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ANALYSIS OF POTENTIAL BENEFITS OF CITIZEN'S PORTAL FOR PRE-SCHOOL REGISTRATION IN GEORGIA

Master's Thesis

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Author's declaration of originality

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

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10.08.2020

Abstract

In the technology-driven era, the role of the government's action to keep up with the rapid changes in all spectrum of fields is critical. During the past decade, the Republic of Georgia has made significant successful steps towards e-Governance adoption. Some socio-political, economic, and technology-related factors have a noteworthy influence on the introduction and implementation of e-services in the country. When it comes to the particular public service - citizen's portal, it presents a successful example of the government's communication with citizens and the business sector. Due to the existing and potential benefits that the respected portal has, the research paper aims to examine how the current form of pre-school registration as a public service can be digitalised, automated, and linked to the citizen's portal. Thus, through qualitative research, based on conducted interviews and an online survey, the given paper analyses the existing preschool registration practices in the Republic of Georgia. Based on the research results the proposed automated registration processes are displayed through the To-Be model, which visually represents the advantages that the new system can provide for a proper flow of steps and timely delivery of the respected service. Also, recommendations for improvement of pre-school registration are proposed based on the generated and extracted data from the research.

This thesis is written in English and is 60 pages long, including 7 chapters and 5 figures.

List of abbreviations and terms

DEA	Data Exchange Agency of Georgia	
DEC	Document Exchange Centre	
GaaP	Government as a Platform	
GoG	Government of Georgia	
ICT	Information and Communications Technology	
OGP	Open Government Partnership	
PEU	Perceived Ease of Use	
PU	Perceived Usefulness	
TAM	Technology Acceptance Model	
UNDP	United Nations Development Program	

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Introduction

A government is hired by people to design and provide services that meet citizens' needs most conveniently, therefore, public service provision should be transparent, accountable, democratic, and efficient. In the technology-driven era, when current developments transform ways in which citizens interact with the government, benefits that innovative solutions bring can be used to tackle the challenges that governments face regarding public service provision. Public officials are also a role model for citizens to overcome the fear of using unknown technology-based solutions. Notably, benefits that derive from novel forms of public services are useful not only for the citizens but for the government as well. "Governments find themselves in a situation where budgets are reduced and at the same time innovation is necessary to stimulate economic growth. In such a scenario, politicians and legislators aim to reduce the administrative burden for businesses and governments, increase customer-centricity, and at the same time they are challenged to innovate. Process standardisation, providing services (only) online, open data, social media, participative innovation, and reducing the size and complexity of the public sector are some of the developments contributing to this aim" (Katare, 2017).

Thus, as mentioned above, the government needs to take the lead when it comes to encouraging citizens to co-create and co-benefit from e-services. "E-Governance has come to be recognised as an efficient means of management by the governments. It involves the use of web portals for delivering government services to its various stakeholders to make a positive difference in manifesting the citizen-centric focus of working of the government" (Katare, 2017). The only way to foster motivation is to be oriented on delivering the e-services which suit the citizens' needs most efficiently. Those needs are usually related to life-events. "In the early days e-Government was primarily focused on creating citizen-centric service provisioning and the government itself, without looking beyond boundaries of the public sector. E-Government was often discussed from the technological perspective and often with no clear connections to the public sector's core values and objectives. Over the years, e-Government policies and

research have adopted a less socio-centric approach, and focus shifted to viewing citizens in their customer role and to creating customer-driven services" (Janssen, 2013).

The most examined way for the government to improve e-services which leads to service satisfaction is to be in a constant dialogue with the citizens which also increases the trust level in government. Considering that no stakeholders can assess e-service quality unless the customer/citizen evaluates it and either complains or positively "grades" it, the absence of such dialogue leads to a lack of feedback which determines the deterioration of e-services. Thus, one of the primary reasons to switch from the traditional paper-based services to e-services is to foster dialogue between the government and citizens. Onestop-shop Government is seen as one of the most successful ecosystems for enabling the mentioned dialogue. "One-Stop-Government refers to the integration of public services from a citizen or customer of public services-point of view. The online One-Stop-Government allows citizens to have 24 hours of access to public services from their home or even on the move" (Wimmer & Efthimios, 2002). However, even in those cases when governments adopt the One-Stop-Shop principle, barriers related to implementation and improving e-services which often stem from the particular country's socio-political context, have a negative influence on the public service provision. However, many countries have succeeded in the development of e-services, and Estonia, for instance, is well known for providing digitalised administration procedures and services for the citizens (Pappel et al 2017).

Given research deals with the topic of how Georgian citizen's portal can beneficial for pre-school registration. Therefore, the study aims to provide a holistic analysis of the current pre-school registration process in the Republic of Georgia and proposes the solution for improving the respected public service.

1.1 Research Questions and Objectives

The main aim of the given research is to examine the efficiency of the current pre-school registration, therefore, advantages and disadvantages which are related to both existing forms of registration: online and paper-based in the Republic of Georgia. The paper also focuses on identifying the key factors which determine e-service adoption in the country, pre-school registration as a research focus. One more set objective of the paper is to propose the solution for improving pre-school registration by linking the citizen's portal to the respected process.

RQ 1: How Georgia's socio-political and cultural context influences technology acceptance and eservices provision?

Georgia is one of the developing countries with a post-soviet legacy that is in the transitional stage towards achieving consolidate democracy. Due to the Soviet past, the country has little experience in independent governing, therefore, adopted governmental policies and practices are often on the testing regime. Thus, it is essential to consider all the existing hindrances which are the source of pitfalls of distributed e-services. For example, the trust level (which incorporates security and transparency) of citizens towards the government and technology. Therefore, it is expected that society that lacks experience with technology and does not trust the government would rather stay away from using online services. Moreover, lack of distribution of information/raising awareness regarding the benefits that such e-services have, also has an impact on citizens' readiness to use novel solutions provided by the government.

RQ 2: How efficient the existing procedure of pre-school registration is?

Pre-school registration in the Republic of Georgia is done in two forms: paper-based and online. The respected process (in case of both forms) includes some bureaucratic burdens. Therefore, none of the involved stakeholders can fully benefit from it considering that the distribution of existing pre-school registration is a neither cost-efficient nor convenient process.

RQ 3: How can a citizen's portal become beneficial for pre-school registration in the Republic of Georgia?

"The government of Georgia (GoG) has declared the development of e-governance as one of its priorities in 2009" (Guruli, Bakradze, & Khorbladze, 2015) therefore, with the help of international partners, some successful steps have been taken in this regard. One of the core projects was the development of the citizen's portal, which runs under the Data Exchange Agency of Georgia. Due to the recourses citizen's portal has, along with the e-services it already provides, pre-school registration can be linked to it as well. Thus, research is dedicated to examining potential benefits that www.my.gov.ge can distribute for pre-school registration in the Republic of Georgia.

1.2 Problem Statement

The Republic of Georgia made significant steps towards e-services provision, however, the potential that a country has in this regard can be used more competently. Many of governmental services are still paper-based although there is a possibility of replacing them with more transparent and efficient e-solutions. Pre-school registration is among such services. Kid's registration for a kindergarten is one of the life events that a notable number of citizens are concerned about. Therefore, they need the registration process to be as seamless as possible. In Georgia, solely cities use electronic registration which still has nothing to do with citizen's portal. Municipalities use traditional paper-based procedures. To improve the service quality, there is a need to analyse the current situation and propose the solution for the process to become more efficient for both sides: the government and citizens.

When it comes to the academic papers related to e-service provision in the Republic of Georgia, there is a considerable research gap: in the case of the citizen's portal, there is only a mere number of official authorities' reports; and no academic paper on pre-school registration has been written. Therefore, the main motivation for the given master thesis research is to contribute to the fulfilment of the mentioned academic gap and help the future researchers as well as the official policy-makers to recognise the issue related to Georgian public service provision, pre-school registration as a focus.

2 Related Work

2.1 Literature Review

The below chapter presents the concepts/phenomena with the given research: e-Governance, e-Service Provision, e-Portal, and Georgian Citizen's Portal.

2.1.1 e-Governance

The research conducted by Sabu Thomas – "Acceptance and Perception of E-Governance among Elected Representatives of Local Bodies in Kannur District" defines e-Governance as followed: "*E-Governance means the use of information and communication technologies by governments, civil society, and political institutions to engage citizens through dialogue and feedback to promote their greater participation in the process of governance of these institutions. E-governance will involve the application of new technologies to bring about more speed, transparency, and responsiveness to the various government activities resulting in increased accountability and consequent empowerment of people" (Thomas, 2006).*

"Government As a Platform-What Can Estonia Show the World?" – the research by Helen Margetts and Andre Naumann, examine the concept of government as a platform based on Estonia's example and also they provide a comparison to Great Britain's example: "*This paper looks at the Estonian case across the seven principles of GaaP put forward by its original architect, Tim O'Reilly: openness, simplicity, participation, 'learning from hackers', data mining, experimentation, and 'leading by example'. It finds that openness, simplicity, participation, and leading by example – have been core to the design – and to the success - of the Estonian digital government, prioritised over the more 'bottomup' principles, such as experimentation, leading to a centrally driven, rational, data-efficient model that has benefitted from sustained leadership. In contrast, the UK government and (from 2011) the Government Digital Service has embraced the more informal principles of experimentation, and 'hacking' culture, and data mining, but has struggled with openness, simplicity and participation, and is now challenged in its central leadership role. This comparative analysis provides some possible lessons for the good government (for example, in terms of citizen focus and flexibility) in both countries, and for the GaaP model itself"* (Margetts & Naumann, 2016).

2.1.2 e-Service Provision

Considering that one of the major enablers of good governance is e-service provision, governments spend their recourses on designing e-services that meet with citizens' needs and challenges of the technology-driven era. e-Services ensure transparency and accountability of the government and also this is reflected to the credibility and legitimacy of government policies. As it is noted, "At its simplest e-service can be defined as the electronic provision of a service to customers. Also it "simple transactions between identifiable customers (citizens, enterprises) on one side, and a multitude of government organizations in charge of registering objects, issuing passports, collecting taxes or paying benefits on the other". (Buckley, 2003) Also, there is another definition presented: "In governmental agencies, e-service refers to the delivery of information and improved services online through the internet or other digital means to all stakeholders (citizens, businesses, and other members of the society). It is viewed as the means of holding the government accountable to its citizens and as an anti-corruption strategy." (Hassan & Shehab, 2011) One more definition of e-service suggests the following: "... provision of services over electronic networks and is much broader than the concept of Information and Communication Technologies, Web services or infrastructure services, It also and foremost it encompasses the respective business model characteristics. The strategic and tactical enablers of an e-service orientation focus on increasing the value defined at the customer level, being a citizen, or a business entity. At the strategic level, the e-service orientation calls for shifting the emphasis from transactions to service and relationships." (Lambrou, 2003). e-Service has several definitions and associations, for example, it is often understood as self-service, considering that the citizen interacts with the online interface independently and other than independence, one more value it has is that it is convenient considering that there is no need to visit any government organization based on their physical location. Thus, the main focus of e-service provision is a citizen, therefore, provided services should be user-centric. There is a misconception that often occurs to the governments as service-designers, they consider it is enough to make existing service online or create new online and this is all. The main difficulty is to change the process itself in a way that will be beneficial in terms of saving recourse on both sides: the government and the citizen. Although decision-makers do understand and support the e-service provision, it might still stay on the idea level without the proper financial reassurance. Other than the budget, there are complex matters related to pre-requisites that are necessary for designing and introducing such services by governments. Although the logic behind public service delivery is similar to the private sector where you have companies as service/product providers and consumers as the buyers/users, when it comes to the relation between the government and citizens, there are a lot more complications.

Also to identify how successful e-service provision will be, the context of a particular country should be taken into account. Thus, barriers of implementation are country-specific, and mostly they are related to legal, technological, administrative, and privacy/security-related – *"Furthermore government needs to have in place clear policies on handling online transactions including measures aimed at ensuring privacy while at the same time letting the public know of efforts in place to ensure the provision of secure online services. Efforts aimed at reducing risk in dealing with government online will have little impact if not made known to members of the public" (Mpinganjira, 2015).*

Considering that developing countries have fewer capabilities, they have higher risks to meet challenges and fewer recourses to cope with them. Thus, e-service provision quality and overall success are depended on the country-specific context. As noted, "*It is important that in dealing with these concerns the government looks carefully into its employment practices as well as on matters of training of staff so as to ensure that they have enough skilled people. Apart from looking at employment practices within the public sector, the government can also explore possibilities of public-private partnerships in its efforts to provide secure online services. This will enable it to tap into the private sector's skills base" (Mpinganjira, 2015). Since the drive-force of such services are citizens, the cultural context of the society has a crucial impact on how introduced e-services will be implemented and improved. This is why every country has its style in terms of public service provision. Better the government officials are aware of those cultural characteristics and take them into account, a more seamless way the mentioned process goes.*

2.1.3 e-Portal

As for the other countries case studies on citizen's portal the following academic papers have their contribution to this field research: "A Proposed Study of a Unified e-Portal for Citizens and Residents in the Sultanate of Oman" (Hadhrami, 2018); "A Heuristic Evaluation of Iraq e-Portal" (Hussain & Murtaja). These papers analyse e-portal in respected countries in a more comprehensive manner: taking technology, people's readiness for using unified e-portal, and country-specific characteristics into account. When it comes to understanding e-portal from a specific perspective, the following study "Are Older Users Using the E-MOI Portal in Saudi Arabia, Hall City: A Quantitative Research" (Chourdie & Alfalah, 2018) focuses on the defined user group. Thus, considering Georgian citizens' skills and trust in technology in this age group, this paper is beneficial. Also, the research paper "Evaluation of e-Portal Services from An Employee Satisfaction Perspective: The Communications Directorate as a Case Study" (Al-Shaher, 2017) is more specific. Therefore, it is useful in terms of analysing e-portal from an internal perspective. To be able to consider e-portal from a more holistic

point of view, the research that was done on "Factors Affecting Citizens' Adoption of E-Government Moderated by Socio-cultural Values in Saudi Arabia" (Alsaif, 2013) is very relevant due to the reason that it focuses on the socio-cultural background, therefore, more soft side of the topic. Also, a paper by Yucel Ogurlu – "E-Governmental Portal and e-Services in Turkey", is very useful considering the geographical parameters of Turkey and Georgia. Paper by Irene Wambui Njoroge – "An Evaluation of e-Government: Case of Nairobi City County Self Service Portal", gives a holistic evaluation from the citizens' perspective: "*citizens' perceptions of the information, system and service quality of the portal, as well as the perceived benefits, use, and user satisfaction levels arising from using the portal.*" (Njoroge Wambui, 2014)

2.1.4 Georgian Citizen's Portal

"The government of Georgia (GoG) has declared the development of e-governance as one of its priorities in 2009" (Guruli, Bakradze, & Khorbladze, 2015). After the Rose Revolution in 2003, the Republic of Georgia made significant steps towards transforming to the modern state. However, transforming the existing public sector practices would not be possible without the international support considering that country had a Soviet legacy which includes but was not limited to nontransparent government, corruption, and nepotism in all levels of the public sector, deteriorated public services, bureaucracy, and total paper-based government administration. The Republic of Georgia joined the Open Government Partnership (OGP) in 2011. "Open Government can be understood as a comprehensive view of how an eSociety can be shaped. The goal is the ubiquitous engagement of citizens in all aspects of developing an e-Society. Open Government emphasises transparency, participation, and collaboration. Enabling citizens and businesses to become engaged in more and more aspects of the work of the public sector is essential as part of the Open Government agenda. This involves raising the awareness of, and trust in government, increasing the take-up of e-Services, participating in e-Service design and delivery, and participating in policymaking. e-Participation is an important means to facilitate engagement of citizens in public discourse and more open political decision-making through the use of ICT" (Krabina, Po-Wen, & Meyerhoff-Nielsen, 2014). Thus, the principles of the Open Government Partnership became the panacea for a post-soviet country. The Republic of Georgia became open to e-Governance adoption. First of all, the legal framework was developed, and some governmental institutions were established which are responsible for e-Governance progress in the Republic of Georgia. One of the key international partners that the country has to e-Governance development is the Republic of Estonia as a paragon of success in terms of building e-society, e-services provision...etc. One of the significant aspects of Estonian e-Governance lays in digital document exchange. "To make digital document exchange more efficient, several solutions have been developed in Estonia, e.g. the document exchange centre (DEC) and e-services at the citizen portal eesti.ee environment, which enable the digital processing and management of a document life cycle from its birth to death" (Pappel, Pappel, & Tepandi, Systematic digital signing in Estonian e-government processes: influencing factors, technologies, change management, 2017). When it comes to public e-services, the Estonian citizen's portal is a highlight, considering that it is based on the one-stop-shop principle, interoperability, and information exchange among public organisations. "A large part of digital communication and document exchange across an organisations borders occurs via the X-road. Observing document exchanges is complicated by several factors, such as the complexity of classifying transactions" (Draheim, Koosapoeg, & Lauk, 2016). Thus, X-road is a drive-force for information exchange, more specifically: "X-Road is a secure, distributed data exchange layer of information systems, whose one of the main tasks is to provide a one-stop-shop solution to ensure access to all of Estonia's the public sector data" (Paide, Pappel, & Vainsalu, 2018).

Data Exchange Agency of Georgia (DEA) which runs under the Ministry of Justice of Georgia is one of the recently established government agencies. "The DEA initiates, coordinates, and ensures compliance with IT and technology-related issues, standards, etc. Similarly, the coordination mechanism helps to establish priorities, secures adequate funding of ICT projects, binds fragmented initiatives together, and ensures compliance with established mandates, standards, etc." (Data Exchange Agency, 2018). Due to the mandate that Data Exchange Agency has, it took the initiative to develop the citizen's portal, which would be an online analogue of the physical (Public Service Hall) one-stop-shop ecosystem that the government has created in order the citizens to access available public services in a single environment. Thus, since 2012 citizen's portal (www.my.gov.ge) has been developed. "The objective was three-fold: To establish an online national "shopping centre" consisting of all government services offered online; to successfully reach all citizens and businesses using the internet and with eID; and to improve the value-added by government investments in IT front and backend service production and delivery systems" (Data Exchange Agency, 2018). Due to the socio-political background and technological capabilities of the county, citizens' IT literacy and readiness for using the respected portal took time and many marketing campaigns for raising awareness in order to encourage citizens to use an online one-stop-shop environment. In this regard, as a result of the taken measures by the Data Exchange Agency, achieved progress is significant: "the number of online services available on www.my.gov.ge has increased from 30 in 2012 to 120 in 2018. The number of average visitors in an hour has increased from 5 in 2012 to 20 in 2018. www.my.gov.ge is the online

service platform for 250 Georgian authorities at national, regional, and local levels" (Data Exchange Agency, 2018).

2.1.5 Pre-school Registration Process in the Republic of Georgia

In Georgia, applying for kindergarten is a mainly manual process considering that all the kindergartens except large cities use paper-based procedure. The latter is done per the following steps: parents submit documents (such as copies of kid's birth registration certificate, proof of good health, parents ID documents, and their marriage certificate) to the local kindergarten physically; then kindergarten management checks if all the required documents are in place or not and save data in paper-based binders, then they take documents (physically approach) to the Kindergarten Union of that particular municipality. In the Kindergarten Union, staff members insert data in their excel sheets and start working on data/check the validity of the submitted documents. Meanwhile, parents are waiting for the response, however, they are not notified of the decision by email/text message or any other means of the electronic channel; instead, either parent take initiative and approach the kindergarten again physically to become aware of the decision (whether parents have to resubmit documents or application has been approved/declined) the kindergarten management puts efforts to notify them through available physical channels. Communication barrier is one of the main reasons why the process is less efficient and flexible for both sides of involved stakeholders. Taking the extensive use of paperwork, bureaucratic burdens, and recourses spent into account, the respected process appears to be inconvenient.

When it comes to registration online which is solely in several large cities, parents can access the webpages of the Kindergarten Union and open a window where they have to provide their personal information for identification. After the online procedure is over, they receive mobile notification (in the form of SMS) that confirms the successful submission of their application/decline. In case the answer is positive, then the second phase of registration begins, parents have to submit required documents physically to the registered kindergarten. Kindergarten management checks the validity of the documents notifies parents via phone call on the successful finalization of the registration process or regarding the need to resubmit documents. When they receive a negative response at the first phase of the registration is scheduled. The online registration is not very seamless process considering factors such for instance, parents face technological issues during the registration process, they still have to approach kindergarten physically for the second phase of registration.

2.1.6 Barriers to Implementing Online Pre-school Registration in the Republic of Georgia

Governments should be pioneers in recognising the benefits of e-Governance as the adoption of IT solutions make a difference in public service delivery quality and transparency. However, even in those cases when countries are open to e-Governance practices, there are many obstacles that governments encounter. Some of the most critical factors that determine the success of e-Governance implementation are related to the socio-political background of the country, political culture, citizens' trust level in government, and their readiness to using e-services.

Considering that the Republic of Georgia has a post-soviet background, therefore lacks experience in governing independently, the country often seeks support from international partners to transform into a modern state. Besides, considering that the country has limited technological capabilities, neither government institutions nor citizens tend to be very open to novel solutions. Therefore, technology acceptance as such is a matter that requires careful examination before designing any public e-service.

One more critical aspect that has to be taken into account is the political culture of the country. Political culture itself "refers to the values and political conduct of the individual or collective agents" (De Silva, Carreira, Filipe, 2018). "Political culture is related to political institutions, conventions, and traditions, including traditions of political culture, different political parties, constitutions, and of course the historical memory and variety of norms of the country" (De Silva, Carreira, Filipe, 2018). If a country has a democratic government and society, then its political culture possesses the following: "diversity of political subjects and ideas, political pluralism; tolerance towards other people, communities, ideas, and developments, including a willingness to allow conflicting interests and opinions to be aired without opposition; readiness and ability of the majority of people to participate in political life; ability to understand what is going on in politics, comprehend the content of political - choices and decisions; belief in the legitimacy of political institutions; firm rules and customs in the relations between political actors; political and interpersonal trust" (Lauristin, Marju, 2018). Political culture in the Republic of Georgia remains to be based on "mythical and ritual behaviour which is not based on rational argumentation and logical discourse; use of ideals; closed nature and no tolerance for other ideas and values; the separation of official and unofficial opinions, evaluations and behaviour;" (Lauristin, Marju, 2018). Thus, citizens tend to rely on political leaders a lot.

One more factor that defines how successful the e-service provision can be is related to political trust. "High political trust is considered as a requisite for the functioning of democracy as well as broader social and economic processes. Trust serves to make institutions work effectively, facilitates social and economic exchange, diminishes transaction costs in markets, and reduces the need for control and *supervision*" (Kestilä-Kekkonen, Elina, 2018). Thus, the government must in advance examine what socio-political and cultural characteristics influence on citizens' readiness for welcoming innovative solutions. First and foremost, it is the level of citizens' trust that they have to improve. "*Citizen's trust in e-Government has some unique features because of the impersonal nature of the online environment, the extensive use of technology, and the inherent uncertainty and risk of using an open infrastructure*" (Colesca, 2018). When it comes to trust in e-service provision, it can have several layers: 1) people should trust government services; 2) people should be open to and trust technology; 3) people should have trust in how the government collaborates with innovation and delivers the technological solution. "*Transition to electronic services for the public sector is more than a technical or organizational change, but involves ethical dimensions of state-citizen interaction in which, in a democracy, trust and consent are at least as important as legal authority"* (Colesca, 2018).

Other factors such as the phenomenon of nepotism, bureaucratic government institutions, IT literacy...etc. also have their impact on how e-service provision success will be ensured. Also, citizens should be well aware of the benefits that e-Governance has, therefore, otherwise they will not have a stimulus to use introduced -services.

2.2 Theoretical Framework

The below chapter presents the description and use of the following theories and concepts: Symon's Context, Content, Process Model; Good Governance; Technology Acceptance Model; Lewin's Change Management Theory; Diffusion of Innovations Theory. Also, it aims to show the relationships among the respected theories and their connection to the research topic.

2.2.1 Symon's Context, Content, Process Model

To understand the Georgian environment and its implications concerning the implementation of eservices, Symon's Context, Content, Process Model is used. Content: main focus regarding content is Georgia's public service - pre-school registration, therefore roots of challenges that influence proper operation and development of this particular public service in the Republic of Georgia. This includes evaluation of the current situation, and potential benefits that the proposed solution ideally should bring in case pre-school registration will be linked to the citizen's portal. As for the context, evaluation is done in terms of the country-specific context due to the reason that pre-school online registration which can be linked to citizen's portal cannot be beneficial for the involved stakeholders unless the current impediments are identified and analysed holistically. Thus challenges are related to the country's internal (cultural, social, political) and external (globalisation, technology, digitation...etc.) context and characteristics. What about the process: the period of evaluation is current given - last few years ever since the citizen's platform and current online pre-school registration was launched. Therefore, the research provides an analysis of how different stakeholders have been interacting in this regard, and what factors influenced on lack of improvement of the respected registration process. Symon's Context, Content, Process Model is helpful and relevant for this case study mainly due to the reason that it includes both internal and external elements which are often missed out by government authorities during the formation or implementation of public services.

The respected conceptual model which was initially proposed by Pettigrew for his work on organisational change in 1985 (Paul, 2009) and later used by V.J. Symons in "A review of information systems evaluation: Content, Context and Process European Journal of Information Systems" (Symons, 1991) is often used when evaluating information systems and their change, for instance, Stockdale and Standing used in their article: "An interpretive approach to evaluating information systems: A content, context, process framework" where they state following argument in favour of CCP model, namely: "*The Use of CCP is an overarching approach to evaluation allows for questions of questions what is measured, by whom and for what purpose, to be asked. The interaction and linking between content, context, and process allow for a complicated procedure of evaluation to be explored*

in multiple ways. "(Stockdale & Standing, 2006). Although Symon's Context, Content, Process Model is mostly used for information system evaluation, it is not limited solely to it and can be used for evaluating other fields and/or different institutional changes. For instance, James and Connolly used it for the book: "Effective Change in Schools" (James & Connolly, 2000) however, they wrote about the limitations of such model: *"It can be argued that model does not give sufficient emphasis to the purpose of the change, although the interpretation of the context can give insights into why the change is taking place and the intention behind any particular change action. A full understanding of the purpose of the change is essential. It can be crucial in helping to elucidate fully what is being changed, and can also give a deeper understanding of the process." (James & Connolly, 2000). When it comes to this particular case study, applying Symon's Context, Content, Process Model is relevant due to the reason that it enables holistic analysis (considering all the influencing elements where roots of impediments of the Georgian public service provision, pre-school registration as a focus, maybe laying).*

2.2.2 Good Governance

The Republic of Georgia has made successful steps towards consolidating democracy. Therefore, as a result of government reforms, public institutions became more transparent, reliable, and efficient. One of the major factors why people's trust towards the government has been increased lays in the adoption of e-Governance, thus, in e-service provision as well. Georgian government used good governance principles to overcome the hurdles of the post-soviet legacy and the cultural context of the country. However, there are still some improvements required in this regard to achieve an advanced level of public administration which complies with good governance practices, therefore, improving the quality of distributed e-services is among the steps that the government continue.

Before defining good governance, when it comes to solely the governance itself: "Governance is understood as a broad process affecting the way decisions are taken and responsibility allocated among social and economic agents within the realms of politics, state administration, and bureaucracy" (Ciborra & Navara, 2010). Good governance is a concept developed around three decades ago that has been recently adopted internationally due to the emerged challenges in public administration, especially in developing countries. It has mainly been used by scholars and international political actors both: governmental and non-governmental in order to emphasize governments being efficient, transparent, accountable, and citizen-centric. The very first time when political and economic international political actors began to use the term, was in the late 1990s due to the reason that "donor countries and institutions trended to make aid conditional upon reforms in the recipient country, which was found largely ineffective in encouraging real policy changes. More recently, donors, such as the International Monetary Fund, the World Bank, and the United States, are increasingly insisting upon performance and good governance as a pre-requisite for aid, a practice called "selectivity." This is a means of requiring a recipient state to demonstrate the seriousness of its commitment to economic and social reforms" (Nanda, 2006).

Thus, the main context where good governance was used had a lot to do with combating against the undergoing non-democratic, non-transparent, unfair, and bureaucratic (with its negative connotation) political processes that were deteriorating the socio-economic state of people. Thus, for governments to receive the international political and financial support, they had to "persuade" the external partners that they were serious about their commitment. Therefore, the promoted term good governance became the requirement that recipient countries had to fulfil. Even though political matters have been separated from the political processes, during the emerging period of good governance, the situation was different from the regular times. The financial institutions became instruments for promoting political processes as well. The reason behind such intervention was the fact that many countries were facing a financial institutions were needed, even though this was somewhat taking recipient countries' power away. On the other hand, donor institutions and countries needed the guarantee that their financial support would be spent to overcome the socio-economic crisis and develop democratic institutions.

Thus, good governance became the term describing the opposite situation that back then, democratic countries were facing. However, it was clear that political processes in different regions would not be the same, and there would be a need for a country-specific approach. "In its report on the State, also issued in 1997, the World Bank made a point of underscoring the fallacies of indiscriminate importation of largely irrelevant 'models': What makes for an effective state differs enormously across countries at different stages of development. What works in the Netherlands or New Zealand, say, may not work in Nepal. Even among countries at the same level of income, differences in size, ethnic makeup, culture, and political systems make every state unique" (Argyriades, 2006).

There are several official definitions provided by international organizations regarding the term good governance. "UNDP has developed the five core principles of it: 1) Legitimacy and Voice Participation; 2) Direction: Strategic vision; 3) Performance: Responsiveness; 4) Accountability; 5) Fairness" (Graham, Bruce, & Plumtre, 2003). Thus, it is clear that countries that were receiving aid had to take set principles as guidelines to make sure that they were fulfilling the obligations and their results in terms of increasing transparency, fair and democratic political processes, economic

development, and social well-being were met. "Good governance could be used to invite judgment about how the country, city or agency concerned was being 'governed': it enabled the raising of evaluative questions about proper procedures, transparency, the quality and process of decisionmaking, and other such matters" (Doorbons, 2010).

Thus, this concept goes hand in hand with the needs that digital society has, considering that good governance increases the participation of citizens in the governing process, therefore, a high level of civil society involvement as well. Other than the managerial side of it, good governance can be discussed from a process point of view, as it is not a result of a product of the fair, transparent operation of the government, but the process that aims to overcome the challenges related to equity and poverty. The reason why good governance is closely related to the high level of citizen participation lies in intending to improve the quality of life for citizens, which would be impossible to aspire without knowing about citizens' needs, their socio-economic background. This is a process that should enable everyone despite their social class to participate in the process of governing. Therefore, good governance is a parallel of democratic processes that are taking place in the countries. As noted by Okot-Uma, good governance has three main focus: "1) Democracy focus: The processes and structures that define the relationship between Governments and Citizens; 2) Business Focus - The processes and structures that define the relationship between Governments and the Markets; 3) Service Focus - The processes and structures that define the relationship between Governments and Citizens" (Rogers, 2000). Governments nowadays realize that they need to be ready for the rapid development of technology, therefore, for managing the 21st-century digital society. However, the technology era brings its pressure, considering the digital divide and overcoming other burdens such as creating the knowledge society, fostering the innovation culture. Thus, before dealing with technological barriers, some challenges stem from the existing socio-political processes, political institutions, managerial cultures, regulations, bureaucracy... etc.

Thus, the primary challenge is to transform the existing social, business, political environment to a more stable and at the same time innovative one which will be corresponding to the implications of the technology-driven era. In this process governments are major actors when it comes to performing the managerial responsibilities. However, delivering the relevant to the 21st-century governmental services to the business sector and citizens will not be possible without a developed civil society where citizens as individuals take their share of responsibility to participate in the political processes and communicate with the government clearly regarding their needs and requirements. Before creating the information society, there are several pre-requisites to be fulfilled, starting from reviewing existing

practices in terms of legislation, regulations, the credibility of the programs and reforms, and set policies. Also, to foster innovation, governments should take public opinion into account, considering that they are governmental service users and the government is accountable towards them. "The Rule of Law, Accountability, and Transparency are technical and legal issues at some levels, but also interactive to produce a government that is legitimate, effective, and widely supported by citizens, as well as a civil society that is strong, open, and capable of playing a positive role in politics and government" (Johnston, 2006). This is precisely where the information technology emerges as a support for the governments for transforming their internal workflow and their approaches in terms of dealing with external actors such as their relationship with individual citizens, communities, and the business sector. "The route to e-Governance is only now emerging, as governments and citizens around the world experiment with, and learn to exploit, new media and the new information technologies. Electronic governance involves new styles of leadership, new ways of debating and deciding strategies, new ways of accessing services, new ways of transacting business, new ways of accessing education, new ways of listening to citizens and communities of practice, and new ways of organizing and delivering information. As a concept, e-Governance can be perceived to be contextually inclusive of Electronic Democracy (e-Democracy), Electronic Government (e-Government) and Electronic Business) e-Business" (Rogers, 2000).

Other than transforming the ways that governments interact with the citizens, e-Governance enables governmental organisations, different institutions to coordinate and collaborate differently through the use of ICT. However, that often requires a new set of mindset, innovative approaches from the government officials, otherwise introduced e-Governance practices might be just the set of façade novel forms of relations among the governmental institutions. "*E-government intersperses various ICTs (with a special emphasis on the Internet) to connect government agencies and institutions, promotes the reorganisation of government's internal and external information flows, activities, and functions to shift the delivery of government services over the Internet"* (Ciborra & Navara, 2010).

The research conducted by Rogers W'O Okot-Uma provides a different perspective regarding good governance as he stipulates it as the phenomenon that has been re-invented considering the rapid development of technology trends and transformed government to citizen relations: "Good Governance should, among other things, be participatory, transparent and accountable in characteristic. This provides a framework within which political, social, and economic priorities are based on a broad consensus in society, and that the voices of the poorest and most vulnerable are heard in the decision-making processes regarding the allocation of resources. Besides, Good

Governance has major implications for equity, poverty, and quality of life. In particular, Good Governance may be defined as comprising the processes and structures that guide political and socioeconomic relationships, with particular reference to a commitment to democratic values, norms & practices, trusted services, and just and honest business" (W'O, 2001). Article by Shalendra D. Sharma – Democracy, Good Governance, and Economic Development examines how good governance and citizen participation can foster economic growth in developing and transitional democracy countries: "good governance is not only the key to the promotion of human rights and protection of civil liberties but also good governance is highly correlated with economic development and the potential to deliver significant improvements in living standards" (Shalendra, 2007).

Thus, good governance is often used as a synonym of efficient, accountable, transparent, and innovative governing that results in high performance of governments and citizens increase trust in governmental institutions, services, and policies. "*Good governance leads to good management, good performance, a good investment of public money, good public behaviour, and good outcomes*" (Juiz, Guerrero, & Lera, 2014).

2.2.3 Lewin's Change Management Theory

Considering that government officials are pioneers in recognizing the advantages of novel solutions and they must govern most reliably and efficiently, every single public institution must be able to keep up with technological advancements. Therefore, the role of key policymakers, managers, and civil servants, in general, is very important. They have to have competence for acknowledging the need for change within the organization they manage, otherwise, they will not be able to deliver a public product - public services that have to be relevant to contemporary processes. Due to the rapid social, economic, and technological changes, it is crucial for organisations (whether they are public or private ones) to manage and keep up with the new phase of developments and challenges. However, considering that some organisations (especially public ones) are very traditional and exercise old-fashioned approaches, they are not change-flexible. However, it is noteworthy that change is inevitable for any organisation. They are considering that every single of them consist of people, therefore elements which are always changeable/transformable. Thus, not-recognition of this phenomenon leads to deterioration of the organisation's function; whereas of the opposite occurs, top-management tends to become flexible to change, and they start using theoretical approaches. Lewin's Change Management Theory is one of the most widely-used among scholars and those who are in management either in the public or private sector.

Regarding the development of the theory itself: "the planned approach to change was initiated in 1946 by Lewin who was a theorist, researcher and practitioner in interpersonal, group, intergroup, and community relationships. Lewin proposed that before the change and new behaviour can be adopted successfully, the previous behaviour has to be discarded" (Todnem, 2005). The respected theory stands on a three-step model: "1) unfreezing – for Lewin, human behaviour was based on a quasistationary equilibrium supported by a complex field of forces. Before old behaviour can be discarded (unlearnt) and new behaviour successfully adopted, the equilibrium needs to be destabilised (unfrozen); 2) moving. Unfreezing is not an end in itself; it creates motivation to learn but does not necessarily control or predict the direction. It is necessary to take into account all the forces at work and identify and evaluate, iteratively, the available options. This Action Research-based learning approach enables groups and individuals to move to a more acceptable set of behaviours; 3) refreezing. This seeks to stabilise the group at a new quasi-stationary equilibrium to ensure that the new behaviours are relatively safe from regression. The new behaviour must be, to some degree, congruent with the rest of the behaviour, personality and environment of the learner or it will simply lead to a new round of disconfirmation" (Burnes, 2004).

After the introduction of the respected theory, Lewin was praised by scientists. Despite his popularity among academics and practitioners, lately, his theory was criticised by researchers due to its simplicity, considering that the three-step model is linear in character and when it comes to behavioural science and change management, scientists nowadays give preference to more complex theories. However, despite the criticism, even the more complex theories stem from Lewin's three-step model. And many researchers refer him per followed by the example of Edgar Schein's comment: "there is little question that the intellectual father of contemporary theories of applied behavioural science, action research and planned change is Kurt Lewin. His seminal work on leadership style and the experiments on planned change which took place in World War II to change consumer behaviour launched a whole generation of research in group dynamics and the implementation of change programs" (Schein, 2009).

2.2.4 Technology Acceptance Model

Introducing information system in those countries which have weak technological capabilities, is related to the number of complications. Considering that the government as an e-service provider has to take citizens'/businesses' needs and requirements into account, it should also understand the ecosystem where it is bringing the new solution. Thus, the success of a one-stop-shop government or any other separate e-service depends on end-users readiness and willingness to use such a service. This

is why the below model has to be taken into account to understand how the quality and relevance of the respected system/novel solution are in correlation with the end-users ability and readiness to adopt such a system.

Developing the Technology Acceptance Model is related to the need for understanding information system use; therefore, user satisfaction emerged in the late 1980s. Thus, researchers proposed models for measuring it. However, using respected existing models were not sufficient to understand users' behaviour. Whether consumers use information system or not, defines how accomplished the system itself is. Thus, they are in correlation. "Whether the system is regarded as good or bad depends on how the user feels about the system. Especially if the users do not rely on the system and its information, their behaviour toward the system could be negative. Success is not necessarily dependent on the technical quality of the system. Using the system is connected with the effectiveness of the system - systems that users regard as useless cannot be effective. Therefore it is important to find out the reasons why people decide to use or not to use the information system" (Pikkarainen, Pikkarainen, & Karjaluoto, 2004). Importance of developing a relevant model that would explain what variables or stimuli determine the usage of information systems was significant, considering that information systems do bring benefits to all sectors where they are being adopted. Those advantages include cutting costs, increase efficiency, better service provision...etc. Thus, the "technology acceptance model (TAM) was proposed by Davis in 1986 in his doctoral thesis. Since then, it has been tested and extended by many researchers. Overall, TAM was empirically proven successful in predicting about 40% of a system's use" (Legris, Ingham, & Collerette, 2001). Ever since it was introduced by Fred Davis, the TAM model became widely-used, it was referred to as one of the most reliable and comprehensive models. "Originated in the psychological theory of reasoned action and theory of planned behaviour, TAM has evolved to become a key model in understanding predictors of human behaviour toward potential acceptance or rejection of the technology" (Marangunic & Granic, 2013).

When it comes to the essence of the Technology Acceptance Model itself, it is built on two major concepts, which appear to be two determinist factors of using information systems: "1) perceived usefulness (PU); 2) ease of use (PEU). ...usefulness is defined as the degree to which the person believed that using a particular system would enhance his or her job performance. It relates to job effectiveness, productivity (time-saving), and the relative importance of the system to one's job. On the other hand, perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort, in terms of physical and mental effort as well as ease of learning" (Yang & Yoo, 2004). TAM is still relevant and one of the most used models, although

recently many researchers have been criticizing it, as they are praising complex models. However, considering that social behaviour has a crucial role in terms of consumer decision-making, for both sectors: public and private one, examining what determines their behaviour – accepting/not accepting the information system is very useful; therefore Technology Acceptance Model has not lost its relevance.

2.2.5 Diffusion of Innovations Theory

Innovation dissemination is a time-tested process where every single user plays a crucial role. Involvement in those processes is largely related to the behaviour of the users. When it comes to public e-services and their use, the drive-force of such services are citizens. Therefore, the reluctance of participating in using such service can be considered as a main potential pitfall. Thus, considering that a solution for improving the pre-school registration process in the Republic of Georgia involves usage of a citizen's portal, it is very important to understand how parents will be able to use such a novel solution. The success of it is largely dependent on the end-users of the respected e-service. Human factors have to be taken into account, especially in regard to user-engagement, as noted, "... the term participation to refer to the behavioural engagement of users in information system development activities and the term "involvement" to refer to the psychological engagement of users with the resultant information system product of that development Process" (Lyytinen & Damsgaard, 2017). Also considering that the human factor is about their behavioural stimuli that users need to overcome the reluctance of engaging with novel solutions, the success drive-force of innovation happens to derive from the motivation factors that users have, otherwise the introduction of innovation systems might fail. "Since human motivation is about the satisfaction of needs a psychological state of involvement is a result of the perceived" (Lyytinen & Damsgaard, 2017).

When it comes to the definition of diffusion of innovation itself, several researchers have contributed to it. However, "the original work belongs to E.M. Rogers, who developed the respected theory and explains it as a process, namely: "... by which an innovation is communicated through certain channels over time among the members of the social system. A typical model consists of sequential adoption and implementation stages. These stages help predict innovation of diffusion over time and space" (Lyytinen & Damsgaard, 2017). Thus, when it comes to analysing the potential dissemination of innovation, not only the given time but also the past has to be considered along with the cultural characteristics of the particular country. Therefore, it is also more than transforming current practices – first of all, it is about analysing past practices, their advantages and disadvantages. As noted, "Diffusion also requires that innovation be compatible with the values, beliefs, history, and current

needs of the adopters. As Rogers notes, "The innovation may be 'new wine,' but it is poured into 'old bottles' (the clients' existing perceptions)" (Dingfelder & Mandell, 2010). Thus, understanding the social system where certain innovative solutions have to be carried out is the key to successful implementation. And the drive-force of such systems is the society itself and their way of communication with the government also has a significant role considering that the terms "diffusion" itself is about the dissemination of innovation, therefore, in this process human factor and the way humans communicate and share information does matter, otherwise the process might be locked in silos.

3. Methodology

The below chapter aims to describe how the given research was carried out. Namely, which approach was used for designing the research, how primary and secondary data were collected and analysed.

3.1 Research Design and Approach

To investigate the above-given research questions, considering the holistic and more socio-political character of the matter, for the research design, the qualitative method was chosen. "*Term qualitative research stands as a multi-method tool of choice for exploring, understanding and evaluating new phenomenon through empirical and interpretive analysis of its representations*" (Mohajan, 2018). Thus, due to the reason that current pre-school registration processes were investigated in terms of understanding the existing practices and in relation to examining the new-phenomenon (proposed solution), the use of the qualitative method is the most relevant for the given research. Also, considering that case studies are often chosen for a comprehensive analysis of the phenomena (whether it is an individual, organisation, or society), the exploratory case study was conducted. As noted, "*A case study is appropriate when "a 'how' or 'why' question is being asked about a contemporary set of events, over which the investigator has little or no control. A case contributes to our knowledge of the individual, group, organisational, social, political, and related phenomena"* (Yin, 2014).

3.2 Collection of Data

To receive insight information regarding citizen-s e-portal and pre-school school registration process, heads of identified four stakeholders were interviewed through the use of the semi-structured in-depth interviews (two of them conducted in person and two-online, around forty minutes each): 1) in case of paper-based pre-school registration: Head of Kindergarten of the Village Vaka; 2) Head of Kindergarten Union of that particular municipality; 3) in case of existing online registration: Deputy-Head of the Tbilisi Kindergarten Management Agency; 4) as for the citizens' portal: Former Chairman of Data Exchange Agency of Georgia (DEA). Also, due to the reason that parents are one of the core stakeholders in this process, in addition to four in-depth interviews, an online survey was conducted to examine above existing situation related with pre-school registration and parents' readiness to use online registration, namely the proposed solution where citizen's portal plays a significant role. As a result of the survey, in total, 111 respondents filled the questionnaire which consisted of ten questions.

When it comes to the secondary data, the following steps have been carried out: online search engine Google Scholar and online catalogue Ester were used for finding academic research papers. Keywords such as "e-Governance", "e-Service provision", "citizens' portal", "e-service", "governmental platform", "good governance", "trust in technology", "Georgian citizen's portal" "technology acceptance model", "Symon's content context process framework", "Lewin's change management model", "diffusion of innovations theory" were used. The number of academic articles, research papers, and books was found with the same themes.

Notably, when it comes to academic works that would be applicable for specifically Georgia's case, the only mere number of works were found, therefore, to gather relevant and reliable information, reports published on Georgia's Data Exchange Agency's (DEA) webpage (authority responsible on citizens' platform development in Georgia) were used. Other than that, several papers regarding Georgia's e-Governance journey that are published by international governmental and non-governmental organisations have contributed to the research. Thus, it is a notable, gap that Georgia has in terms of research papers or reports which can be available in either Georgian or English language. Analytical papers that are available regarding the Georgian citizen's e-portal are written with the help/through cooperation with international organisations.

3.3 Analysis of Data

To analyse the primary data, i.e. in-depth interviews conducted with identified stakeholders, the thematic analysis was used (done through the help of qualitative analysis software NVivo), considering the qualitative character of the research design method. Thematic analysis is "*a method for identifying, analysing and reporting patterns (themes) within data*" (Braun & Clarke, 2006). This method consists of six phases which are not linear: "1) familiarising yourself with your data; 2) generating initial codes; 3) searching for themes; 4) reviewing themes; 5) defining and naming themes; 6) producing the report" (Braun & Clarke, 2006). There were no pre-prepared codes identified; instead, open coding was preferred while analysing the results in the system; however, codes and themes were later identified based on research questions. When it comes to the analysis of the questionnaires, to understand how parents evaluate their experience with the current pre-school registration procedures, the online survey was created and distributed (through the use of survey software - www.Surveymonkey.com). Thus, for the analysis collected data by online survey tool (presented in the appendix) has been taken into account to identify critical patterns based on each research question.

4. Results from Research

The research aims to examine what are the existing factors that make public service provision – preschool registration in the Republic of Georgia, inefficient, and what are the strong sides that should be kept and taken into account. Per the information obtained through the primary and secondary data, it is relevant to state that political culture as such, also trust in government and technology, citizens' ITliteracy level, IT infrastructure, socio-economic background in the country in general, play a significant role on how the public institutions deliver services/e-services and how ready citizens are for using them. Thus, to investigate how above-mentioned factors determine the existing form and quality of the pre-school registration as a public service and whether the proposed solution would work or not, four interviews with involved stakeholders were conducted and analysed along with the online survey.

4.1 **Results from Interviews**

The results of the conducted interviews present an analysis of information provided by interviewees. Based on the interviews with the identified stakeholders, thematic analysis has been done. Several codes were identified using NVivo which were categorized into themes (as presented in Appendix 2). The main identified themes and codes are presented below:

Existing Challenges			Attitude towards the Proposed Solution
Government-related	Kindergarten management-related	Citizen-related	
Issues	Issues	Issues	
Public officials with	Bureaucracy	IT literacy	Transparent process
the post-soviet mindset Issue of trust Duplicated System	Lack of IT infrastructure The only physical channel of communication	Cultural challenge Socio- economic background	Convenient for parents Cost-savvy for government Time-efficient

Figure 1. Key Themes and Codes from Interviews

Existing challenges

In the case of both forms of current registration, one of the main themes is regarding existing challenges. Each interviewee gave insights about what are the core existing issues which have roots in three major hurdles: government-related issues, citizen-related issues, kindergarten management-related issues.

The government-related issues stem from the following factors: public officials with a post-soviet mindset, lack of trust from citizens, and duplicated systems.

Public officials with post-soviet mindset - it is apparent (especially from the interview conducted with the Former Chairman of DEA) that the first and foremost, the government institutions themselves do have a hard time realizing that none of the public services they develop belongs to them personally. *"Public officials in state organizations think that they lose political weight if some of the organization's power will be delegated to the other state institution. Some public managers are like local feudal lords, they take public services as their belonging instead of the state property. They are used to working this way, and when reforms take place and their power is delegated to some other authorities, they are against those policies, because they are afraid of losing their political weight. It is very difficult to change their mindset." Thus, in case there is a need of one of the functions of the particular public organization to be delegated to the other one, the conflict of powers arise, which becomes a hindrance in terms of e-service development and provision (considering that there is a lack of centralized policies and adopting the innovative approached is left on the goodwill of the governmental institutions). Thus, it is vivid that the post-soviet legacy – mindset still plays a crucial role for public sector managers while setting policies and making decisions.*

The issue of trust in government tends to be a significant hindrance regarding citizens' readiness to use novel solutions. One of the demonstrative examples presents information that the Head of the local kindergarten told about how parents often question the transparency of the registration process, as they often think it is a matter of bribes to get a place in the kindergarten. One of the cultural characteristics that Georgians as a small society have is that social circles that exist in the forms of relatives, neighbours, etc. do influence each other, and nepotism is widely used practice even nowadays. As noted by the Head of the Kindergarten of the Village Vaka, *"Trust issue in us as a public institute is very apparent. In case a kid does not get a place, parents often doubt that somebody else's (from management staff) relative was given a privilege."*

Duplicated system – in the Republic of Georgia there are both: online and physical one-stop-shop environments where citizens can receive a public service. However, considering that Georgian people tend to have more trust in humans than technology, they prefer to use physical one – Public Service Hall, where they can be assisted by staff. Thus, the country is spending recourses for building both systems and as a result of having a physical alternative, citizens lack motivation to use an online one-stop-shop environment. As noted by the Former Chairman of DEA, "We need to focus on developing electronic services. Let's say you as a citizen need to use public services, you know that it is available on www.my.gov.ge, but you still need something additional-certain stimuli to choose it over the physical alternative. Human beings do not like to leave the usual environment – their comfort zone. If you offer alternative or more comfortable services in an environment that is familiar to him, of course, he prefers it and does not bother himself to use online solutions."

When it comes to the kindergarten management-related issues the following have been identified:

Bureaucracy is one of the main issues which has been identified in the current pre-school registration procedure. Due to the reason that communication between the Kindergarten Union and kindergartens' management is performed through an in-person approach, recourses spent on the respected process are inefficient. For instance, per the interview with the Manager of the Kindergarten of Village Vaka, the procedure after parents submit the documents goes as followed: "*The Kindergarten Union issues and sends an order to start the registration. The list of required documents also is defined by them. I collect kids' documents here, take them to the Kindergarten Union. They verify information, create study groups and the Head of the Kindergarten union then issues an order on how many children should be enrolled in my kindergarten and sends a list of the kids for that particular year."*

Lack of IT infrastructure – in the Republic of Georgia IT infrastructure provision is an issue not only for villages but also in towns as well. As a result of lack of it and other technological recourses that are required for kindergartens to have the Internet and use it for administrative and communication purposes, the only way kindergarten management can communicate with the Kindergarten Union is through the physical channel. Per the interview with the Head of the Kindergarten Union of the Municipality of Khashuri, "For online registration to be carried out in the kindergarten, there must be Internet in every kindergarten for you, which is not yet provided in those kindergartens that run under our administration. Not all villages have the Internet, solely the towns have this luxury. Until IT infrastructure is put in place, it will be impossible to think about something online."

The only physical channel of Communication – as stated above as well, due to lack of IT infrastructure and other required technological recourses, the only way kindergartens in towns and

villages communicate with parents and the Kindergarten Union, is through the physical channel. Thus, it requires extra effort from all the stakeholders to reach out to each other and manage the registration process seamlessly. Per the interview with the Head of the Kindergarten of the Village Vaka, "Due to the reason that we do not have Internet, I manage the registration process and another administrative process through the paper-based solution. Also, when I need to communicate with the Kindergarten Union for example for submitting documents, I go in the town physically – we do not exchange information electronically."

In the case of the **citizen-related issues**, the following hindrances have been identified:

Citizens' current use of technology - namely, parents in cities is more prone to use social media channels for communicating with kindergarten management, rather than other official available online channels. Based on the interview with the Deputy Head of the Kindergarten Management Agency of Tbilisi, it is credible to conclude that one of the major factors that define Georgian citizens' level of technology readiness and literacy, is in their social-economic background. As noted: "Due to multiple complaints from parents, for 2019-2020 academic year, we had to demonstrate to journalists how the registration process happens technically. Quite often there are problems with citizens' network, with their Internet provider, suppose either the Internet is down or they have another technology-related failure, and we are blamed for the interruption in the registration process. Thus, we had to prove that it was not caused by us. Also, many socially vulnerable families do not have a personal computer and the Internet, this is why we have a help-desk where those families can use our service." Considering that in the capital there is solely online registration, help from staff members of the Agency is very important for parents who have difficulties with understanding online registration procedures and/or do not have personal computers/other relevant devices for registering their kid. Also, they do like to consult with the Agency staff and use all means of channels for that, the most popular among them is the social media platform - Facebook page of the Agency. Thus, they still need reassurance from the official site that they are following procedures correctly, and in case of mistakes/difficulty, they need to know there is a helpdesk available. Besides, there is a support/helpdesk area in the Agency; thus parents also go there for consulting, which tells a lot about parents' preference to take traditional in-person communication approach with the civil servants, rather than them being motivated to interact with the technology and figure out the solution themselves.

Socio-economic background - based on the interview that was conducted with the Head of Kindergarten Union of the Municipality of Khashuri, it is evident that one of the major hindrances in

terms of using e-services in Georgia stems from the social-economic and digital-divide that exists between the capital/cities and regions/municipalities. For instance, sometimes it is difficult for them to explain to parents even the necessary procedures due to their literacy in general. "Online registration whether it is through the citizen's portal or other means, would be very novel and I welcome it. However, I am not sure how citizens will be able to use it considering that we have many socially vulnerable families, their socio-economic background is reflected on their use of technology as well and I think would be a barrier in regions." Thus, again we encounter the need for social-economic pre-requisites that are required for using e-services, otherwise, the implemented e-services will not be beneficial for users, therefore neither for other involved stakeholders.

Cultural challenge – due to the post-soviet legacy, socio-economic background, and traditional mindset, citizens tend to be less open to changes, therefore, novel solutions as well. Based on the interview with the Former Chairman of DEA, when it comes to state policies, in the Georgian context, real improvements are made when the state takes a more rough approach, rather than when it leaves an alternative way for citizens. For example, if they have will be fined for not performing certain obligations, they tend to have more motivation to be open to innovations introduced by the government.

As the second theme - attitude towards the proposed solution, the following coded have been identified: 1) transparent process - interviewees expressed a positive attitude towards the fact that through an automated solution, the registration process becomes more transparent, therefore parents will not have doubts in this regard. As noted by the Former Chairman of DEA, "I think that citizen's portal can be linked to the kids' pre-school registration. There will be definitely some issues to be solved in advance but in case there is a unified state policy, then technological and legal barriers will be resolved. An automated process would make registration more convenient for citizens, and I believe it would become more transparent as well." 2) Convenient for parents - it will be easier for parents to go through the process, the only environment they will need to visit is the citizens' portal, which is time-efficient for them. 3) Cost-savvy for government – due to the two existing forms of the registration neither human nor physical or technological recourse is spent efficiently. The administration of kindergartens in towns and villages is paper-based. 4) Time-efficient – kindergarten management will save their time, considering that they will no longer need to communicate with other state authorities or parents through physical channels. As noted by the Head of Kindergarten Union of the Municipality of Khashuri: "It will be positive for both: for carrying out our administrative activities and from parents' perspective as well. Registration would become much easier because
through the citizen's portal it would be more convenient for parents to register their kid. Also, it would be convenient for us because the exact number of acceptable kids will be pre-determined, therefore, the process is sorted and simplified in advance."

4.2. Results from Questionnaires

The target group consisted of parents who have experience in registering the kid in the public kindergarten in the Republic of Georgia. In total, 111 responses to the survey were recorded.

Based on the received responses, the key findings are per the following:

More than half of the respondents (52.25%) registered their kid online and a significant number of them (68.47%) had a positive experience while 31.53% were not able to register their kid first time.

The main source of information regarding the registering procedure remains to be the kindergarten administration (37.84% of respondents), also they receive information from the TV and social media (35.14%); and the least percentage -27.03% from the relatives, friends, neighbours.

When it comes to challenges for parents for registering their kid the 27.93% responded that their challenge is to collect required documents; while for 18.92% significant difficulty is to fill the online form, and 18.02% indicated a lack of information regarding registration as a challenge.



Figure 2. Answers to the Survey Question about the Barriers of the Registration

Regarding the most positive aspect of kid's registration in the kindergarten, the most repeated answers were related to 1) a nice attitude from kindergarten staff; and 2) a seamless online registration.

When communicating with the kindergarten administration, the majority of respondents (86.49%) prefer to visit the kindergarten physically; 7.21% prefer email; and 6.31% - social media.

The majority of respondents (56.76%) have heard about the citizen's portal www. my.gov.ge but have not used any of the available services; 27.03% have used services provided through the citizen's portal, and 16.22% of the respondents have not heard about it at all.



Figure 3. Answers to the Survey Question about the Citizen Portal

5. Discussion and Answering the Research Questions

There are some social, political, economic, cultural, and technology-related factors that influence public service provision quality in the Republic of Georgia, especially when it is a matter of novel solutions - e-services. Thus, the success of innovative solutions lays in considering old practices as well. As the Diffusion of Innovations Theory suggests: "Diffusion also requires that innovation be compatible with the values, beliefs, history, and current needs of the adopters. As Rogers notes, "The innovation may be 'new wine,' but it is poured into 'old bottles' (the clients' existing perceptions)" (Dingfelder & Mandell, 2010). Also, as noted by Symon's Context, Content, Process Model, the context of the country matters when holistically evaluating social phenomenon. Namely, it is evident that of developing countries, especially those with a post-soviet legacy have many democracy related issues that lead to a lack of trust in government. Other than this, one of the significant reasons that harden e-service provision is that there are duplicate systems, thus considering that Georgian citizens do not have long-tradition and experience with using technology, they lack stimuli to go out of their comfort zone and use e-services instead of their physical alternative. Based on the survey results and interview findings, it is evident that Georgian citizens are more familiar with paper-based solutions, therefore, they often prefer physical channels of communication to public authorities over an online one. As noted by the TAM model, end-users do have a major role whether certain novelty will be adopted or not. They have to have stimuli for using the new system, however, it is also very important for e-service to be user-friendly. Due to the Georgian people's mindset and based on successful examples of reforms, it is credible to say that for the Georgian context more centralized framework of public service provision and harsh approaches lead to actual positive results. As emphasised by Lewin's Change Management Theory, managers are core change-makers. Thus, the role of the public policy-makers is enormous considering that they are pioneers of recognizing the advantages of innovation and they have the authority to introduce and implement e-services. Therefore, raising awareness in this regard, mainly about the benefits that citizens can receive in case of using novel solutions is crucial for the readiness of using such e-services in Georgia. Based on the research the answers for the research questions were formed and are presented below.

RQ 1: How Georgia's socio-political and cultural context influences technology acceptance and eservices provision?

The social system of the developing countries which have the only couple of decades of independent governing is fragile. Therefore, introducing both: e-services and traditional ones, are always under the testing regime and often under the risk of failing, considering that society which is a drive-force of any

socio-political process, might not be ready for adapting to changes. Besides, developing countries do not have technological and economic capabilities for coping with potential challenges that arise along with novel solutions. However, considering that despite soviet-legacy the Republic of Georgia made significant steps towards consolidating democracy and strengthening the economy, there are many success stories in terms of e-Governance implementation, therefore about e-service provision as well. However, due to the mentioned background that the country has, society has demonstrated reluctance of switching from paper-based to online solutions. At the same time, it is notable that developing countries have less "luxury" to take their phase for changes considering that in the technology-driven era, is it crucial for them to keep up with rapid developments. This is why politicians in Georgia often take a more direct and harsh style to "push" the society. Thus, the cultural context of the country a great negative influence on e-service provision. Therefore, government officials need to consider it when designing, introducing, and implementing such services.

RQ 2: How efficient the existing procedure of pre-school registration is?

The current process for pre-school registration is only partly effective. At first glance, it might be considered that existing practices are efficient due to the following circumstances: 1) in the case of the paper-based registration despite the communication hurdles, kindergarten staff manages to reach the parents; 2) in case of online registration, parents do not have to physically approach kindergarten during the first phase of registration. However, after a more detailed examination of each form of registration, several issues were identified concerning each involved stakeholder:

Parents – in case of the paper-based registration they have to physically approach kindergarten, submit and sometimes re-submit documents, and again they have to in-person go to the kindergarten to find out about the registration status which tends to be an inconvenient process as it takes lots of time. When it comes to online registration, parents encounter technology skillset related problems during filling the online forms. Also, when proceeding to the second phase, they have to physically approach the kindergarten. Besides, there is another, infrastructure-related issue – lack of available places.

Kindergarten and Kindergarten Unions – the main issue arises from the fact that they go through the bureaucratic process to manage both a paper-based registration process. Besides, communication between the kindergarten managers and Kindergarten Union is never online, which leads to inefficient consumption of human and technical recourse.

Government – the core issue is that there is no single policy in terms of pre-school registration. Therefore, there is no unified form of kids' databases (some kindergartens have online, some on papers). Each municipality decides itself on how to govern the registration process, which often causes confusion and complaints in society. The main obstacle is the inefficient spending of the existing recourses.

RQ 3: How can a citizen's portal become beneficial for pre-school registration in the Republic of Georgia?

First of all, using the one single website which is the same for every parent despite their location, will make the process a lot seamless for citizens, considering that they do not have to address kindergarten physically, thus it will save their time. However, the main benefit that it will bring is about changing the whole process itself which is related to the administrative rearrangement, considering that through the one-stop-shop principle number of government authorities can communicate and exchange information without citizens' extra involvement. Plus, the government will have kids' online databases - a more secure and transparent way of keeping records, process more trusted by citizens. Using citizen's portal for this process will save all the required costs that the government is currently spending on the existing two forms of pre-school registration.

6. Recommendations and Proposed Solution

This chapter aims to display the As-Is model and To-Be model of the pre-school registration and present recommendations based on the research findings.

6.1 As-Is and To-Be

The below model presents the current pre-school registration (paper-based form) in the Republic of Georgia. It demonstrates how key stakeholders: parents, kindergarten management, kindergarten union, and its management are involved in the process. Thus, the first step that parents take is as followed: they physically approach the kindergarten management and submit necessary documents in the same form. After receiving the request, kindergarten management examines the accuracy of the presented documents. In case documents are not complete or not valid, they call to parents via phone or of necessary physically visit them to notify regarding the issue. When the case is opposite submitted documents are all in order, kindergarten management physically approaches and brings documents/requests to the kindergarten union of the given municipality. The staff of the kindergarten union is responsible for checking the validity of documents and the availability of a place. Then they send a report (physically submitting it) to the Head of the Kindergarten Union for the final approval. Once the Head of the Kindergarten Union decides to approve she/he sends order regarding positive decision back to own staff members, who at their part are responsible for notifying to the kindergarten management regarding the approval (they contact the manager of the kindergarten via phone-call for arriving in their office). As for the next step, the kindergarten manager physically approaches the Kindergarten Union for receiving the report. Finally, the kindergarten staff member notifies to the parent (there are cases when they physically visit the parent) regarding the positive status of the kid's registration.



Figure 4. As-Is Model

The below model presents the proposed solution for improving pre-school registration in the Republic of Georgia. It shows how seamless the process can become for both: governmental institutions and parents.

The respected process would change as followed: as for the first step, parents register their kid through the registration form available on the citizen's portal www.my.gov.ge. They will be able to submit all the required documents via the same portal. Once the request is received, the citizen's portal will be responsible to send a request to the relevant Kindergarten Union which is responsible for checking and validating the documents (they have online access to information that various state authorities share). In case the submitted documents are not complete or require correction, the Kindergarten Union through the channel of citizen's portal sends a notification to the parent via email. In those cases when all the documents submitted online are in order, the Kindergarten Union authorizes the request and notifies all involved stakeholders: 1) issues notice for the citizen's portal in order them to notify (via email) the parent regarding the successful registration of the kid; 2) via online channel sends the authorized request to the kindergarten, therefore, they have information on the registered kid.

Based on the above description of the new pre-school registration process, it is notable that one of the most significant advantages is related to how all involved stakeholders benefit, namely: 1) parents they will no longer need to approach kindergarten in person, whether it is regarding the submission of documents or finding out the application status. Thus, one of the life-events which their kid's preschool registration presents will become convenient, time and cost-savvy (taking into account that they only interact with the online environment, they do not have to make copies of documents and bring them to the kindergarten); 2) service providers: kindergarten and Kindergarten Unions - they will spend fewer recourses due to the reason that the suggested process decreases bureaucratic burdens, therefore, the staff of the respected organizations will use time efficiently on other matters. Besides, their communication with each other and to other government authorities becomes online, thus communication hindrance will also be solved. Besides, automated pre-school registration is a more transparent process, therefore, it will increase citizens' trust towards the respected service providers. As for the citizen's portal, the major benefit from the suggested model is that it will acquire more users, therefore gain popularity among citizens, which can also lead to using other e-services that the respected e-portal provides. Thus, automated pre-school registration will have a positive effect on the overall improvement of www.my.gov.ge.



Figure 5. To-Be Model

6.1 Recommendations

Based on the research results and in addition to the suggested To-Be model, some recommendations can be drawn which are noteworthy for improving the existing pre-school registration process in the Republic of Georgia. Thus, this chapter aims to present the proposed solution as well as limitations and pre-requisites that are required for its implementation.

The Proposed Solution

To make the pre-school registration process convenient, transparent, and cost-savvy, the Georgian citizen's portal has to be linked to the process. Thus, end-users/parents will interact solely with the online environment. They will be able to apply, check the status, and receive the final answer online, without a need to physically approach the kindergarten itself. As for the government side, the process becomes seamless, considering that less bureaucratic steps are required and that leads to better management of kindergartens as well. The automated process will require fewer recourses – time, human capital, paper...etc. Thus it will make the pre-school registration process more efficient for all the involved stakeholders.

Limitations

There is no single state policy regarding pre-school registration: there are two different forms (online and paper-based) of the registration based on location which leads to citizens' dissatisfaction and confusion about the process.

The current paper-based process of registration is more bureaucratic due to the number of stakeholders involved and their way of communication. Therefore, it is negatively reflected in the resources that the government spends on such public service provision.

Citizens often complain about the registration process which stems from their confusion regarding the registration process: submission of required documents physically, interaction with the online system and their IT literacy level is among the main issues.

Pre-requisites

Legal – due to the reason that kindergartens are under the administration of local governments, there is no single state policy that would define exact procedures and timelines regarding the pre-school registration. Thus, for the proposed solution to be implemented, there is a need to amend legislation

for delegating the powers to the relevant authorities. Also, the law about all kindergarten databases to be presented in electronic form has to be established.

Technological – considering that the citizen's portal is not yet linked to the pre-school registration, there is no relevant database linked to it. Thus, the exchange of information concerning the required list of documents should be ensured by relevant state authorities. Therefore, there is a need for state policy in terms of providing the required IT infrastructure to kindergartens to be able to have an online database and to switch from paper-based to online management. The latter leads to developing an IT literacy skillset for kindergarten staff so that they will be able to exchange information with other public authorities electronically and help socially vulnerable families to register their kid online. The Development of IT infrastructure, is crucial from the citizens' perspective as well, considering that there are many villages in Georgia where still there is no IT infrastructure provided.

Citizen-related – due to cultural and socio-political background, Georgian citizens tend to be less open to innovation. Thus, raising awareness about the benefits that online pre-school registration would have is significant. Therefore, relevant marketing campaigns have to be carried out.

7. Conclusion

Successful e-service provision requires multiple pre-requisites to be fulfilled. Thus, government officials should take several factors into account before designing and delivering such services. Considering that the Republic of Georgia is a post-soviet country, cultural and political contexts have an impact on society's mindset and those aspects do also influence how e-services are being adopted/used by people. Political culture, existing trust level in government and technology, and socioeconomic background in general, subsequently determine the level of readiness required for e-service adoption. When it comes to the efficiency of the research focus - the existing pre-school registration process, based on primary data collected from all the involved stakeholders, it is notable, that many of the parents experienced only insignificant hurdles in the process, but some of them have had difficulties while using the respected public service (in both cases: whether they used online or paper-based registration). More inefficiency is evident within the public organizations' work considering that traditional paper-based processes are recourse-consuming. Considering that one of the major goals of e-governance is to make public service provision more efficient and beneficial, existing recourses should be spent more wisely by the government. Thus, taking into account that Georgian citizen's portal has already been developed, therefore, online channel of public service provision in a single ecosystem already exists, government should encourage citizens to use online services that are available on www.my.gov.ge. Raising awareness on the benefits that online one-stop-shop environment provides is critical. Nowadays, the physical alternative of the citizen's portal is more popular, considering that people do prefer staff assistance in Public Service Hall. However, due to the reason that for e-Governance development in the Republic of Georgia citizens' readiness for using online one-stop-shop environment is very important, the government should provide more stimuli for citizens to choose favour of www.my.gov.ge. Therefore, adding more automated services will increase the use and popularity of the public services that a citizen's portal can provide. Thus, more frequently citizens use the available e-services, more familiar they become with technology, which will lead to an increased level of trust in Georgian government. Using advantages that an online one-stop-shop environment can offer, will have a significant impact on seamless public e-service provision. Namely, linking pre-school registration to the citizen's portal will make the process more transparent, efficient, and convenient. Thus, all the involved stakeholders will benefit from such e-service delivery quality.

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Appendix 1 – Interview Questions

Interview Questions to the Former Chairman of the Data Exchange Agency of Georgia

- 1. Which form of authorisation is preferred by users for logging to the citizen's portal www.my.gov.ge?
- 2. How did the number of users change after the authorisation method login through account and password was added?
- 3. Which e-services are more often used by citizens?
- 4. Which of the marketing campaigns were conducted to raise awareness regarding citizen's portal and available e-services; which of them was more effective?
- 5. What do you think, what are the main barriers for citizens and corporate users as well for using citizen's portal, and why?
- 6. Based on the Georgian context, what do you think, what kind of pre-requisites should be fulfilled in order citizens and the business sector to use e-services available on the portal more often?
- 7. Based on feedback that users leave, please comment on what are strong sides of the citizen's portal and what requires improvement?
- 8. To add pre-school registration e-service to the portal, please comment on what kind of legislative, organisational, technical barriers should be overcome.

Interview Questions to the Deputy-Head of the Kindergarten Management Agency of Tbilisi

- 1. How many kindergartens and kids are registered within the scope of Tbilisi?
- 2. Through which information channels are parents provided with information regarding online registration?
- 3. What kind of marketing campaigns has been conducted to raise awareness regarding online registration?
- 4. After introducing online registration, have you provided a video or other forms of instruction for parents?
- 5. What do you think, what are the main barriers for parents for online registration?
- 6. Are parents able to leave feedback (both: negative and positive) regarding online registration?
- 7. Considering that online registration has two phases, how do you distinguish which kid belongs to which group?
- 8. Based on your experience, please comment on what kind of organizational difficulties the Agency has faced during the online registration process?
- 9. After parents submit all documents to kindergartens, in which form do you communicate with the kindergarten management?
- 10. If the online registration was linked to the citizen's portal www.my.gov.ge, what do you think, how would that affect Agency's workflow, and would that make it easier/more difficult for parents to register their kid online?

Interview Questions to the Head of the Kindergarten Union of Khashuri Municipality

- 1. Please, introduce the internal organisational structure.
- 2. When it comes to external partners, please describe to whom you have obligation to present the report, and which organisations you interact with?
- 3. How many kindergartens run under the supervision of the Kindergarten Union?
- 4. Please, describe the registration process.
- 5. Once you have all the necessary data provided, then how you work with them? What kind of tools do you use to analyse, organise, and store the data?
- 6. How would you evaluate the process itself? What are the internal and external challenges your organisation faces in this regard?
- 7. Is it planned to change the process of registration? If yes, please elaborate on how it will be changed?
- 8. Based on your experience, which forms of registration online or paper-based is more relevant for municipalities?
- 9. How would your workflow change if you do not have to deal with pre-school registration at all?
- 10. Based on your experience how would you evaluate parents' readiness to use online pre-school registration?

Interview Questions to the Head of the Local Kindergarten (Village Vaka)

- 1. Please, describe the organisational structure of the kindergarten.
- 2. How many kids are registered in your kindergarten at this moment?
- 3. Please describe the process of kid's registration what procedure do parents go through?
- 4. Please, describe the registration process from an internal organisational perspective including your interaction with the Kindergarten Union.
- 5. Based on your experience in these positions, how would you evaluate the registration process? Please, name both: strong and challenging aspects.
- 6. What are the core challenges or positives sides you face while interacting with parents?
- 7. Once parents submit documents, how do you deal with the given data, what are the technological/manual tools you use?
- 8. Would you consider that staff distribution is relevant to the workflow you deal with or you would make an amendment?
- 9. From your perspective, considering that you interact with parents and know them and how they deal with their kid's registration process would you consider that online registration would work in municipalities? Please, elaborate/give reasons in case of both answers.
- 10. Would you consider it more useful and efficient if the process changes in a way that parents do online registration with the help of kindergarten staff members?

Appendix 2 – NVivo Map



Appendix 3 – Survey Results











