduction

Another important component of the education dimension is access to education for adults. The adult immigrants might have an opportunity to apply for various programs at Higher schools. These opportunities are provided with several services. Firstly, immigrants can find relevant information on studyinestonia.ee. Secondly, Estonia has a digitalized application system (dreamapply.ee) whereby students can apply for different programs. In addition, immigrants can obtain an additional online course apart from obtaining a degree at moodle.ee.

Health

One of the frequently mentioned, yet not investigated enough dimension is a health dimension. Health comprises one essential component of physical and wellbeing and thus the immigrants should ensure about the services provided to them in terms of healthcare. From the policy perspective, the government should provide the access to the healthcare to the immigrants, meanwhile, from the individual perspective, immigrants need to be aware of the healthcare services they are offered (Niehaves, B., & Plattfaut, R. 2010). One of the paths to get the information on services is an eHealth system that might facilitate the process of getting familiar with healthcare offers (Codagnone, C., & Kluzer, S. 2011). It is also worth to mention that healthcare offers awareness is one of the most demanding knowledge for migrants. According to the researches, nearly half (45%) of immigrants in Spain browse on the Internet to find information on health (Diminescu, D., et. al. 2009). In the meantime, it is worth mention that this dimension has a vague measurement tool. While Common Basic Principles for Immigrant integration policy

outlines that a share of a good and poor health among immigrates as a measurement tools of the success, it remains unclear how to indicate the "good health", neither it is clear how to understand the degree of personal adaptation within this dimension (Council of the European Union, 14615/04, 2004). Therefore, I intend to build this dimension based on the legal regulations and healthcare services provided to the citizens in Estonia.

Health insurance:

According to the Alien Act, the immigrant (or an alien) are required to have health insurance. It is stated that:

"(1) During the temporary stay in Estonia and applying for an extension of the period of stay an alien is required to have a valid health insurance policy guaranteeing that any costs related to his or her medical treatment as a result of illness or injury during the period of stay in Estonia will be met.

(2) An alien need not have a health insurance policy:

1) if an alien is deemed to be a person covered by compulsory health insurance pursuant to the Health Insurance Act;

2) if an alien has an insurance policy guaranteeing that any costs related to his or her medical treatment as a result of illness or injury will be met to the same extent as for a person covered by health insurance;

3) in a case provided by a treaty or;

4) if any costs related to his or her medical treatment as a result of illness or injury shall be paid by another state or an international organization" (Alien Act 2010)

In this light, getting health insurance is an essential indicator of a healthcare dimension. In addition to health insurance, it is also important to apply for basic healthcare services: prescription and family doctor. To foster the digital habits for immigrants and get them adapted to the basic healthcare services might be considered as a successful measurement of the integration within this dimension.

e-prescription

E-Prescription is regarded as one of the breakthroughs of the digital healthcare system. The E-Estonia portal claims that 99% of prescription are digital. E-prescription directly connects to the insurance system and also it provides the communication an online communication with a doctor (e-estonia). Apparently, a paperless approach that offers a variety of opportunities to get health consultancy is regarded as a convenient tool for getting healthcare services. In terms of immigrants, it might also facilitate the process of communication as it slightly eliminates the language barrier problem.

Family doctor and e-Patient

The last important services are registration to the family doctor. The process of acquiring the family doctor can be done online via the state portal as well as the further communication can be done through the e-Patient portal that allows the patient to keep updated with their health conditions and receive the healthcare consultation online.

Housing

An important component of settling in the host country is finding accommodation. Yet, the scholars haven't come to the common agreement on how to measure the housing dimension. Not only the having accommodation itself plays an essential role in the integration process but also the conditions and the neighborhood (Ager, A., & Strang, A. 2008). Scholars emphasize different features of the immigrants' housing. For instance, the housing conditions and circumstances in Italy differ among EU and non-EU immigrants as non-EU immigrants are more likely to rent, not buy houses and as well as the share of non-EU immigrants in a lower-income area as higher (Bonifazi, C., Strozza, S., & Vitiello, M. 2012). Other interesting finding regards to the immigrant's location. The share of migrants is likely to be higher in the urban and disadvantages areas (Diminescu, D., Hepp, et. al. 2009). Furthermore, minorities can experience homelessness (ibid), That brings us to the key issue of the housing – *getting an accommodation should be considered as an indicator* of successful integration. Yet, may researches indicate the barriers to be integrated within this dimension. The main problem that occurs within this dimension is a limited choice of accommodation as the marketplace frequently offers fewer opportunities for immigrants (Macura, M., et. al. 2005). Furthermore, the market place can inherit discrimination towards immigrants based on their race or ethnic that can limit their access to a decent housing or access to the housing itself (Gilardoni, G., et. al. 2015). Apart from the general barriers, the initial issue that immigrants encounter is the means to find accommodation. A large share of immigrants (79%) revealed they used the Internet to find accommodation (Lupiañez, F., Codagnone, C., & Dalet, R 2015). Taking into consideration that accommodation is one of the basic need that is likely to require to be fulfilled before the landing to the hosting country means that the immigrant might get housing agreements in advance. In this term, ICT can be a useful tool that facilitates the process of finding accommodation. The e-services can help to tackle the problem relates to language and simplify the process itself by offering the opportunity to submit requests online (Kluzer, S., Hache, A., & Codagnone, C. 2008; Kozachenko, I. 2013). In case of Estonia, there are several services like kv.ee that allows to find accommodation online and contact to the potential landowners.

An additional indicator that can be regarded within the housing dimension of Internet access in the household that has a significant impact on other dimensions. In recent years, the researches devote more attention to this aspect of housing. Having access to the internet at home enables the immigrant to have access to core institutions of society and main services to connects to the society (Reichel, D., Siegel, M., & Tudela, J. C. A. 2015). More and more governments devote great attention and put efforts to tackle the digital gap in households (Diminescu, D., Hepp, et. al. 2009). Whilst the *Internet access* cannot be regarded as an independent unit of the housing dimension, it should be measured within this dimension and an additional indicator of the successful integration.

Legal dimension

Another bedrock of immigration is access to legal rights. When we trace to the policy approach of the integration measurements, the legal dimension would be regarded in terms of the citizens' rights offered by hosting country. In other words, the Policy of integration would be ranked according to the degree of complexity to acquire the citizenship or experience the same citizens right as natives do (Lodovici, M. S. 2010; Scuzzarello, S. 2012; Favell A. 2015; Phalet, K., & Swyngedouw, M. 2003). Penninx, R. (2005) points out that legal dimension regards to the practice of alien to have secure residence right. The drawback of the most scholars is that they focus on the acquiring the citizenship as a successful integration performance, yet they mostly neglect the daily practice of protecting the basic rights or getting legal assistance (Goodman, S. W. 2015). It can relate to solving the cases of discrimination, protecting the consumer's rights or other issues the requires legal assistance.

Identity registration can be recognized as the ground base of legal rights access. Yet, getting the permit is not sufficient. As it was previously discussed, to get access to the e-services, the immigrant should have a means of identity recognition. Estonian government offers several tools for it: Smart ID, Mobil ID, and ID Card. The portal states that these verification tools allow viewing your own health information; designate representatives for various functions; present declarations of will; view prescriptions and when they have been purchased; and to have access to` other core institution services. These verification tools allow the government to provide access to the services that signifies access to the basic citizen's rights in Estonia. In addition, Estonia widely uses the electronic signature that stresses the importance of having this tool in order to have access to government documents or to be able to sign your documents. In this regard, having one

of the verification tools and an electronic signature can be recognized as enough degree of legal integration of immigrants. In addition to that immigrant should always have access to legal assistance. The state portal provides basic information on the key issues that may emerge, as well as they offer the e-notary – online legal assistance.

Political dimension

The political dimension is one of the tenants of civic rights of immigrants that can be considered as one of the deepest, yet controversial aspect of integration. According to Berger, Galonska and Koopmans (2004) political integration feature opportunities and threats for the hosting societies. From the assimilation perspective, political participation can endorse the social divide into the mainstream society in the face of natives and the ghettos in the face of immigrants. Meanwhile multiculturalism perspective perceives political integration on maintaining a strong identity of migrants that brings an opportunity to represent their community. Political integration is seen as "successful incorporation into a host society rests not only on employment (economic integration) and civic engagement (political integration), but also on individual commitments to characteristics typifying national citizenship, specifically country knowledge, language proficiency, and liberal and social values" (Goodman, S. W. 2015). Referring to the Commission of the European Communities. (2009) it is urged to enhance political participation of immigrants on all level. The focus should be directed to increasing political participation on the local level throughout engaging immigrants to participate in elections. In these terms, the government should raise awareness about the political rights of immigrants to spur their interest to participate in political life and have an opportunity to raise their voice (ibid).

In the meantime, political engagement of immigrants has not a universal blueprint and different scholars suggest different perspective to study political integration. Political participation could be found in the degree of trust to government and governmental institution in the host country (Penninx, R. 2005). In this case, it is measured the gap between native and immigrants' attitude to the government. Gemi (2015) indicates several activities as indicators of political participation like the knowledge of core institution of the hosing governance (parliament, government, political parties, etc), state's institutions, civic society units (NGOs, Trade Unions); participation in civic organizations, political initiatives, communications with institutional bodies and local authorities. Likewise, Berger, Galonska, and Koopmans, (2004) determines political integration within the level of interest of the political rights, the degree of participation in formal

(like voting on elections) and informal (participating in civic organizations) politics. Another important component of political integration is stressed out by Jacobs and Tillie (2004) emphasize the importance of awareness on the political right of migrants.

Political participation is the toughest dimensions dues to the general trends of political of migrants. Codagnone and Kluzer (2011) find that a small share of immigrants is active in political participation: less than a quarter of immigrants participated in social groups, vote in elections, establish the contact with the government or sign petitions. Berger, Galonska, and Koopmans, (2004) reveal the few numbers of migrants interested in politics or commit political activities like participating in demonstrations, attending meetings, striking, submitting complains. In this light, ICT is seen as a potential tool to boost up the pollical activism by increasing visibility and giving a "voice" and speak against possible discriminations (Borkert, M., Cingolani, P., & Premazzi, V. 2009).

Nevertheless, political participation is defined by the National government which means they indicate the degree of political involvements of immigrants. In the case of Estonia, political rights are not clearly defined in the Alien Act, neither in The Strategy of Integration and Social Cohesion in Estonia. However, the citizens might be aware of the basic political rights which are the freedom of expression, the freedom of assembly, the right to enjoy their own culture, to profess and practise their own religion, and to use their own language, in private and in public, freely and without interference or any form of discrimination (OHCHR 2018). In this light, I deem to outline political participation in terms on e-participation as ***awareness of the political rights of immigrants, communication with governmental bodies and political participation***.

External Factors: Awareness and ICT skills

It should be also acknowledged that there might be some external factors that might affect the studied impact. Driven by the previously done researches it might be assumed that the impact on integration can be measured only in case of successful adoption of E-Government   that depends on the overarching awareness (Reichel, D., et. al. 2015) and good ICT skills among the users (Almarabeh, T., & AbuAli, A. 2010). Although the previous researches show that most of immigrants has even higher ICT skills than locals (Diminescu, D., et. al. 2009), they still use the ICT skills mostly to keep in touch with their families (Kozachenko, I. 2013; Berger, et. al. 2004). At the meantime the level of ICT skill crucially determines the degree of inclusiveness of migrants and their capacity to handle a daily practice with the Internet (Codagnone, C., & Kluzer, S. 2011).

Therefore, the injury will take into consideration the possible impact of the level of awareness and ICT skills and thus it will be included into the study for better understanding its role on integration process in general.

3.3. DATA COLLECTION AND METHODS OF ANLYSIS

As the site of study is a single case study in Estonia, I narrowed down my sample to newlarrived migrants in Estonia. The main reason why I chose migrants for my sample is that the aim of my study to indicate the potential impacts that I can find based on the experience that migrants will share. Migrants were selected with respect to the following criteria: 1. The resident duration does not exceed over 5 years; 2. They came to Estonia for working reason. As for the first criterion, it corresponds to the main aim of research – to study the new arrival migrants and based on the definition on the Ministry of Interior Affairs, new arrivals are migrants who have been in Estonia no more than 5 years. As latter creation, I intend to study the specific group that has the most holistic access to all governmental services in Estonia, since migrant, who works, pays taxes and therefore have access to other social goods, like access to the healthcare system. I excluded working immigrants – former international students on purpose, as they might have the first stage of getting acquainted with the hosting country differs. Most of the students have different conditions of getting adopted in Estonia. First of all, students are offered with accommodation, and they are supported by the admission office.

As a data collection approach, I conducted semi-structured interviews. A semi-structured interview is a commonly used data collection approach in social science. For the exploratory aim this study, the semi-structured interview is the best fit since the few pieces of research on the impact of E-Government   on immigrants' adaptation have been done and thus it leaves the space for exploring unexpected outcomes (Gray, E. D. 2013). The flexibility of the guide still maintains the robustness as the preliminary guide is built based on the previously studied literature which makes it more reliable (Kallio, H., et. al. 2016). In addition, semi-structured interview enables a degree of involvement of the researcher and live the floor for empathy (McIntosh, M. J., & Morse, J. M. 2015), which is helpful for studying sensitive topics what migrating period can be. Therefore, the questioner was made before starting contacting interview and tested in the field and adjusted due to the relevancy of questions (see Appendix 1). As the sampling includes to criteria the prior sampling approach was purposive. The data collection combined the convenient and snowball

sampling approaches as migrants are not the most accessible group. The respondents were approached via Facebook groups (like Expats in Tallinn) and through the social network of the researcher. Convenient sampling also allows defining the size of sampling based on matching the study aim (Elo, S., et. al. 2014). All the interviews were audio-recorded and then transcribed by the researcher. In order to avoid ethical violations, the respondents were instructed with the aim of researches and insured that the interview will be confidential and anonymous. In addition, all the respondents were offered asked to give consent for audio recording that they could confirm verbally or signing the consent form (see Appendix 2). The data collection was conducted from 8th to 22nd of April 2019 through face-to-face and Skype interviews. Overall, 16 migrants were interviewed: 6 women and 10 men. The mode age of respondents was 33; the youngest participant was 22, the oldest 47. All the respondents represented different areas of occupation: doctors, academic researchers, freelancers, data analysts, customers support agents, marketing specialists, wellbeing service workers, millwright, shopping assistant. The nationally also varied: the sample can be divided into non-EU and EU citizens which constitute of representatives from the Netherlands, Ukraine, Russia, Spain, China, the United Kingdom, Lithuania, the Czech Republic, Chile, Bangladesh. The time spent in Estonian varied from 1 month to nearly 5 years. The average duration of the interview was 30 minutes (see Appendix 3).

As for the study I chose content analysis method as one of the commonly used methods of analyzing data in qualitative researches. Compare to quantitative content analysis, qualitative content analysis (QCL) is more flexible that allows finding not explicitly seen meanings, and requires more context (Schreier 2012), At the same time, QCL is systematic and requires to follow the steps that also increases its reliability (ibid). Since there were some previous researches, I chose a directed coding approach (Elo, S., et. al. 2014) and elaborated the preliminary coding schemes based on a conceptual framework that was discussed before (see table 1). As I wanted to cover all the aspect that related to the impact of E-Government   on immigrants' adaptation, I further elaborated new coding based on the reviewed data which allowed me to have a holistic view on the phenomenon (ibid). Consequently, 38 codes have extracted that fit into 5 categories with 5 subcategories.

CHAPTER 4

4. FINDINGS

Economic participation

12 out of 16 respondents reported that they are full-time employees at companies, yet one of the respondents is a freelance and two others said that they combine full-time work with setting their own business. Interestingly, interviews argued that getting the job in Estonia mainly an occasion that their prior intention. As they further explain interviews were invited by and their acquaintance. For instance, the interviewee 5 said that he did not consider an opportunity to work abroad until he got the offer from his acquaintance (resp. 5, p. 1: 13-17). Some respondents though looked for a job at job portals but without a specific intention to get a job offer in Estonia. One of the interviewees, who is a Software engineer from Bangladesh, mentioned that he found LinkedIn very helpful in finding the job (resp. 15, p.1: 1-4). Some of the respondents also tried to open their own business in Estonia. The male respondent from Ukraine shared the experience of Belarusian friends who set a business Estonia. He noticed that they found it easy and didn't take them a lot of time to register their business:

> "My Belorussians friends have been here for two years, and they worked at a factory that produced some jerseys. They registered their entity and an enterprise within one evening. They did not have any previous, moreover, they were not so much familiar the Estonian language with, as well as they were not familiar with the Estonian. They did it in one evening, because on the E-Government website, on the taxpayer's website everything was clearly spelled out: where and what to press and what to register. Everything was comprehensible, it was clear and transparent. Everything was done for the person who sees it for the first time [1]" (resp. 4, p. 2: 81-87).

The experience the respondent shared highlight several important moments. Firstly, the e-services facilitate the process of setting up the business, that the official website provides with all

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[1]

Мої друзі білоруси – тут вже два роки, і вони працювали на фабриці, яка виробляла якісь трикотажні вироби. Так от вони зареєстрували свою юридичну особу – підприємство десь за один вечір. Хоча до того вони ніколи з таким не стикалися, тим паче естонську мову вони недуже знають, тим паче з законодавством недуже знайомі. Вони зробили це за один вечір, тому що на сайті електронного уряду, на сайті податкової все було чітко розписано, де і що натискати, і що реєструвати. Все було долуге, все було чисте і прозоре. Все було зроблено для людини, яка перший раз бачить, що воно таке.

necessary information on the requirements and no additional consultation is needed. Another interesting point was language. As the respondent 4 noticed that the registration is provided only in Estonian. Interestingly, despite the lack of Estonian the friends of the respondent did not have a problem is figuring out the procedure of registration. In meantime some respondents who works as freelancers admit they referred to the help of Estonian friends. One responded said that he his Estonian friend was very helpful and gave an essential piece of advice in those area he was not sure: "… *she helped me with everything, like a with all the things of the company. so, it was easy: she told me where I have to do this, she helped me to the bureaucracy that I didn't understand*" (resp. 9, p. 2:79-81). However, he admits that the procedure could be done on your own as he points out that the registration was easy and clear. Still he finds an opportunity to get a helpful hand from his friend quite beneficial in these terms.

Respondents also showed a digital activity in purchasing and paying online. The respondents frequently pay their bills and for rent online as well. Some respondents claim that buying online simplify their life and thus that try to buy everything online. Respondent 3, who is a Ukrainian female living in Narva, also says that she had set up a credit online as well (p.5: 215). However, some of respondents tends to avoid paying online and prefer using cash. A Ukrainian male respondent who is manual worker, admitted that he does not want to open an Estonian bank account and feel more confident when he has money in cash (resp, 12, p 1: 56-57). One of the responded explained that as she wanted to be sure in what was she buying:

"…I don't like to buy in computer something. Because I want to look. Maybe if I buy with the computer and what I receive is different. And here I use not a computer to buy because my English and Estonian are so different. If I go to the shop to buy and look at it face to face, it's easier" (resp. 16, p. 3: 120-123).

When it comes the question of having a bank account, it appeared that despite everyone being employed, not all respondents have bank account in Estonian banks. One of the reasons is that bank accounts was closely link to the resident permit. Since some of respondents did not received the resident permit by the time the interviews were conducted, they were restricted in terms of setting a bank account in Estonia. The interviewees 8, 11, 10 point out as not-resident of Estonia they had to pay 200 EURO fees that they did not want. As alternative to setting a bank account, some respondents opened in a digital banking, or they just received their salary in cash, as respondent 12 does. In meantime, one respondent highlights that he found using Estonian bank

system not very convenient and outdated thus he moved to the digital banking (resp. 8, p. 1:36-38).

A great attention was devoted to the discussion of taxes. The respondents find that the process of tax submission online very easy and convenient. One of the reasons e-taxes was positively remarked by immigrants is that it doesn't require a lot of efforts in filling in forms. The respondents said that it took them several minutes to submit the application. One respondent points out that at the beginning, it took a while to figure out, however, the following year he didn't need to fill in anything as it was already all in (resp. 8, p.2: 51-54). One of the reasons the respondent, had a problem with tax declaration was language as he points out that the website didn't not provide a sufficient English translation. In a meantime, respondent 3 points out that the it was helpful for here having a Russian version of the website. Another important, remark made by respondent 8 is that the website did not provide him clear information on how to submit declaration in case of working not a full year. Despite these inconveniences he highlights a convenient communication with officers via mailing who helped him to fix the problem. Respondent 7 shared his experience of submitting declaration as a private person. He notices that it is a bit more complicated as in this case he needed to fill it manually: *"I have a company, I work as a freelancer, it takes a bit more time, as I have to put my income on my own, and I should the requirements that are there. In most of the time it just on Estonian, but if you already have an experience, it pretty easy"* (p.1: 41-43). Overall, the immigrants find this experience of e-declaration convenient and less stressful.

Education

Most of the respondents who participated in the research were single and did not have family here in Estonia. A Ukrainian female respondent though came to Estonian with a school age child and therefore she shared her experience of registering the child to school. Respondent 3 said that she had been looking for schools for her child before she arrived in Estonia. For this she found the official portal eesti.ee very helpful. However, she complained on the discrimination she faced at that time as Russian school did not want to enroll her child due to her Ukrainian nationality. Apart from, this experience, she did not meet any obstacles later. She also shared her experience of using a e-school system – Stuudium. She has a good word on the system and notes that it helps her to be on track with the event at school but not be overwhelmed with it during her working time. She also admits that she likes getting important news online as wells as having an opportunity to

communicate with the teacher though this system. Besides the positive impacts for her, she also remarks that she witnesses a positive outcome on her child as she finds that this system helps her child be on track with her grades which encourage her to self-improvements.

Some respondents (resp. 3, 11, 5, 14) revealed that were thinking about getting a degree in Estonia, however, none of them has used this opportunity yet due to different reasons. One of the reasons that respondent 3 outlined was the cost of education and that respondent cannot afford it as they then might lose an opportunity to earn money (p. 3: 98-101). As she has a family, she acknowledges that she cannot afford studying. Another reason was inconvenience in combining job and education for some respondents (resp. 13, p. 56-59). Other respondents admit they did not see any need to obtain one more education as they either already have a higher level (master's or PhD) or they consider themselves old for a one more degree.

Nevertheless, some respondents try to obtain an additional course. Respondent 2, who is a female working as a doctor, has obtained an online class at University of Tartu and left positive remarks:

"You register pay and then get a time set. Let's say, you have it twice a week class. And you ... there is an introductory meeting called ... a forum! When you have free time, you can go and read and, in the end, you have tests. So far, it's a communication. All your questions on the topic are responded specialist. Professors and responsible assistants answer all the questions. And you just need to check it once read everything. Lectures are provided in the same flexible and accessible form. There are videos you can press and watch when you are comfortable, or there are theoretical files to read. It is helpful, that the questions are asked, that there are specific and examples, and as someone sees it, they response[2]" (resp. 2, p. 2:89-97).

Although only one respondent shared a positive experience of using online course, other respondents did not try this opportunity. One of the reasons was unawareness about this opportunity to obtain courses online. Another reason was seeing a need in courses. One interesting reason was claimed by respondent 1, a Dutch male 27, who deems he needs an offline

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[2] Ти зареєструвався, заплатив гроші, призначають час. І ти допустимо, два рази на тиждень, як вони там проходять. І ти… там є знайомство, як воно називається… форум! І ти в вільний час заходиш, читаєш, а потім в кінці тести знаєш. А так спілкування. Всі твої питання по темі, все це відповідають тобі спеціалісти. професор там, відповідальний доцент так само заходять і відповідають на усі питання. А ти в свій час заходиш і читаєш то всьо, що відповіли. А лекції вони ж даються так само і вільній, доступній формі. Або там є відео курс, ти натискуєш і дивишся, коли тобі зручно, або теоретичні ці файли відкриваєш, і читаєш. Але саме корисне, це те, що питання задають, конкретні і приклади, і то, хто як бачить, той так і відповідає.

commination. He points out that he spent a lot of time in the internet and he tried to avoid spending his leisure time online (p. 3: 98-99).

In a meantime, most of respondents considered to obtain a language course. However, they mainly prefer in class education. Respondents, 3 and 12 deem that online courses require more time than in class courses. Other respondents claim that in class courses are more efficient than online as it provides more practice and opportunity to discuss it with tutor. As a software developer, respondent 8 also points out that online-based Estonian course has some bags. He notices that the course is based on a flash player system that is not supported with most of the contemporary browsers (p.2: 67-72).

Healthcare system

As an employed worker, respondents admit they were aware of the health services they have an access. Besides of automatic acquisition of health insurance, the respondents know about family doctors, yet not all of them registered. The main reasons were that respondents did not need to visit doctor; thus, they did not have a need in this service. Respondent 5 (male, Chilean) admits that he was planning to visit doctor but could not find a time to register. He also says that he got information from his diaspora network and also asked them to advice regarding a doctor. He pointed out that one of the main obstacles in getting sufficient health services was finding a doctor who speaks English. Similarly, other respondents remarked that the language issue was a key problem in getting service (resp. 1, resp. 14). Sharing his experience his experience of finding a family doctor, respondent 14 shares remarks another vice of the e-system:

"So, my Estonian is weak, not a bit of exist. But I would not be good enough to talk to doctor, happy that's more important. but you can't see which family doctors speak English, so I just go for a list and say "hey, do you speak English?". which rather defeats the purpose of being able to do it online at first place" (resp. 14, p. 3: 89-92).

From the comment above and from the experience of the respondent 5, it can be drawn an assumption that the web portal can provide more information on language skills of doctors that might facilitate the process of selecting a family doctor. Interestingly, respondent 12 claimed that he did not need a family doctor as the office provided them a full health testing.

Another problem that some respondents faced once they found the doctor was low quality of the services. For instance, respondent 2, who is also a doctor, notices that her family doctor was not capable enough in treating her. In addition, she said that here family doctor did not know how

to register her in the system and direct to the other doctor through e-consultation (p.3: 127-131). Interviewees also complain about the long lines to the doctor and that they had to wait for a long time to get the service (resp. 16, 1, 3). This situation respondents 2 and 16 found very critical when they needed a grounded treatment and they could not get it urgently. This shows that despite digitalization of the system, immigrates cannot benefits from the system to get a qualified health services as the main product is provided offline and thus the outcome of E-Government   is diminished.

Despites critics sent by respondents; they still positively remark the system. Firstly, they like that they can set an appointment online which the find as a find saving process (resp. 14, p. 2: 72-74). Secondly, they notice the positive outcome of e-prescription as they associate it with less bureaucracy that do not require to brings papers with them (resp. 11, p. 2: 67-68). They positively evaluated a synchronized system of the receipts that enables them to get receipts everywhere in Estonia. In meantime, as they the system is automated, it might be a problem to get into the system. Respondent 15 admits that his doctor needed to rely on the receipts he had brought from his country. Thus, it can be assumed that the lack of background knowledge about the immigrant's health might cause some problem in determining the efficient treatment in the future.

Accommodation

For most of the immigrants finding an accommodation was the biggest challenge. Despite of using Estonian websites of finding apartments, most of them found them inefficient and thus they relied on their networking. Immigrants highlights that some of them were discriminated as they were immigrants and did not know Estonian. Respondent 16 (female, Chinese) says that she also suffered in finding an apartment due to her nationality (p. 5: 200-206). Eventually she had found an apartment with a help of her Estonian friend as the landlord had told them that in case of problem they wished to speak to Estonians. At some point the respondent assumes that landlords refuse renting apartments to foreigners as they do not have a good command of English; however, it might be also stressed out that some nationalities can be discriminated due to biases.

Despite possible discriminations, respondents also express low trust to the websites that provides with renting opportunities. For example, respondent 11 (female, Russian) says that she trusted Facebook groups more than the websites (p. 2: 78-79). She explains her attitudes to that as she wanted to be sure in the landlord and on the website, there were no opportunity to check the personality of a future landlord. Interviewees also complains on the high prices and brokers fees

that did not correspond to the quality of apartments. Eventually, most of respondents referred to the help of their colleagues of friends who lived in Estonia (resp. 14, 5, 13, 6). Yet, some respondents are not satisfied with their accommodations due to the quality of apartment or not a pleasant neighborhood. Tracing back to respondent 16 it is worth stressing out that although she has an apartment, she is limited in its use: the landlord forbid her to use kitchen that again shows that finding apartment for foreigners is problematic. Another interesting finding is equipment setting in the apartments. None of the respondents mention they did not have an internet, however, some of the respondents do not have computers that limits them in access to e-services (resp. 11, 16). Despite all the challenges, some the interviewees find the websites quite helpful as the information is provided in three languages and there the owns provides with pictures (resp.9, p. 8: 308-309)

Legal access

It worth noting that having an ID card turned out as the main indicator of being acculturated that also affects the process of integration within other dimensions. As it was previously mentioned, ID card enables residents to open a bank account without fees. Moreover, it became a problematic to register residents as patient in the system. In general, residents without ID are limited to most of the e-services provided on the official web portal as they cannot log into the system. The absence of ID card also engenders problems with accommodation. Interviewees 8 and 11 mentioned that they encountered problems with arranging the internet access to their house as they did not have a residence. Therefore, the respondents relied on their social networks to manage householding issues. Acquiring residents and ID card differs depending on the nationality of residence, more broadly, immigrants can be split into EU and non-EU citizens. Hereby, EU citizens did not encounter any problems in getting the residence and they received it fast, meanwhile non-EU citizens have to go through a bit longer process. Respondent 12 (Ukrainian, manual worker) has been in Estonia for 3 years, yet has not acquired the ID card. Another respondent 16 also mentioned that she had been waiting for quite a while to get the ID card. They assume that there is a limited amount of spots to apply for the residence permit per year and thus the process can take a while (p. 7: 265-270). In meantime, despite a waiting time the process of application itself was remarked as convenient and not stressful. The respondents point out that the police station provides all the necessary information online, including the application form that

can be filled in at home. Respondent 11 also mentions that it was convenient for her to set an appointment at police office which she found very convenient and time saving for her as a full-time worker (p.1-2: 85-89).

ID card is frequently used as an identification tool to log in to the bank and to use some services (resp. 8, p. 2: 70-78). Respondents points out that they frequently use card for verifying their identity when they pay bills or purchase online. However, they also point out that ID card is not always convenient. The main issues occur with the card reader which complicates the process of using ID card, as it requires to have a card reader with you and computer, which again trace us to the possibility that not every immigrant has a computer to use the ID card.

As alternative immigrants prefer using smart ID, which the find more convenient. Despites this not all respondents are satisfied with this software. Respondents 16 says: "*But I feel it has problem, because you need to put a new software inside your telephone. But only this telephone can use, another telephone cannot use. If I use this one application everywhere it's okay. But the new one is only for one telephone*" (p. 3: 116-118). The respondent points out on a problem that smart ID is not available for using in case the person does not have a smartphone with enough space on it, which might be a problem in using it. Respondent 6 also finds the mobile software inconvenient it requires internet connection. In case the person does not has access to the WIFI or an internet set on the phone, they cannot benefit from the software. Another tool that less used among the respondents was mobile ID that was positively remarked by the users and there do not determine any inconveniences in using it.

Respondents also are not frequent users of the digital signature as they do not see the need to use it. However, Ukrainian respondents (resp. 5, 3, 2) use it frequently to verify their purchases or to sign documents at work. It was especially frequently used by respondents who were doctors and needed to verify their receipts. However, not all the respondents find it convenient to use. Respondent 4 shares the situation when there were technical problems that kicked him out of the system and needed to fix the problem later. Another respondent complains that using digital signature should be optional as it creates many extra actions, however he admits that this process of verification is much more reliable for the banking system itself (resp. 8, p.4: 142-147).

Speaking about legal assistance most of the respondents did not refer to lawyers except one. Respondent 3 says that eesti.ee was helpful for finding lawyers. Another question was if the immigrants communicate with governmental bodies. Some respondents share their experience of

communicating with police regarding their resident permit issues via mail. They positively remark this communication as very efficient due to responsiveness of the police officers. Respondent 3 also mentions that she got a permission form the police station to send all documents online which amazed her, and she signified it as a citizen-centered approached. Respondents 13 also mentions that she had to communicate with tax officers online and that they were clear in explanation to her. Another interesting finding is that email communication helps to overcome the language barrier as the respondent 12 admits: "*Thus, I frequently communicate with them via email. They send me email, I watch it, translate or somebody translates me as I am working with almost all Estonians[3]*" (p.3: 128-130). In this term, avoiding communication face to face helps to bridge the linguistic gap between immigrants and the government. An opportunity to use a translation software or asking friend facilitates the process of communication.

Political participation

The main finding of the research is that none of respondents voted on local elections in Estonia. Although some had this opportunity, they did not use it. As one respondent explains that he was not aware of the political system in general and those parties that had participated in the elections (resp 8, p. 4: 125-127). Interestingly, despite not being limited in voting, non-EU citizens expresses more interests in political system than EU citizens. For instance, respondents 2 and 8, who are Ukrainians, mentioned that they had visited meeting with political parties who had participated in National elections this year. However, the main reason why immigrant did not vote was their passive political involvement (resp. 1, p.4: 141-142).
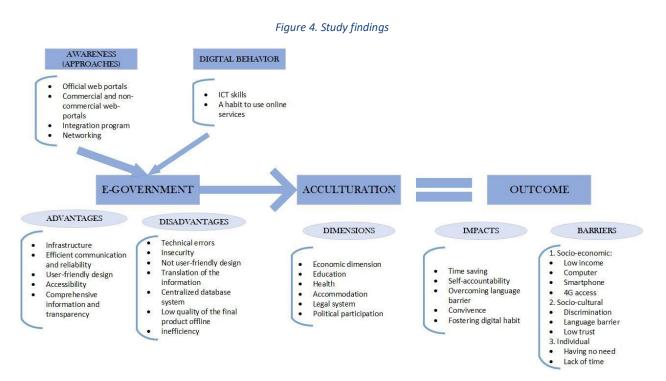
Regarding awareness of the rights, EU citizens were more aware of their political rights than non-EU citizens as they recall to the general EU citizens' rights (resp. 6, 14). What was interesting is that EU citizens had an opportunity to vote in Parliament election, although none of them did it in Estonia. Respondent 14 explains that EU immigrants are obliged to pick up the country they vote to vote for and therefore EU citizens were put in the situation when they had to decide whether they should vote in respect with their origin or their current residence. And respondents mostly prefer voting for their country of origin, which shows the perception of

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[3] Тому, я постійно з ними контактірую, я це роблю через електронну пошту. Вони мені надсилають електронну пошту, я собі дивлюся, я роблю перевод. Або мені хтось переводить, так як я працюю практично з усіма естонцями

immigrants' identity in the new environment. Although they benefit more from the system, they remain more affiliated to their country of origin. Another interesting finding was pointed out by respondent 1, he claims that information about political rights that might boost their political involvement is not widely spread among immigrants as other information.

4.2. DISCUSSION

Based on the results received from the respondents, I made adjustment to the preliminary models by adding essential finding (see Figure 4). Further I will regard on what advantages and disadvantages of the E-Government   system do immigrants outline; what should be change in understanding the external factors (awareness and digital behavior) and finally I will discuss what are impacts does the E-Government   have on immigrants' acculturation.

Figure 4. Study findings

E-GOVERNMENT   ADVANTAGES

As for transparency, respondents liked the fact that they have an overarching access to the information. Especially it was marked as a positive outcome in terms of the healthcare system. As respondent 4 is a doctor, he explained that the doctor does not set a specific pharmacy but only mentions the substance, which means that in the pharmacy the patient is not forced to buy a specific product but can choose the products according to their budget. Another aspect of transparency was

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noticed by interviewee 3 who described her experience of using the e-school system. She says that she liked that a child and parents are provided with all information about the academic success of their child as well as they were always informed with other important events. Respondents also find it appealing that all information is provided on the official website that does not require them to spend a lot of time and effort for searching.

The focus of respondents' attention was devoted to the infrastructure of the E-Government system. In this regard, most of the respondents admit the efficiency of the system in the healthcare system. They positively remark the fact that the information is transported through the system which releases them from extra communication with doctors and dependents on paper documents. Respondent 2 also mentions that the centralized system of patient data is convenient in term of mobility as they can get medical services in other places, in case of an emergency. Another positive aspect of centralized data system was remarked in the process of submitting a tax declaration. Respondents like that system synchronize their data and release them from the extra work in filling in all the information. One of the respondents also finds this synchronized system very beneficial for him as he does not feel any difficulties in case of missing his documents with him as well as changing the documents does not take a lot of efforts as all information was already stored in the system (resp. 8, p.5: 182-191). The comments of respondents signifie that the system X-road has achieved the set goals in systemizing the database and facilitates the paperwork process (Margetts, H., & Naumann, A. 2017). The infrastructure smoothly links with other benefits that respondents find in the system: easiness and accessibility.

Another important issue that responders' notions are the accessibility of the services. More specifically they link to Internet access in Estonia that allows them to use services everywhere. This shows, that immigrants do not feel that there is any digital divide that excludes them from the rest of society. This fact is very important when we regard the accessibility to the services in urban and rural areas. Apparently, Estonian has overcome the digital divide obstacle by providing an Internet access everywhere (Kalvet, 2009) which has brought an impact not only for the locals but also for the foreigners. Since respondents complain about lack of some outdoor services like language schools in the rural area, internet access to the e-services to some point help to tackle the issues.

Respondents also argue that e-services are mostly easy to use, and they did not meet with any difficulties in terms of using. This signifies that the e-services are accessible for people

different ages and different ICT skills. The easiness of services yields a positive impact on the immigrants' life as they feel how it facilitates their daily life and help to deals with a daily routine in a convenient way. The easiness of e-services also links to reducing the bureaucracy role on the immigrant's life. In other words, the respondents find it appealing that e-services relieve them from papers and time-consuming procedures. In these regards, the positive impact on immigrants is visible as they gain the benefits from the system.

Immigrants also find communication online very efficient and convenient. The email communication is more convenient as it saves the time of respondents and they do not need to move to the place. Respondent 2 compares her experience of communication at her homeland, admits that it facilitates her life as she did not need to spend an extra effort to approach the needed institutions. That shows that such is communication can be beneficial in decreasing the tension between government and citizens and thus increasing their trust in the government. Moreover, they positively remark that with this communication they are provided with all necessary information. This shows that efficient and convenient e-communication also helps to shape the trust between immigrants and the government as they feel the support from their side and feel as they are heard. Interestingly, some respondents mentioned that we approached by the government via emails, which means that to some point Estonian government anticipates that the residents in Estonia inherits a digital behavior and are familiar with ICT.

Another important advantage of E-Government   is comprehensive information and reliability. Respondents highly positively remark the information system provided by the government. They like that the all-important information is provided on the one resource that links to others, which facilitate their process of searching for all important information. They admit that frequently use official portals for finding information as they find them more reliable than the network:

> "*I usually try to use the computer because I know that that is the official information. people can be mistaken, But what it says on the website, basically the truth. It is extremely helpful workinestonia, studyinestona. You can find all information*" (Resp. 5, p. 5:205-207).

E-GOVERNMET DISADVANTAGES

On the other hands, respondents outlined several shortcomings of the E-Government system. Immigrants defines the following inconvenience of the system: technical errors, insecurity,

non-friendly design, translation of the information, centralized system, low quality of the final products, online inefficiency.

As the first vice, technical bugs in the system has had affected the user experience of the respondents. Although immigrants admit technical problems occur, the consequence in case of its appearing are quite serious. In particular respondent 4 shared his experience of being kicked out of the system due to the technical breakdown of the system. Respondent 13 also said that he was had a problem with tax system as she was not displayed in the system. Nonetheless, respondents do not frequently suffer from the technical problems of the system and perceive this disadvantage of the concern. Another concern that interviewees expressed relates to the data security. Respondents 13 and 16 find data system not reliable enough and worry that the data information can sneak out. Interestingly, one of the respondents originates from China, which is also known as a digitally advanced country, thus the previous user experience in home country might signify the high digital literacy and thus caustics with personal data. Another respondent is working in a field of data security that also might affect her concerns to the data protection in Estonia. This finding is quite important, as the X-Road system aims to provide a data security (Margetts, H., & Naumann, A. 2017), yet the immigrants still have concerns. This signifies the low trust in the system by immigrants.

Surprisingly, despites to the frequent positive remarks to the convenience of e-services, there are still some flaws that does not make them user friendly. The main critics is devoted to the ID card and the reader it requires. Some respondents point out that it makes using ID card not flexible. Moreover, the card reader tents to break down and thus it engenders inconvenience in getting access to the services. Banking system is also criticized for outdated design and options. Respondents 8 and 16, compares their home banks claims that they provide with more option. In particular, respondent 8 admits that he would like to have a Google or apple Pay option, meanwhile respondent 16 shows the integrated application - a combination of a social network like Facebook with banking system. Another important finding is that despite of gaining benefits from centralized database system, there is backlash. In a sense, the access to some services, highly depends on access on one service. For instance, without ID card, respondents do not have access to most of the e-services as it requires to log in in the system.

Another shortcoming of the E-Government   can be called the no-outcome E-Government , or in other words, inefficiency of the services or its dependence on the offline services. When

respondents share their experience of getting medical service, they notice that the quality of the services was low, which meant that despite the digitalization system that simplify some of the aspect of the communication, still the final product is not improved. Therefore, the dependence on the final product have a significant effect on the efficiency of the E-Government   system and gaining benefits from them. Moreover, some services were remarked as inefficient compare to the offline services This regards to getting education and finding accommodation. Respondents deem that that studying is more efficient in-class as it provides the in-real time communication. In terms of accommodation, as it was previously mentioned, the network was more efficient in getting accommodation which shows the inefficiency of the e-services in this system.

Overall, there are several clashes within the E-Government   dimension. The infrastructure was as positively remarked as well as it was criticized for excluding the immigrants from the system. Another interning finding that there is a contradiction in evaluating the design of services and its easiness of use. Moreover, respondents took the both sides of evaluating the security of the system. These findings show that some of the aspects of the E-Government   have pros and cons and thus it can as reinforce the benefits as well as undermine the system.

EXTERNAL FACTORS

The study has made an important contribution to the understanding the impact of ICT skills and awareness. More specifically, the findings might reinforce previous study that claimed that the level of ICT skills are higher among the immigrants (Reichel, D., et. al. 2015). Nonetheless, it it also shows the contradiction with the claim that the ethnicity does not affects the ICT skill of migrants. that has shown that it is quite difficult to measure the conditional variables and thus the approach should be changed (ibid). Interestingly, the Ukrainian respondents were more most advanced than EU-citizens respondents in using e-services. Deriving from the finding, it can be suggested to measure the ICT skills in terms of digital behavior. In this terms, digital behavior, can be described as the frequency of using ICT for the complying with daily routine. Digital behavior closely links, to the ICT awareness as it can indicate the purposes of using ICT skills. For instance, the finding has shown, that some respondents uses ICT for networking, meanwhile others uses the ICT to get a relevant information of services that also affects on outcomes they gained.

As for awareness, it can be also suggested to reconsider how to measure the awareness. More significantly, is to understand not the level of awareness but what the sources are used for getting the information. Based on the finding it can be recommended to define the following channels: official-web portals, commercial and non-commercial web-portals, integration program and networking. It should be noted that most of the respondents have frequently referred to the official web-portal and search for the information there; however, not all the services that are provided a governmental. For instance, accommodation is provided by commercial web portals, as well as there are no-commercial portals like settle in Estonia, workinestonia. Another way to get information is the integration program that is offered to the immigrants, usually, at the police station when they apply for the residence. Respondent 4 mentions about this program and shares an experience of his friend who had taken that program. He says that the integration program had been helpful for his friends as it had been structured on how to use e-services and where to find information. In the meantime, the main mean of awareness still remains immigrants' friends and acquaintances. Interestingly, the network can be a tool for getting adapted within one dimension or network can also provide information about e-services to the immigrant:

OUTCOMES

The research has revealed as a positive impact on the life of immigrants that might have an effect on immigrant's integration and also barriers that might reinforce the exclusion of immigrants. As for barriers we can put them into three main categories: socio-economic, socio-cultural and personal barriers. The research has shown that immigrant has concerns regarding their capacity to use e-services. This mainly relates to the equipment that immigrants have. For instance, respondents point out that most of the e-services are only accessible from a computer. In case, immigrants do not have a computer at home that can be excluded from the system and will be not able to benefit from E-Government   . In the meantime, respondent 14 an6 16 notice that accessibility to services also depends on the phone that immigrant has. They point out to benefit from e-services, it should be a smartphone with enough memory space. This reinforces the assumption that it can exclude immigrants from the system. Another important remark was made by respondent 6 who stresses that some e-services require the internet and in case there is no internet connection, the person cannot use the services. All these issues show that the property of immigrant might matter in terms of integrating into the E-Government   system and pass the stage

of the acculturation. For instance, respondent 16 admits that she feels difficulties in using services as she does not have a computer at home.

As for socio-cultural barriers, it can be outlined the language issue, discrimination, and low trust. As it was already discussed, the language issue closely linked to the disadvantages of the E-Government   system. Insufficient translation creates inconvenience for a new arrival who do not have a sufficient level of Estonian. This finding also refers to the previous finding that language is an essential tool to include the immigrants into the system (United Nations 2018). Another obstacle closely depends on the e-services where a final product is provided offline. As it was already mentioned by respondents, the main challenge they encountered was finding the venue as they felt discrimination. This shows that E-Government   cannot help to overcome some barriers like discrimination. In addition, the low trust in e-services and relying on personal network relates to the digital behavior of the citizens and show how actually they are open to e-interaction.

The third set of barriers based on personal issues. For instance, immigrants frequently mention that they do not see a need for e-services. Indeed, not all the e-services should be frequently used; however, it can be assumed that the no need attitude is caused by the low awareness of the e-services. As an example, respondent 11 reveals she does not about tax declaration and that she is obliged to submit annually. In most cases, immigrants are avoiding signing for family doctors as they do not see a need for medical services. Another problem that immigrants define is that that do not have enough time for finding the information. It might signify that some information can be not easy to access, or it is not clear and need more time to figure out. Lack of time was a key barrier of a low political involvement as most of the participants were either unaware and did not want to look for the information or they were not sure if they understood their rights correctly.

Despite a notable amount of problems defined by immigrants, they also determine the benefits they gained from the system. The most impactful benefits are time-saving and convenience. Respondents reveal that e-services help them to save time that they can use for the leisure time which is convenient as well. Immigrants admit that these benefits they like about the country and which make their life comfortable in Estonia. Interestingly, another benefit overlaps with the barrier. Despite having the absence of a comprehensive translation, some immigrants find e-communication more convenient as helps to bridge the language gap. It might be assumed that the advance system of Google that offers translation can be a tool for getting the services without

know language. One of the main findings is that e-services foster digital behavior among immigrants. The immigrants originated from not digitally advance countries get excited by the system and start using it. What is more, they admit that being digital is a inherit habit in Estonia as they perceive Estonia as a digital country? In this regard, digital behavior can be considered as a citizens' commitment and therefore an important element of their integration to the society.

4.3. LIMITATIONS

The research does not provide the application for generalization findings, thus it cannot explicitly provide with robust interferences or hypothesis. It should be also admitted that I acknowledge the fact of possible biases in my sampling as the making channel of reaching respondents was a Facebook page which apparently indicates the good ICT skills among my respondents. In other words, I am aware that I might have neglected the immigrants with bad ICT skills. Moreover, as it was a qualitative inquiry, I am also acknowledged of possible subjective biases that might affect the results of the findings.

4.4. FURTHER RESEARCH AND POLICY IMPLICATIONS

This research has thrown up many questions in need of further investigation. The finding provides further support for developing the theory on E-Government   impact on immigrants' integration. In particular, there is an abundant room for further investigation E-Government impact on integration within the socio-cultural and identity stages. As the logical development of the current research, it is suggested to proceed with future studies of adaptation stages of integration on the wider scope by expanding the sample of immigrants. It might be fruitful to conduct the research that compare different ethnical groups, as the finding has shown that Ukrainian were the most ICT active and felt themselves more adapted compare to other respondents. For the more holistic view on the impact of E-Government, the tool can be also tested on the other country case that might bring fruitful results to compare and to elaborate on the future theory.

Moreover, the findings of this study have a number of important implications for future practice.

- Taken together, these findings do support strong recommendations to elaborate on better promotion among immigrants to *increase their awareness of e-services*. As the finding has

revealed, the migrant might not use the e-services due to their unawareness of their existence or ignorance regarding the profit of use. Therefore, it is suggested to elaborate the communication strategy to convey the message to migrant which will address to the explanation of the existing e-services and their practical use. As the channel of communication, it can be done through the email communication as a course on the welcome program.

- The finding also recommends devoting attention to the courses on ***raising the civic engagement among immigrants*** providing them holistic information on their political rights and opportunities in Estonia. Moreover, special attention should be addressed to non-EU citizens as the political rights they acquired differs from the political rights of EU citizens.

- It is suggested to ***provide a holistic translation of the government online portals*** in order to avoid the exclusion on newly arrived immigrants with a lack of language skills. According to the eInclusion declaration, in order to include the immigrants into the social discourse, the information should be equally provided not only on the local language but also on other international languages. The Estonian web portals should provide with a better English translation of the information and services.

- There is, therefore, ***a definite need for adopting an anti-discrimination policy*** to bridge the social gap between locals and foreigners and reduce the biases. As the finding has shown, the foreigners encounter the discrimination on behalf of locals thus the researches are needed to indicate the reasons with a future implication of a new policy on anti-discrimination.

- A key policy priority should, therefore, be to ***plan for the long-term care of servants training, in particular, to improve the language skills of servants***. A special attention should be devoted to the healthcare workers who should be provided with English language courses to improve their capacity to provide a high-quality service for non-Estonian speakers.

SUMMARY

The present study intended to examine the impact of E-Government on the adaptation process of immigrants. More specifically the study aimed to elaborate on the instrument to measure the impact of E-Government on the adaptation process of new labor immigrants and thereafter to test its feasibility on the case of Estonian newly arrived labor migrants. The study has gone some way towards enhancing our understanding of the new angle to study immigrant's integration and thereby another area of E-Government impacts. The finding makes noteworthy contributions to elaborating the research tool to measure the impact of government on the adaptation of labor immigrants.

As for Chapter 1, I intended to shed a light on the main phenomenon of the study: migration, integration, and E-Government. I discussed the dominant theories of migration, outlining the types of migrants and highlighting the contemporary migration trends. For the integration, I demonstrated two approaches to study immigrants' integration: as a policy on integration and as individual perspective. Both approaches encompass stages: the integration policy approach mainly relates to the policy implications and defines three stages (entry level, resettlement, and naturalization) (Bjerre, L, et al. 2015). The individual approach explains the integration from the personal experience of immigrants which comprises adaptation (acculturation), socio-cultural, and identification stages (Erdal and Oeppen 2013; Gemi, E. 2015). It was also identified the dominant dimensions of integration such are employment, housing, education, legal access, political rights, social network, frequency of communication, access to cultural practices, access to religious practices, access to language practices. Based on the theoretical results it was decided to focus upon the individual approach, namely on the first stage of adaptation. It was also discussed the model of E-Government that employs providing the information online (Venkatesh V., et. al. 2012; Almarabeh, T., & AbuAli, A. 2010; Finger, M., & Pécoud, G. 2003), maintaining the interaction through e-services (Finger, M., & Pécoud, G. 2003) and providing the transaction communication transaction (Finger, M., & Pécoud, G. 2003). Furthermore, it was determined the key impacts and barriers of the E-Government system followed by the discussion on the role of E-Government deployment understanding the citizenship (Schou and Hjelholt 2018; Björklund, F. 2016; Kozachenko, I. 2013). In the end, it was presented finding of previously conducted researches that led to outlining the main gals and research questions of the study.

Chapter 2 discussed the Estonian cases justifying the relevance of selecting the case for the study. This chapter contributed to understanding of the Estonian model of E-Government and revealed the important factors of successful adoption. In addition, it also discussed how E-Government shaped the new pattern of citizenship (Björklund, F. 2016) that requires digital involvements of the citizens. It was also devoted an attention to the migration trends in Estonian and discussed, illustrating current socio-demographic composition and examine the new Integration policy (Ministry of Culture 2014).

Chapter 3 justified the research design of the study - the qualitative single case study and demonstrated the process of data collection and analysis methods. In this section, I presented the conceptual model that encompassed the first stage of adaptation within 6 dimensions linked to the existing e-services in Estonia. In addition, I outlined external factors that might have had an effect on E-Government adoption and therefore on the immigrant adaptation. I further justified my preferences on semi-structured interview and content analysis for conducting the study.

A summary of the main findings and of the principal issues and suggestions reveals that:

- respondents in most cases successfully perform within the economic dimension and frequently comply with an economic routine digitally: paying bills, online purchase, tax declaration submission.

- interviewees do not express notable interest in obtaining a degree in Estonia dues to level of degree they already have. The finding indicates the unawareness and reluctance to online-courses among the respondents and highlights their preference to in-class study.

- interviewees positively evaluate the digitalization of the healthcare services, yet that deem it can be more efficient in case of raining the quality of healthcare servants, namely, improving their language skills.

- the role of social network in migrants' resettlements is significant and it share more social trust among immigrants due to being more efficient in the cases of ethnic discrimination of migrants. In a sense, networks help to tackle an issue caused by ethnic biases.

- ID is fundamental need that enables access to other social good provided with e-services.

- respondents did not show an interest in politics of Estonia and thus they claimed themselves a politically inactive.

The interviewee also indicates centralized infrastructure, efficient communication, and reliability, user-friendly design, accessibility, comprehensive information and transparency as advantages of E-Government   system in Estonia as a positive impact on their adaptation, whereas they indicate technical errors, not user-friendly design, non-holistic translation, exclusion led by a centralized system, low-quality of the final offline product, inefficacy as disadvantages. The finding also indicated timesaving, self-accountability, overcoming that language barrier, convenience, fostering a digital behavior and barriers that encompasses socio-economic, socio-cultural and individual issues as valuable contribution of E-Government to adaptation process.

Based on the finding and conclusion, I elaborated on the further research and policy implication and suggested to proceed with studying the phenomenon on a wider scope, including new immigrants' groups as well as investigate the stages of integration. As for policy implication, I addressed to improve the quality of the healthcare services and raise the awareness of the public services among the migrants by including that into their welcome programs. This research will serve as a base for future studies and policy implications. This research will serve as a base for future studies and policy implications.

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My name is Anastasiia Popova and I am a graduate student in Political science at the University of Tartu. This is an interview is conducted within the Master's thesis project that aims to contribute to the understanding of the integration process of new immigrants in Estonia. My main focus is on how e-services can facilitate the process of adaptation. Therefore, I am interested in hearing your story of adaptation in Estonia and about your experience of using electronic services.

There are no right or wrong answers to my questions. Instead, your task is simply to share your experience emphasizing what is important for you. I will guide you through the interview so that we finish it all in about in an hour.

Please know that my purpose in doing this interview is not to figure out what is wrong with you or to do some kind of deep clinical analysis! The interview is for research purposes only, and its main goal is simply to hear your experience of adaptation. Your experience is valuable to understand the personalities of the adaptation path. Everything you say is voluntary, anonymous, and confidential. You can finish the interview in anytime you want as well as you can ask me to not include parts of the interview if you find some topics too sensitive to discuss.

I think you will enjoy the interview. Do you have any questions?

Questioner:

ICE-BREAKER:
1. To begin with, tell about yourself, what are doing here?
2. Why did you come to Estonia?
3. What do you like and what you don't like in Estonia? Answering to that

ECONOMIC INTEGRATION:
1. What is your current occupation?
2. How did you find your job?
   - (In case the interviewer did not mention) Did you use job portals// unemployed agencies online to apply for a job?
5. Do you have a bank account?
6. Could you share your experience of opening a bank account?
7. Are there any payments you prefer to do online and why?
8. How do you pay taxes?
   - If online – could you describe your experience of paying taxes?

EDUCATION
1. Do you have children in Estonia?
   - If yes do, they attend school in Estonia?
   - How did you register your children to school?
   - Do your children use in school e-schoolbag // e-textbooks or e-lessons? Could you share your experience with these tools?
5. Have you ever registered for online classes in Estonia?
   - If yes - Could you share your experience?

HEALTH
1. Do you have access to medical services and prescription?
   - To what medicine services do you have access?
2. Could you share your experience of acquiring health insurance?

3.   Do you have your family doctor?
4.   How do you register for a family doctor?
5.   How do you communicate with your doctor?
HOUSING:
1.   Could you share your experience with finding accommodation?
2.   What were the difficulties?
3.   Do you have the internet at your accommodation?
LEGAL RIGHTS:
1. Do you have any verification tools, like Smart ID, Mobile ID, ID-card?
2. How often do you use it and for which purposes?
3. Do you have a Digital signature?
- Have you ever used it?
- If yes, to which purposes do you use it?
4. Have you ever had an experience when you needed legal assistance in Estonia?
- If yes, could you share your experience: what was the purpose, how did you look for the legal assistance?
POLITICAL RIGHTS:
1.   As an immigrant are you aware of your political rights in Estonia? Why and why not?
2.   Where can you find information about political rights of immigrants in Estonia?
3.   Have you ever had an experience of communicating with Estonian national or local government?
4.   If yes, could you share your experience? How did you reach the government authorities?
5.   Have you ever tried to vote on local elections? Why or why not?
6.   Did you vote online or with a ballot paper? Why?

Certificate of Consent

This consent is provided within the master's thesis project "**Can the E-Government   facilitate the process of immigrant integration? The case of Estonian new working immigrant".** The aim of the project is to hear you're the migrants' experience of getting adapted to life in Estonia, particularly the role of e-services in the process of immigrants' integration.

The interview is supposed to last up for an hour, the respondent can stop the interview anytime. The interview cannot answer questions they consider sensitive. In order to not miss any important notes that might occur during the interview, he talks will be audio recorded. It will be not shared with anyone and will be used only within the thesis project. The respondent can also ask not to record the interview.

I am aware of the foregoing information about the project and agree on the condition of the interview. I have had the opportunity to ask questions about it and any questions I have been asked to have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant_____

Signature of Participant _____

Date _____

   Day/month/year

Respondents information

RESPONDENT 1

Date of the interview	8.04.2019
Interview duration	25:05
Gender	Male
Age	27
Occupation	Customer support agent
Nationality	Dutch
City	Tallinn
Length of stay in Estonia	2 years

RESPONDENT 2

Date of the interview	10.04.2019
Interview duration	49:15
Gender	Female
Age	47
Occupation	Doctor
Nationality	Ukrainian
City	Narva
Length of stay in Estonia	3 years

RESPONDENT 3

Date of the interview	11.04.2019
Interview duration	56:23
Gender	female
Age	28
Occupation	Shopping assistant
Nationality	Ukrainian
City	Silamae
Length of stay in Estonia	3 years

RESPONDENT 4

Date of the interview	15.04.2019
Interview duration	55:05
Gender	Male
Age	35
Occupation	Dentist
Nationality	Ukrainian

City	Viljandi
Length of stay in Estonia	3 years

RESPONDENT 5

Date of the interview	16.04.2019
Interview duration	37:02
Gender	Male
Age	33
Occupation	Digital marketing specialist
Nationality	Chilean
City	Tallinn
Length of stay in Estonia	1 year

RESPONDENT 6

Date of the interview	17.04.2019
Interview duration	15:05
Gender	Male
Age	33
Occupation	Professor
Nationality	Czech
City	Tartu
Length of stay in Estonia	7 months

RESPONDENT 7

Date of the interview	16.04.2019
Interview duration	14:56
Gender	Male
Age	33
Occupation	Academic worker, freelancer
Nationality	Ukrainian
City	Tallinn
Length of stay in Estonia	4 years

RESPONDENT 8

Date of the interview	14.04.2019
Interview duration	24:45
Gender	Male
Age	26
Occupation	Software developer
Nationality	Ukrainian

City	Tallinn
Length of stay in Estonia	2 years

RESPONDENT 9

Date of the interview	17.04.2019
Interview duration	57:05
Gender	Male
Age	33
Occupation	freelancer
Nationality	Spanish
City	Tallinn
Length of stay in Estonia	5 years

RESPONDENT 10

Date of the interview	19.04.2019
Interview duration	16:55
Gender	female
Age	22
Occupation	Marketing specialist
Nationality	Russian
City	Tallinn
Length of stay in Estonia	9 months

RESPONDENT 11

Date of the interview	15.04.2019
Interview duration	14:35
Gender	female
Age	22
Occupation	Customer support agent
Nationality	Russian
City	Tartu
Length of stay in Estonia	2 months

RESPONDENT 12

Date of the interview	9.04.2019
Interview duration	25:34
Gender	Male
Age	39
Occupation	Manual worker

Nationality	Ukrainian
City	Tartu
Length of stay in Estonia	3 years

RESPONDENT 13

Date of the interview	22.04.2019
Interview duration	15:05
Gender	female
Age	34
Occupation	Academic researcher
Nationality	Lithuanian
City	Tartu
Length of stay in Estonia	3 years

RESPONDENT 14

Date of the interview	20.04.2019
Interview duration	25:05
Gender	Male
Age	39
Occupation	Software developer
Nationality	British
City	Tallinn
Length of stay in Estonia	2 years

RESPONDENT 15

Date of the interview	9.04.2019
Interview duration	39:14
Gender	Male
Age	38
Occupation	Software engineer
Nationality	Bangladesh
City	Tartu
Length of stay in Estonia	10 months

RESPONDENT 16

Date of the interview	20.04.2019
Interview duration	65:12
Gender	female
Age	33

Occupation	Massages worker, self-employed
Nationality	Chinese
City	Tallinn
Length of stay in Estonia	4 years

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