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“The impact of ICT investments and policy issues on economic development in the public and private sector in Kosovo”

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Abstract

The role and the impact of the information and communication technologies (ICT) in the development of the countries, regions and the whole globe is huge is, especially in the aspect of borderless communication, the production as well the knowledge management. However, it is still a challenge to assess how much ICT has contributed to economic growth at the country as well as the global level, however technology plays a very important role in different ways to change people life. Taking into consideration the fact that because of technology people are connected all the time to each other, the way of selling and promoting products became easier according to technology tools. Finally, being informed for different prices and products just with one click has made it even easier for the customer being nearer their products and prices.

This thesis tends to present the state of economic development of public and private enterprises before and after the introduction of information technology. Also, this thesis presents the impact that the new information technologies have on state institutions, with the concrete cases of mobile telephony IPKO and VALA and their development impact on economic units, within the scope of the Ministry of Economy, in Republic of Kosovo.

As it is known worldwide, every state that came out of the war, does not prioritize investments in information technology, but the focus of the state in this case are investments in the most necessary areas that bring basic welfare to the population. So, considering that we are living in the 21st century and this century is known as the century of information technology, our state has not been immune to these investments. As part of this, this research field will be based on what policy the Government has pursued to create legislation on information and communication technology, as well as what steps the Government has taken to improve its services through investments in information technology. The establishment and development of two economic operators of communication such as the public company Telekom i Kosovës and the private company IPKO will be analyzed in details in this context.

This research represents the way how the development trend of these economic operators over the years and their strategic planning has been. The main focus of this research will be on the impact of investment in ICT (Information Communication Technology) and on the development

of government services, through the development of Telecom Kosovo and the development of private sector IPKO. Having in mind that the government and public companies plays an important role in the overall state economy, the data analyses of this research shows that the increase of ICT investments in EU institutions has influenced the economic growth within these countries. So, this trend has a great impact and is considered very important in our country as well. The way of offering electronic services as a necessity, is becoming a must fact by Kosovo institutions.

Key words: ICT, economic growth, policy, services....

Abstrakti

Askush tanimë nuk ka dyshime që teknologjia e informimit dhe komunikimit (TIK), ka pasur ndikim të rëndësishëm në pothuajse në të gjitha vendet e botës, sidomos në fushën e komunikimit, punës dhe mësimi. Sidoqoftë, ende konsiderohet sfidues fakti i vlerësimit të ndikimit të TIK dhe kontributit të saj në rritjen ekonomike nëpër shtete e po ashtu edhe në nivel global. Sidoqoftë mund të konsiderohet se teknologjia kanë rol shumë të rëndësishëm në ndryshimin e jetesës njerëzore, duke ndikuar në pothuajse të gjitha aspektet e saj. në mënyra të ndryshme. Duke konsideruar faktin se për shkak të teknologjisë njerëzit janë të lidhur përmes komunikimit tërë kohën, mënyra e të shiturit dhe të promovuarit të produkteve është lehtësuar me përdorimin e mjeteve teknologjike. Përfundimisht, duke qenë të informuar për çmime dhe produkte të ndryshme, për konsumatorët është lehtësuar edhe më shumë marrja e informatave për produkte me vetëm një klikim.

Në këtë tezë prezantohet ndikimi i teknologjisë së informacionit në zhvillimin ekonomik, e në veçanti në sektorin privat dhe publik - para dhe pas përdorimit të sajë. Po ashtu, ky punim shkencor paraqet ndikimin e teknologjisë informative në institucionet shtetërore, rastet konkrete të përfshira të dy njësive ekonomike, me synimin kryesorë në Ministrinë e ekonomisë, në republikën e Kosovës.

E njohur tashmë botërisht, çdo shtet i sapo dalur nga lufta, nuk e konsideron prioritet investimin në teknologjinë informative, mirëpo fokusi i këtyre shteteve qëndron investimi në njësi të tjera të nevojshme që sjellin përfitime të drejtë për drejta tek popullsia shumicë. Kështu që, duke pasur parasysh që po jetojmë në shekullin 21, shekull ky i njohur si epoka e teknologjisë informative, vendi ynë nuk ka mundur të qëndroj larg këtyre investimeve. Duke u bazuar në këtë fakt, ky kërkim shkencorë do të zhvillohet duke u bazuar në politikat që ndjekë qeveria për të formuar legjislacionin e teknologjisë informative, e po ashtu duke studiuar hapat që qeveria ndjekë për të përmirësuar investimet në shërbimet e teknologjisë informative. Formimi dhe zhvillimi i dy sektorëve që ndikojnë në zhvillimin ekonomik të komunikimit si Telekom i Kosovës si njësi shtetërore dhe IPKO si njësi private do të analizohen detajisht në këtë hulumtim.

Ky hulumtim paraqet mënyrën se si trendët e punimeve të këtyre operatorëve ekonomik nëpër vite dhe trendët e planifikimeve të tyre strategjike janë zhvilluar. Fokusi kryesor i këtij hulumtimi do të jetë ndikimi i investimeve në TIK (Teknologjinë Informative dhe komunikuese) për zhvillimin e shërbimeve publike, duke analizuar aspektet e investimit në TIK, në dy entitetet: atë të Tekekomit të Kosovës, si pjesë e sektorit publik dhe zhvillimin në sektorit privat, nëpërmjet kompanisë IPKO. Duke pasur parasysh se qeveria dhe ndërmarjet publike luajnë rol të rëndësishëm në ekonominë e të shtetit, hulumtimet e realizuara dëshmojnë se rritja e investimeve në TIK in institucionet në Bashkimin Europian ka ndikuar në zhvillimin ekonomik të këtyre shteteve. Kështu që, ky trend zhvillimi ka ndikim shumë të madh dhe konsiderohet shumë i rëndësishëm edhe në shtetin tonë gjithashtu. Të ofruarit të shërbimeve elektronike tashmë të konsideruara shumë të nevojshme, po kthehet në një fakt që duhet patjetër investim në institucionet e Kosovës.

Fjalët kyçe: Teknologjia e Informimit dhe Komunikimit, zhvillimi ekonomik, ligjet, shërbimet.....

Апстракт

Никој не се сомнева дека информатичките и комуникациските технологии (ИКТ) имаат значително влијание врз повеќето земји во светот, особено во начините на комуникација, работа и учење. Сепак, сè уште е предизвик да се процени колку ИКТ придонесе за економскиот раст на земјата, како и на глобалното ниво. Технологијата игра многу важна улога на различни начини за промена на животот на луѓето. Исто така, имајќи го предвид фактот дека поради технологијата луѓето имаат можност да се поврзани цело време едни со други, начинот на продажба и промовирање на производи стана полесен според технолошките алатки. Конечно, информирањето за различни цени и производи само со еден клик им го олесни на потрошувачите начинот да бидат уште поблиску до своите производи.

Оваа теза има тенденција да ја претстави состојбата на економскиот развој на јавните и приватните претпријатија пред и по воведувањето на информатичката технологија. Исто така, во оваа теза е претставено влијанието што го имаат петте информациски технологии врз државните институции, конкретни случаи на две економски единици, во рамките на опсегот на Министерството за економија, во Република Косово.

Како што е познато ширум светот, секоја држава што излезе од војната, не дава приоритет на инвестициите во информатичката технологија, но во фокусот на државата во овој случај се инвестициите во најнеопходните области кои носат основна благосостојба на населението. Значи, имајќи предвид дека живееме во 21 век и овој век е познат како век на информатичката технологија, нашата држава не беше имуна на овие инвестиции. Како дел од ова, ова поле на истражување ќе се заснова на тоа каква политика спроведе Владата за создавање законска регулатива за информатичка и комуникациска технологија, како и на какви чекори

презеде за подобрување на своите услуги преку инвестиции во информатичка технологија. Воспоставувањето и развојот на двајца економски оператори за комуникација како јавното претпријатие Телеком и приватната компанија ИПКО детално ќе се анализираат во овој контекст.

Ова истражување го претставува е трендот на развој на овие економски оператори низ годините и нивното стратешко планирање. Главниот фокус на ова истражување ќе биде насочен кон влијанието на инвестициите во ИКТ и врз развојот на владините услуги, преку развој на Телеком Косово и развој на приватниот сектор ИПКО. Имајќи предвид дека владата и јавните претпријатија играат важна улога во целокупната државна економија, анализите на податоците од ова истражување покажуваат дека зголемувањето на ИКТ инвестициите во институциите на ЕУ влијаеше на економскиот раст во овие земји. Значи, овој тренд има големо влијание и се смета за многу важен и кај нас. Начинот на нудење на електронски услуги како неопходност, станува задолжителен факт од косовските институции.

Клучни зборови: ИКТ, економски раст, политика, услуги.

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CHAPTER I: INTRODUCTION

The importance of knowledge and getting easier and faster access to information and technology services has totally changed humans approach toward ongoing everyday life. “Investments in Information and Communication Technologies (ICTs) as the main source through which digital transformation unfolds, creates an opportunity for businesses adaptation of digital tools and contemporary business models that enabled digitalization by investing in computer hardware, software and databases” (Spiezia, 2019, p. 5). The changes on technology, access to information, new products and prices that technology tools offer to people every day, not only affected human development in knowledge but it gave a different way of economic growth and development too. “The recent experiences of the US and some European countries show that ICT investment promotes economic growth and labor productivity” (Martinez, 2007, p. 2).

The evolution of technology that is characterizing the era in which we live has given the main coloring, not only to the development of society, but also to the policies pursued by different states, both domestically and internationally. Areas such as economics, education, security, medicine, communications, business, industry, etc., find themselves involved in this era, which thanks to the powerful technological impact it brings has been compared by various researchers, having the same impact as the industrial revolution. If we were to try to find an adequate name for the age of technology then we would have chosen different names, like the 'information age' or even the 'technology age'.

The challenges that information technology brings, and not only, are numerous. Information gathering is no longer done only through traditional old methods, but mostly through technology tools. Are we entering a time when information gathering and control will only be accomplished through technology? Governmental funding programs still attempt to frequently uplift the innovation and investment. Investments those which tend to be fundamentally sponsored by surveyed countries with the exception of financial training programs which are

seen as a path to develop and expertise in ICT. As well as to promote innovation through Information and communication also technology tools (Spiezia, 2019, p. 21).

The global economy is completely changing business patterns with it. This change also includes Kosovo, which has become part of the latest technology trends. All this is being enabled by network operators such as IPKO, which success is one of the examples how an Information Technology can be the basis of economic development in Kosovo.

IPKOs' development and success emphasized how technology investments and innovation can generate growth in businesses as well. The biggest companies in the world today are mainly coming from the technology and information sector, ranging from social networks to those we know very well - Twitter, Linked IN, Zynga, Facebook. Therefore, non-investment in the information and technology sector is no longer an option in modern economies. In this regard, our state, Kosovo, is also aspiring to lead. But today the competition is also global, as are the opportunities for companies to reach the global level.

To build effective policies in addressing the needs and challenges of the economy, and to define the role of ICT in economic growth, we need to design and develop the appropriate tools for collecting and understanding the relevant data. Particularly, with contemplate to regional development and innovation dynamics differentials (Gabriel Massin, 2018, p. 12). As mentioned by (Gabriel Massin, 2018), ICT may play a very important and great role on economic growth, but is still needs a lot of work on technology tools, policy making and use of it in the right way in order to make money which help on economic growth of the state.

1.1. Background of the study

"Accordingly, the review and recreation of the Lisbon Strategy in 2004 put special emphasis on the Information and Communication Technologies (ICT) as a means of meeting the challenges of boosting growth, competitiveness and cohesion throughout Europe" (Martinez, 2007, p. 11). As mentioned by (Martinez, 2007), through the Europe ICT plays an important role on technology growth but as fast and as easier it seems to get in touch with products and costumer, at the same time it needs a lot of investments and time on management of it. In still development in

progress countries like Kosovo, the effect of ICT growth not only might have a contribution on economic growth but also on employment prospects. Productivity as the key factor for a country's economic developments, which also might tends to have a positive impact on economic growth. However, the worldwide economy from time to time still seems to abide a productivity slowdown which started in the advanced world over to developing countries after the global financial calamity (Lang, 2019, p. 2) . However, compared with traditional business, new technologies facilitate an increase of the interactivity, flexibility, cheap business transactions as well as improve interconnection with business partners and customers. Information technology is having a significant impact in every sector which is related to offering online services, especially where industries are in decline or when unemployment levels are high like in Republic of Kosovo. Because of the use of ICT and technology tools, people are in exertion of the opportunities of different sectors in order of fulfilling their needs easier and faster.

The main focus of this study is on government and public companies, since in Europe the influence of ICT is increasing and it is considered as very influential for economic sector. The way of offering electronic services is a necessity, rather than the service offered by the Kosovo institutions. Today, most of the public and private sectors use ICT as a way of offering better services and put much importance on the information exchange and informing customers for the products and services. This study aims to confirm that the improved internal efficiency and increased information exchanges are the main benefits from ICT for public and private sectors. As result of increased information exchange, companies are able to cover much larger customer area and attract new customers. Emphasizes that public and private sectors are shifting to a new way of finding customers which allows decreasing of their everyday expenses for advertisement and saving cost by improved operations.

With the development of technology, economical growths in the two decades of twentieth century have modified the majority of wealth creating work from physically based to knowledge based (Namani, 2009, p. 4). As (Namani, 2009, p. 4) mentioned, the fact that the information management has greatly enhanced the value of business organization by offering new business opportunities, has greatly change on economic development. Business opportunities obviously

has changed their role on selling products faster and being nearer their customers. Kosovo as a small and not developed country has used different policy ways toward use of ICT tools using the most profiting institutions in this small country which are telecom and mobile operator IPKO.

1.2 Significance and purpose of the thesis

The main focus of this research is to show the factors that influence the development enterprises and government policies that directly affect economic growth in the Republic of Kosovo. Analyzing earlier researchers developed about the impact of various factors related to the ICT investments, that enable the well-being or not of these companies and institutions, the focus of this research is related with the importance of several points directly related to economic growth in countries in transition like Kosovo presented as below:

- The trend of information technology development in EU and in the Republic of Kosovo
- Information technology investment trends in transition countries
- Barrel legislation which regulates electronic communications
- Investments made by the public company Telecom and the private company IPKO
- Investments made by the Government of Kosovo in improving E-government
- Strategic investment plans in ICT of the Government, Telecom and IPKO

Being based on above goals this research is focused on the investment in ICT for the development of government services, through the two case studies, the development of telecom and the development of IPKO. This study will deal with all the issues mentioned above, examining the economic situation before and after the investment in the field of ICT. The differentiation in operating expenses after the effect of the ICT system development and its role on economic growth is represented as follows and presented in details.

The level of reduction of operating costs after the implementation of ICT in the above-mentioned Institutions is 27.3% affected by online procurement, online business registration and business database in Kosovo (SH.A, 2019, p. 17).

In telecom, the cost of operation has increase for 5.65% (SH.A, 2019, p. 11). The reason for this increase in operating expenses is due to inadequate human resource management, where in

2018 there is an increase of the number of workers without any analysis of an organizational need of financial cost coverage for them. Another problem has been the problem with the SIM to SIM contract, where the telecom has entered into a contract with a virtual operator for 100 thousand numbers and this has resulted in a loss in the telecom. SIM to SIM, is the investigation of the telecom on SIM numbers of VALA as the first mobile operator which offered better services to the costumers about faster internet and other mobile services. This attempts for new investigations came as a result of the competition of private operator IPKO which was already offering better services and resulted not to be successful as planned.

In IPKO, the cost of operation has decreased 21.65% There are several factors affecting this (Coleman, 2011, p. 17). Initially investing in up-to-date technology from the world's well established brands, then providing the most advanced internet and cable services, VOIP offering other innovations such as the Data Center where now different companies can lease servers for their Hosting needs. So, investing in these technologies has led to higher quality and lower cost. Cost reductions have led to redundancies (reductions occur as a result of online services), sales of goods and services online.

1.3 The structure of the study

This thesis is developed in five chapters. Chapter one provides a general introduction and generally deals with the background of the thesis, significance and purpose of the thesis and structure of the thesis. Chapter two represent a wide field and detailed analyses of literature review being based on similar studies regarding economic changes and growth around the world in small countries, such as Kosovo. The role of ICT on economic growth and business challenges regarding ICT use will be examined, finally the role of ICT on investment and policy issues on economic development in public and private sector in Kosovo, as well as the role of E-Government of economy development and its' role on ICT use.

Chapter three presents the research methodology used in this study focused on quantitative and qualitative methods. For a quantitative method, a survey will be conducted in institution and companies, consisting of the representation their thoughts about the level of implementation of the technology in their respective organizations. As the qualitative method

we will show analyzes regarding interviews with institution and company representatives, as well as customers, in order to define the current trends in using ICT platforms and the way they can improve the overall services processes with focus in public and private sector.

Chapter four will show the results of analyzed surveys and interviews, selected materials for the purpose of this study, and analyzes of costumers responses as well.

Chapter five will represent the overall conclusion of this research study, limitations and recommendation for the future research.

Chapter II: Literature Review

2.1 Introduction of the literature review

This chapter covers the review and analysis of different books, articles and other sources related directly with the place and importance of ICT development and its role on economic growth in Europe, regions in transition and small countries such as Republic of Kosovo. Since many years ago, humans' vision has been on facilitating process of communication and creating easier relation between the sender and receiver of the message. Technological progress has experienced tremendous growth in recent times. But technology of information and communication also follows an exponential increase design. The rising steps about the evolution in information and communication technology (ICT) is seen as an extensive exploration to expand of the role of ICT to economic growth, which give benefits of growth, especially in the developing countries (Song, 2021, p. 2). Being under the pressure of time and the need for faster communication through easier methods which might lead to better living conditions, new inventions has been showed, to finally make a great change on the economic circumstances and other life prospective. ICT development as widely technology use is seen to be the key factor of faster linking communication through people which also brings economic profits on real time.

However with the use of ICT services which offer an easier method of fulfilling communication needs, costumers are the ones who plays a very important role while believing in use of different operators of telecommunication. While the operators offer a wide range of opportunities competing on the consummator accord to communicate in distance, key opportunities for furthering participation about using information and communications are focused on the efforts to educate consumers about the alternative facilities and providers that are available to highlight the substantial benefits of any new service (Xavier, 2008, p. 5). "Telecommunication nowadays is considered as the easiest way of transmitting signals,

messages, texts, images and information of any nature by wire, radio, optics or electromagnetic system.”¹ Since costumers are in need of ICT services their target is intended to be the one that offers best services.

“Policy makers and regulators should be mindful that the widely expressed purpose of pro-competition policy is to enhance consumer welfare” (Xavier, 2008, p. 5). In order to expand the ability of offering services to as many costumers as possible, regulations in order to provide easier ways of communications, especially emails available at zero limitation of costs and related to high quality leads to substitution from traditional physical mails to use of electronic gadgets.

Kosovo Telecom (KT) is the largest mobile operator in Kosovo which supplies fixed and mobile services. The services offered by Kosovo Telecom are provided by Vala as the largest mobile operator in Kosovo. This situation changed in 2012 when the Post and Telecommunications was divided into separate units (postal services and telecom). They are managed by the government of Kosova. There has been many tries to privatize it but failed because of the failure of approval from the parliament of the Republic of Kosovo. Meanwhile another operator called IPKO came through the trade and developed their network very fast becoming an important part of telecommunication trade in Kosovo as first private sector in Kosovo offering ICT and internet services. (Coleman, 2011, p. 11)

Mobile applications also have an impact on employment growth, information technology and new business development, since electronic services are mostly tending to be finished online through easier used electronic devices by costumers. IPKO offering Information Technology has been a key player in the field of ICT and private telecommunication sector business in Kosovo.

IPKO has one of the best data center in the region, while providing managed services, security and consistency to ISO standards. IPKO’s success can be measured with the growth of the market share (35%) in offering the mobile services to 300000 costumers in a short period. “IPKO Telecommunications became the fastest growing second mobile operator introduced widely in

¹ <https://www.britannica.com/technology/telecommunication>

the markets of the entire continent of Europe” (Coleman, 2011, p. 67) .Today, as social entrepreneurs search for models of how to meet a double bottom line, often in a regulatory context that does not yet recognize their aims, the IPKO story is an example of how philanthropy and business can—even in a challenging post-war environment—invest in human capital, stimulate innovation, create jobs and fuel an economy (Coleman, 2011, p. 11). The company services range from the physical to the cabling with LAN, Wireless, Security and Hosting, Cloud, IaaS, PaaS, SaaS platform, while IPKO offers the collaboration it has established with local, regional and global companies. IPKO also has the largest presence in the ICT sector, 600km + fiber optic, 85% of population covered by 3G / 4G, 500 Wi-Fi Hot Spot.

2.2 The role of ICT on economic growth and business challenges

Significant development of information and communication technology in the past two decades has made an appearance all over the world. With the development of this sector which conduct to another easier way of getting in touch with information for different fields and show of the earlier preparation for any possible changes or investment that are directly related to economic shifts. Most studies in the field have indicated that information and communications technology is a key factor in the economic and social development of the countries because it has positive effects on economic growth, productivity, and employment (Gabriel Massin, 2018, p. 2).

Rapid extension of ICT has a determining importance on economic growth for many reasons. Firstly, the effortless access to knowledge and information permit people to being attracted of the use technology tools and work through ICT opportunities. A factor that also allows companies to have easier access on their contact relationships, control on their employees and the capital costs possible changes on economic incomes. However managing this differentiation of market effort requires a great ability on technology tool's function but also close collaboration between overall stakeholders of different field by with the same interests and responsibility toward economic and incomes improvement. “Managing this transformational process requires cooperation and partnerships between different stakeholders in the society to ensure stable and successful progress towards the goal of realizing a fully developed information society” (-Tawil, 2009, p. 2).

Changeable function of the online market function from physical to digital includes knowledge of technology that are directly related to ability of the use of the hardware, software, networks and media collection, storage, processing and presenting of information all of the information that leads to digital networks. ICT is impacting economic growth in many ways, especially through the various opportunities of production and the diversity of the services. However, nowadays noticeable changes have been made to economic development. Since the change of market is obvious as long as people are using ICT services to fulfill their needs and achieve their product targets through using communication and technology services.

Investment in ICT has increased access to all over institutions, which are directly related almost any services, making them faster and with different costs according to the service. Thus, directly reach the point of economic change income. Access platforms are the online platforms through which citizens and businesses have easier access and better service. Businesses are now able to track tenders (through e- procurement) electronically, register them and have online communication. Whereas when it comes to describing the services of Telecom and IPKO performance in Kosovo, according to different analyses it can be seen that IPKO has increased significantly. The success of IPKO is not related only with the innovations in wireless technologies in the environment of peace. IPKO has found the managing way of how to transform money brought in by magnanimous agencies into investment capital (Coleman, 2011, p. 27). IPKO as a private ICT sector has better performance in every aspect and their response time to specific problems is from 1 hour up to 24 hours maximum.

The evolution of technology that is characterizing the era in which we live has given the main coloring, not only to the development of society, but also to the policies pursued by different states, both domestically and internationally. Areas such as economics, education, security, medicine, communications, business, industry, etc., find themselves involved in this era, which thanks to the powerful technological impact it brings has been compared by various researchers, with the same impact as the industrial revolution. If we were to try to find an adequate name for the age of technology then we would have chosen different names, like the 'information age' or even the 'technology age'. The challenges that information technology

brings, and not only, are numerous, as is the help that technology brings. Information gathering is no longer done only through traditional or human methods, but also through technology.

The global economy is completely changing business patterns within itself. This change also includes Kosovo, which has become part of the latest technology trends that offers almost all people services online using ICT. Therefore, non-investment in the information and technology sector is no longer an option in modern economies. In this regard, Kosovo as a young state in its' first development stages is also aspiring to lead for better. Today the competition about economic changes using ICT is not young states struggle anymore it also is global challenge, as are the opportunities for companies to reach the global level. Capturing up on the developed economies in terms of appeal of technology and resulting economic benefits had never been easier than nowadays. On the other hand, the results for not being able to adopt ICTs can also be disastrous (Hammed, 2006, p. 4) .

According to the necessity of costumers to fulfill their needs faster, easier and in the best possible way form the best companies, being based on the way the products are offered, costumers also need protection and empower by the companies they believe in. If using ICT services form a company that not only is accurate costumers' needs but it also stays true to offered brands in market, it means that the opportunity to have a brighter future as a company using informative communication are very high. The care toward costumers needs is also an issue of a great importance toward wanted success. Such attention to the consumer stipulation procedure is timely way to inform consumers as being prepared to choose between competing provisioners are necessary to stimulate firms of innovation and improve quality as compete in terms of prices (Xavier, 2008, p. 6).

Policy making and regulation in telecommunication sector has been very much related with costumers' interests such as: protection and empowerment. Awarening that accessible suppliers are available as critically important. Such awareness has increased regarding over recent years, due to the increased competition in the fixed mobile services, mobile and broadband markets (Xavier, 2008, p. 11). Fixed lines, mobile and other services that costumers feel in need of every time and which can be easily offered using ICT, and are considered of a

great importance to be fixed and ready on time in order that the company blossom wanted success and costumers contribute to the economy of their state. ICT services, ability of the use of technology in order to offer the best services and being able to adjust to market needs and target services are related very much to the policy making toward ICT are very much tight as a chain which need to function together in order to achieve economic development information and communication use at very wanted level.

2.3 The role of ICT on investment and policy issues on economic development in public and private sector in Kosovo

Information and Communication Technology (ICT) is today integrated into all aspects of modern life, both for business, the consumer and the government itself. Therefore, ICT is an essential component of the modernization of administrative capacity in Kosovo. The impact of ICT investments on productivity are conducted to higher services toward mobile telephony, so usage of ICT is expected to be the key link to higher fecund due to both ICT-producing and ICT-using industries. For instance, higher output and productivity in ICT-producing industries are also calculated as a part of the country economic growth and aggregate productivity (Lang, 2019, p. 5). There are many different ICT related activities supported by EU funds and other donors, such as the update versions of the address system and civil registry. In this context, with the contribution of the European Commission, under the initiative of the CARDS 2005 program, the implementation of the project "Public Administration Reform at the Center of Government" was launched, with the aim of enabling ICT support infrastructure. The main objective of this component was focused on enabling an ICT-supported environment whereby public institutions become more efficient and responsive to the public, in the dissemination of information and the provision of public services.

In addition, the European Union, through its partnership with Kosovo, has supported the Kosovo government in encouraging and strengthening ICT through the National Plan for the I Public-Private Partnership and its relation to project finance Public-Private Partnership (hereinafter PPP) is used to show all forms of cooperation between public authorities and private entities in order to finance, build, administer and maintain infrastructure, or providing a

service. PPP is widely used and is considered one of the instruments that bring benefits and economic development to a country, Implementation of the SAA with the EU.

In 21st century, where globalization and technology have a significant role in integrating countries and economies as a factor to improve people lives across the globe, Kosovo has recognized Information and Communication Technology as a helper for socio-economic development, cooperation integration and integration into Europe. A focus on digitalization is clearly preferable to central point on digitization, from a definitional viewpoint to remain easy disposable (Ribarsky, 2018, p. 12).ve The motives for performing this financial operation are varied. Private sponsors, in general, want to either provide an auxiliary financial structure for their core business, or be the builders of this structure. In contrast, public sponsors use this formula that is more efficient than others, pouring a small amount of equity into public services. The information system of the Government of Kosovo is largely based on the standards and recommendations of Cisco and Microsoft. During this period, the standard of confidentiality, integrity and availability of information was respected. For these reasons, various operating and application programs have been used to protect against external attacks and viruses.

The development of the economy as well as information technology development is facing the deficiencies in competition and low production capacities and productivity. This seems to be as reflection in a number of indicators, whose structure indicates absence of offering needed services and products. Kosovo as a young state who has not been “free” for such a long time, its’ manufacture sector has gaps on the production way, a factor that led open ways to other activities to come and seep in the market. New activities are those that were accepted by the costumers and have played a very important role on the economic development of the country.

One potential way of recording selling flows of the online products using ICT, would be to earn money and work easier in general. As well as to assume that the intermediation platform purchases are considered as key reform for market changes. (Ribarsky, 2018, p. 13) The technology and ICT services have been identified as very profitable, thus many people became sooner employed and all usual activities moved from physical to online sources following the want of sooner and faster services.

At the same time Kosovo was found without any strong restriction, policy and costumers' interest's protection at the field of mobile operation which helped people getting in touch easier and faster. Public sector who was the largest operator which had the largest number of workers as a public company in Kosovo operated by Vala, because of mismanagement soon was found in competition with another private company named IPKO. At the same time ICT sector was being developed so fast that better performance came up soon into Kosovo's market by IPKO which launched services of 3G and 4G earlier than Vala.

Yet, because of the mislead of the market for different politic reasons, Kosovo not being part of telecommunications the public sector of Vala did not have a dialing code number when IPKO launched the operator within the code number. As an circulation that made costumers follow other private operator rather than the only publice one offered by their state. Kosovo is not a member of the International Telecommunications Union. This is one of the factors why it can not provide and control the resources in the numbering and the frequency. Through the auspices of the European Union, Kosovo and Serbia have worked with ITU to grant Kosovo a dialing code (+383), which became operational since February 2017 (Commission, 2014, p. 6).

Private and public stakeholders share risks, funding and responsibilities during the different stages of the project. Through PPPs the public administration is able to carry out projects of different nature, which can be classified according to their economic and social importance. The first category may include projects which are able to generate revenue without any intervention by the public partnerships. During 2017 the communications market in Kosovo has experienced contradictory ups and downs.

On the one hand, there are positive trends in some of its segments, such as the increase in the number of mobile and internet users, while on the other hand, there is a decline in overall revenue in mobile services, which is the main segment of this market. The market is undergoing competitive development by supply and price reductions in some of the core services, all of which are enabled by the liberalization of markets, in accordance with the Electronic Communications Law and Electronic Communications Sector Policies.

Even during 2017, the use of electronic communications continued with positive developments trends, referring to increased traffic volume and significant investments in the development and

capacity building of networking. In the mobile services segment, the two leading mobile network operators own about 93.4% of the revenue of the entire mobile telephony segment, while the two virtual operators own about 4.7% of the mobile telephony segment revenue.

Mobile operator revenues (including network and virtual operators) represent over 74% of the revenue across the entire electronic communications market. In 2017, there was a decrease in the total originated traffic, a segment that experienced a decline of 5.11% compared to 2016. Whereas, incoming (terminated) traffic recorded a significant increase of 92.82% compared to 2016, the increase is due to the inclusion of MTS doo operator data. As for 3G and 4G mobile broadband internet access, the number of active users who have accessed the internet through these two technologies is constantly increasing, this number is finally increasing. In 2017 reached 1,538,751 users, which is an increase of 41.9% compared to 2016 (SH.A, 2019, p. 37).

2.4 The role of E- Government on economy development and its' role on ICT use.

Today's model of e-government development involves not only the use of information technology to automate internal government work processes, but also the use of this technology to support and transform government external work. This model enables the arrangement of information systems at the core of reform. Expanding focus from purely e-administration, including e-citizen, e-services and e-society. Finally, e-government today is the use of ICT to achieve better governance, integrating information processing and communication technologies, full citizen integration and through technology use to achieve good governance objectives.

The strategic goals set include:

- a) Development of information and communication technology infrastructure, aiming at having the entire administration at central and local level connected to a broadband network
- b) Enabling free, fast and secure internet access, promoting competition and developing an effective regulatory framework

- c) Development of e-government and public services, aiming at the transition from the first phase of electronic dissemination of information to the advanced stage of the provision of interactive electronic public services
- d) Provision of public services
- e) Electronic database, interactive and accessible to all
- f) Development of e-business
- g) Completing and improving information society legislation

In the field of education, the development of the information society is seen not only in terms of school education but also public education or dissemination of knowledge such as:

- IT literature in schools
- Introducing and harmonizing e-education standards
- Qualification of teachers
- Modernizing the education process
- Temporary training
- Increasing the presence of ICT education at all levels
- Distance learning
- Long-term learning

The information society is a relatively new concept, not only for our country. Moreover, the information society relates to ICT, is characterized by rapid changes. Consequently, information society legislation also needs to be amended and improved to provide an effective legal framework for the development of the information society. Policy making, setting goals and setting an ambitious vision would not be worthless without the mechanisms for the implementation and monitoring. The government identifies its' specific needs in information technology use as a priority for the development of the country.

So, e-government is one of the tools to meet development specific goals. Mentioned goals are the main points that usually go beyond the efficiency of government processes through reform to the state development. These targets set, for economic changes are not of any specific significance, but each country determines them according to their needs. In their model, the

choice of capital structure is a dependent variable in equilibrium conditions (here we refer only to the financial economic dimension of the results, which is the only item that can be analyzed through the balance sheet statement).

Moreover, economic-financial performance is a central element of an entity's performance that aims to maximize profit (or maximize firm value). One of the financing methods is BOT (Build-Operate-Transfer). This method is used very often to fund governmental projects. This is very important because there is a need for finding additional resources from the private sector as well. These forms of Transfer are making easier to the private investors, because they can easily track the investments during the commitment period. At the end of this development period, ownership repay to government. One variant of this is the Build-Transfer-Operate (BTO) model, by means of the election is transferred to the government establishment is completed. The ownership of the contract, through the Build-Own-Operate (BOO), allows the private investors to retain it for permanent.

Collaboration with the private sector is one of the ways for increasing the effectiveness of e-government services. The private sector would be motivated to invest in the public sector if the government would support them with different instruments and not just to copy them. The government, in order to improve its electronic services, should not strive to extend its role, but rather to be focused on the improvement of its services and the access to them. Another important factor in this context is to not replicate the services or products that are being served successfully by the private providers.

The excellence of governance requires that the public administration operate in a strict way and that citizens have the opportunity to penetrate the bureaucracy, to contact the official, their elected or their representative. Involvement in the administration of electronic work modes such as the use of electronic document, secure email, electronic procurement, electronic business registration, etc., will bring governance electronically, or as the e-government is known (e-government). Since most e-government processes require network or server login, sending information securely, receiving confirmation that the message went to destination, the need of investments in ICT becomes inevitable.

Electronic signature operates on the basis of Public Key Infrastructure (PKI). Each electronic signature consists of a pair of keys, one called public and the other private. The public key is part of the PKI, while the private key is held by the signatory. When an electronic signature is applied to an electronic document, the sender uses his private key to sign the document electronically. The recipient verifies the authenticity of the originating document because the PKI also sends the necessary information containing information that will identify and verify the authorship of the sender who signed the document. The electronic signature provides the necessary assurance and security that the originating document is original, identifies the sender / recipient and, through the time stamp, certifies the time when the electronic document was originated / received.

The advantages of using an electronic signature are great. The electronic document with integrated electronic signature is secure and reliable in its authenticity. This causes many relationships to take place online, e.g. contracting, purchasing, and banking, procurement, etc. In terms of values, let's take the role of electronic signature in administration.

The use of electronic document administration and the provision of all employees (about 130 thousand) with electronic signature will be followed by a reduction in financial and time costs, increased effectiveness, flexibility, security, accountability and transparency. With the interest and investments made by the government in recent years in the IT field, the legacy backlog of public administration in technology and knowledge is lagging behind and it is easily understood that the digital era in Kosovo has not been as needed and wanted. Everything is being modified very fast and in the right direction by the use of ICT. It is a new beginning and electronic services from the provision of computer labs and internet service to every school, the completion of legislation and other needed systems solutions are offering an easier choice for Kosovo's people. In all of these, e-signature has an important role to play, and together they will create the conditions for effective e-government, where citizens and communities will be heard online.

In a democratic state, by free and secret ballot, the voting citizen has the privilege to choose how and from whom to be govern. Electoral law should set the rules for a fair process and establish all necessary mechanisms to ensure transparency and non-blocking of the process in

the event of disputes. In the end, each political party must be convinced and loyal that the outcome was true and recognize it.

Chapter III: Methodology

3.1 Introduction to methodology

This chapter covers information about the methodology sample of conducting this research on the chosen case study, the impact of ICT investments in public and private sector in Kosovo and its' role on the economic growth.

3.2 Research approach

There are two main research methods approaches to implement the primary research; the Qualitative and the Quantitative research methods. Bu using the qualitative approach, it allows to approach the society interactively and directly in order to gather their personal perceptions, opinions and views. The quantitative approach is principally used as a synonym for the data collections technique such as questionnaire and interviews that brings out about the use of the computative data. Qualitative research mainly implements the usage of personal interview and case studies as an instrument for data collection. Both methods have their limitations where the qualitative research method main weakness is the time needed to collect the amounts of data then to classify and select them, while the quantitative method, due to indirect interaction, is unable to collect additional data beyond those already collected.

3.3 Research methods

In order to define the objectives of this research for development of ICT sector in Kosovo, the study used the mixed-method approach. The different mixed collection data methods used as approaches that combines qualitative and quantitative data collection techniques are used at the same time or one after the other until final results are achieved.

Furthermore, since the mixed-method approach makes it possible to use more than one method, the research can formulate a broader and more complete range of research questions. Mixed method can also provide a more complete and stronger conclusion convergence and validation of findings.

Since that the research is focused on the impact and the development of ICT in public and private sector in Kosovo, in that case the quantitative research method will survey private and public of mobile services which correspond to costumer services using qualitative mobile operators and better internet services also through ICT, and qualitative research will survey enterprises which consist on supplier companies. Qualitative research method first has consulted the literature review in order to explore the current situation of economic development in Kosovo, also the impact of ICT into trading community and how it can improve the overall ICT services regarding working on better services in public sector Telecom and private sector IPKO.

Secondly this research method will conduct direct interview with the main supplier enterprises, by using a broad questioner form towards companies' representatives, with aim to analyze and identify the gaps and difficulties of their current services processes which consist on traditional way of working, in order to define the proper solution platform which will transform, facilitate and improve these business processes between suppliers and customers enterprises.

Quantitative research method will survey as much buyer's enterprises, in order to see what they think about implementing this new technology, and their willingness on transformation of their existing business processes into e-Business, as well as to inform them about the opportunities coming from e- Government.

The survey will mainly be addressed to companies' managers, to better identify the barriers and challenges faced on implementing technology as a platform among enterprises, as well as what are the requirements that such platforms should be able to provide from the customer perspective.

Finally, as one can see the use of the mixed-method approach for the purpose of this research study is more appropriate because, different methods will be used for different parties from different perspective in the study.

3.4 Survey

The most used and the most popular research strategy among business researches remains the survey. Survey can be explained as the questioning of individuals on a topic and then describing their responses which is the one of the case with this research study. A survey research strategy includes questionnaires, structured interview, and structured observation.

3.5 Research Questions

Through survey, this research will rather try to answer the following research questions and therefore try to test the following hypothesis:

1. What are the main barriers and possible drivers for economic growth in Kosovo impacted by ICT development?
2. What are the main factors that implies Kosovo institutions and companies to implement these new technologies contributing economic growth?

3.6 Hypothesis

For the purpose of conducting the research and verifying the findings, the following hypotheses will be raised, supported by additional hypotheses:

- **H1. The benefits from ICT implementation by Kosovo institution and companies are very high, in terms of cost and profit.**
 - **H1a.** The difficulties for ICT implementation by Kosovo companies are exaggerated.

- **H2. The main factors that impose Kosovo institutions and companies not to implement these new technologies rely mainly on fear of the unknown.**
 - **H2a.** Integrated ICT platforms are great solution for companies with minimal technology knowledge

The IT infrastructure is a key prerequisite for developing e-government. Capacity building of infrastructure makes it possible to increase the quality of public services electronically. This will greatly facilitate, accelerate public administration reform, as the most optimal solution through e-government. So, through computer networks it is possible to access many apps and services by the users. This includes access to the Web (WWW), the digital contents such as audio, video, shared resources in servers and other electronic outputs and communication apps as well.

3.7 Methods for data collections

Data can be collected in different ways, in different settings, and from different sources. Within this research four primary sources for data collection for case study research, and these include: documentation, archival records, interviews, direct observation and costumers' questionnaire. While, the use of each of these might require different skills.

Based on the research questions, and from the various strategies, this research coveted to adopt a mixed method research, the quantitative method through survey research methodology which use the questionnaire form that allow the collection of large agreggate of data in an approximately short period of time, and the qualitative method which provides data collection through interviews.

Both these approaches will be elaborated below.

3.8 Questionnaires

A questionnaire is a mean of extracting beliefs, experiences, perceptions, or attitudes of a sample of individuals by attaining research information from respondents. As a data collecting instrument, there are planned and distributed a set of questions designed as such to yield specific information from the respondent, in reaching the need to find the required information about a relevant topic.

Questionnaires should be appropriately designed for respondents, and any guidelines for answering questions must be clarified. Questionnaires must be designed to relate to objectives in the research. The questionnaire must serve the research purpose, it should cover the main issues about services offered by the companies and attitude of costumers regarding company productivity, and the data must be collected and analyzed.

While, for the purpose of this study, ICT based questionnaire is used, where the questionnaire is distributed in hard copy to participants.

The questionnaire includes questions on computer use, use of internet, sharing information electronically between the enterprises and institutions that offer mobile services and the differences public and private sector products, finally the background information about companies. Further, by the use of the questionnaires, this research aims to identify the main hurdles for adoption of the ICT as a platform among Kosovo local enterprises.

3.9 Interviews

An interview is a technique that is used in qualitative studies which extracts knowledge, facts and data about a particular issue that is being studied, using a variety of questions.

From the very beginning the term interview can be defined as specific purposeful conversation where one person asks prepared questions whereas another person answers them as respondent. Also, the key chore about interviewing is to understand the meaning and perspective of thoughts of the respondents. Open ended interviews allow interviewers to explore deep regarding the responses of the participants. With the main intention of gaining more insights information regarding specific topics. On the other hand, closed ended or structured interviews do not provide the flexibility of giving open and in-depth responses due to the fixed questions order.

Since the research aims to find out the main barriers and possible drivers for adoption of ICT use as a platform to contribute in the economic development of Kosovo, as well to understand to what degree the private and public companies Telecom and IPKO have currently been contributing to economic growth or mobile company development. This implies that the research looks for in depth and open responses through open-ended interviews with more

description to gain the insights of participants which in this perspective are the suppliers companies. Hence, in-depth interviews are selected as one of the appropriate tools in this study.

3.10 Methods for data analysis

Data analysis is defined as the process of analyzing the collected data and provide the facts and findings or testing the hypothesis to validate the data.

Since the research is based on mix methods of data collection through qualitative and quantitative methods, the data analysis was conducted as follows:

With regards to the quantitative data, once the targeted number of questionnaires was reached, the data were collected and analysed, while based on the analysis the interpretation being made as well. Descriptive statistics allow the researched to describe the characteristics of the sample through numerical and graphical interface. After conducting the basic analysis, the research will get the results which will be analysed, compared and interpreted in order to answer the research questions.

While for the qualitative data analysis, the collected data by the interviews will be defined through some different steps in order to derive the findings and answer the research questions:

The first step in qualitative data analysis is collating and understanding the data. In this step, the researcher listens to the interview recordings and writes down the main conversation points in a word document. Before continuing with the actual analysis, the research will evaluate and reiterate the key questions to be answered in this study. What are the main barriers of using ICT and to analyze and identify the gaps and difficulties of their current business processes, in order to define the proper solution platform which will transform, facilitate and improve these business processes between suppliers and customers regarding mobile operator revenues. This is to make sure the research conducts the analysis in the appropriate way in order to answer the key areas of research.

Data reduction and categorization is the part of qualitative data analysis which sorts, focuses and organizes data in such a way that conclusions can be made and verified. This process

includes summarizing and simplifying the data that will be collected from interviews and selectively focusing on some parts of data. Also, this method will be used to transform the data from interview transcripts and compress long statements into briefer statements in order to summarize the meaning of large amount of text into fewer words. And the final step, is interpretation and discussion. In this stage, the research will interprets the findings of the research in a much specified manner. And after that, finally, the perceptions from private and public mobile operator' representative perspectives will be compared and discussed.

By the illustration of these two research methods for data analysis, the chapter gives a brief understanding of how the research plans to conduct the research and provide the findings.

Chapter IV: Research findings and data analysis

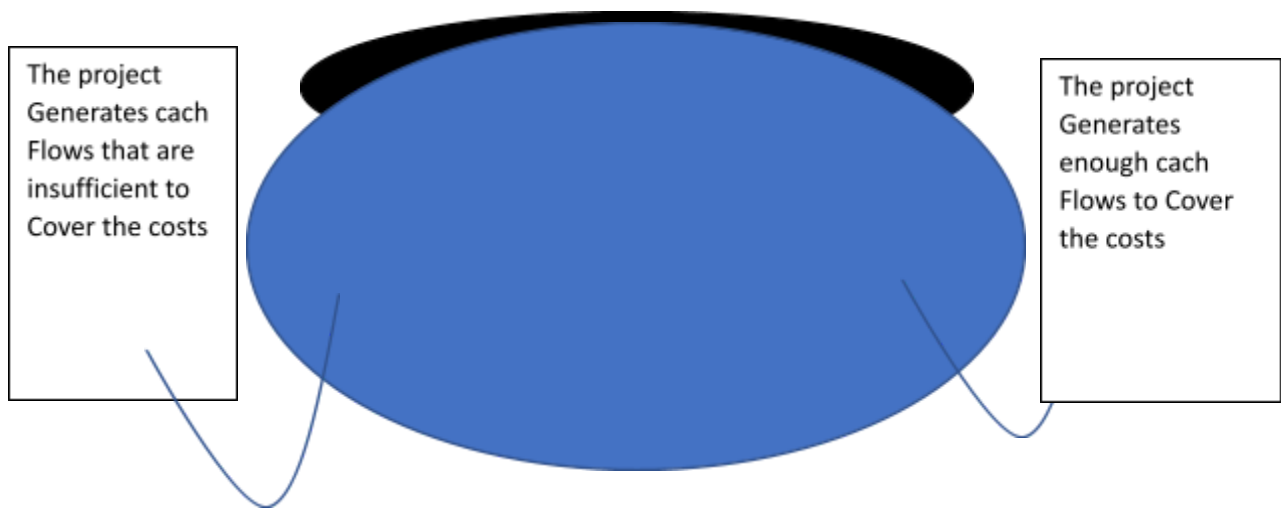
4.1 Introduction to research findings and data analysis

This chapter represents data analyses collected from survey questionnaires of public and private sectors companies operating in Kosovo by offering different opportunities of mobile services. Having different operators who compete by giving different services to the people has made a lot of changes on states' investments in the economic field. In the other side the cooperation of public and private sector in order to offer better services of ICT, contributes to the economic growth of the state through the investment on ICT services. In order to notice better and be able to provide an appropriate argumentation about above mentioned ICT development challenges and to be able to provide the significant role of the fixed and mobile services networks in these developments below will be shown the analyses of the responses from the questionnaires as a research tool.

4.2 Research findings and data analysis

Public-Private Partnership (hereinafter PPP) presents the cooperation between public authorities and private entities in order to finance, build, administer and maintain

infrastructure, or providing a service. PPP is widely used and is considered one of the instruments that bring benefits and economic development to a country.



Source: Province of Lombardy (official website)

Figure 1: BOT and BOO projects in infrastructure (1990 - 2011)

From the (figure 1), it is noticed that PF (Project Finance) is a special form of PPP which is implemented under BOT and BOO models. Contracts, which can be concluded between public and private parties, within the PF can be of two types: BOT (Build, Own and Transfer) and BOO (Build, Own and Operate).

Information and Communication Technology (ICT) is today integrated into all aspects of modern life, both for business, the consumer needs and services also, and the government itself. Therefore, ICT is an essential component of the modernization of administrative capacity in Kosovo. In order to find out the use of ICT services and opportunities that costumers are offered to through mobile and other online services, in charts below are presented the results of this research paper through the responses of public and private investors in Kosovo.

These questionnaires were developed in three different public and private institutions which are: Kosovo Telecom as a public company where twenty people filled the questionnaire for this research purpose during (March 2021), Ministry of Economic Development as a state institution where twenty two people filled the questionnaire for the purpose of this research during

(March 2021) and IPKO as a private company where fifteen people were interviewed for the purpose of this research during (March 2021). The focus of the research being based on these three institutions is to compare their investments are the services and the public and private sectors. Finally it is compared their impact on citizens' lives, based on their online and mobile operator investments.

1. What is the impact of ICT investment in Kosovo?

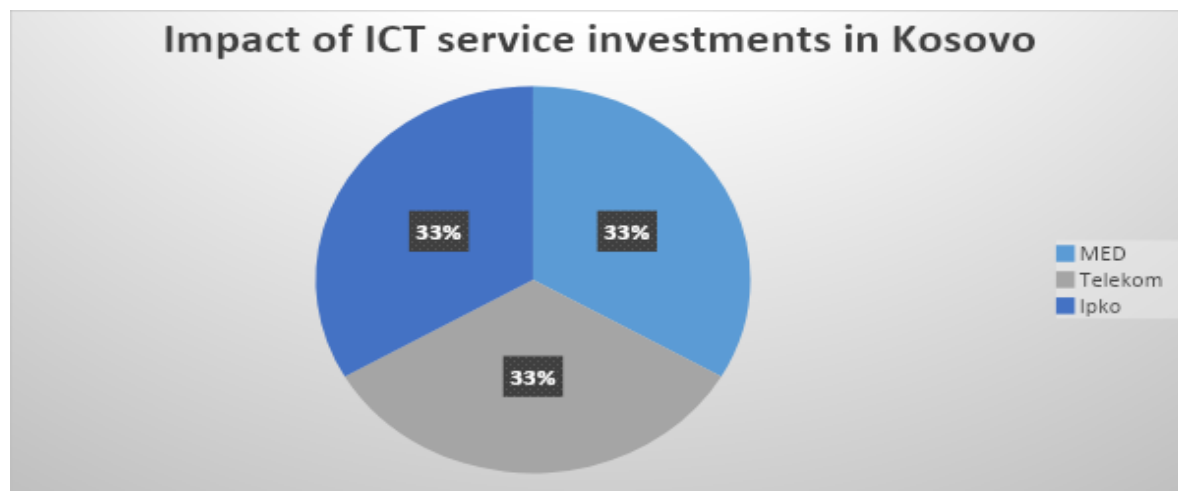


Figure 2: The calculation of responses from first question of the questionnaire: What is the impact of ICT investments in Kosovo?

The chart of the fig one represents that IPKO, MED and Telecom claim that the impact of ICT investments to help economic growth is necessary. Because of the life progress and the technology's evolvement, everything is already dependent on it, and since every life activity is related to technology, then ICT services investments are inevitable. However investment quality

is depended on the quality of services. The greater the investment, the better will be the quality of service provided to the client. As shown in the graph we see a percentage of 33% - 34% scale of the development from each institution. From these result can be noticed that ICT service investment is still needed for further developments in all the areas in private and in public sector in Kosovo.

2.What are the policies your institution pursues for economic development in the public / private sector in Kosovo, including ICT?

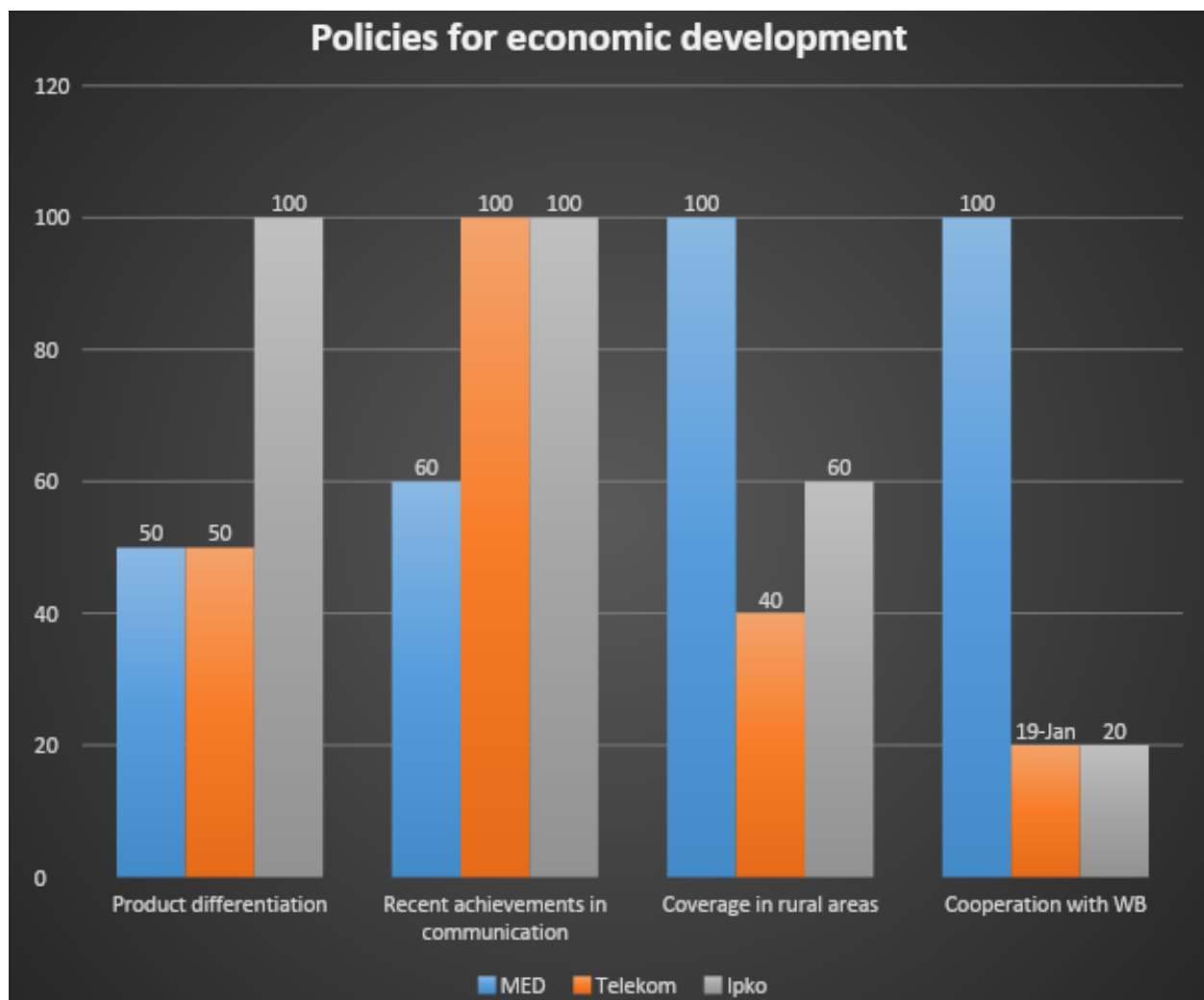


Figure 3: The calculation of responses from second question of the questionnaire: What are the policies your institution pursues for economic development in the public / private sector in Kosovo, including ICT?

While Telecom in its' policies for economic development has decided that it is necessary to bring the best gadgets of communication technology. IPKO is focused on differentiating the products it can offer to the market compared to other relevant companies or institutions. Despite these two mentioned companies, the Ministry of Economic Development maintains that the most necessary and appropriate development policy is to cover the entire territory of Kosovo with internet, even in rural areas, where Telecom and IPKO have not penetrated. This has been achieved in cooperation with the World Bank, with which they have signed agreements since 2013.

Almost quarter (23-24%) of Kosovo's territory has not been covered by internet services, because the private operator has not invested, calculating the return on investment. With grant and subsidy policies, MED has come to realize why these areas are not covered by these services. MED has also requested that funds be allocated from the Kosovo budget for operators to provide this service. Since 2018, they have officially started implementing the agreement they have signed with the World Bank to cover the entire territory of the country with telecommunications services. This project is already under implementation and foresees that not a single house in the Republic of Kosovo will be left out of this service. This project has cost about 20.5 million euros and is realized through optical cable.

3.How much has ICT implementation affected the development of your institution ?

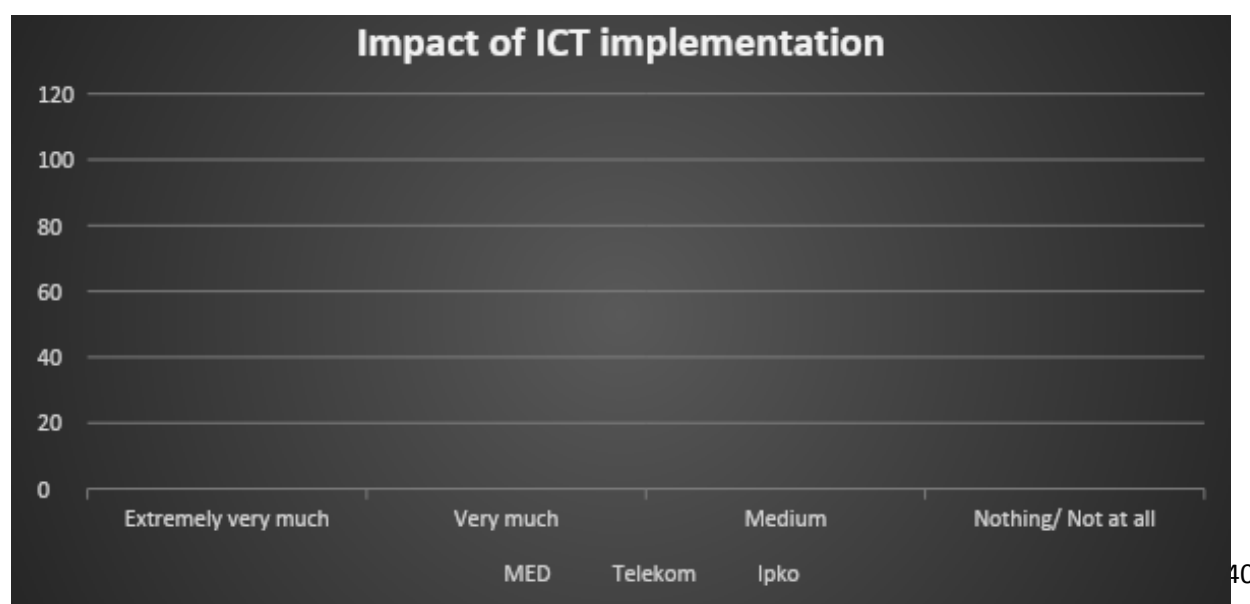


Figure 4: The calculation of the responses from third question of the questionnaire: How much has ICT implementation affected the development of your institution?

Based on the interview conducted at IPKO, it is claimed that the impact of ICT implementation is a challenge in itself, because each new service, costs quite a lot, but this affects new company memberships, considering that this is what this is the company does: providing the latest in telecommunications services.

We also received almost the same response from Telekom. The impact of ICT implementation on Telekom has had an immeasurable impact because the nature of the business imposes high quality requirements in terms of performance, security and reliability. Whereas from the Ministry of Economic Development the answer is more specific. They claim that using the internet also increases efficiency and effectiveness at work, reduces costs and increases marketing opportunities.

4. What has changed with your company / institution because of the ICT involvement

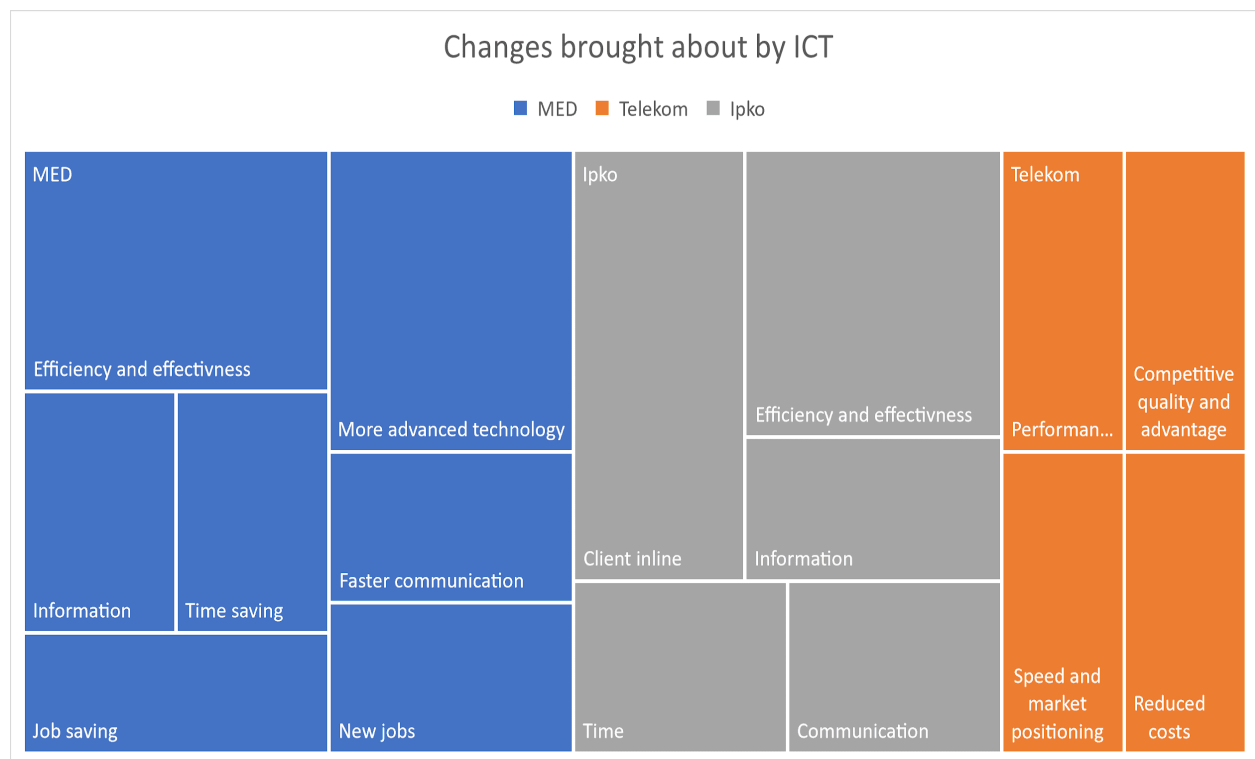


Figure 5: The calculation of the responses from the fourth question of the questionnaires: What has changed with your company / institution because of the ICT involvements?

The changes that ICT implementation has brought to the institutions / companies, through the results of the research interviews seem to be large. The Ministry of Economic Development emphasizes at least seven noticeable changes such as: efficiency and effectiveness, faster information, time and labor savings, new jobs for modern technology users, more advanced technology for client and faster communication. Whereas, MED states that although over 90% of the population of the Republic of Kosovo uses the Internet, the most used applications are the communication ones, such as: WhatsApp, Viber, Messenger, Facebook, Instagram, Twitter etc.

On the other hand, the private company IPKO states that there are at least five noticeable changes in this context: efficiency and effectiveness, faster information, time saved by both the company and the client, faster communication and above all the customer is 'in line' and not 'in queue'. In the other side Telecom counts four noticeable changes in this context: better performance, quality and competitive advantage, superior service delivery and market positioning and, of course, lower costs.

5.Are ICT investments needed or preferable? Why?

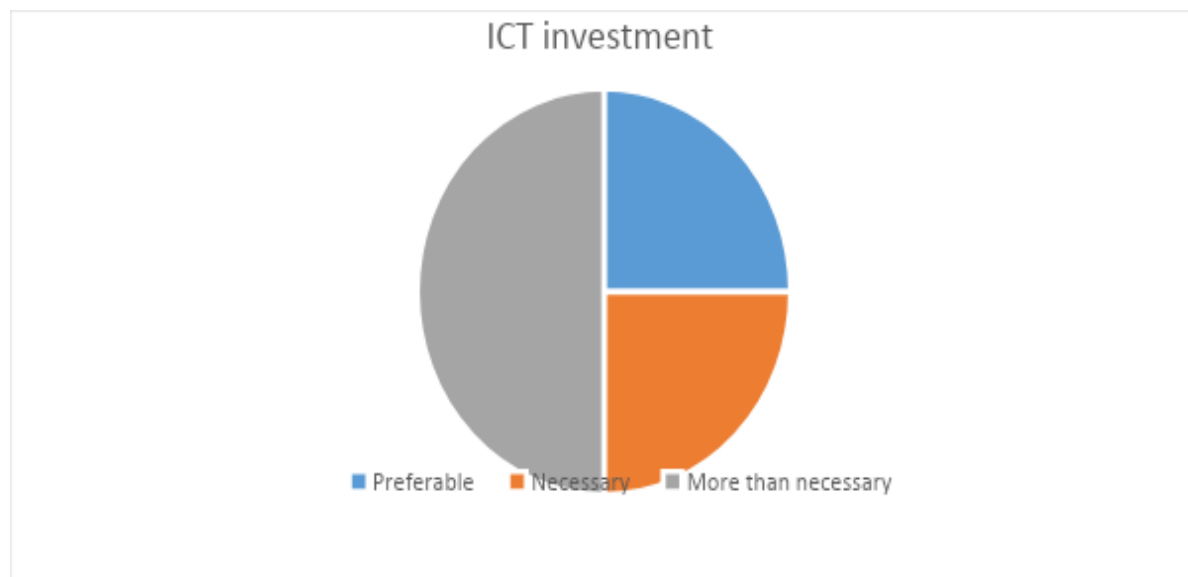


Figure 6: Chart.5 The calculation of the responses from the fifth question of the survey: Are ICT investments needed or preferable? Why?

Despite the fact that none of the three surveys deny that ICT investments are essential, we have also received a specific reason at the Ministry of Economic Development, why these

investments are more than necessary to be used and present. Apart from the fact that investments must be made linearly and continuously in order to continue growing along developed EU countries, ICT investments absence can cause service gaps, which then affect users and the economy.

The more investments a company or institution is in charge with, the most modern technologic services will be offered to the costumers. Furthermore, modern technology increases the competitiveness of a country's economy, increases efficiency, reduces prices, increases people's ability to work, and this has an impact on other sectors as well, facilitate life in general.

6.In your personal opinion, what are the three key points that characterize ICT in your institution / company?

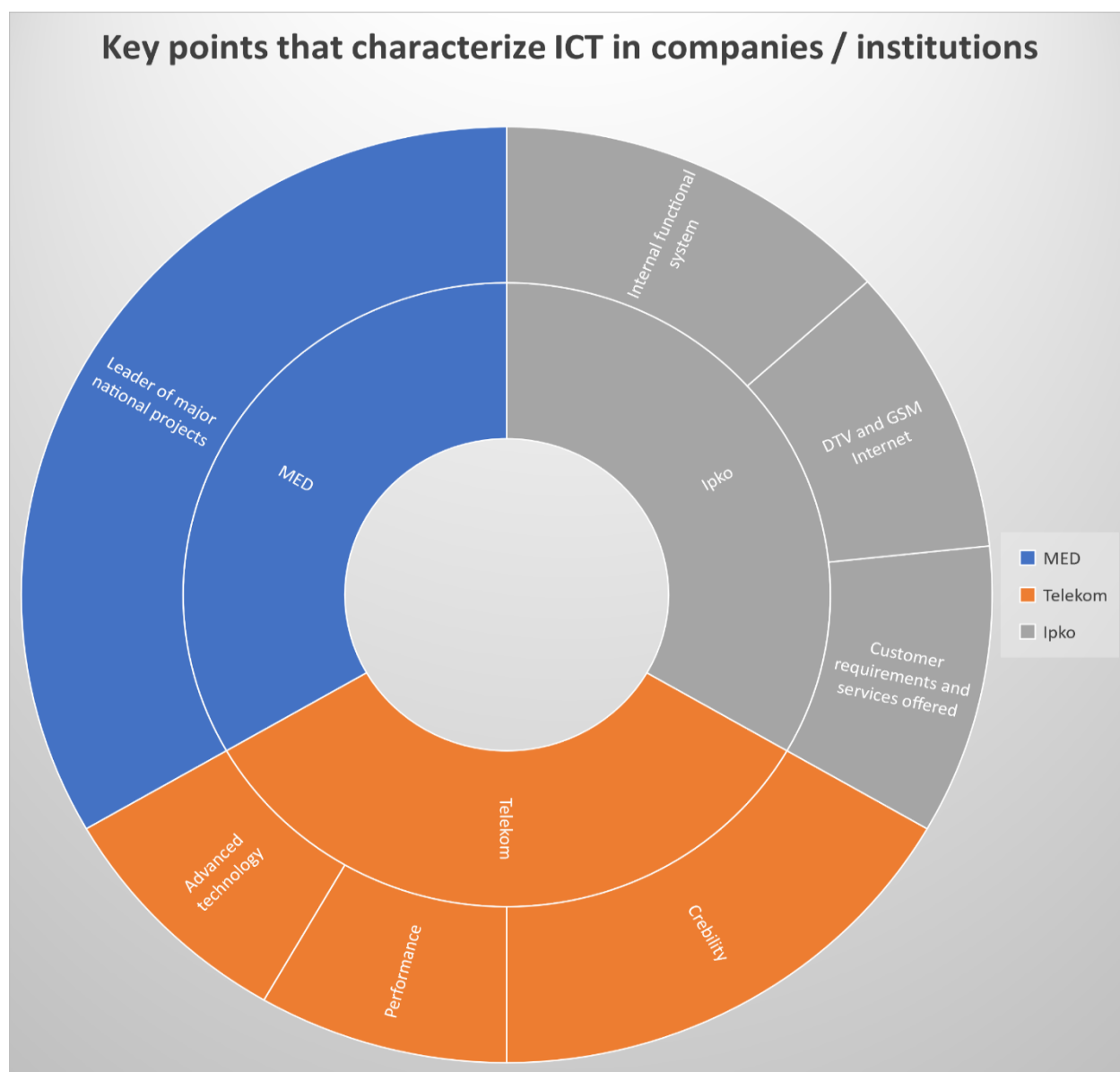


Figure 7: The calculation of the responses from the sixth question from the questionnaires: In your personal opinion, what are the three key points that characterize ICT in your institution / company?

At the Ministry of Economic Development, the only response we have received as a characteristic of ICT in the institution is the fact that MED is the leader of major national technology development projects in the country.

At Telecom we have taken three key points as ICT features, which are:

- The performance they display to customers,
- The credibility they provide to the client and
- State state-of-the-art technology.

Whereas in IPKO the three points that characterize ICT are:

- Internal functional system,
- The ways internal communication works and
- The ways in which customer requests are processed and the services provided to clients, such as DTV and GSM internet.

Regarding the Ministry of Economic Development, we should recall the agreement signed with the World Bank since 2015, which stipulates that no single house in the territory of the Republic of Kosovo will remain outside the project for the supply of internet services, and implementation of this agreement started in 2018. Even this signed agreement claims to provide internet services in rural areas, where the private investor has not penetrated and invested, due to the risk of not returning investments. While MED, calculating the investments made, which is 20.5 million Euros, calculated the return on investment, then requested the allocation of money from the state budget of Kosovo, the allocation of grants and subsidies and the provision of technical maintenance. .

All this goes into the sole answer given by this institution, as a leader of major national technology development projects in the country'.

7.What are the difficulties that the use of ICT facilitates?

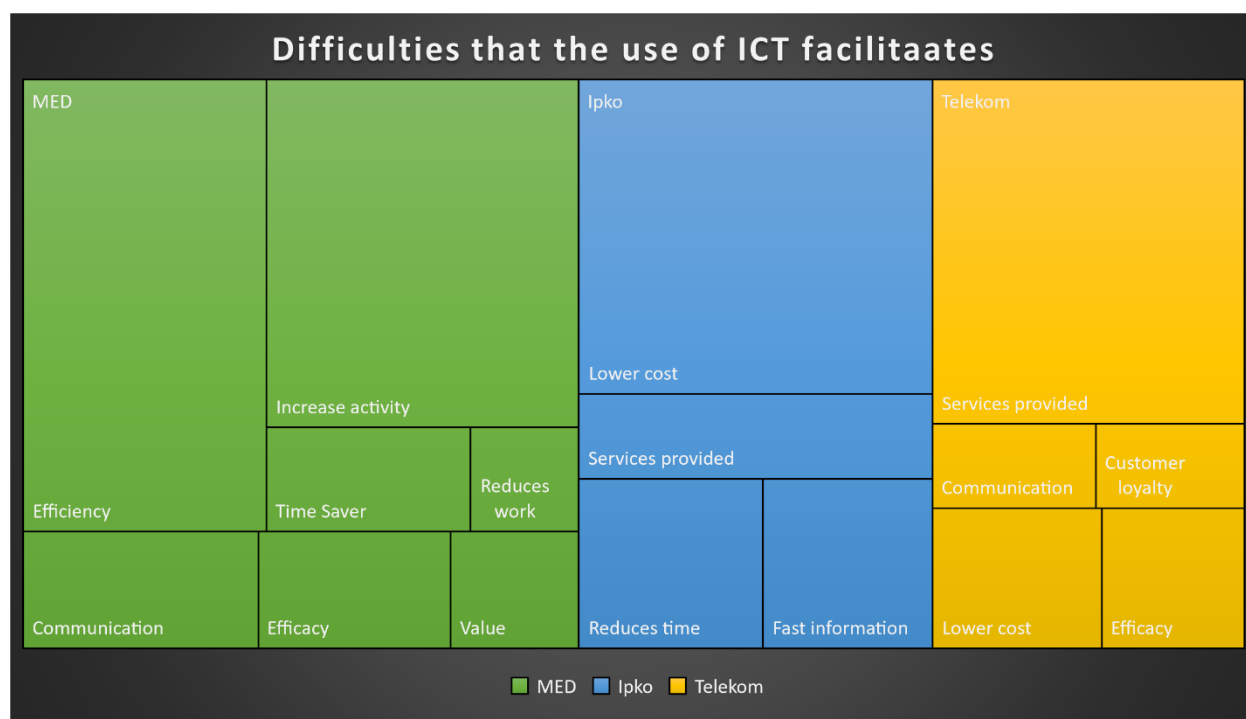


Figure 8: The calculation of the responses from the sixth question of the questionnaires: What are the difficulties that the use of ICT facilitates?

According to the Ministry of Economic Development, the difficulties that the use of Information and Communication Technology alleviates are numerous, but some are worth mentioning, such as: efficiency, faster and safer communication, efficiency, increased activity, reduced workload. , saving time and reducing price.

According to the private company IPKO, ICT alleviates these difficulties: the services provided are more qualitative, the information is faster, the time is reduced and the price is lower. Telekom claims that customer loyalty, services offered, faster communication, efficiency and lower cost are the most important points that ICT facilitates.

As a result, we highlight the fact that all three companies / institutions claim that the three areas where ICT offers assistance and facilitation are: faster and better communication, time saving and lower cost of expenditure.

8. What are the three advantages or benefits your institution has had with the introduction of ICT in the institution?

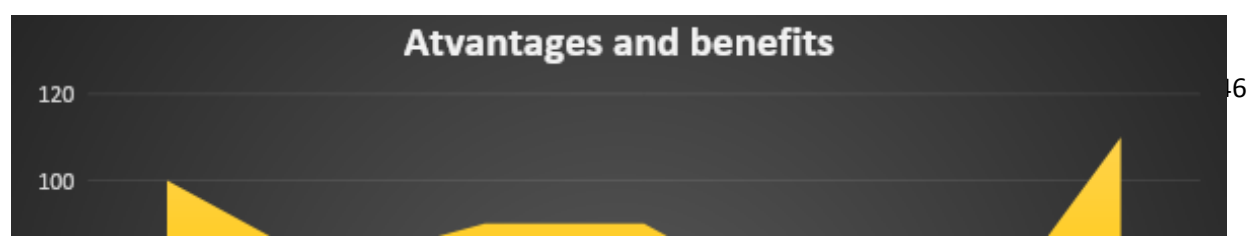


Figure 9: The calculation of the responses from the eighth question of the questionnaires: What are the three advantages or benefits your institution has had with the introduction of ICT in the institution?

All three companies / institutions state that the time saved, the different cost savings and technological tools used for ICT development, the quality of the 'products' offered, the reduced cost and speed are the advantages and benefits of using the technology through ICT in their company / institution.

In addition to the benefits mentioned above, the Ministry of Economic Development also accepts that saving time increases transparency. And if you save time and are transparent then you are even more efficient and you have nothing deficient in your work activity.

9.What are the challenges that your institution faces in implementing ICT?

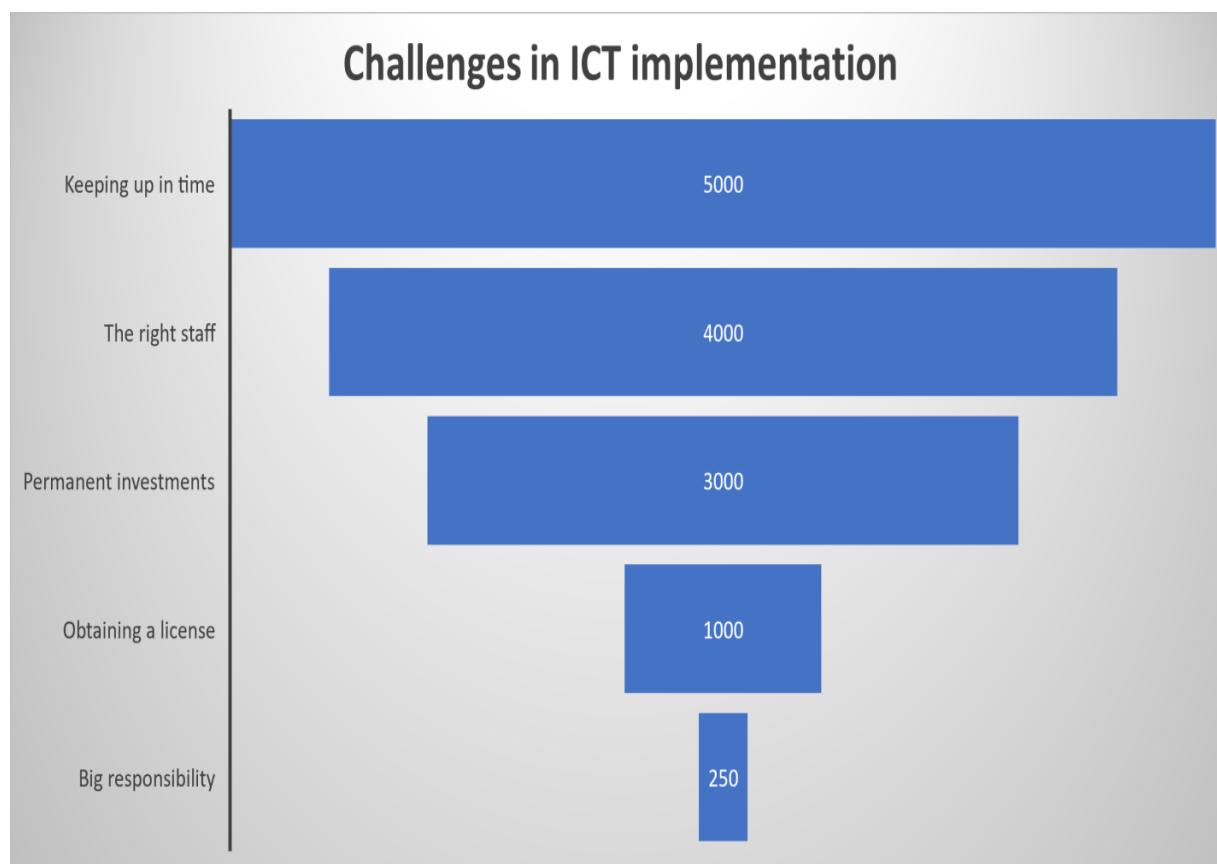


Figure 10: The calculation of the responses from the ninth question of the questionnaire: What are the challenges that your institution faces in implementing ICT?

Keeping up with the times is a challenge that companies / institutions accept to be a really big challenge and is also the main challenge out of all the issues mentioned, to always be present in the market. Also preparing a proper framework for the proper use of technology is another challenge that companies and institutions face when implementing ICT in the workplace. Permanent investments are the third challenge that they singled out. According to MED, if investments are linear continuously then market positioning is also better. Also, according to MED, if investments are plentiful, the quality of services offered in the market is higher. And it directly affects the state's economy. Obtaining a license is considered a challenge by companies and institutions because getting it is a long and challenging process. It is therefore placed as the fourth challenge in this questionnaire. And all of these challenges, however, also imply great responsibility for each institution and company.

10.If using ICT has made life easier for you, mention three disadvantages if it!

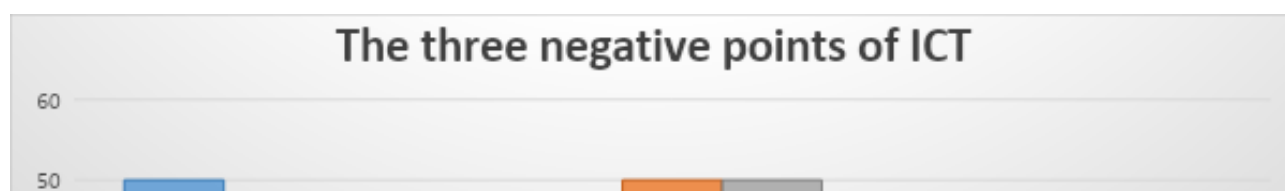


Figure 11: The calculation of the responses from the tenth question of the questionnaires: If using ICT has made life easier for you, mention three disadvantages if it!

The institution of the Ministry of Economic Development defines as an ICT deed the fact that people have become so dependent on technology, be it information or information. They even see this dependency as a serious problem, as most internet users are unaware of the 'risk' that can befall them. And that is why they see and regard cyber security as a very serious problem and a topic to be discussed.

Due to the fact that the use of the internet in Kosovo is limited in the context of rural areas and wide coverage in general and not being used in the wider context, every user risks falling prey to Internet attacks and even becoming victims, such as ID theft, account fraud, various passwords, then photos and videos, personal data, documents stored on their smartphones, tablets, computers etc. MED claims that a simple and almost insignificant connection can cyberattack an institution, and even an entire state.

Also, it does not neglect the fact that the companies and institutions that promote and offer this service can also be blamed for this 'culprit', because while showing customers the positive features of using the internet, they are obliged to inform the clients about its disadvantages and risks, which are possible.

11. Is it worth the investments that have been and continue to be made in this regard and why?

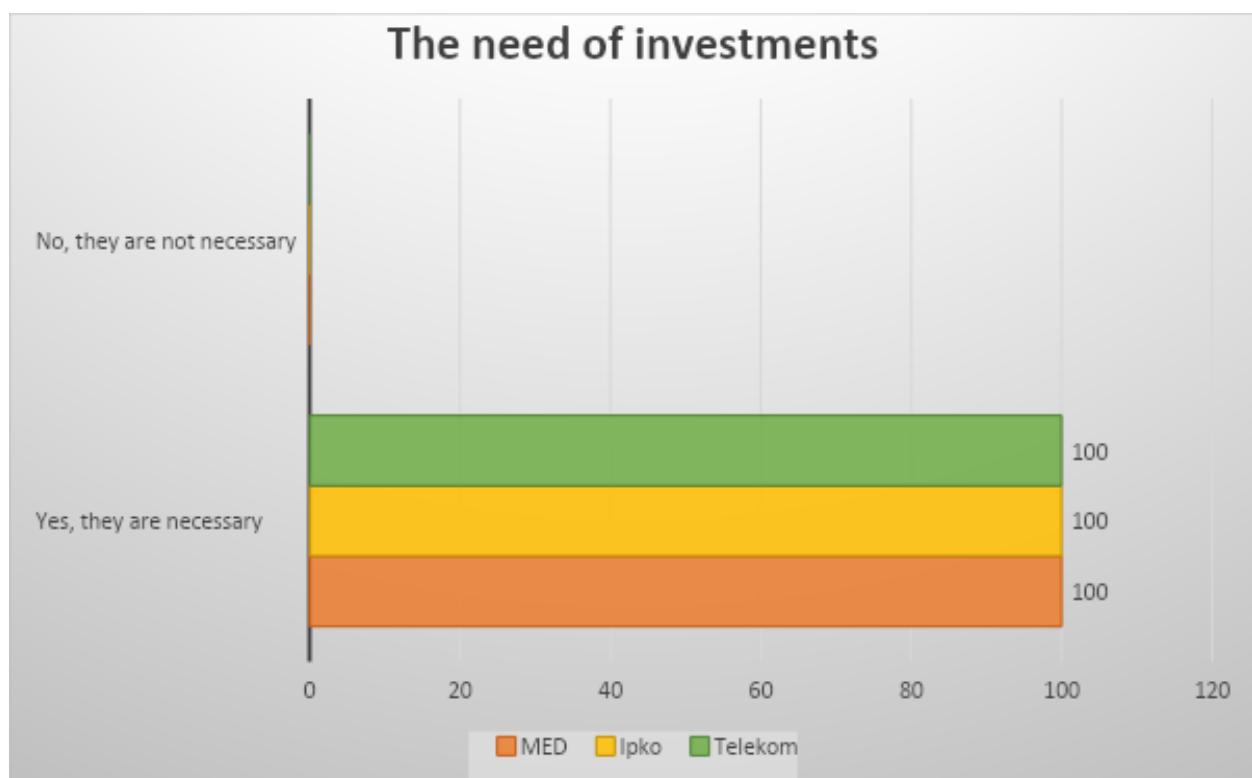


Figure 12: The calculation of the responses from the eleventh question of the questionnaires: Is it worth the investments that have been and continue to be made in this regard and why?

According to the responses of the interview with the institution of the Ministry of Economic Development, the answer to this question is 'yes, they are necessary'. This is because life is predicted to be highly dependent on technology and the world will live a wholly digital life. Internet services have created a very comfortable life for clients in all sectors, and this is a very strong reason to continue investing in ICT. They even state that such unnecessary investments will have consequences on the lives of the people.

The private company IPKO also replied that investments are necessary in ICT, because nowadays every mobile data service is developed and oriented through technology, so world is moving on the development along with technology gadgets and ICT services. And the moment that is decided not to invest in technology, the automatic result is a disconnection from the world. That is to say, life without internet, phones and TV is no longer meaningful.

Telecom replays that ICT investments is necessary because the world is heading for artificial intelligence. Much of the work that people do today is supposed to be replaced by machines, mainly for output quality, speed, reliability, precision, different routines and more.

4.3 Findings and benefits

Post and Telecom of Kosovo (PTK) is a licensed provider of Internet services through services such as: XDSL, ADSL (Telecom) and GPRS (Wave). PTK has a powerful internet network distributed throughout the territory of Kosovo, utilizing Central Network infrastructure. The realization of the Optical Ring of the main signal transmission network, as well as the existence of microwave systems at the same time as third-level communication that makes this network very secure. Kosovo Telecom covers the local market with a 16% share of the internet. On 28 April 2015, the public operator VALA launched the fast 3G and 4G internet project, which covers 75% of the territory of the Republic of Kosovo, with 125 antenna stations installed with 3G and 4G internet, respectively 90% of the country's territory, which can be supplied by 231 antenna stations (SH.A, 2019, p. 34).

As the company announced when promoting this project, it is an investment of about 35 million euros. There are several private companies operating in Kosovo in the field of ICT. As the largest

company currently operating in Kosovo is IPKO, which owns almost half of the market, some 47% of the total domestic market (SH.A, 2019, p. 34). On March 21, 2017, IPKO, increased the coverage with its mobile networking in new locations at base stations, while also continuing to update its mobile network.² “The aforementioned modernization has increased the coverage rate of the population with 3G services from 87% to 90.7%, while LTE / 4G coverage has increased from 81.7% to 84.4%” (Coleman, 2011, p. 56).

“At the end of 2016, IPKO has expanded its 4G network with 54 new settlements in 67 villages of 18 major municipalities, including covering large tourist areas such as Brezovica” (Coleman, 2011, p. 43). The private sector extends the telecommunications network infrastructure through the microwave, optical and coaxial networks. Recently, the communication network infrastructure via fiber optic cable is expanding. All regional cities are connected via fiber optic cable and expansion is underway in other cities. The microwave network covers almost 90% of the territory of Kosovo.

Since the end of 1999 onwards, the number of internet users has changed rapidly according to the number of services of the mobile phones provided in the IT sector has expanding of becoming greater. Services offered by the private sector are mobile telephony, fixed telephony, cable television, internet, VOIP, etc. The most used service by the settlers of Kosovo is internet, which enables the transmission of data, voice, photography, video, etc. Another private operator is Kujtesa.NET, which covers 25% of the Kosovo market with the providing the internet services.

“Counting all operators operating in the territory of Kosovo, internet access has reached 50% in urban areas, while in rural areas it has reached over 10%. Approximately 60% of the total internet usage is already functional” (SH.A, 2019, p. 53). To provide services closer to the users the responsibility is on charge of communal services. The rapid technological development especially, the field of information technology has completely changed. However, all electronic services are provided on the basis of legal responsibilities, so all municipalities have a prominent role in delivering electronic services to the users. In this regard, central level

² <https://www.ipko.com/en/ipko-tani-mbulon-90-perqind-te-kosoves-me-internetin-3g-dhe-4g-2/>

institutions must create spaces, whether infrastructure-level, or create spaces through adopted policies, as well as other assistances in terms of systems integration and databases. Significant projects will be implemented in cooperation and permanent coordination for all municipalities, including network upgrading and expansion, upgrading and enhancing.

Also various electronic cadastral services are related to the daily services provided by the municipality in this field (e-cadaster) and which uses the access to the state e-portal for the realization of this service, but the editing of the cadastral data is done by the person. Municipal electronic services include, electronic property taxation, facilities needed for mobile services needed in the Kosovo, participation in the creation of systems that manage the entire process of a municipal administration, web applications of municipal citizens for obtaining mobile services, citizen participation in municipal decision-making processes electronic (e-participation), electronic municipal voting (e-elections).

As presented a series of steps will be implemented in a coordinated way between all institutions.

Obviously municipal services will track the effect of the implementation of e-schools, because depending on the processing of data obtained from the implementation of such a project, the municipality should intervene on the basis of its responsibilities to eliminate any defects, possibly evidenced in the field of education. The same is true in health, where according to statistics released municipal bodies should reflect. So, this will significantly advance the responsibility of the municipal levels development. With the electronic services of local government, the citizen will be constantly involved in the process of fulfilling their demands and the transparency of local government will be further enhanced.

Chapter 5: Conclusion and Recommendations for the future research

5.1 Introduction to conclusion and recommendations

As it was described in the beginning of this research paper, the aims of this study were to look at possible drivers and barriers to the implementation of ICT use in private and public sector in Kosovo as a chain of economic development of the state. This chapter summarizes the problem and trying to verify to what degree ICT use have currently been implemented by Kosovar mobile services in order to contribute to states' economic growth.

The second chapter provides a review of the literature used, based on academic articles, research papers and books, in order to describe the impact of ICT into trading community, by focusing on development of ICT use through mobile services in private and public sectors.

Chapter 3 provides an explanation of the research approach, research methods, and methods for data collection and data analysis in order to assess the objective of the research.

While the chapter 4 presents the research findings and data analysis obtained from qualitative and quantitative research methods, in order to achieve the aims and objectives of research, answer the research questions and test the hypothesis.

Finally this chapter covers the information about the impact of technology development on state and private institutions has increased significantly in recent times. This is due to high demand, to enable faster monitoring and access to the required services. Given that technology has been gaining momentum in the market, we can focus on the last three decades and so on. Until three decades ago services were virtually inaccessible, and if they were accessible then securing them was a long and tired path. Therefore, ICT involvement was inevitable.

With the initiation of ICT a number of services have been facilitated. Many observers have indicated the increase in ICT investment since their achievements in 2000 was interpreted as a profitable sign of economic increase as well, contributes working in digitalization. “The increase in investment in ICT equipment relative to GDP was equal to 65% in volume over 1999-2015, i.e. the same as the increase in computer software and databases in volume. The measurement of price deflators remain problematic” (Spiezia, 2019, p. 7). E-government, which offers countless client services, services that were once difficult to be achieved. The implementation of information technology has proved a very successful result in converting physical data into digital ones. Also, knowing that the speeds of communication and information are essential in institutions and organizations, the digital revolution is essential in the efficiency and efficiency of the services they provide.

But this change has had its’ challenges as well, because many of the human resources have not been prepared on time for those immediate changes, and staff training is necessarily needed. Looking at these changes, there was little controversy the implementation of ICT in institutions and organizations. There have been debates over public management, with supporters of the technology insisting that its use increases efficiency. Against a scenery of reducing prices of estimating productivity growth, there has been raised a doubt about the explicate basis of ICT use, whether current compilation and measurement methods are adequate toward economic development (Ribarsky, 2018, p. 3). Some required redesigning it to make public data

management as efficient as possible, but there were some who called the implementation sensible and inadequate.

E-government is used in almost all democratic governments around the world and as such has become indispensable in providing services to citizens, communicating with them and disseminating information. In the other side financing infrastructure projects as a new form used to implement and finance a country's basic infrastructure, including the private sector. This makes it possible to use private sector funds to build them, especially by those governments that do not have broad access to traditional sources of funding. Governments allow the private sector to provide public services, having the role of project sponsors and owning them for a fixed period of time. Agreements and regulations should be used to facilitate the implementation of the projects successfully. Governments must ensure a satisfactory rate of return for sponsors and investors, while safeguarding public interest. So, what is very important in implementing an infrastructure project is the agreement between governments and the private sector, especially in developing countries.

As it can be seen in fourth chapter through analyzed results, all central institutions have organized internet access in different ways. Most of these institutions use the Internet through the DTI / MPS Information Technology System Center. Internet access of these institutions is tailored to their needs and in accordance with applicable administrative instructions. Some institutions are supplied through other IT systems (KPS, MEF, CUSTOMS, etc.) or are directly linked to private ISPs. Internet from the institutions of the Republic of Kosovo is used for work needs, research, development, promotion and communication with other information technology systems. Almost all local government institutions use the Internet. Most of these institutions are connected to the Internet through the MPS Information Technology System Center, while others through various relevant systems or directly to private ISPs.

The institutions of the Republic of Kosovo are obliged to use hardware and software standards based on the "Hardware and Software Policy", developed by DTI-MPS. The purpose of this policy is to guarantee the compatibility of hardware and software for the proper functioning of information technology systems. Failure to adhere to the aforementioned policy by some

institutions has resulted in the creation of many systems, which has resulted in significant disruptions and unnecessary spending within government institutions. The investment in the ICT field is even more in this direction lead to the fact that everything is being digitized already, and failing to catch up with technology development will leave us behind in both economic development and overall area of general life.

5.2 Recommendations for the future research

There are some fundamental broad issues which must be tackled and therefore should be the recommendations of this research:

There should be a comprehensive approach towards mobile phone services and costumers in order to inform them about the benefits that an e-Government use would provide to them, as well to inform them about the security measurements that are in place in such a platform.

Costumers must be aware of the importance of having an e-Commerce platform implemented, benefits gained, and competitive advantage created in the Kosovo market as well as in expanding their geographical presence.

Other recommendations are simple and essential.

As I was told during the interview at the Ministry of Economic Development, the primary importance is the amount invested, the budget allocated or allocated for ICT development infrastructure.

Another recommendation is to invest even more in this direction, given the course and the momentum with which life is developing. Also, one must not forget the fact that everything is being digitized already, and failing to catch up with technology development will leave us behind in both economic development and every other area of life. From relevant institutions and companies for the development of ICT in Kosovo are in favour of lucrative agreements with European and world companies and banks.

Although the Ministry of Economic Development has signed a contract with the World Bank on the issue, they are of the opinion that such agreements are essential for the development of ICT and for the development of the country.

Finally also, to give more importance to the development and implementation of government, as it is the main body of state / people leadership.

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Appendix 1

"NDIKIMI I INVESTIMEVE TË TIK DHE ÇËSHTJET E POLITIKAVE NË ZHVILLIMIN EKONOMIK NË SEKTORIN PUBLIK DHE PRIVAT NË KOSOVË: RAST STUDIMI MINISTRIA E EKONOMISË, TELEKOMI I KOSOVËS DHE IPKO" KY PYETËSOR DO TË MARRË 5-7 MINUTA TË KOHËS SUAJ. JU LUTEM, PËRGJIGJUNI NË MËNYRËN MË TË PËRSHTATSHME PËR JU!

Pyetësor

1. Cili është ndikimi i investimeve të TIK në Kosovë?
2. Cilat janë politikat që ndjek institucioni juaj për zhvillimin ekonomik në sektorin publik/ privat në Kosovë, duke involvuar TIK-ut?
3. Sa ka ndikuar në zhvillimin institucionit/kompanisë tuaj implementimi i TIK-ut?
4. Çfarë ka ndryshuar në kompaninë/ institucionin në tuaj involvimi i TIK-ut?
5. Investimet e bëra në TIK janë të nevojshme apo të preferueshme? Përse?
6. Sipas mendimit kritik personal, cilat janë tri pikat kyçe që e karakterizojnë TIK-un në institucionin/kompaninë tuaj?

7. Cilat janë vështirësitë që përdorimi i TIK-ut i lehtëson?
8. Cilat janë tri përparësitë apo përfitimet që institucioni juaj ka pasur me futjen e TIK-ut në institucion?
9. Cilat janë sfidat që institucioni juaj has në implementimin e TIK-ut?
10. Nëse përdorimi i TIK-ut e ka lehtësuar jetën në punë, na i gjeni tri pika negative të tij!
11. Ja vlenë apo jo investimet që janë bërë dhe vazhdojnë të bëhen në këtë drejtim dhe përse?

PERGJIGJET :

1. Ndikimi i investimeve në TIK në Kosovë ka rëndësi të madhe në këtë sektor , pasi që thuajse funksionojmë me teknologjitë më të reja të cilat përdoren në të gjithë botën , po ashtu ka ndikim pozitiv edhe në ekonomi , si dhe në punësim, ku janë të punësuar me mija punëtorë në këtë sektor.
2. Saktësisht politikat që ndjekim janë politika të diferencimeve të produkteve që i vënë në pah produktet tona dalluar me produktet tjera të konkurrencës, dhe politikat tjera oligopolistike, që në një anë ose në tjetrën joshin më shumë klientët me vendimet e tyre në lidhje me çmimet , me diferencimin e produkteve dhe sasinë e produkteve që do i plasojnë në treg.
3. Institucioni është zhvilluar gjatë tërë kohës, ku investimet në infrastrukturë nuk janë ndalur asnjëherë që nga kur është themeluar kompania dhe deri më tani. Pra gjithmonë duhet të përditësohen pajisjet pasi që vjetrohen dhe gjithmonë ka prurje të reja teknologjike më të avancuara që kushtojnë shumë. po ashtu bëjnë diferencimin e shërbimeve pasi që janë shërbime më të avancuara me teknologji

të avancuara . Së bashku me investime normalisht që rritet edhe numri i përdoruesve të këtyre shërbimeve të avancuara , pra njëkohësisht kemi rritje të investimeve dhe rritje të përdoruesve të këtyre teknologjive të investuara .

4. Involvimi i TIK në kompaninë tonë ka ndikuar shumë pozitivisht , ku ka reduktuar kohën e humbur për shkak të përdorimit të këtyre teknologjive , tash gjithçka më shpejtë funksionon në baza komunikimi , informomi dhe periudha të pritjes deri tek informacioni tashmë është shumë e vogël.
5. Investimet janë edhe të nevojshme edhe të preferueshme, gjithmonë duhet ndjekur teknologjia e fundit që të jemi në trend me tregun.
6. Tre pikat që e karakterizojnë TIK në kompaninë time, sistemi i brendshëm funksional , mënyrat se si funksionon komunikimi i brendshëm ,mënyrat se si procesohen kërkesat e klientëve dhe shërbimet e ofruara për klient siç janë interneti DTV dhe GSM.
7. Vështirësitë që ose më mirë të themi përparësitë që i ka TIK janë: koha e shkurtuar deri tek informacioni , koha e shkurtuar deri tek procesimi i rasteve, gjithçka është shumë më e shpejtë dhe ka kosto më të vogël .
8. Përparësitë që i ka TIK është zvogëlimi i kostove dhe rritja e fitimit .
9. Sfidat janë nga më të ndryshmet , nga sfidat e marrjes së licencave deri tek implementimi total i tyre ku ka edhe kosto të madhe dhe përgjegjësi të madhe deri në përfundim.
10. Tre pika negative të TIK, nuk mund të them që TIK ka mangësi , mirëpo vetëm se ndoshta mund të jemi të mbi informuar nga një epokë ku dominonte libri, në një epokë që edhe njerëzit më të pa interesuar për librin shpenzojnë minimum 3 orë në ditë duke lexuar informacione të ndryshme dhe duke u informuar për gjëra të ndryshme përmes teknologjisë tashmë të ofruar.
11. Investimet duhet bërë sepse tashmë gjithçka është e orientuar nga teknologjia, pra e tërë bota po funksionon përmes teknologjisë. Në momentin që vendosim të shkëputemi nga kjo botë është njëjtë si të jetosh në epokën e mos zhvillimit njerëzor , ku nuk ka telefona nuk ka internet dhe as TV .

Appendix 2

"NDIKIMI I INVESTIMEVE TË TIK DHE ÇËSHTJET E POLITIKAVE NË ZHVILLIMIN EKONOMIK NË SEKTORIN PUBLIK DHE PRIVAT NË KOSOVË: RAST STUDIMI MINISTRIA E EKONOMISË, TELEKOMI I KOSOVËS DHE IPKO" KY PYETËSOR DO TË MARRË 5-7 MINUTA TË KOHËS SUAJ. JU LUTEM, PËRGJIGJUNI NË MËNYRËN MË TË PËRSHTATSHME PËR JU!

Pyetësor

1. Cili është ndikimi i investimeve të TIK në Kosovë?

Investimet në TIK janë në një shkallë të kënaqshme në zhvillim në shtetin e Kosovës. Mirëpo duke pasur parasysh që puna jonë zhvillohet në baza të teknologjisë investimet në TIK janë gjithmonë të nevojshme.

2. Cilat janë politikat që ndjek institucioni juaj për zhvillimin ekonomik në sektorin publik/privat në Kosovë, duke involvuar TIK-un?

Telekomi i Kosovës, duke qenë një industri që kryekëput bazohet në TIK për pothuajse të gjitha operacionet e veta, nuk mund të mendohet pa i pasur në politikat e investimeve arritjet me të fundit në teknologjinë e komunikimeve, në sistemet bazë por edhe mbështetëse, përmes partnerëve strategjik dhe lider në fushat përkatëse.

3. Sa ka ndikuar në zhvillimin e institucionit/kompanisë tuaj implementimi i TIK-ut?

Shumë! Vet natyra e biznesit imponon kërkesa të kualitetit të lartë në kuptimin e përformancës, sigurisë dhe besueshmërisë.

4. Çfarë ka ndryshuar në kompaninë/ institucionin në tuaj involvimi i TIK-ut?

Performancë, kualitet, shpejtësi, saktësi, kosto të ulura, pozicionim në treg, përparësi konkurruese etj.

5. Investimet e bëra në TIK janë të nevojshme apo të preferueshme? Përse?

Të domosdoshme! Natyra e operacioneve që kryhen sot, si në funksionet bazë por edhe në ato mbështetëse, nuk mund të mendohen ndryshe.

6. Sipas mendimit kritik personal, cilat janë tri pikat kyçe që e karakterizojnë TIK-un në institucionin/kompaninë tuaj?

Besueshmëria, performanca, teknologjia.

7. Cilat janë vështirësitë që përdorimi i TIK-ut i lehtëson?

Besueshmëri për konsumatorët, shërbime më të mira, komunikim më i shpejtë, shpenzime më të ulta dhe shërbime më të sigurta

8. Cilat janë tri përparësitë apo përfitimet që institucioni juaj ka pasur me futjen e TIK-ut në institucion?

Shpejtësi, cilësi, kosto e ulur.

9. Cilat janë sfidat që institucioni juaj hasë në implementimin e TIK-ut?

Të qenurit kompani publike është e vështirë në kuptimin burokratik, për të qenë gjithmonë në hapin e kohës, në një ambient shumë shpesh të ndryshueshëm, dhe domosdoshmëri në investime permanente që rezultojnë me buxhet të ngarkuar për mirëmbajtje dhe përtëritje. .

10. Nëse përdorimi i TIK-ut e ka lehtësuar jetën në punë, na i gjeni tri pika negative të tij!

Nuk mund të numëroj asnjë!

11. I'a vlejë apo jo investimet që janë bërë dhe vazhdojnë të bëhen në këtë drejtim dhe përse!

Po, nuk diskutohet. Sot bota po shkon drejtë inteligjencës artificiale! Shumë punë që sot kryhen nga njerëzit do të zëvendësohen nga makinat, kryesisht për cilësi të rezultateve, shpejtësi, siguri, precizion, rutina të ndryshme etj.

Appendix 3

"NDIKIMI I INVESTIMEVE TË TIK DHE ÇËSHTJET E POLITIKAVE NË ZHVILLIMIN EKONOMIK NË SEKTORIN PUBLIK DHE PRIVAT NË KOSOVË: RAST STUDIMI [MINISTRIA E EKONOMISË](#), TELEKOMI I KOSOVËS DHE IPKO" KJO INTERVISTË DO TË MARRË 5-7 MINUTA TË KOHËS SUAJ. JU LUTEM, PËRGJIGJUNI NË MËNYRËN MË TË PËRSHTATSHME PËR JU!

Pyetësor

1. Cili është ndikimi i investimeve të TIK në Kosovë?
2. Cilat janë politikat që ndjek institucioni juaj për zhvillimin ekonomik në sektorin publik/ privat në Kosovë, duke involvuar TIK-ut?
3. Sa ka ndikuar në zhvillimin institucionit/kompanisë tuaj implementimi i TIK-ut?
4. Çfarë ka ndryshuar në kompaninë/ institucionin në tuaj involvimi i TIK-ut?
5. Investimet e bëra në TIK janë të nevojshme apo të preferueshme? Përse?
6. Sipas mendimit kritik personal, cilat janë tri pikat kyçe që e karakterizojnë TIK-un në institucionin/kompaninë tuaj?

7. Cilat janë vështirësitë që përdorimi i TIK-ut i lehtëson?
8. Cilat janë tri përparësitë apo përfitimet që institucioni juaj ka pasur me futjen e TIK-ut në institucion?
9. Cilat janë sfidat që institucioni juaj has në implementimin e TIK-ut?
10. Nëse përdorimi i TIK-ut e ka lehtësuar jetën në punë, na i gjeni tri pika negative të tij!
11. Ja vlejné apo jo investimet që janë bërë dhe vazhdojnë të bëhen në këtë drejtim dhe përse?

PERGJIGJET

1. Cili është ndikimi i investimeve të TIK në Kosovë?

Investimet me të mëdha janë bërë pas luftës së fundit. Investimet kanë filluar në vala. Nga viti 2000 deri në vitin 2008 janë bërë afro 110 mijë euro investim. Afro 200 milion euro investim janë bërë në infrastrukturën e TIK deri më tani, kryesisht nga operatori IPKO. Pa investime nuk mund të ketë shërbim cilësor. Kualiteti i shërbimeve varet nga investimet e kompanisë. Në fillim ka investuar vala, kurse tani IPKO kryeson me investime.

2. Cilat janë politikat që ndjek institucioni juaj për zhvillimin ekonomik në sektorin publik/ privat në Kosovë, duke involvuar TIK-ut?

Ka qenë politikë e MZHE-së që të arrijë mbulueshmërinë e tërë territorit të Kosovës me internet. Kemi filluar nga viti 2013, në bashkëpunim me Bankën Botërore, të futemi edhe në ato vise ku biznesi privat nuk futet dot, dmth në viset rurale. 23 ose 24% e territorit të Kosovës nuk ka qenë e mbuluar me shërbime të internetit, për arsye se operatori privat nuk ka investuar, duke llogaritur rikthimin e investimeve (return investment). Me politikat tona të garantëve dhe

subvencioneve ne kemi tentuar, në bashkëpunim me BB, dhe kemi konstatuar se përse këto zona janë të pambuluara me shërbime të internetit. Kemi ndarë të holla nga buxheti i Kosovës për operatorët që të realizohet ky shërbim. Nga viti 2018 ne kemi marrëveshje me BB për të mbuluar tërë territorin e vendit me shërbime telekomunikuese. Jemi në implementim të këtij projekti. Kosovodigito.org është webfaqja ku mund të informohemi për këtë projekt, i cili parasheh që as edhe një shtëpi e vetme në Kosovë të mos mbetet jashtë këtij shërbimi. Ky projekt ka kushtuar afro 20.5 milion euro. Ky projekt realizohet përmes kabllos optike.

3.Përmes përdorimit të internetit rritet edhe efikasiteti në punë. Zvogëlohen shpenzimet, përdoret për marketing.

4.Modernizimi i ekonomisë së një shteti varet shumë nga përdorimi i teknologjive të reja, jo vetëm në makineri, por kryesisht në përdorimin e teknologjive të reja informative-komunikuese. Me këtë rritet shumë edhe konkurrenca e kompanisë. Po ashtu, kjo përfshinë reformat online dhe offline. Tek reformat offline, më së shumti i referohemi personelit që punojnë në kompani, i cili kuptohet se duhet të jetë i trajnuar për të punuar me reforma të reja, të cilat vijnë bashkë me futjen e teknologjive të reja. Sektori i turizmit dhe energjetikës kanë mjaft vend për rritjen e punës, duke përmirësuar ofrimet e teknologjisë komunikuese-informative.

5.Investimet e bëra në TIK janë të nevojshme apo të preferueshme? Përse?

Investimet janë më se të nevojshme dhe kjo duhet të bëhet në mënyrë lineare, për të mos e humbur hapin, se kjo pastaj shkakton boshllëk në shërbime, të cilat ndikojnë në përdorues dhe ekonomi. Sa më shumë investime teknologjia është më moderne, e sa më moderne të jetë teknologjia e rritë konkurrencën e ekonomisë së një shteti, e rritë efikasitetin, i zvogëlon çmimet, e rritë shkathtësinë e njerëzve, dhe kjo bën që të ketë ndikime edhe në sektorët e tjerë, të cilët lehtësojnë jetën në përgjithësi.

6.Sipas mendimit kritik personal, cilat janë tri pikat kyçe që e karakterizojnë TIK-un në institucionin/kompaninë tuaj?

MZHE është prierare e projekteve madhore nacionale në zhvillimin e teknologjisë në vend.

7. Cilat janë vështirësitë që përdorimi i TIK-ut i lehtëson?

Lehtëson komunikimin, çmimin, redukton apo kursen kohën, rritë efikasitetin, rritë apo lehtëson të gjithë veprimtarinë individuale dhe kolektive. Është revolucion në jetë dhe ndryshon jetën.

8. Cilat janë tri përparësitë apo përfitimet që institucioni juaj ka pasur me futjen e TIK-ut në institucion?

Kursimi i kohës, rritë transparencën, kursen letrën, tonerët, energjinë elektrike. Nëse e kursen kohën, e rritë transparencën dhe je më efikas atëherë nuk ka i ka të mangët në veprimtarinë e punës. Platforma e TIK mundëson edhe shpërndarjen e informacionit në kohë shumë të shkurt.

9. Cilat janë sfidat që institucioni juaj hasë në implementimin e TIK-ut?

Mbajtja e hapit në koherencë me zhvillimin e teknologjisë, përdorimi adekuat dhe trajnimi i kuadrit të duhur, niveli i ndryshëm i njerëzve të cilët e përdorin teknologjinë.

10. Nëse përdorimi i TIK-ut e ka lehtësuar jetën në punë, na i gjeni tri pika negative të tij!

Varësia e njerëzve nga teknologjia, siguria kibernetike që njerëzit në shumicë nuk e kuptojnë.

11. Ja vlejné apo jo investimet që janë bërë dhe vazhdojnë të bëhen në këtë drejtim dhe përse?

Jeta do të jetë shumë e varur nga teknologjia, bota do të jetojë një jetë digjitale, shërbimet në të gjithë sektorët kanë krijuar jetë më të rehatshme dhe kjo është arsye mjaft e mirë për të vazhduar investimet në TIK. Mos investimet e tilla do të jenë me pasoja në jetën e popullit.

Appendix 4

THESE QUESTIONS AIMS TO EXPLORE THE IMPACT OF ICT INVESTMENTS AND POLICY ISSUES ON ECONOMIC DEVELOPMENT IN THE PUBLIC AND PRIVATE SECTOR IN KOSOVO. THESE INTERVIEW QUESTIONS DOES NOT REQUIRE YOUR PERSONAL INFORMATION AND THE DATA WILL REMAIN CONFIDENTIAL. THIS QUESTIONNAIRE WILL TAKE ABOUT 5-7 MINUTES OF YOUR TIME. PLEASE, ANSWER THE QUESTIONS IN THE MOST APPROPRIATE WAY FOR YOU!

1. What is the impact of ICT investments in Kosovo?
2. What are the policies your institution pursues for economic development in the public / private sector in Kosovo, including ICT?
3. How much has ICT implementation affected the development of your institution / company?
4. What has changed the ICT involvement in your company / institution?
5. Are ICT investments needed or preferable? Why?

6. In your personal critical opinion, what are the three key points that characterize ICT in your institution / company?
7. What are the difficulties that the use of ICT facilitates?
8. What are the three advantages or benefits your institution has had with the introduction of ICT in the institution?
9. What are the challenges that your institution faces in implementing ICT?
10. If using ICT has made life easier for you, you have three negative points!
11. Is it worth the investments that have been and continue to be made in this regard and why?

RESPONSES

1. The investments of ICT in Kosovo is of a great importance in this sector, bearing in mind that already everything is working now through technology, applications that are already used all over the world. ICT development has a positive impact in economics too. A fact that leads to employing a lot of workers in this sector.
2. Exactly politics that we follow already are politics of differentiation of products competing our productions with other company's productions and services. Also, new policies which pushes costumers through the prices, differentiation of the products and the quantity of our products.
3. Our institution has been developing all the time. Our investments has never been stopped since the company started working. Our working gadgets needs to be updated in accordance with new technology applications which costs a lot. However we need to make a usual update of our gadgets because of we need to offer advanced services to

our customers. Together with the investments we gradually grow up the number of our costumers' and mobile servicers users too.

4. The investments in ICT in our company has had a very positive impact, through new investments we have reduced the loss of timing, now everything works faster, information and the period of waiting until the final information service is reach is realized faster too.
5. Investments in ICT are very needed and preferable, as said earlier, every time we need to follow the newer trends of technology in order to be able to reach more costumers' through our services.
6. The main points that characterize ICT in our company are, the internal functional system, the ways of functional communication and other services offered to our clients like: internet, DVD and GSM.
7. The priorities that ICT offers are shortest way until the needed information, shortened time until the cases procedure etc. So, everything can work faster through internet with a lower cost and faster earning way of money.
8. Priorities of ICT are lower costs and better money earning.
9. Challenges are different, starting from obtaining of the license, implementation of the license which has a great price and a lot of responsibility to the final implementation.
10. It cannot be said that ICT has any counted points, the only deficiency is that people are not anymore that much interested about reading books. Now through technology even the less interested people on learning and reading can spend at least three hour time reading about different information finding easier the information that they need through technology clicks.
11. Investments must be done in ICT sector, because nowadays everything is concentrated to be finished through internet and technology tools. In the moment that people decide

to live without using technology gadgets means that they are going back on time living without internet and TV as the main source of information.

Appendix 5

THESE QUESTIONS AIMS TO EXPLORE THE IMPACT OF ICT INVESTMENTS AND POLICY ISSUES ON ECONOMIC DEVELOPMENT IN THE PUBLIC AND PRIVATE SECTOR IN KOSOVO. THESE INTERVIEW QUESTIONS DOES NOT REQUIRE YOUR PERSONAL INFORMATION AND THE DATA WILL REMAIN CONFIDENTIAL. THIS INTERVIEW WILL TAKE ABOUT 5-7 MINUTES OF YOUR TIME. PLEASE, ANSWER THE QUESTIONS IN THE MOST APPROPRIATE WAY FOR YOU!

1. What is the impact of ICT investments in Kosovo?
2. What are the policies your institution pursues for economic development in the public / private sector in Kosovo, including ICT?
3. How much has ICT implementation affected the development of your institution / company?
4. What has changed the ICT involvement in your company / institution?
5. Are ICT investments needed or preferable? Why?

6. In your personal critical opinion, what are the three key points that characterize ICT in your institution / company?
7. What are the difficulties that the use of ICT facilitates?
8. What are the three advantages or benefits your institution has had with the introduction of ICT in the institution?
9. What are the challenges that your institution faces in implementing ICT?
10. If using ICT has made life easier for you, you have three negative points!
11. Is it worth the investments that have been and continue to be made in this regard and why?

RESPONSES

1. The investments of ICT in Kosovo are in a satisfied scale but according to technology updates, we always need more development since we are working every time through ICT.
2. Telecom of Kosovo is based on ICT for every service we offer to our costumers. As such Telecom of Kosovo as a public fix mobile sector cannot function without proper policies through updates technology gadgets. However everything function through supportive partners as main leaders of different ICT fields.
3. The ICT implementation has impacted a lot our company development. Our company works on basis of quality, best performance of mobile services and reliability.
4. The ICT involvement if our company has changed the way of performance, faster

services, lower costs and easier access in Kosovo's trade In terms of competitiveness.

5. The investments on ICT are more than needed. The way we offer our services, also the way it works it cannot be possible without technology gadgets and the updates of our services.
6. The three main points that characterize ICT are: reliability, performance and technology
7. The challenges of ICT use are the customer loyalty, offered services, faster communication, efficiency and lower cost.
8. With the use of ICT in our company we improvised in faster services, better services and lower costs.
9. Being a public company has different challenges in terms of offering different services like: working all the time to offer the best services, working on different environments and needed investments to update our gadgets which results in spending a great amount of money.
10. I don't think ICT has any negative points on its' use.
11. Yes, the ICT investments are always needed. Taking into consideration the fact that nowadays living is going through artificial intelligence, is being expected that a lot of jobs that today are finished by people, in the future to be accomplished by artificial machines for the sake of better results, faster results, loyalty etc.

Appendix 6

THESE QUESTIONS AIMS TO EXPLORE THE IMPACT OF ICT INVESTMENTS AND POLICY ISSUES ON ECONOMIC DEVELOPMENT IN THE PUBLIC AND PRIVATE SECTOR IN KOSOVO. THESE INTERVIEW QUESTIONS DOES NOT REQUIRE YOUR PERSONAL INFORMATION AND THE DATA WILL REMAIN CONFIDENTIAL. THIS QUESTIONNAIRE WILL TAKE ABOUT 5-7 MINUTES OF YOUR TIME. PLEASE, ANSWER THE QUESTIONS IN THE MOST APPROPRIATE WAY FOR YOU!

1. What is the impact of ICT investments in Kosovo?
2. What are the policies your institution pursues for economic development in the public / private sector in Kosovo, including ICT?
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5. Are ICT investments needed or preferable? Why?

6. In your personal critical opinion, what are the three key points that characterize ICT in your institution / company?
7. What are the difficulties that the use of ICT facilitates?
8. What are the three advantages or benefits your institution has had with the introduction of ICT in the institution?
9. What are the challenges that your institution faces in implementing ICT?
10. If using ICT has made life easier for you, you have three negative points!
11. Is it worth the investments that have been and continue to be made in this regard and why?

RESPONSES

1. The highest scale of investments in Kosovo are made after the war. The investments has started from VALA. During the years 2000-2008 are made approximately 110 hundred euro investments. Approximately 200 million euros are invested in ICT already, mainly by IPKO operator. The quality of the services is very much depended by company investments. Firstly VALA as a public mobile company has been the main investor, now the main investor is private company IPKO.
2. It has been as policy released by ministry of economy to cover the whole territory of Kosovo with internet. In 2013 we have started the cooperation with World Bank to cover with internet the rural areas where private companies cannot take part. Approximately 23-24% of Kosovo territory did not have access on internet because that private investors have not invested in rural areas. Through our policies of grands and other

investments, also with the support of the ministry we tend to cover the whole territory of Kosovo with internet through public sector services. In 2018 we achieved to have a deal with BB, that we will provide internet access and other mobile services to every part of the territory of Kosovo, through optic cable.

3. Through the use of the internet we think that we will experience a higher effectiveness in our places of work through ICT, lower the costs and use of marketing.
4. The use of newer technology offers makes possible the modernization of the economy, not only by the gadgets but in the offers of technology of information and communication. We believe that by the use of ICT the competitiveness between companies to offer better services is raised through online and offline services. When offline services are mentioned we refer to the workers inside the company, which needs to be trained in order to be able to use the new technology reforms. In the other side, the sectors of tourism and energy plays an important role to improve the use of technology and ICT.
5. Investments on ICT are more than needed and those investments must be done in a continual way. In order to not losing the way of continual development on ICT services, the operators must invest so that they will not create emptiness of their services which might cause to the loss of users and loss of economy. As more investments are being made, the technology is going to offer newer services for its users. In the other side according to the technology investments the competition between companies will be higher in accordance with the economy of the state, the effectiveness of services will be of a higher scale, the costs will be lower, and as a result there will be an easier living way through technology and ICT services.
6. The ministry of economy plays a key role on great projects for great technology development in our state.

7. It facilitates the way of communication, it saves people time, it has a higher effectiveness about online services and gives an easier opportunity for all individual and collective actions. ICT is a revolution that facilitates general life.
8. It saves time, raises the working transparency, it saves the paper, the toners and electricity. If by using technology and ICT we save time, we can make a step forward to create a higher transparency and efficiency, as a final step will result the higher action on work. The use of ICT makes it possible sharing of different information for a shorter time.
9. The greatest challenges are: staying on the right track following newer technology gadgets and platforms and the training of the stuff.
10. The negative points of the use of technology might be: the dependence of people on technology and the cybernetic security that most of people do not understand its importance.
11. The future way of living is provided to be in a way that people are very much depended by the use of technology, the world will make great digital changes, the use of ICT has created an easier way of sharing information creating a comfortable way of living and I think this is strong reason to invest on technology in general. But if we lose the way of investing on ICT the consequences in the future will be bigger than we think today.