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Digitalization of the Economy within the Republic of Kosovo, its benefits and potential

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1. Introduction

In this paper we will be discussing what is Digitalization of the economy and its benefits, we will compare the differences of a highly digitalized country and ones that are not developed yet and the benefits such countries have.

We will discuss how it affects businesses in day to day life and how it will impact Foreign Direct Investments (**FDI**).

About the Republic of Kosovo we will discuss the ICT infrastructure the country currently poses, we will research the attitude and openness of the Kosovar population to digitalization of the public administration and how that will affect their day to day life, which we will discuss in three different categories: People living currently in Kosovo, the businesses and the Kosovar diaspora.

We will discuss the change of behaviour towards credit cards, online banking and how we can stimulate the behaviour of Kosovars to use credit cards and online banking.

At the end of the paper we will discuss how we can make Pristina a Smart City, the challenges of such a plan and how that would be able to attract FDI-s.

2. Digitalization and e-Government and the application of them in practice

What are: Digitization, Digitalization and Digital Transformation?

Digitization: The goal of digitization is not replacing the original documents with files in a computer, because it can be destroyed. In context of physical information carriers, such as paper documents or analogue, printed images etc. we mainly digitize by using scanners in a business office. The documents scanned do create a digital representation of document imaging, which does not end there in most cases. Why should we digitize just to keep archives then? That is not the goal mainly. In different firms, in different fields it is not only data, but it serves a purpose to capture software which the software itself can retrieve from the aforementioned documents, which in turn creates an extract of a digital form which then is put through the workflow of a business process, a system or whatever the goal might be.

The main goal when we talk about digitization, which is the first process of the three mentioned above, is to enable the said documents from a paper based process to a digital format in order to make the workflow as efficient as possible.(1)

Digitalization: In business practice, digitalization most often refers to enabling, improving or transforming business operations, business functions, business models, processes and/or activities, by leveraging digital technologies and a broader use of context in regard of digitized data, which in turn is transformed into intelligence and actionable knowledge, with a target goal. (1)

The meaning of digitalization of businesses is to put into context the information we use. Another definition given is digitalization in a specific environment or area of business. In this context a company can chose the areas where it wants to digitalize, for example, The Museum of Fine Arts in Bilbao, uses mainly physical tickets for entering the museum, meanwhile Guggenheim sells online tickets as well as physical, but their main attraction is the physical art pieces. That is one example where Guggenheim uses environmental digitalization, due to its inability to digitalize everything.

In another situation, if you work in an office, for example in a marketing or sales department, these companies nowadays strive for minimum usage of paper. These companies have other day to day dynamics because they use different methods of working.

In a traditional sense, the usage of paper is crucial. For example, in a Police station, it is rather the norm to use paper forms, which rely on technology as well, but handing over and passing physical papers and forms is the norm, and you need to be physically present.

In the previous mentioned digital offices, the usage of technology has become a day to day mandatory situation, with being mobile becoming the norm. These workplaces use digital tools such as mobile devices to keep in communication with each other non-stop, which requires to engage and work in a much different way obviously.

Digital Transformation: Digital Transformation in the cultural, organizational and operational change of an organization. The change goes through a smart integration of digital technologies, processes and competencies across all levels and functions in a staged way. (1)

While digital transformation is mainly active in the business field, it also impacts government, public sectors and those who are involved in societal challenges, such as environmental issues, aging populations etc.

In a few countries, such as Japan and South Korea, unlike in the Western societies, this transformation aims to impact every aspect of life, with the initiative of Society 5.0 (a concept for another paper), is in fact very similar to the Industry 4.0 programme.

The development of new competencies revolves around the capacities of being more agile, people oriented, innovative, customer-centric, streamlined and efficient.

In real life, it is an end-to-end customer experience optimization, operational flexibility and innovative experiences, which are key drivers and goals of digital transformation, along with the development of new revenue sources and information-powered ecosystems of value, which in turn lead to business model transformations and new forms of digital processes. The inside company goals can be to solve internal challenges, even in the situation of level projects, the levels are disconnected in process, whereby internal goals are inevitable for the next steps a company makes.

2.1. E-Government

What is e-Government?

E-Government in principle means everything from online government services to the exchange of information and services electronically between a government and its citizens, businesses and other arms of the government.

Traditionally e-government has been considered as the use of ICTs to improve the efficiency of government agencies and providing government services online.

Within time and the development of ICTs, the framework of e-government has broadened to include the ICT by the government to for conducting a wider range of interactions with their citizens and businesses, to an open government data and the use of such data to improve and innovate within the governance of a country. (2)

If we are to put a definition on E-government, it would be the use of ICTs to effectively and efficiently deliver government services to citizens and businesses, thus achieving public goals by digital means.

The principle of e-governance is to support an effective institutional framework, which in turn is set to improve internal workings of the public sector by reducing financial costs and transaction times. This in turn would better integrate work flows and processes and it enables effective utilization of the resources within the public sector agencies, which aims to find sustainable solutions,

By e-Government, the countries are set to be more efficient, provide better services and respond to the demand of citizens for transparency and accountability, to be more inclusive and by that the restoration of trust between citizens and governments.

2.1.1 Advantages and challenges of implementing e-Government

According to a study done by Mr. Drew and Mr. Alshehri of the School of ICT in the Griffith University in Brisbane Australia, there are 4 different strategies to implement, which are from 4 different organizations and each of them has different types of models with different number of stages, and we are going to go through all of them.

First of all, it is the **UN/ASPA study (2001)**: which has five different stages of implementation.

1. The first stage is Emerging, which a government establishes a very basic online independence with official sites where information is very limited and basic.
2. Enhanced, which a government increases their sites and information becomes more dynamic, where content and information is updated regularly.
3. Interactive, where users can download forms, e-mail officials, interact through the web and make appointment and requests.
4. Transactional, where users can pay for services or conduct financial transactions online
5. Seamless, where it encourages full integration of e-services across administrative boundaries, with total integration of e-functions and services across administrative and departmental boundaries. (3)

The second model is the **Gartner study (2000)**: Which has 4 stages

1. Presence, where the government gives basic and simple information websites of a passive nature, usually called a “brochure ware”, which is similar to a simple brochure, basic information, nothing else.
2. Interaction, where the government commits into simple government to citizen (G2C), government to business (G2B) and government to government departments (G2G).
3. Transaction, where the government enables payments for licences, taxes, bills etc.
4. Transformation, the highest stage and basically aligned with the concept of governance, involves a reinvention of how government functions are conceived and organized. (4)

The third model would be **Layne and Lee study (2001)**: which as the previous one has four stages. This one is directed to public administrators in regard of e-government and their organizations. It has the goal of growth into a fully functional e-Government.

1. Establishment of online presence by cataloguing, which can be similar in practice to the “brochure ware” but it is more elaborate and complex.
2. Transaction, where the government initiates a focus on connecting the internal government system to online interfaces and allowing citizens to transact with government online.
3. Vertical Integration, which refers to local, state and federal governments connected for different functions or services of government.
4. Horizontal integration, which is defined as integration across different functions, departments and services. (5)

Meanwhile the fourth model in our research is the **World Bank study (2002)**: which has only three phases, which are independent from one another.

1. Publish, which encourages the government to publish information in regard to the government and information compiled by the government to a wider audience possible.
2. Interact, requires an interactive e-government which involves two-way communications, starting with basic functions like e-mail contact information for government officials or feedback, which allows users to submit feedback on legislative or policy proposals.
3. Transact, which allows citizens to obtain government services or transact business with the government online. A transact government website would offer a direct link to government services, which would be available 24/7. These sites would enhance productivity for both businesses and civilians to cut costs by getting government assistance easier, simpler, faster and most importantly cheaper. (2) (6)

Comparison between e-government stages

The sections we just covered have different models obviously, from different sources and different methods. The differences between the stages and the sources are rather quite limited, with similarities between stages quite apparent, as we can see that the first step of putting an online presence it is a generality and not an exception, in order to implement the e-government, despite the different names used for them.

Another common stage is the transact/transaction step, which encourages the presence of online transactions between the models, with the two-way communication being a common later stage.

On another side, the differences between models are for example the number of enhancement stages and update processes.

While on vertical and horizontal stages, the vertical stage is set to a local, state and federal governments connected for different functions or services, which enables citizens to access the services at the higher level of governments from the same entry as the municipal level, because the local system are supposed to be connected to upper level systems. At a horizontal stage, systems are integrated across different functions and services. An example of a horizontal stage is if a citizen is to pay a bill,

the evidence would be shown in other departments as well.

But in the end, due to technological, social, organizational, economic and political diversity and differences, e-government involves a variety of stages or phases of development and it can not be a single step process.

The Advantages of e-government implementation

The advantages and benefits of the implementation of e-government are the same for both, the developed and developing countries.

The most common benefits are the reduction of customers, and organisations time, effort and costs, improvement of service delivery and citizens satisfaction, increase of ICT skills among young population, internet knowledge and computer usage, creation of new businesses and work opportunities.

In governments side, the e-government implementation is such as, improvement of efficiency of government agencies abilities to process data, the improvement of services through understanding of users requirements, the share of information and ideas between government agencies and departments, the assists of policy objectives by promoting ICT and e-commerce, improving transparency, accuracy and facilitating information transforming between government and citizens, improving transparency, accuracy and facilitating information transformation between government and customers and helping build trust between citizens and governments.

The challenges of e-government implementation

The challenges of an effective e-government implementation is set in 4 different categories, the **Technical** barriers, **Organizational**, **Social** and **Financial**.

The variety of e-government complexities implies on the existence of these wide range challenges, where we can see that at the Technical level, the biggest problems are ICT infrastructure, privacy and security. When it comes to Organizational issues are Top management support, the resistance to digitalization, collaboration and the lack of properly trained and qualified personnel. When it comes to Social challenges are the digital divide and alienation of the older generations and the culture itself, which in Kosovo is rather a face to face oriented culture and the Financial challenges it ends up being only one: costs.

Technical barriers.

When it comes to technical barriers, the main problem seems to be the implementation of cross departmental communication, the compatible infrastructure between these departments. With the political instability in Kosovo on the year 2020, the issue sets to be that only promises of guarantee seem to be insufficient, but rather it should be accompanied by technical solutions, complete transparency of the procedures and definitely the independent auditing, and that in my own opinion, should be controlled by the experts from the Diaspora, because they actually love the country and are less likely to be corrupted as I will show in section 4, **The attitude towards a digitalized Kosovo.**

The **ICT infrastructure** is the biggest challenge for the implementation of e-

government, but that we will discuss in detail in section 3, **the Kosovar ICT infrastructure**.

Privacy and Security

One other challenge which is definitely a big risk with an unstable government is Privacy and Security, whose implementation is a critical issue in e-Government in both developed and developing countries. Layne and Lee (5) have identified privacy and confidentiality the greatest barriers on the way of e-Government implementation.

A study by Seifert and Bonham (7) identify that an e-Government should be approached with an eye toward the protection of individual privacy. Furthermore, the issue on individual protection and security is an important obstacle into e-Government implementation. With the implementation of e-networks and their transparency have the potential to be the bridge between the citizens and the government when it comes to trusting each other.

According to the Gazeta Blic, in an interview to the former U.S. ambassador in Kosovo, Greg Delawie in 2017, the trust between the citizens of Kosovo and the Institutions themselves seems to be fading due to corruption within the institutions, all institutions of Kosovo. (8)

Mr. Delawie cites that “transparency, efficiency and accountability towards the citizens is the main goal to which every coming government has promised to uphold these values, but they have failed.” (8)

Security such as privacy are the biggest obstacles to implement into e-Government initiatives. Online security means the protection of all information and systems against any disclosure to unauthorized access, or unauthorized modifications or any devastation. (9) Hence it refers to protection of information systems, assets and control to the information itself which is an essential trust component between the citizens and the Government. Security issues may present the largest obstacle to the development of e-Government services. Thus, security policies and standards that meet citizen expectations are an important step toward addressing these concerns. (10)

The implementation of an e-Government is the use of security solutions such as digital signatures, encryptions, customer unique numbers, online banking etc.

Organizational barriers and top management support

The implementation of e-governance is not a pure technical issue, but rather an organization issue (11). These organizational challenges include top management support, resistance to change to electronic ways, collaboration and the lack of qualified personnel.

The implementation of a functional e-Government needs an absolute support from the leaders and the government officials, in order for it to be adopted properly. Indeed on the eyes of the people who work to implement the systems, the Government is the key factor into enabling them to implement it, with the change of legislation and with the necessary financial support.

There is a necessary need to have a co-ordination between the high-level officials, the people working on it and the citizens (7)

Resistance to change to electronic ways and social barriers

e-Government is a rather new phenomenon which in the work places means the switch from manual to electronic methods. The changes mean that they will create an advanced environment, which is different from the traditional ones, which government departments tend to rely on, at least in the developing countries. Many Government officials would see their positions threatened, decrease the resistance to e-government systems employees have to understand the importance and significant of e-government and make sure that they won't endanger their jobs, but through retraining and skill developments, the employees can be reassigned new roles.

decrease the resistance to e-government systems employees have to understand the importance and significant of e-Government and make sure that they won't endanger their jobs, but through retraining and skill developments, the employees can be reassigned new roles. Between public and private sectors, it is necessary to provide resources, plans, skills and experiences that the government may not otherwise have. Governments should encourage all sectors to participate in e-Government and implementation and its development. (2)

When it comes to Social issues, they mainly focus on the access of a large variety of people. This implies that the interface/s would be usable by any part of the personnel within the government. The social challenges are the inclusion of factors such as digital divide, culture, education and income.

Financial Barriers

In developing countries, the financial support of the Governments seems to be, in the eyes of them, the biggest problem. The most serious and significant barrier to the implementation of e-government is a lack of money; e-government implementation is expensive. Since every government budget is already overburdened with every possible expense budget makers can fit into it, the suggestion to expend the considerable sums that an excellent e-government will cost is a non-starter, in budgetary terms, and in budgetary politics (12).

For countries with non-existing infrastructure, the investment in new technologies, hard and soft wares, maintenance, training and education requires heavy investment are seen the biggest obstacles by the Governments of such countries.

2.2. The comparison in digitalization between EU countries and their GDP

Just like every person in a family that is different in some aspect, the digitalization projects throughout the European Union have been different.

According to The Digital Economy and Society Index (DESI), the countries which have a higher DESI are the Nordic Countries with Finland, Sweden and Denmark leading the way.

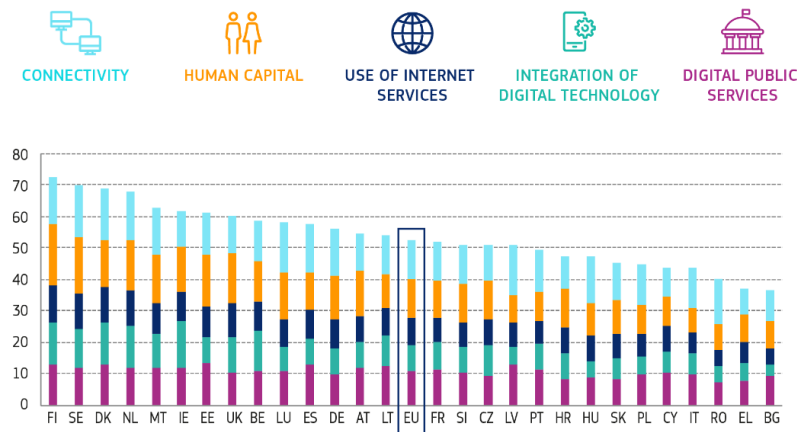


Fig. 2.1. The Digital Economy and Society Index (DESI) 2020

<https://ec.europa.eu/digital-single-market/en/desi>

According to DESI, Finland, Sweden, Denmark and the Netherlands are global leaders in digitalization, although it is evident that countries like Malta, Estonia and Ireland have some catching up to do, the EU in general has to do better to become the number one player in the world when it comes to digitalization.

According to the Methodological note of DESI, was developed according to the guidelines and recommendations in the OECD's 'Handbook on constructing composite indicators: methodology and user guide'. The data included in the index were mostly collected from the relevant authorities of the Member States by the European Commission (Directorate-General for Communications Networks, Content and Technology as well as Eurostat) and from ad hoc studies launched by the Commission. DESI measures the progress of the EU countries towards a digital economy and society. As such, the index brings together a set of relevant indicators on Europe's current digital policy mix. DESI has four main types of analysis:

1. A general performance assessment, which serves to obtain a general characterisation of the performance of individual Member States by observing their overall index score and the scores of the main dimensions of the index
 2. The focus to pinpoint the areas where a Member State performance could be improved and the analysis of the main dimensions of the index
 3. Follow-up: to assess if there is a progress made overtime
 4. Comparative analysis, which serves to cluster Member States according to their index scores, comparing countries in similar stages of digital development in order to flag up the need for improvement in relevant policy areas.
- The methodology requires an update in regard of every area that is connected to relevant policies.

The indicators used in the DESI comply the following requirements

1. Must be collected on a regular basis, in order to comply with the monitoring functions, the indicators are preferred to be collected in yearly data basis
2. Must be relevant for a policy area of interest. All indicators in the index must be accepted as relevant metrics in their specific policy areas
3. Data must not be redundant.

Coming back to the indicators of DESI and Fig. 1.1 the countries which are digitalized tend to be higher in GDP per Capita and according to Dr. Thiess Petersen, digital economies have shown the consequences of digitalization in the labour markets of the developed countries, their cross-border relocation of production sites where it suits them. He argues that the future is towards digital technologies when it comes to the efficiency of production processes. The increasing capital and technology of the rich industrialized countries is improving because are better at being able to finance the costs of digital transformation. (13)

According to Dr. Petersen the current situation of GDP per capita in the Western countries is the highest in the world. He argues that if the digital technologies are used properly, the competitiveness within these countries and the cross-border competitiveness will increase, increasing the GDP per Capita as well on the other hand those countries who will fail to implement digital transformation will be losing competitiveness, which means the developing countries will be indebted. Dr. Petersen mentions Italy and Greece as the examples of countries that are currently failing in this process.

According to a research by BBVA bank, they use a multi-dimensional digitalization index with which they have compared the Digitalization of 99 different countries. They argue that according to their study. The results show that **Internet affordability does not explain the significant differences across countries**, regardless of the level of development. This fact seems to indicate that the price is not a decisive factor in Internet adoption, as this service would be equally affordable in countries with higher and lower adoption rates. On the other hand, the **infrastructure dimension** has a high variation and discriminates well among countries that are more or less digitized. (15)



Fig. 2.2. The BBVA digitalization index

<https://www.bbva.com/en/which-countries-are-the-most-digitally-advanced/>

In reference to fig. 2.2. we will analyse the top 5 countries within EU with the best digitalization results and their GDP per capita with the 5 worst.

High Digitalization	GDP per Capita 2019	Index	Low Digitalization	GDP per capita 2019	Index
Luxembourg	114 110 \$	1.0 (perfect)	Greece	29 712 \$	0.5
Netherlands	56 455 \$	0.94	Italy	42 198 \$	0.58
Germany	55 366 \$	0.88	Spain	40 329 \$	0.63
Finland	48 191 \$	0.88	Bulgaria	22 182 \$	0.58
Denmark	56 103 \$	0.90	Croatia	27 558 \$	0.46 (lowest in EU)

Table 2.1 Comparison between GDP-per Capita (16) and Digitalization Index (15)

As we can see the GDP per Capita tends to be higher on the more digitalized countries in comparison to those who do not tend to digitalize. According to Ana Cabrita, the southern European countries need to improve their regulatory frameworks to enhance digitization, which applies to eastern European countries as well. (15)

With the digitalization index by BBVA which was made in 2018 and with the GDP per Capita of the end of 2019, there tends to be a correlation between the difference, with the industries themselves becoming more and more efficient, the southern European countries lack behind fairly behind.

2.2.1. The happiness factors?

In 2018, over 62% of people aged 16 and over within the EU reported being happy. Unsurprisingly the countries with a happier population were Belgium, Netherlands, Austria, Finland and Luxembourg (17), which contain 3 countries within the top 5 most digitized countries at the time. Meanwhile, on the other hand we have 2 of the poorest digitalized countries within the EU and 4 of them are in the bottom 7, showing again a correlation with happiness and GDP per capita. And with digitalization impacting directly in the GDP of a country, we can safely assume that happiness within Digitalized countries is higher as well.

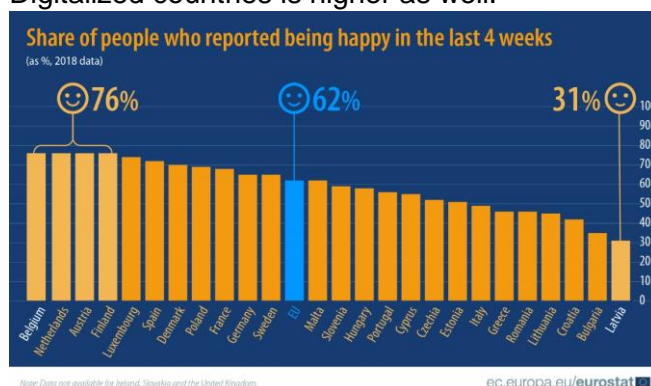


Fig 2.3. Happiness throughout the EU by Eurostat

The only exception in this study by Eurostat and the digitalization argument is Spain, which might be a coincidence or an anomaly, but making daily life easier for the average person and the working processes to companies as well makes for a better and happier living.

3. Foreign Direct Investment (FDI)

What are Foreign Direct Investments?

According to Investopedia, is an investment made by a firm or an individual in one country into business interests located in another country (18). In principle, FDI takes place when an investor establishes foreign business operations or acquires foreign business assets in a foreign company, however FDI-s are distinguished from portfolio investments in which an investor merely purchases equities of foreign-based companies.

According to Maria Obiols of Global Finance Magazine, what brings FDI-s to a country can be a various factors from cheap land, rich mineral deposits to strong human assets such as rich consumer markets, or tech-savvy talent pools, and some tempt investors with a low tax policy. Mrs. Obiols cites that “in the recent years, investors have been focusing more on the governance and regulatory factors and countries which seek to increase FDI-s should target governance issues to improve competitiveness.” She points to key governance factors such as improving security for operations in the country, reforming business regulations and dispute-settlement mechanisms, and lowering corporate tax rates. (19)

3.1. The Digital Economy

The Digital Economy has started to set new challenges and possibilities for the International Investment policies throughout countries and in this part of the paper, we will go through **three points**.

First, as digitalisation and digital technologies come to be used more broadly and intensively by multinational enterprises in all sectors of the economy, some of the policy challenges to which digital technologies have given rise, but which have hitherto been limited to the digital sectors, are likely to become broader international investment policy challenges. For example, the widespread adoption of artificial intelligence and the collection of big data could result in a significant broadening of investment reviews motivated by national security and interest considerations.

Second, a growing body of digital policy, which likely to play an increasing important role in shaping internationalisation as digitalisation becomes a key element in underpinning the way multinational enterprises (MNE-s) organize their operations, digital and non-digital, and how they are able to build their digital capabilities.

Third, the broadening adoption of digital technologies across different sectors could result in a much broader diffusion of these technologies and the productivity gains to which they can give rise. (20)

Coming back to our first point, the main ingredients of a digital economy are three, digital data, digital technologies and digital infrastructure. Digitalisation puts all sounds, shapes, information etc. into digital data, which can be infinitely processed and stored at negligible marginal cost. Digital data has been the basis of the new business models, and within certain industries, it has given rise to even more industries. For most big firms, big data has become an increasingly valuable strategic asset generated by algorithms and network circulation. (21)

Digitalisation has led in its essence the emergence of Digital ICT technologies, which have developed rapidly new products and services. These new technologies range from digitally enhanced devices such as smart machines, digital platforms (e-commerce, social networks) to entirely brand-new technologies such as virtual currencies and blockchains.

An important building block for digital technologies and data-driven economies was the development of a secure and high-speed digital infrastructure. (22)

Such infrastructure is composed of a multitude of local, national and global networks owned by different entities and builds the foundation for digital services, applications and business models.

Due to the high paced advancement of digital data, digital technologies and cloud computing, data storage has become an important infrastructure component at the firm level.

According to Mr. Neville of Financial Times, the digital economies have changed traditional business models, such an example can be the healthcare, which relies on data and AI rather than pharmaceutical research. The same can be said with manufacturing, which is continuously relying on AI than traditional engineering. (23)

Across all sectors in the developed countries, are adapting to an increasingly digital business environment by building up internal capabilities as well as by acquiring external assets and knowledge from secondary and tertiary data.

Now coming to our second point, one of the most important changes in the modern world throughout the digital economy is expected to reduce the need for a physical presence to service into foreign market by facilitating the transmission of a wide range of goods and services in digital form, such as music, publications and services ranging from architectural design to retail can be delivered in digital form, globally.

An international investment perspective, the main implication is that the trade of between exporting and market-seeking FDI as market entry modes for delivering products to host countries may be shifting towards exporting. (24)

On the other hand, a report by UNCTAD in 2017 concludes that the market-seeking FDI and efficiency-seeking FDI are partially undermined by digitalization.

The ability of firms to access international markets with smaller “asset footprint”, thanks to the digital economy, which has been associated with the emergence of micro-multinational and born-global firms that quickly attain global reach with minimal cross-border investment. (25)

the impact of the digital economy on international investment patterns concerns the growing importance of digital infrastructure for the ability of countries to attract FDI. Just as the digital economy has played a central role in facilitating the emergence and spread of global value chains, the capacity of countries to provide the required digital

infrastructure for more digital-intensive international production networks is expected to become an increasingly important new determinant of MNE location decisions. (26) Although the digital economy will continue to have transformative and disruptive implications for businesses, major disruptions for multinationals and international investment trends, such as declines in the use of FDI by firms as a mode of market access, have yet to be observed. Digital technologies have given rise to new businesses and international business models that have allowed some firms to build a global presence without significant amounts of FDI, but FDI continues to underpin the internationalisation strategies of firms in more traditional industries. (25)

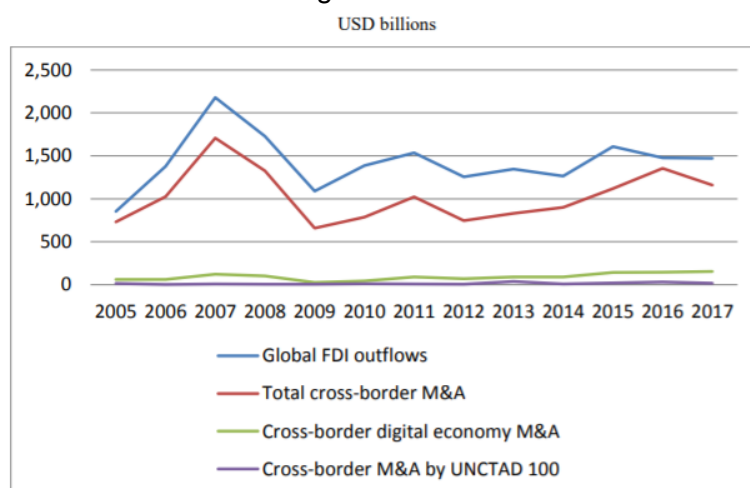


Fig. 3.1. The Global FDI outflows and M&A investment. Calculations (20), Data (25)

Although the contribution of digital firms to international investment flows has been modest to date, a number of recent trends suggest that the role of digital technologies in the international investment regime is growing. While the average cross-border M&A has had a steady growth from 2010 to 2017 at an annual rate of 9%, the average, the average cross-border M&A has had a growth of 30% within this period. According to the 100 digital firms identified in UNCTAD, those firms increased cross-border acquisitions on average by 90% annually over the same period (2010-2017). Even though the FDI footprint has been light, compared to the traditional firms, they have nonetheless been growing rapidly (30)

A large share of this international investment is going into digital infrastructure. For example, cross-border investment to acquire digital data storage assets reached USD 13.8 billion in 2016, the highest level on record. Cross-border investments to acquire intangible assets (i.e. knowledge-seeking FDI) have also been an important driver of the growth in cross-border digital investment. For example, cross-border acquisitions to acquire software developers increased fifteen-fold since 2009 to reach USD 102 billion in 2017.

A key factor behind the recent rapid growth in M&A directed at acquiring digital assets has been the sharp increase in the acquisition of digital assets by non-digital firms. Up until 2014, nondigital and digital firms were roughly equal in terms of their acquisition of digital assets. Beginning in 2015, the former significantly increased their digital acquisitions, going from acquiring USD 78 billion in digital assets in 2013 to acquiring USD 458 billion in 2016.

This acceleration of investments in the digital economy by non-digital firms could presage more pronounced international investment effects than have been observed until now. As MNE's in traditional sectors such as agri-business, real estate, construction, healthcare, professional services, and retail build up their in-house digital capacities hybrid international business models requiring less FDI (or otherwise redefining ownership patterns in global value chains) are likely to emerge outside of the digital economy itself. (20), (25)

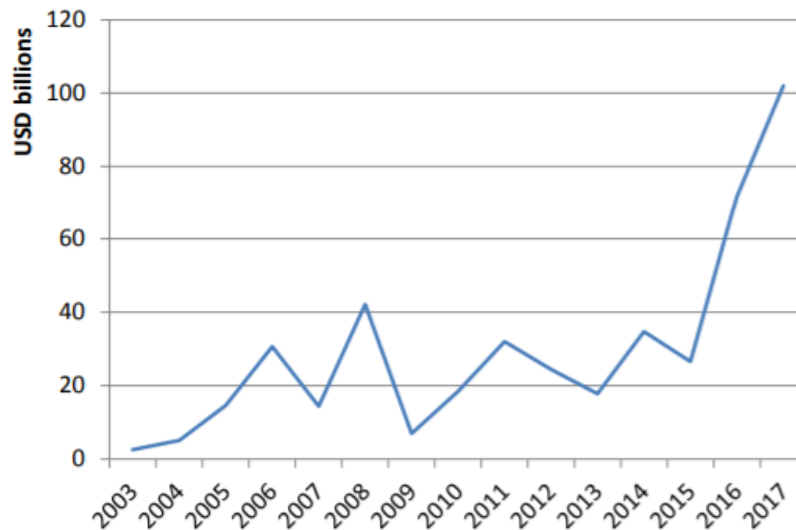


Fig. 3.2 Cross-border M&A into software publishers, 1995-2017 Calculations (20) Data (25)

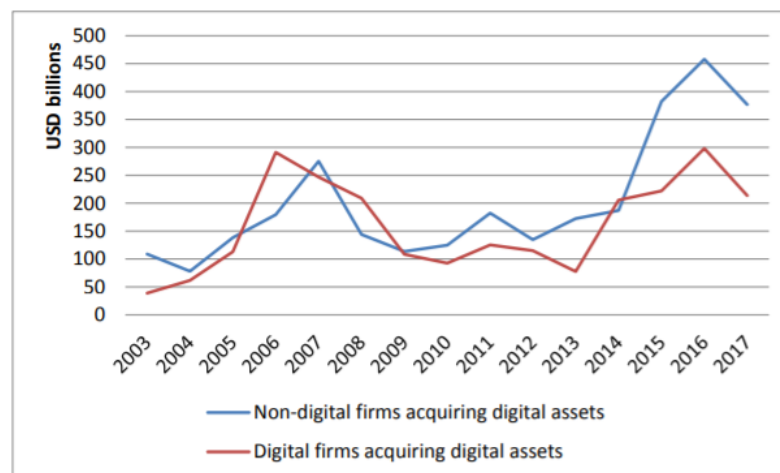


Fig. 3.3. The acquisition of digital assets by non-digital firms (2003-2017). Calculations (20), Data (25)

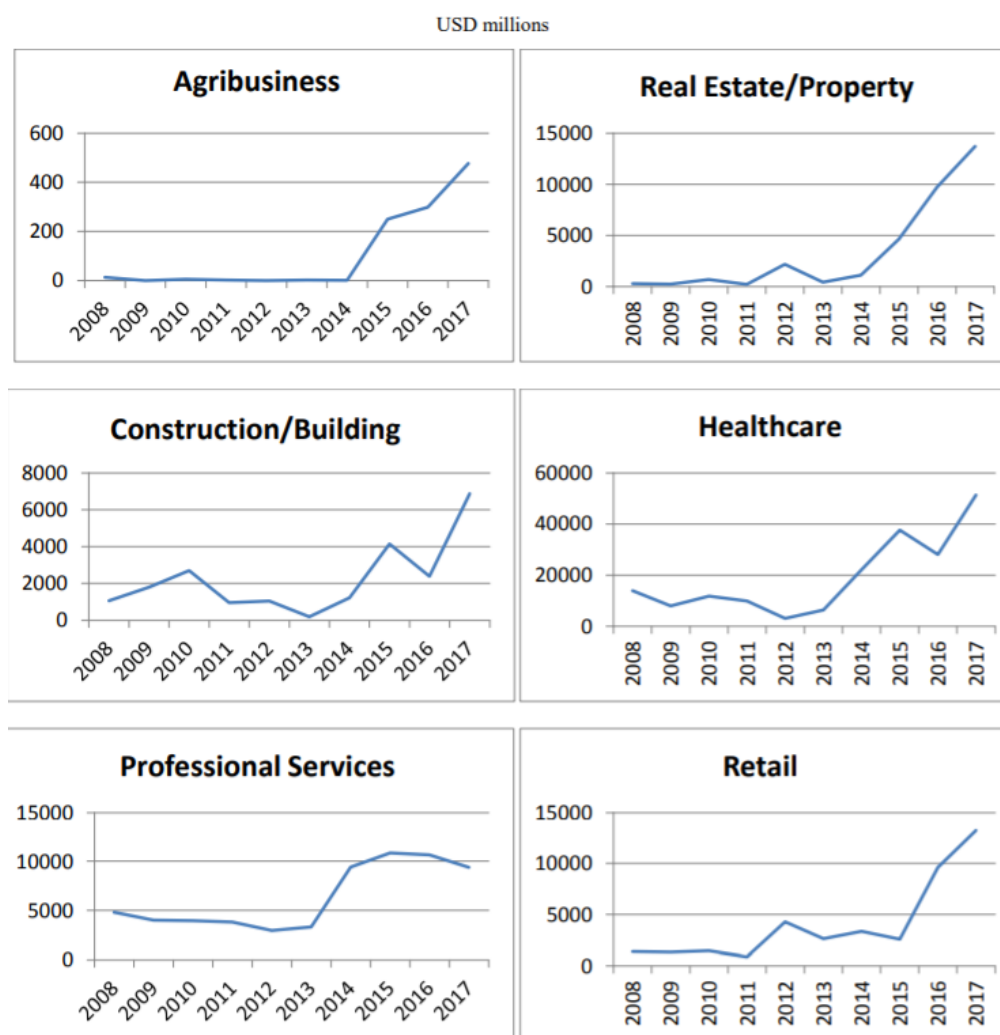


Fig. 3.4. Non-digital sectors acquiring digital assets (2008-2017). OECD calculations (20)

The reverse trend -- digital firms acquiring non-digital assets -- has not been as clear or strong. In 2017, digital firms acquired USD 158 billion in non-digital firms, which is up from the levels following the financial crisis but still well below the USD 591 billion of digital assets acquired by non-digital firms (figure 5). The greater interest on the part of non-digital firms in acquiring digital assets than the other way around probably reflects the greater potential for productivity and competitiveness gains of digital adaptation for firms in non-digital sectors. Notwithstanding the general trend, some sectors have seen more digital-to-non-digital hybridisation than others. The retail sector provides a good example of this trend, with Amazon's acquisition of the traditional retailer Whole Foods in 2017, and Walmart's acquisition of Jet.com in 2016. (20)

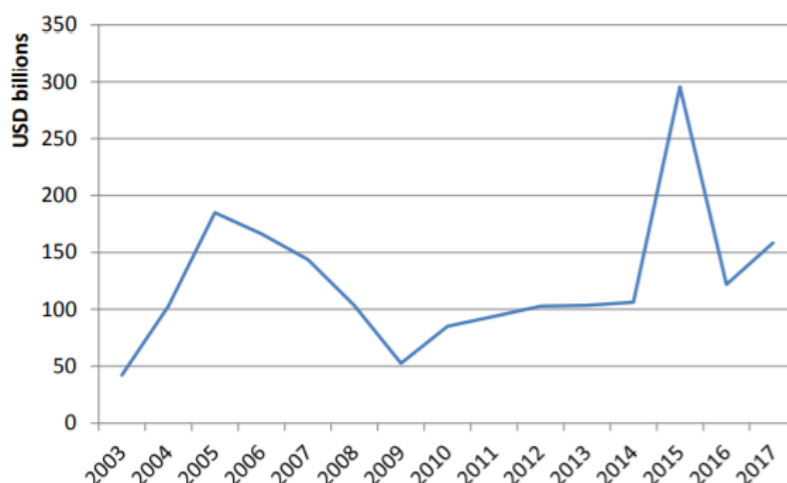


Fig. 3.5. Acquisitions of non-digital assets by digital firm acquirers, (2003-2017)

The geography of cross-border investments in the digital economy is heavily concentrated in, but not monopolised by, developed economies. Over the five years from 2013 to 2017, the United States and the United Kingdom each received over USD 100 billion in inward M&A investments in digital assets, and together accounted for 49% of all cross-border digital M&A. They were followed by a group of four economies that received over USD 20 billion in inward M&A investments in digital assets, comprised of the Netherlands, the People's Republic of China (hereafter China), Germany, and Israel. India, Japan, Singapore, France, Finland, Sweden, Austria, and Canada all received over USD 10 billion in inward M&A investments in digital assets. The top 20 home economies to (or sources of) international M&A investments in digital assets is likewise concentrated in more developed economies, but nonetheless includes China, Chinese Taipei, South Africa, Hong Kong (China), India, and Oman. Fifteen economies appear in the top 20, both as attractive destinations for digital M&A and as leading sources of cross-border M&A investments. This means that ten economies only appear in one of the two lists. The five economies that are attractive hosts/destinations but that do not appear in the top 20 sources of digital M&A are Singapore, Finland, Austria, Italy, and Peru. The five economies that are top 20 sources of digital M&A investments but do not appear in the top 20 destinations are South Korea, Ireland, South Africa, Denmark, and Oman.

These cases raise an interesting economic and policy question since we would normally expect the factors that determine attractiveness to foreign digital investors to be the same as those that determine the ability to generate outward digital investment. One possible explanation is that countries follow a digital development path in which a country first develops the factors that attract inward digital investment (human resources, good digital infrastructure) and, at a later stage after this digital investment has matured, outward digital investment follows.

Now coming to our third point, In Investment policies in an increasingly digital world, we can argue that investment policies have not undergone much major changes.

As we mentioned in point two, the digital economy is increasing at a very fast pace, especially as it spreads into the non-digital economy. While UNCTAD (25) emphasises the implications of investment policies for supporting digital development strategies,

this section focuses on the implications of investment policies for supporting digital development strategies for international investment. An important challenge is set to be that many digital policies. The change of these policies does not necessarily go hand in hand with traditional investment policies. Two digitally based policies stand out for Governments, digital policies related to national security and digital policies related to business operations.

Foreign ownership can give rise to national security concerns for governments, with some countries having developed specific policies to address these issues while maintaining an open mind to foreign investments. The types of transactions that have given rise to national security concerns have evolved over time. Examples of foreign investments that have given rise to security concerns include the acquisition by foreign firms of so-called dual use technologies, the foreign acquisition of critical infrastructure, and more recently, investments by foreign state-owned enterprises (especially by China).

Few governments have significantly altered their approaches to preserving national security because the mechanisms in place have been deemed adequate for dealing with new potential sources of concern to which the internationalisation of the digital economy has given rise. Nonetheless, some governments have become more explicit in recognising digital issues in their approaches to national security. For example, Germany has recently clarified its FDI review mechanism because of a “changing security landscape” concerning civic security-relevant technologies. The directive, an amendment to the foreign trade regulations, aims at setting clearer rules for the review of acquisitions from non-EU investors. It puts a focus on companies that host critical infrastructure; produce industry-specific software for that infrastructure; or work with surveillance mechanisms, cloud-computing-services or telematics infrastructure.

Even though the not directly at digital economy issues, the Governments of France, Italy and Germany in 2017 called for EU policies to permit national governments an “additional protection” from investments by foreign buyers in “areas sensitive to security or industrial policies” (26). Through similar conditions, the Group of the European People’s Party, the largest political group within the EU parliament issued a proposal for a thorough “Screening of Foreign Investment in Strategic Sectors” in 2017 as well. The proposal calls for the creation of a “European Committee on Foreign Investment” that would review, investigate and control sensitive foreign investments within the European Union. The European Council summit in June 2017 concluded that it should “analyse investments from third countries in strategic sectors, while fully respecting member states’ competences”. Other European countries such as the United Kingdom and the Netherlands are also considering strengthening their screening of foreign direct investment (FDI) on national security grounds.

In the United States, screening of foreign investments from a national security perspective is carried out by the Committee on Foreign Investment in the United States (CFIUS). In 2016, more than 170 transactions were reviewed in total, many of them technology related. Whereas the vast majority of foreign investments involving high technology were approved, three exceptions were related to semiconductor technology. The proposed acquisition of Lumileds from Philips, a Dutch company, by a Chinese consortium was not carried out due to non-disclosed concerns, the acquisition

of Aixtron, a German semiconductor company, was blocked by a presidential executive order, and the sale of Global Communications Semiconductors to Sanan Optoelectronics, a Chinese semiconductor company, was abandoned due to CFIUS concerns.

3.2. Brexit as an example

An example can be made of Brexit, where in the United Kingdom 51.9% of the population voted on a referendum to withdraw from the European Union. There were a number of pros and cons at the time on the board, but the financial concerns were definitely affecting both sides of the voters.

When people voted “yes” on Brexit they thought they were voting for saving that could come up to Billions of pounds a year for the Government, more control over immigration and more security in the UK.

One thing Brexit definitely did was to disrupt the financial sector, which was the biggest sector of the British economy, at 12% of the GDP.

Brexit has changed the financial sector of UK, where offshore banking is concerned and jobs are leaving London, with corporate HQ's moving to mainland Europe, but the issue stands at where are they moving?

According to Alice Tidey of Euronews, after the 2016 referendum up to, 140 companies have moved to the Netherlands, with 78 firms moving in 2019, which created around 4200 jobs and injected over 375 million €. At the beginning of January 2020, around 425 companies were in verge of doing a similar move after 175 doing the exact same thing in 2019 (27). As we mentioned in paragraph 1.2, and as we will see, it is because the Netherlands is highly digitalized, and being close to geographically as well have been the main facilitators to this surge of UK based companies moving to the Netherlands.

According to PYMNTS Fintech companies have been moving out of the UK market. By the 8th of January 2020, more than 275 Fintech firms have moved out of UK to relocate mainly in Luxembourg, Paris and Frankfurt, as mentioned again in paragraph 1.2. and as mentioned by the Digitalization index by BBVA (15) and the European Unions DESI index (12), it is an investment trend that is likely to follow on the upcoming years.

According to Sadie Levy Gale of the Independent, More than 100 Tech start-ups were set to leave the UK post Brexit for Berlin, making it the new Centre of Financial companies within Europe. Senator Cornelia Yzer during a presentation in London Fintech Week 2016 quoted that over 100 companies approached her office in 2016 about a move in Berlin. That being start ups focused in fintech, e-commerce, mobile applications and multinational companies as well, about the possibilities to move to Berlin. With Deutsche Bank and Microsoft having opened an accelerator firm together in Berlin and with Commerzbank as a partner as well. The reason is yet again, digitalization, the main facilitator why these companies considered moving to Berlin. (28)

Another sector which is highly affected is the UK gaming industry, which according to Jordan Erica Webber of the Guardian, after Brexit 40% of companies considered highly leaving the UK because of the fact that 57% of the employed in this industry in the UK were EU citizens. The main issue tends to be the loss of international talent.

The UK at 2017 was the 6th largest gaming market in the world, with 4.33 billion €

revenues in 2016, with over 12.100 full time employees and of course the relocation seems to be the better digitalized countries such as France, Netherlands and Germany. (29)

Summarizing this paragraph, the main reason why companies keep on moving from UK because of Brexit seem to be regulations and the locations they choose seem to be the highly digitalized countries as the main facilitators.

4. The Kosovar ICT infrastructure

In this section of the whole paper, we will concentrate on the strategic plan of the Kosovar ICT department.

We will go through the plan problems of the Kosovar ICT structure which the Government decided to fix or patch, the improvements set to be made from the programs beginning to the end and other issues which are relevant to the ICT sector and its infrastructure.

4.1. The 2013-2020 Plan

According to the Ministry of Economic Development, ICTs are one of the most important technologies influencing human life and daily activities. In the economic sphere, the availability of a diversity of modern electronic communications network and services help businesses, increase their productivity and efficiency by generating more efficient production techniques and lowering the cost of coordinating economic activity within and between businesses.

In the social sphere, widespread access to reliable, fairly priced, good-quality electronic communications networks and services foster increased citizen awareness and involvement,

and facilitates the availability of a wide range of government services. In the public-sector sphere, there is considerable evidence indicating that electronic communications can be a powerful tool to promote government transparency, accountability and efficiency.

At the end of 2012, before the program was implemented, only 48% of the population had access to Internet

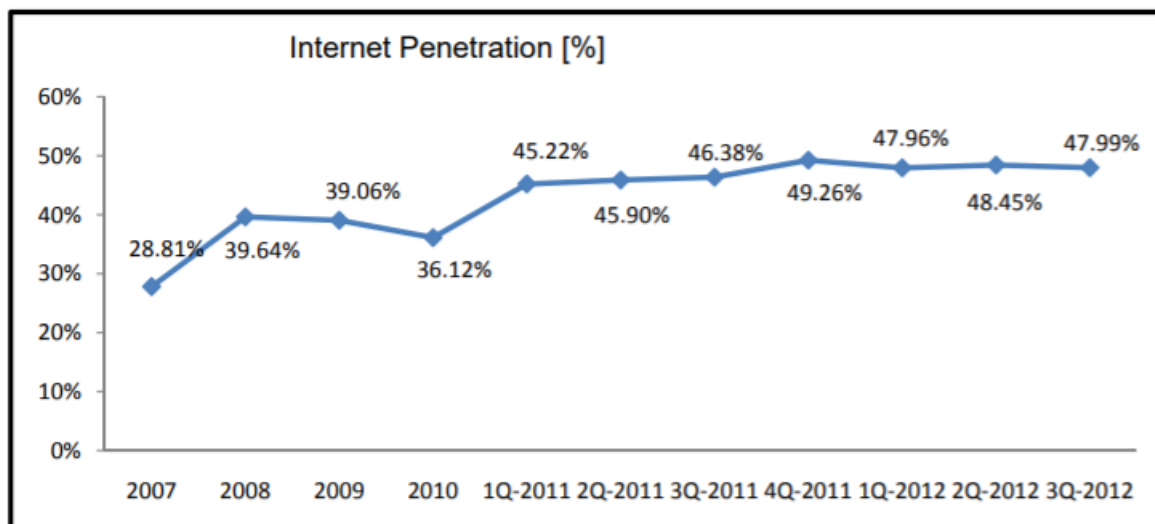


Fig. 4.1. Internet Penetration within the territory of Kosovo. (30)

Meanwhile according to Eurostat (31) the average access within the European Union was at 72%

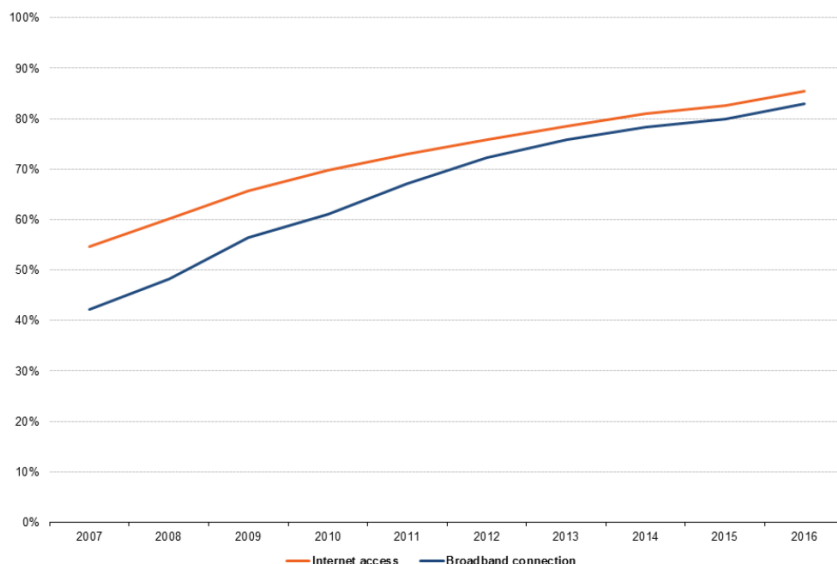


Fig 4.2. The average Internet Penetration within the EU (31)

Meanwhile the mobile penetration had a significant raise from 2007 to 2012 with it growing up from 41% to 96% within the period.

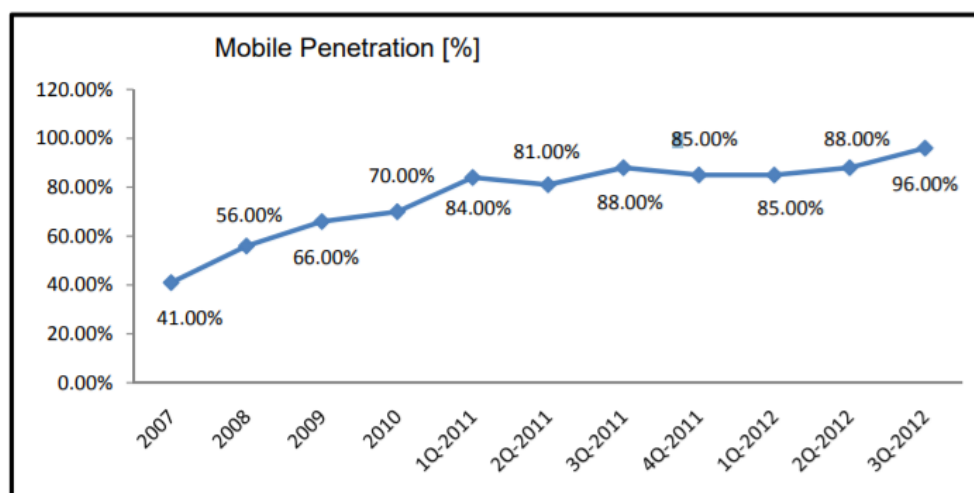


Fig 4.3. Mobile Penetration within the Territory of Kosovo

The ICT Sector Policy 2013-2020 was set to address the issues of ICT infrastructure development, development of electronic content and services and the promotion and the use of such opportunities, which would end up in the enhancement of the Kosovar residents ability to use the ICTs.

The issues the ICT infrastructure faced in 2011-2012 was the issue of the remote areas having expensive internet. One of the main goals was to reduce the price at the time, however, the development of the infrastructure in the country had been quite uneven, with businesses in the remote areas reluctant to develop or upgrade. In Kosovo, the population online connection was mainly wireless technologies, with the usage of old telephone lines made of copper as the main source, which obviously gave a higher connection rate and better internet to the urban areas. To ensure broadband connection coverage, the public sector had to take actions to bridge digital divide since only geographically consistent development of broadband networks brings additional benefits to the economy and society in general, the Government did explore innovative and creative options, including public private partnership, alternative funding mechanisms, etc., for the deployment of Internet broadband services to schools and other academic institutions, public health institutions, and cultural institutions such as libraries. Government and public institutions had to seek financial support provided by multilateral financial institutions, e, g World Bank, European Bank for Reconstruction and Development and the European Investment Bank, with the aim to finance projects aimed to bridge the digital divide between un-competitive and competitive areas. If demand needs, the Ministry of Economic Development should prepare and adopt broadband deployment action plan with the aim to deliver broadband access to the residents, SME and farmers living in un-competitive areas.

5. The attitude towards a digitalized Kosovo

Government's stance

According to the Minister of Economy, Employment, Commerce and Strategic Investments, Rozeta Hajdari, Kosovo had started a joint project with the Austrian Government in regard of guidance and co-operation.

Madam Hajdari has stated that digitalization has the potential for the economy of Kosovo to “blow over” the regional and international borders, especially with the EU, in regard of Commerce. “Digitalization does not ask for the physical borders, but it brings the possibility to have an overflow of new ideas and co-operations. We are set to withdraw the maximum we can with the Government budget and the aid that we receive from our partners to improve the life of the ordinary Kosovar” – Rozeta Hajdari. (32)

This stance by the Government has been changed though, because of a coup to overthrow the Government on the 25th of March 2020, three weeks after the statement of the Minister Hajdari.

The Kosovan Chamber of Commerce and GIZ during the time of the previous Government have had an agreement for strategic partnership whose goal was the digital transformation and enabling the competition in the private sector.

This agreement was made on the 10 September 2019 and is reported to be backed up by the German Government through GIZ.

The agreement according to the Kosovan Chamber of Commerce is the study on digitalization which will focus on three crucial sectors in the economy: manufacturing, agrobusiness and services. The study is set to diagnose the actual situation of businesses in regard of the usage of digital tools and the need of digitalization within manufacturing facilities. The study is about the increase of the capabilities of Kosovar companies to do business, and a growth in the geographical presence and digital presence, with the goal of penetrating into new markets to the consumers. (33) (34)

Since then, from the new Government with Prime Minister Hoti, we have heard absolutely nothing in regard of digitalization and it has stopped all the projects in this regard, but have made a project for a new highway for whom the costs have not been revealed yet.

The political situation is such that, from the time I have written this paragraph, the Government might have changed.

5.1. A research in the attitude of three factors in Kosovo (Kosovars living in Kosovo, The Diaspora and the Businesses)

The reason what motivated me the most to start this paper was a small research I did on my own for businesses in Kosovo, people who live in Kosovo and people who live in Diaspora. In total I received over 250 responses within a week, so I saw it as a sufficient response and hence I closed the research. For my research, I used Google Forms with the pretext that it is the easiest form of a research for the researcher and for the users as well.

We start with the people who live currently in **Kosovo**:

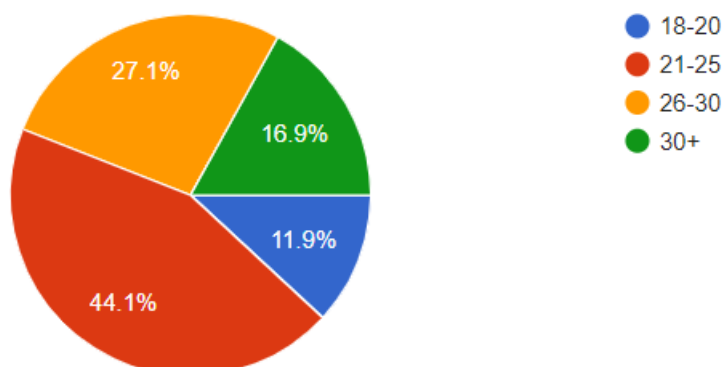


Fig 5.1. The age groups (Kosovo)

As one can see, the demographics of the people who participated in the research were young adults at 71.2% (44.1% at 21 to 25 and 27.1% at 26 to 30).

The first question they were asked were, how many documents does a person withdraw within a calendar year, with the majority answering to up to 3 documents until the end of the calendar year.

The most withdrawn documents were as one might expect, the tax documents, the birth certificate and the birth extract.

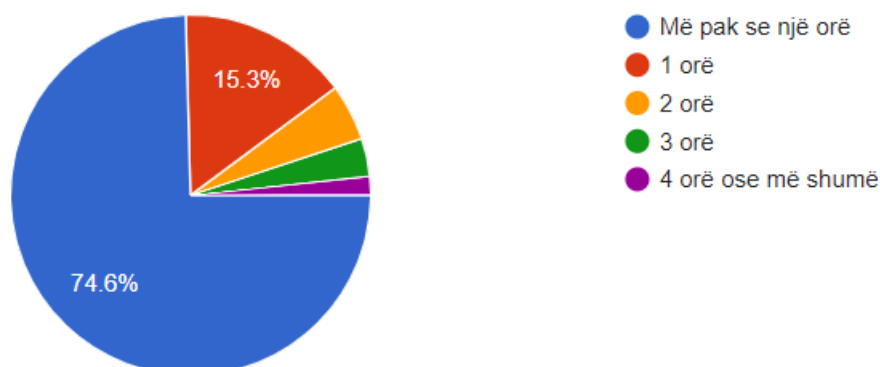


Fig 5.2. The longevity of withdrawing a document (Kosovo)

The average time it stays less than one hour, at 74.6%, which includes traveling as well for personal documents. When asked, which is the biggest issues to get a document, it was the staff unprofessionalism and the negligence at 54.2%, the conflict of working hours of the individual and the municipalities at 49.1% and the lengthy procedure at 33.9%. Keep in mind that the responders could give more than one answer in this question within the survey.

When asked, would it be easier for the individuals to have all the services online, there was an overwhelming positive result.

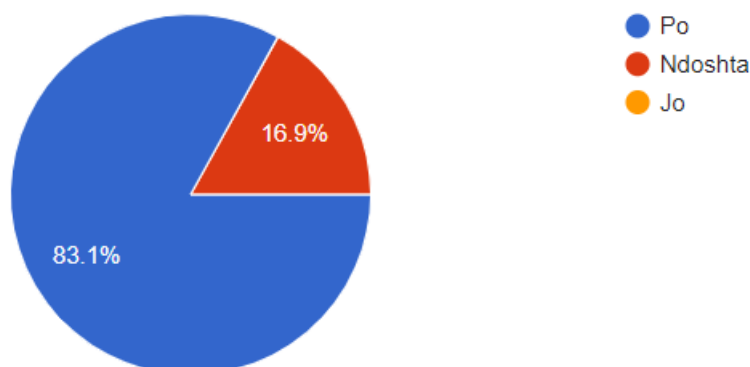


Fig. 5.3. Would it be easier to complete the administrative duties online if provided? (Kosovo)

A surprising 83.1% of the people asked responded in “yes”, 16.9 responded in “maybe” and 0% responded with “no”, but when asked if the older generations would be able to complete these duties online only 18.6% responded “yes” with 42.4% being sceptical and answering “maybe” and 39% saying “no”

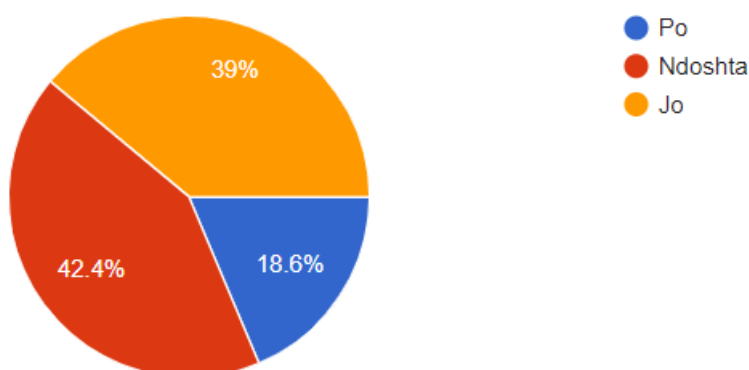


Fig. 5.4. Would the older generations be able to do their administrative duties online (Kosovo)

The second category is the **businesses in Kosovo:**

With the majority of respondents being at an small to medium industrial level such as as Production companes such as Potato Chips, Furntiure factories, Ceramic and Sanitation factories and the businesses being more established with 32% of them being over 15 years and more actively operating, we have asked them, how many documents per year do they need to withdraw?

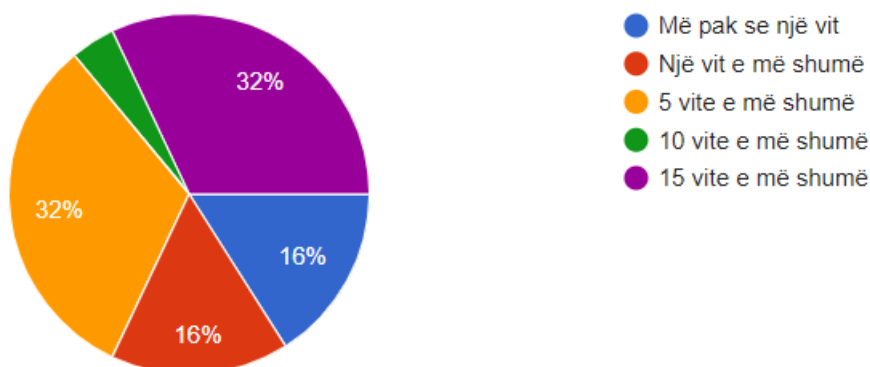


Fig 5.5. how many documents do you withdraw within a calendar year (Businesses)

60% of the respondents answering at 5 times or more, the issue remains that all businesses for tax purpose documents they need to go to Pristina, where the amount of people to withdraw a document can cause quite the waiting lines.

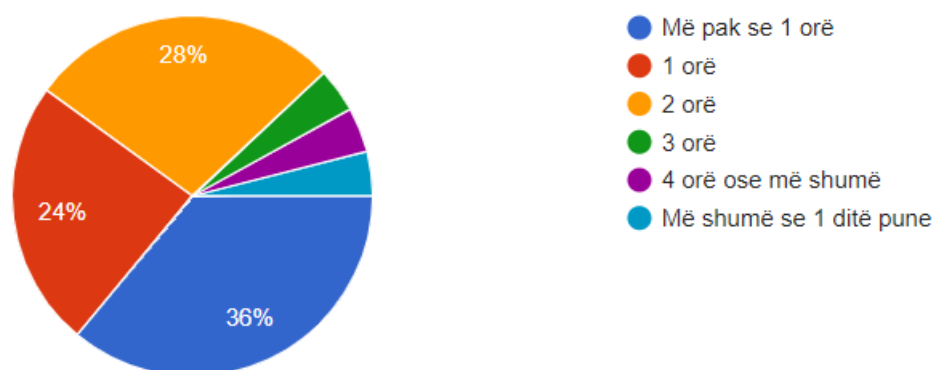


Fig 5.6. The longevity of withdrawing a document (Businesses)

When we asked how long does it take to withdraw a document

When asked what is the biggest issue for businesses, the time still remains an issue within the companies as well at 48%, the working hours conflict at 30% and the main issue still remains the unprofessionalism and the negligence of the staff at 60%. Keep in mind that the respondents in this question as well could give more than one answer.

When asked would it be easier to do these duties online, 68% answered "yes", while 28% answered "maybe" while 4% answered "no".

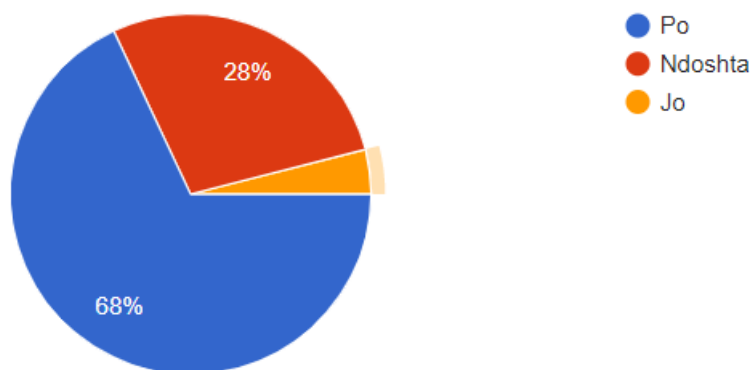


Fig.5.7. Would it be easier for businesses to do the administrative duties online (Businesses)

When asked in an open question, what would be the biggest benefit of digitalizing the public administration, the results were almost overwhelmingly “the less wasted”.

The third category we asked was the **Diaspora**:

The demographics of the diaspora age wise were much older than the people living within Kosovo (at least the responders). This group of people made over 70% of the responders within all three groups asked about the digitalization of public administration.

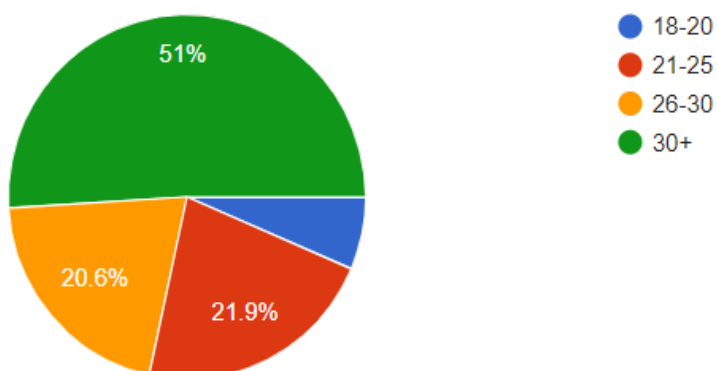


Fig. 5.8. The age groups (Diaspora)

As we can see, the responders from this group is much more mature than the responders from the group living in Kosovo. With this group almost specifically living in North-Western Europe, with only a few other people living in the U.S. or Italy.

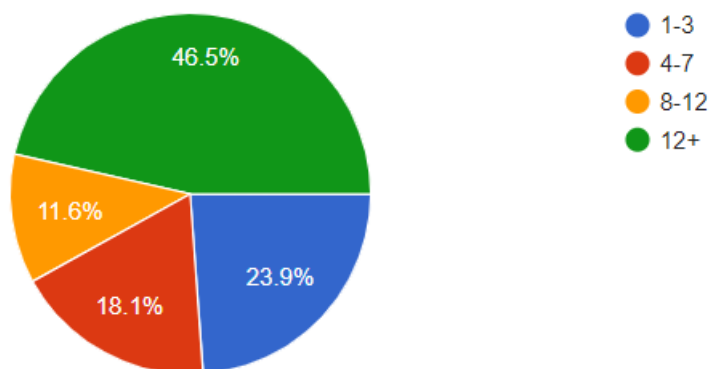


Fig 5.9. The amount of years they have been living in Diaspora

This figure surprised me the most, with a large minority of 46.5% of these responders living over 12 years abroad is staggering, and with a new wave of emigrants at almost 24% living abroad for 1 to 3 years.

When asked how long do they spend in Kosovo within a year, 63.9% answered with a month or more.

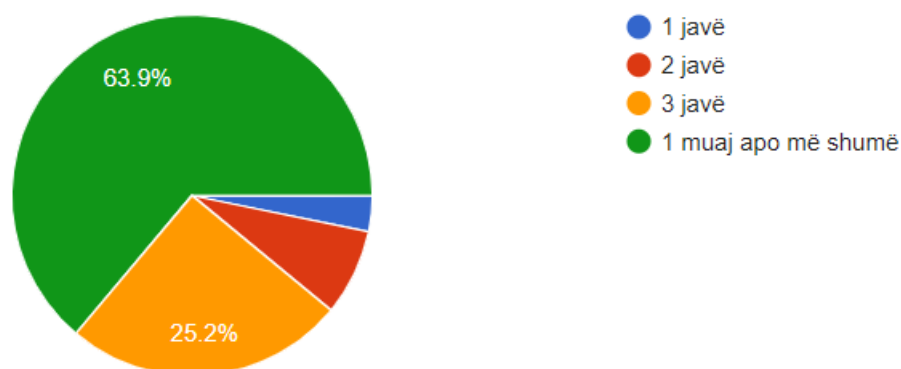


Fig. 5.10. The average time an individual from Diaspora spends in Kosovo within a year

90% of the responders have only Kosovar citizenship and have properties in Kosovo as well, which makes this situation more complicated, with them having to withdraw documents every year for tax purposes and documentation purposes. Almost all these responders have to get each year taxation documents and bills, birth extract and birth certificate for the purpose of enabling them to get an ID or to renew their Passport.

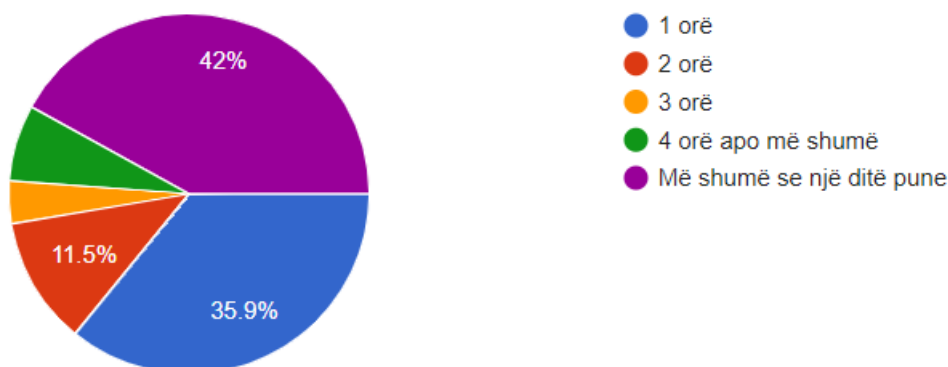


Fig 5.11. The longevity of withdrawing a document (Diaspora)

We have come to the main motivating statistic why I decided to make this research. The amount for a person from Diaspora to get a document it is lasts more than a day is at a staggering 42%.

When asked what are the main issues they face to withdraw a document 60.4% responded with the longevity of the process, 30.2% and an overwhelming 84.9% responded in the unprofessionalism and the negligence of the staff and only 1.4% faced no issues.

The responders could give more than one answer in this question as well.

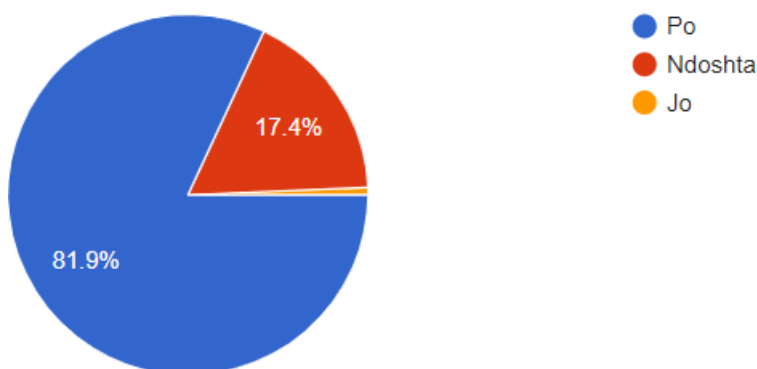


Fig. 5.12. Would it be easier to withdraw documents online? (Diaspora)

When asked, would it be easier to withdraw these documents online, 81.9% of the responders answered with “yes”, 17.4% “maybe” and 0.6% answered “no”, and would language be a barriers, 71.8% answered “no”, 18.1%, answered “maybe” and 3.9% answered with “yes”.

When asked in an open question, which generations would have the most trouble withdrawing a document, there were only two types of responses, the elderly due to technological challenges and the younger generations, who are grown up in Diaspora and have difficulties with the Albanian language.

5.2. Resistance to change

Coming back to the resistance to change, we can conclude that e-Governance is a way to allow transparency within the Government and the trust between Government and citizen.

As discussed in point **2.1 e-Government** there can be several barriers, but in this case, we are discussing the situation within the institutions of Kosovo.

One issue which is an issue is the staff and the organizational resistance. One issue is that the staff can see technology to replace them and as such it is only natural to resist change.

According to Balkan Investigative Reporting Network (BIRN), they call the year 2019 a “Recession of Justice” in comparison to the years 2017 and 2018, in regard of the corruption cases. This “Recession” has occurred regardless of the fact the judges and the staff number and salaries within these last 3 years have increased.

They argue that the decrease of the number of prosecuted, the decrease of the number of solved cases, the fail of the production of proper argumentation of the prosecuted in the courts and the quality (or lack of) the accusations have decreased.

The head of the report, Labinot Leposhtica has argued that the individuals charged with corruption have been fined instead of facing jail time, which should not be the norm, and the confiscation of the properties or wealth has been inexistent.(35)

Most of the institutions are accused of hiring party members of the parties that win municipal elections. According to Insajderi.com the job vacancies in the times of elections is a trend throughout the elections, which they cite that “In most institutions them being local or central, new job vacancies spring up as the election activities intensify” (36). Usually this is a trend of the parties that hold power in the Government hire party militants within the municipalities they have won the municipal elections.

The resistance here is obviously with an e-Government there is going to be a higher transparency, hence there have been no attempts to modernize the Public Administration by the previous Governments. Even the NGO-s have protested the fact that prior to the last elections, there have been employments either with party ties or family ties. According to Besnik Boletini, a researcher on the NGO “Çohu” (Eng. Stand up), cites that “The high number of the employed in the Public Administration has been an issue with in the talks with the European Commission due to the fact the EU has requested to lower the spending due to the high costs and unnecessary employment.”

5.3. E-Justice

E-Justice (or e -judiciary) is the modernisation of judicial systems throughout Europe with the use of technology. The reason of such a progress has come to significantly improve access to justice for every single citizen and it substitutes the old judiciary system. In the simplest form, the use of e-justice refers to the use of technology to improve access to justice and effective judicial action including dispute settlements or criminal sanctions. The biggest effect it is supposed to have is in the fight against financial crimes and frauds. (37)

The countries that have started the application of e-justice are Italy, Turkey, and Mexico. In a conference of U.N. in 1st of June 2016, when these countries reported in front of the UN Rule of Law Coordination and Resources Group (ROLCRG), starting with Turkey (38)

Judge Servet Gul, Head of the Department of Information Technologies of the Ministry of Justice of Turkey reported that their program had significantly increased the effectiveness and accessibility of judicial system of Turkey, by providing faster, more transparent and a more cost efficient judicial service. The program they use is called UYAP, by which Mr. Gul reports that it links all judicial process to be carried through electronic documents. In 2016, the system had close to 2m users, which Mr. Gul reports that it has saved close to 100 million USD from the State Treasury expenses, as well as significant environmental benefits, by creating a paperless working environment. Mr. Gul in 2016 declared that the Turkish government will push to enhance the usage of e-justice, which included at the time a law enforcement portal, a forensic data bank, e lien and e-teller portal. (42)

Mr. Juan Pablo Raigosa, member of the Judicial Council of the State of Nuevo Leon in Mexico, emphasized how the enhanced administration of justice through the use of ICT has made significant improvements to the business and investment environment in the State of Nuevo Leon, whose focus has been the development of a system to deal with the enforcement of contracts. He declared that since 2002, there has been a push by the state of Nuevo Leon to process the files through their e-system called “The Virtual Tribunal”. In 2016, they reported to have put through their system over 90% of authorized files. The system is highly accessible and it provides real time information through a dedicated application which can be accessed anywhere in the world.

Virtual Tribunal has been found to minimize the chances for corruption, to speed up proceedings and to have capacity to handle more cases with fewer staff. The State of Nuevo Leon is currently engaged in developing “the mobile court officer” which allows all judicial staff to work from wherever they are, and for their workflow to be monitored. (38)

Dr. Pasquale Liccardo, Director General of the Directorate of Automated Information Systems of the Ministry of Justice of Italy, presented their Online Civil Trial process of Italy, which is the largest e-government project undertaken by Italy and has coverage of all civil cases throughout the country. The system allows for an entirely electronic process of all civil cases across the country. The system allows for an entirely electronical process of cases, which as is the pattern reduces time and expenses related to accessing the court. The system is reported to have had close to 6m users daily by Dr. Liccardo and has saved the Italian Treasury close to 55m EUR annually and in turn has increased the submission of legal acts by over 25%. (38)

6. Banking attitude

Kosovo is one of the developing countries within the EU, and the issue of cash and card is one of the biggest barriers in the technological behaviours.

Cards are used for services and for transactions, but the lack of law enforcement to properly enforce the usage of electronic and/or digital cash registers in the recent years has created a situation where avoiding tax is very easy, so this is basically creating the opportunity of sales suppression. Sales suppression is, not recording a percentage of cash sales with the intention of under-reporting the amount of sales and thereby under-reporting the corresponding tax liability. In the past, the sales suppression could be achieved by just putting the cash in the pocket... in Europe. In Kosovo meanwhile it is still the same situation because the technology of sales has not changed due to the lack of debit card usage and the normality of cash usage. (39)

Such issue has been addressed by Phillip M. Miller and Karl Rudarp in their piece in "How to increase acceptance and usage of debit cards in emerging markets". (40) According to Mr. Miller and Mr. Rudarp, the emerging markets in relation to the use of debit cards, have been presented with a dilemma for acquirers hoping to stimulate debit acceptance and card usage. The consumers in those markets have been unable to find acceptance points at merchants, which in turn have not had demand from consumers. What can happen would be the acquirers to disrupt the standoff by gradually building both acceptance and consumer demand. What the acquirers have to do is to understand the stages of debit and credit card usage and to create a stimulus underlying them. What that does is create the reduction of cash and increase financial inclusion, but the main issue is getting it right.

According to their paper, Mr. Miller and Mr. Rudarp argue that there is a "catch-22" situation^{*1} in the payment scenario in emerging markets, in one side you have the consumers who believe merchants prefer cash, which is a perception that is created by the limited acceptance of debit cards. In the other side you have the issue of merchants not being able to get financial benefits in accepting cards and do not see any convenience to consumers. In this situation the missing actor is the acquirer. (40)

Widening the acceptance of debit cards is a gradual process, whether in emerging markets or developed ones. It starts by getting consumers to make one debit transaction, which in turn makes them aware of additional locations that welcome debit cards. Consumer research according to Mr. Miller and Mr. Rudarp shows that, contrary to conventional wisdom, debit card payment maturity is driven by the number of merchant categories in which consumers are comfortable using their debit cards, not by the actual number of transactions completed.

Why the facilitation of debit cards is necessary is the fact that, according to Albert Spahiu of Telegrafi.com and a report by the **Kosovar Stability Initiative** called "**The Final monitoring report on the level of labour law implementation**", was reported that 57.5% of the employers pay their workers in cash only, 15% pay their workers in cash and through banking transactions and 27.5% only through banks.

¹ Catch-22 situation: is a paradoxical **situation** from which an individual cannot escape because of contradictory rules or limitations.

According to the report, not only that the payment is done through cash but out of those 72.5% of the employers that pay their cash, most of the workers that they employ are seasonal workers and they do not have any contract or documentation that they hire, nor do they open applications.

According to Kosovan Law, it is required of every employer to have a register or account of every transaction they make, and close to 15% of these business owners declared that they do not possess any kind of ledger, being that digital or non-digital to record their transactions.

This informality is linked closely with the unreported employment and cash compensation, for which, the enforcement of the law is supposed to drastically lower these two.

Another Labour Law violation is the fact that 33% of the business owners do not allow the full legal yearly leave of their workers and 40% do not allow at all for their workers to take their yearly leave. (41) (42)

This situation obviously reaches the point where the taxes are not paid and collected effectively. Of those 57.5% of businesses which pay their employees in cash only, it is only logical that they will avoid paying salary tax, even though the tax percentage is relatively low, with 0 to 80€ per month pay 0%, 80€ to 250€ pay 4%, 250€ to 450€ pay 8% and from 450 and up pay only 10%, which in comparison with the majority of EU countries is relatively low. (43).

The facilitation of debit cards would be useful for in the eyes of the Government for this main purpose.

7. Smart Cities and Pristina

7.1. What is a Smart City?

The modern history of urbanization has changed and evolved through the expectations of the 1990s. In the '90s scholars argued that the digitalization of the city is going to impact the cities in such a manner that it will end the concept of a city. The most dominant view of the era was that digital-media and the internet will shorten the distance of communication that it will end the cities as we know it. The main advocate of this theory was a technology writer called George Gilder, who assumed that "cities are leftover baggage from the industrial era" and concluded that the continuous growth of personal computing, telecommunications and distributed production, "we are headed to the death of cities.

But the development of cities has taken the other direction, with cities expected to have over 60% of the total population living in urban areas until 2030. Regardless of this, the impact caused by digitalization has had profound effect on cities. Small and distributed computers have become a necessary part of our daily lives, with wireless connectivity, they now blend within our physical environment. The idea behind all of this digitalization as I mentioned is to improve and form a sustainable city. The information

accumulated within urban environments can be captured in real time and they can be processed, monitored and give feed back, opening the possibility to understand and make an impact which is positive in the long term life of the city. The evolution of digitalization has an aim to make us rethink the city life. The municipal digitalization of cities has evolved from analysing traffic and energy consumption (still the main goal) to citizen empowerment and participation.

An analogy used to describe the digitalization of cities can be the Formula One example, which describes the racing car, from being fully mechanic in the past to having telemetric technology these days that is monitored by hundreds of sensors, which will make the mechanics and drivers understand everything about the car, in a word creating an “intelligent” car, which in order responds better to the drivers conditions, the situation in which the car is and the race in general.

If cities become “open air computers”, the municipalities can start to programme them to become more sustainable by introducing data flows and analytics, which allow systems to synchronize better and improve management in a top-down manner, meanwhile at the same time new technologies, that introduce data have become a very chaotic bottom-up processes through citizen engagements and through private initiatives. These processes present the idea of participation of all possible data gatherings, at an enormous scale, which in turn shape the modern urban life

When it comes to digitalization, there always are going to be the questions of how do we go about the data collection, and which data to prioritize, when we know cities are a complex space of flux, such as people, vehicles, goods resources and much many other data. One of the goals of digitalization is to show and understand how these data interact and overlap each other constantly, making the life as we know it today. The complexity has played an important role of composing the city life, meaning the multidisciplinary nature of the field of urban studies and planning.

The struggle with the digitalization is the development of new sets of skills and new positions for municipalities and approaches in order to develop the cities themselves into a sustainable and optimal manner.

One of the new approaches and skills professionals have managed to develop are as an example, city hall employees learning digitalization and data analytics, meanwhile architects have begun to design apps and the computer engineers have started to develop applications in urban scenarios in order to develop new technologies while still learning to measure the socioeconomic equities and public safety.

The emerging fields in urbanism develop approaches which are collaborative which in turn introduce new methods of research and experimentation. Government organization works with industry experts and academic researchers in collaboration with the inhabitants themselves work towards the developments and deployment of projects for the city, within the city, outside office environments or laboratories, furthermore in disregard from enriching projects with a real world effect and context, these stages and areas of development put a debate within the public about the possible pushbacks and implication of urban interventions.

Aside from the theoretical standpoint, the practical one regards a high value on working

in collaborations of teams, which are experts of urban, engineering and administrative fields, which work on existing ideas and try to implement new ideas, while working on the current state of the cities.

7.2. Four components of a Smart City

To assist in urban planning and urban planners, the people working in these projects have to identify the best methods to support the smart city development. After looking through over 60 smart cities throughout the world, there have been identified four different basic types of cities. (49)

The Essential Service Model: Cities within the Essential Services Model have their focus on the usage of mobile networks in their emergency management programmes and by digital healthcare services. These cities in principle are supposed to have good communication infrastructures and they prefer to invest into a limited number of well-chosen smart city programmes. An example of this can be Tokyo and Copenhagen. (45)

Smart Transportation Model: The cities within this model are focused usually within high population and high-density cities. The main problem within these cities is the moving of goods and people within the city. Cities in this group emphasize initiatives to control urban congestion. Through smart public transportation, car sharing and/or self-driving cars. The main usage of information and communication technologies are directed to these technologies. An example of this model can be Singapore and Dubai. (45)

Broad Spectrum Model: Cities that fall under the Broad-Spectrum Model emphasize urban services, such as water, sewage and waste management and always seek methods and technological solutions for pollution control. One characteristic that is relevant within these cities is the reliance on these technologies. These cities are characterized as well with a high level of civic participation. Such examples can be cities like Vancouver, Beijing and in Spain a notable city using this model is Barcelona. (45)

Business Ecosystem Model: Is a model that seeks to use the full potential of information and communication technologies to jumpstart economic activity. The model is characterized with cities that give a high level of priority in digital skills training as a necessary accompaniment to create a trained workforce and aim to foster a high-level tech business environment. Examples like this can be Amsterdam and Edinburgh. (45)

7.3. Digital City Challenge

According to an article written by Laura Cuesta Ramirez for the Europa.eu, the official web page of the European Union, the EU is planning to develop a set up to help facilitate 41 cities in Europe to implement digital policies, facing the big societal challenges of today.

The article states that in the near future is close to the present, which in meantime means that digitalization is going to be an challenge, but it is a must for the bigger or the emerging cities to stay relevant in maintaining and sustaining its population. According to this article, 58% of European households have ultra fast 4G connectivity, meanwhile the 4G mobile network covers 91% of European Union territories. In disregard to this, 43% of Europeans still do not understand basic technology which makes them incapable to apply it. The cities which are bound to be helped need support to become more productive, innovative and better places to live in general. In the words of the President of the European Committee of the Regions, Markku Markkula which state that “citizens are waiting, and we need more solutions and to achieve them we need to level up our ambitions”.



Fig 7.1 The cities that are set to get digitalization help.

What is Digital Cities Challenge?

The Digital Cities Challenge was launched during October 2019, during the European Week of Regions and Cities to accelerate digital transformation in the cities which need a development in the technology sector. The programme has a limited budget of €9.2B, which allows 15 cities to benefit from this project (cities in blue in Fig. 6.1) and 20 cities that do not receive funds but are invited to participate and interact with the digital initiative in their own resources (cities in green in Fig. 6.1) and 6 cities which are

mentors in this project (cities in white in Fig. 6.1) which themselves have high-standards of living and offer the support necessary for these cities.

To achieve the necessary results, the programme offers high-quality policy making and policy advice, which enable city leaders and the citizens to access high-level experts and implementation of digital transformation strategies, free of charge and in the local language for a limited amount of 15 months.

Digital Cities Challenge offer not only mentoring forms of experts but also networking opportunities and collaborative opportunities within the previously mentioned cities. The goal of this facilitation of digitalization is to transform the lives of residents of these areas and businesses and entrepreneurs as well. (46)

The argument is that the programme has the potential to interconnect all sectors of a city with the help of digitalization to improve the economies of the cities in a global environment.

Markku Markkula insists on the fact that the European Union cannot solve the digital challenges in Brussels, but rather the actions should be local, with the argument that every city and region should take its own initiative to improve their digital development, in accordance with the process of collaborative and social economies.

Although the digital challenge is different in each region and each city, the programme tries to set up a common strategy to achieve similar results. Markkula according to this article again insists that the results of numbers are important, but the focus is mainly on the quality which makes a difference. (46)

The city of **Ventspils** in **Latvia** is an example that the strategies work. The port city benefited from the work of the Digital Cities Challenge programme, in which the city has established a highly dedicated municipal institution called the **Ventspils Digital Centre**, which provides access to ICT programmes for all the residents, which in turn facilitate the development of crucial skills to stimulate the meaningful use of ICT, which in turn is implemented on the city itself.

In **Ventspils** the citizens can get instructions, advice, use of public computers and public Wi-Fi network etc., which indicates that the Digital Cities Challenge is rather a success in the way it is implemented. The programme has provided the digital skills training such as robotics and 3D computer graphics to students of the city.

Egons Spalans (Deputy Executive Director on ICT) declared that at least 16% of the cities school age kids attend these classes, which indicates a high interest in developing these skills.

But the programmes goal is to reach every level of the current digital world, which means working with universities, schools and/or kindergartens, which in turn is not only helping students but teachers as well. (46)

7.4. Pristina as a Smart City? Traffic, congestion and parking issues

The issues of Pristina are the air pollution, the traffic congestion, the water and sewage issues and the biggest is the urban planning.

If we want to make Pristina a Smart city, it would be the application of a Broad-Spectrum Model, such as Barcelona. Why would this make sense, is the fact that just like Barcelona, Pristina faces the same issues, but in a smaller scale.

One issue that Pristina, and Kosovo in General have are the road accidents, where the

municipality and the government themselves have lacked action.

According to Alfred Marleku of Sbunker.net, Kosovo is facing an increased number of accidents each and every year. The number of accidents and the fatalities from 2004 until 2018 look more like war statistics, where out of 66 546 accidents there have been 123 551 injured individuals. Mr. Marleku compares the numbers of accidents in the fatalities of Norwegian accidents and Kosovar accidents, where he argues that in 2019, Norway has recorded 110 fatalities from accidents, where the population is 5.3 million and in Oslo there has been only 1 fatal accident, meanwhile in Kosovo in 2018, there have been 12 360 injured individuals with 128 fatalities, with a population of 1.9 million. Mr. Marleku states that these accidents are a danger for the economical safety as well due to the fact that the vast majority of the injured individuals are the sole providers of their household. With 30% of the population's livelihood is threatened if an accident is to happen to any of the family members. (47)

What can Pristina do at this point, is to implement a data-based system like Herrman and Herrman does for Texas.

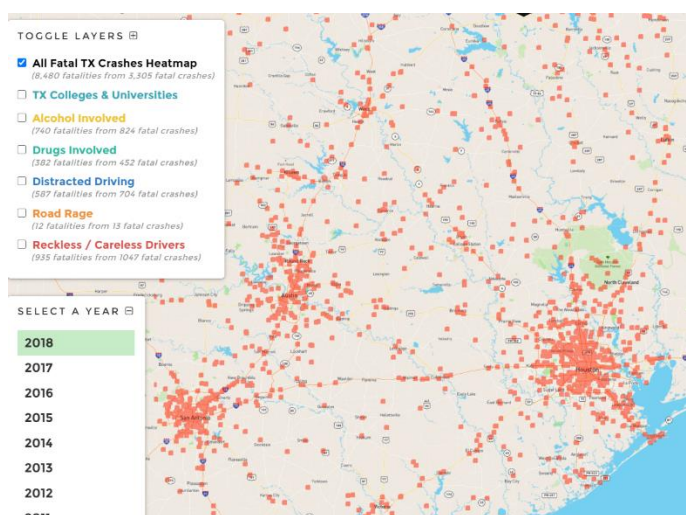


Fig 7.2. Herrman and Herrman Road accidents data, Texas (48)

With this type of data-based information, the municipalities and the government can pick up where the majority of road accidents is happening and make road and parking modification. This would cause for a more controlled environment in life saving and money saving as well for Kosovar families.

This brings us to the second issue, parking. While the congestion within the city remains high, there have been promises by the current Mayor of Pristina, Mr. Shpend Ahmeti to solve this problem, matter of fact this was one of his promises which helped him immensely win the municipal elections in Pristina. Mr. Ahmeti in November of 2019 approved a project to open a new underground parking building within the city centre of Pristina. There are several issues with this plan. First and foremost, which is located in the actual backyard of the Faculty of Philology of the University of Pristina, which the University students and staff opposed, the second issue is, it is supposed to last from 28 to 24 months, which without any doubt will affect the studies of the students of the

Faculty. The third issue is that the budget of Pristina in the beginning of 2020 was allocated at 91 million €, meanwhile, a project for 700 parking spots is set to cost 10 million €, which is over 10% of the annual budget of Pristina. Meanwhile the fourth issue is that, in 2018, Mr. Ahmeti was supposed to approve “Prishtina Parking” which, according to Eman Rrahmani, a “Lëvizja Vetëvendosje” municipality representative, was supposed to approve the project to two entrepreneurs (which in the article remained anonymous), would provide the 700 and more parking spots within 5 months. According to Mr. Rrahmani, “Prishtina Parking” would already be generating income for the municipality, if the Mayor was not so stubborn and selfish, by trying to take over the “Prishtina Parking” venture, which he did not succeed and affected the processes of activating the said venture with political intervention. (49) (50)

For Pristina to solve the parking problem, an example could be taken by Barcelona and their SMOU application, by which, whenever there is a parking spot available, it appears open, and by which you can always see where you can go and park. (51)

For Pristina to reduce the air pollution and the congestion within the city, they can go in three different ways.

The first solution would be to implement measures such as Barcelona has proposed to do in July 2019, where the Mayor of Barcelona, Ada Colau proposed to ban all cars registered before 2006. According to Mrs. Colau, Barcelona has over 125 thousand cars registered before 2006, which would reduce the air pollution levels by 15 percent by 2024. (52).

The second solution would bring Pristina closer to a smart city than the other two options. This solution is based in the U.S. and the majority of the more modern European Cities, but we will take the city of Bellevue, Washington, United States of America as an example.

The traffic signals in this city of 130 thousand inhabitants has adapted a fluctuating system of traffic lights. According to Mr. Alex Stevanovic, the director of the Laboratory of Adaptive Traffic Operations & Management at Florida Atlantic University, the goal is to make adaptive signals which would make sure inefficiencies never happen. (53)

As city leaders increasingly turn to data for insight into running their metros more efficiently, adaptive signals have emerged as a modern strategy to reduce the costs of their citizens.

According to the U.S. Census Bureau, the time and the money the U.S. citizens spent in 2013 on the road has been 124 billion \$ meanwhile the U.S. is set to reduce the expenses by 50% until 2030 by reducing the time wasted in traffic and by reducing of costs of doing business. (53)

Pristina could use similar technologies to reduce their traffic congestion by installing smart and fluctuating traffic lights, especially in the city centre and especially during summer where the influx of emigrants coming during their holidays from other EU/ETA countries where they work and live to Kosovo, where the population of the city raises by 10% to 15% each year during the summer months.

The third solution would be the introduction of tolls within the city centre. What does this represent? In big cities like Barcelona, where such a thing is being debated to be implemented. The arguments have been positive and negative so far, how would this affect the poorer households in Barcelona? According to the Universitat de Barcelona,

School of Economics professor, Germa Bel, where in a statement in regard of the implementation of congestion in the webpage of the University, he argued that the levels of pollutants in Barcelona are high, and the main cause is by far the private transit aka. cars. Mr. Bel argued that the biggest opposition would be by drivers, and the congestion charge would be from 7am to 7pm. When asked in regard of how that would affect the poorer households, Mr. Bel argued that it would not, he stated that all segments of populations travel within the Barcelona Metro Area. 2 out of 3 households in Barcelona that work in the Barcelona Metro Area have an above average income, and that the poorer households use the public transportation anyway. (54)

But Pristina does not have an elaborate underground system, matter of fact, they do not have any Metro at all, nor trams, but rather private van-taxi's and urban busses. What was proposed from Shpend Ahmeti, the Mayor of Pristina in October 2020 was the installation of tolls in Pristina for citizens that reside outside of Pristina. He hopes that in November 2020, at the time of writing this paper, to approve the plan and to start being implemented in January 2021, but there is obviously a significant problem with this plan, the price it was set to enter Pristina, which at his proposal was at 10€. Across all Kosovo citizens protested this proposal, especially citizens of the villages outside of Pristina. The majority of the Pristina Municipal Assembly regarded this as a discriminatory and not very well thought plan, and some even called it illegal. (55) Meanwhile after this proposal Mr. Ahmeti has argued that this is for the best of citizens of Pristina due to the fact that during the winter the air is heavily polluted and it is to reduce that pollution, and due to the issue of the roads not being wide enough to make more space, they have to implement this as a drastic measure. (56)

7.5. Smart Street Platform

Another issue in which Pristina can improve, is LED lights and sensitive lights. According to Esther Fuldauer of Tomorrow Magazine, she argued that LED lights need less energy and when street lights are updated to LED lights, the cost of maintenance is usually 50% to 70% lower than the normal lights. According to Mrs. Fuldauer, Lamp posts are the ideal infrastructure for mounting smart city systems and when they are used for networking and monitoring, they become a sensor platform, growing efficiency even further and providing for a myriad of urban solutions.

Remote on-off control, dimming, and scheduling functions are quick wins of connected street lighting, with massive impact on energy savings and maintenance, which can be achieved through low cost connectivity such as PLC or RF Mesh programs, meanwhile more advanced features need more secure cellular networks.

Cellular networks would allow for more robust and faster connections with lower latency, which would be needed for more elaborate smart city solutions. Smart street lighting with 4G LTE and/or 5G network can provide a platform for WIFI, HD Video Streaming, gunshot detection, air quality monitoring, traffic management and smart parking.

Smart street lighting platforms would allow the before mentioned traffic light control, traffic management, smart parking etc. but what it enables is air quality and noise

monitoring, public safety through HD video and pedestrian footfall sensing. (57)

Cities with Smart Street Lighting:

Barcelona: published its first “Lighting Masterplan” in 2012, where they replaced 10 000 lamp posts with LED Lights across all districts in Barcelona. The lights contain sensors that detect movement and dim to save energy when no one is around. The smart lamp posts are remotely managed and also provide free Wi-Fi across the city and collect air and noise pollution data.

Copenhagen: lightning master plan was approved in 2014 and has implemented around 20 000 Led street lamps through which it has improved energy efficiency with savings of approximately 65%. Through remote lighting management and control, they dim the lights when they are not needed or increase the strength, providing added safety for pedestrians and cyclists when they pass by.

Chicago: has launched a 4-year smart lighting program in 2017, where they aim to install 270 000 LED street lamps. Chicago estimates that it will save around 10 million \$ annually with the project and they aim to improve visibility and safety through LED technology. The project monitors and controls maintenance with real-time updates when outages occur.

Energy usage globally is expected to grow by 35% in 2030, where lighting accounts for 19% of global usage. Another problem of this is that the municipalities spend 30% to 50% in energy bills on average, so smart street lighting is an excellent opportunity to efficiently run security, noise management and safety in general and that is the aim and the benefit of a Smart Street Platform, to detect every mismanagement or every problem that occurs.

Does Pristina have the resources to implement a Smart Street Platform? The answer is yes. Pristina can manage to gradually, year by year connect the city with a smart lighting system and sensors, which starting from the traffic lights to the street lights, would affect congestion, pollution and the other necessary issues, but for more elaborate plan, I will continue this in chapter 7. Implementation plan (57)

8. Implementation Plan

When it comes to the implementation phase, I see it divided in three different sections, which should definitely be happening at the same time, through synergy, between all the necessary factors, but it should be facilitated by the Government and the Parliament.

With the adaptation of regulations and the financial initiation, Kosovo should be able to be one of the most efficient countries in Europe, obviously if these processes are managed properly.

8.1. The Government

As we have seen so far in point 3., the infrastructure in Kosovo is there, but according to a former employee of Cactus, the company which maintains the web pages of the Government and Public domains, who wanted to remain anonymous confessed that during his two years within the program and web developing and the software maintenance, the government itself does not provide proper tools, nor Cactus does the job which they have been employed to do.

According to this anonymous former employee, the domains are made with WordPress, which in his experience, the domains are so weak that if they have close to 10 000 clicks within a day, the entire system will collapse.

Even though the systems are existing, they are the most basic platforms a government can use. (58)

The basic phases:

As the very first phase of implementation, the most logical way is to apply the **UN /ASPA study** implementation strategy (look at 1.1.1. Advantages and challenges of implementing e-Government).

First stage, Emerging phase is already there, with the basic data bases and official sites already existing, but what needs to be done is to use more secure and more stable web programs, where crashing and penetration of foreign and unsecure entries cannot be made.

So basically the need there is to build up through the existing data bases, according to the anonymous former employee of Cactus.

Second stage, Enhancing, the government and the municipality pages can become more dynamic with the posting of job openings, news and other information is updated regularly. Each municipality to enhance their web pages with their events and the Government itself publishing their own events and not only communication through Facebook or other social media platforms which happens nowadays.

Third stage, Interactive, (As mentioned in A research in the attitude of three factors in Kosovo), The need and the demand is there to have all the personal documents and the official documents such as tax documents, birth certificates etc. and the need to apply for official documents such as passports and ID cards via official government domains.

Fourth stage, Transactional, where the users can pay for the necessary applications for official documents and other necessary services via online bank (which is non-existent in this moment).

Fifth stage, Seamless, Is the final stage, where all e-services are fully integrated across administrative boundaries, with total integration of e-functions and services across administrative and departmental boundaries, (G2G, G2B and G2C communication and service).

Of course, there is the need of support from the Government into financing the development of this department, but there is need to change methods and the people who were working in the Governmental and Municipal domains and web pages. In order for these phases to be implemented properly, the need to change personnel is due to many issues, them being lack of qualification, lack of awareness of the field or development, negligence or disinterest to work properly.

8.2. The practical enhancing

What can the Public Administration do is, as a first step to proceed in phase three in the **UN/ASPA** implementation phases, where the basic documents are online as soon as possible, but if you want to get the documents in the offices, is to make every transaction within the municipalities. The idea behind this is, just like according to Mr. Miller and Mr. Rudarp in “how to increase acceptance and usage of debit cards in emerging markets” study. (40)

As they mention in the paper usually in emerging markets, the facilitation is necessary within these markets due to the non-existence of facilitators. Making necessary payments by card for personal documents such as ID cards and Passports can be, in this case for Kosovo, the perfect facilitator.

What does this bring within Municipality Services is the reduction of corruption and for customers, the necessity of debit cards.

What usually Kosovars do is, even if they acquire their wages through banks (which is only 27.5%), they withdraw the money nonetheless, and the individuals which take their salaries in cash (which is 57.5%) and those which take their wages through both, cash and bank (15%), (45) will have the necessity to keep their money within the bank, at least a small amount to start.

This will encourage the population themselves, if they have no cash to utilize debit cards and businesses to accept more and more card payments.

What this means for the government is two things:

1. **The increased demand for salaries to be made through banks** and,

2. The businesses to take more card payments, which means for them to register transactions, which in the Governments case means more efficient fight on tax fraud from businesses and individuals and more generated taxes.

8.3. Economic Digitalization, Businesses and Attraction

This subject can come as the second or third phase of the Digital development, but in my opinion is the most necessary and important part of every country in the World. By improving Governance methods, the improvement of competitiveness is more than natural. Kosovo should improve its security for operation in the country, being that digital or otherwise.

Kosovo should, as a **first step** into digitalizing the economy, encourage the businesses to upgrade to digital devices for their operations. This has been an issue for international companies to invest in Kosovo, even though the wages are almost the lowest in Europe, and Corporate tax is 10% (43).

The encouragement can be by providing a platform for each sector. An example can be the update of the Ministry of Agriculture to provide their farmers with a website to see the news in the Farming sector and to provide them the necessary technology to update their farms to have communication with the proper authorities if they lose their crops to any natural abnormalities. The construction sector to be updated with the new safety policies etc.

The second step is to improve and upgrade digital policies, which in Kosovo are rather outdated and for some sectors, inexistent.

The third step is to broaden the adoption of SME organizations, which would increase the synergy between businesses and the diffusion of the technologies. This would result in higher productivity gains.

The fourth step would be, encourage financial technology developments.

If all these steps would be able to implement, what Kosovo would gain is a rapid developing economy and the most important, it would gain a sustainable competitive advantage in attracting FDI-s in digital economy to the regional competitors. Another thing that Kosovo would gain is a better business reputation.

8.4. Pristina's potential

As we have established so far, Pristina has a long way to become a moderately smart city, let alone a global example or leader in digitalization.

With a budget around 90 million € each year, it is difficult to manage a city of 200 000 individuals.

The first thing Pristina should do is to set a smart traffic system for it to manage their congestion. Pristina has one of the worst air qualities in Europe, that would help immensely. Why? Because it would allow for cars to move quicker and it reduces the

waiting time for those cars which create congestion. Another thing which should be mentioned is that it allows drivers to have a better understanding and evaluation within the city which would prevent crashes as well.

The second thing Pristina should prioritize is parking spaces within the city.

With a budget of 91 million € in 2019, and a project of 10 million € for 700 parking spaces is a mismanagement of resources. The Municipality and the Mayor itself should be able to find open spots within Pristina, which would make a better solution for Parking.

Pristina has not the density of New York or London, which would make it absolutely impossible to find free spaces to build such parking areas and after this, the development of a Parking application, for citizens of Pristina to be able to find open parking spaces within a short period of time.

The third step Pristina should take is to make every light in the city LED and sensor based. With such a small budget and such big aspirations, the Municipality should be focused on managing properly every single cent and saving some though electricity bills and directing them somewhere else, could give a boost to Pristina for other projects such as innovation and technology hubs.

Pristina should have two goals in their plan, the betterment of the life towards the citizens of the city and the request to join the Digital City Challenge projects, either as participants or as guests.

The reason why the municipality should focus itself in the Digital City Challenge projects is that, for the reason that Kosovar citizens do not have any rights to travel within Schengen countries, it would make the Municipality understand how more advanced countries work and what they have implemented, what has helped them and what has not and what can Pristina try to apply within their city.

This would allow the officials of Pristina to see the outside world for once, the methodology other cities apply and possibly get some funding as well which would help to allocate more funds in other projects as well.

9. Conclusion

We can summarize so far that Kosovo is capable to digitalize in a rapid enough pace, to set it apart from the rest of the Balkan countries. With support from the top management, The Government, the country can become a leader, but what Kosovo as a country lacks is the trained personnel, with experience in mass digitalization, or individuals that have experienced it as a consumer. Kosovo in the writing of this thesis has no open borders with the Schengen countries, so the biggest outflux of tourists is in either Albania or Turkey, which are not into Western and Northern European levels. In this regard Kosovo has become a country which resembles the “Allegory of the Cave” by Plato if we want to get philosophical. The people see the good projects and the bad projects that can occur in the World because of the Technology, but the problem is that they do not experience these very advanced projects and the better situation of living and this is a vacuum of knowledge, experience and way of thinking

that the individuals from Diaspora can fill. The will is there, because many people who have all their families in Kosovo and live in Western and Northern Europe, where they work, study and are willing to fill that vacuum if the possibility arises.

By advancing the technology, Kosovo would be able to attract FDI-s, especially those technology related. There is a massive enthusiasm when it comes to innovation, where there are two state funded Innovation Centres, Innovation Centre of Kosovo and the Innovation & Training Park (ITP) in Prizren, the second largest city in Kosovo. Kosovo has 7-regions within the country, so 5 or 6 more would be perfect for it. An Innovation Centre for each region and a Head Innovation Centre. This would accelerate the economy in a very focused manner, where the bigger companies would be able to work with newer and newer ideas each year.

Another issue from which the Government would benefit would be the better collection of taxes, as mentioned in the implementation plan, which would help enrich the lives of community and become a better candidate for Visa-free travels in the Schengen Zone and for EU candidacy in the future.

Another positive and promising aspect of the country is that the youth are highly interested in Science and Technology hence it is a step forwards to keep the future professionals within Kosovo as well

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58. Anonymous, former employee of Cactus, Helsinki, Finland. 25th October 2020

Appendices

1. Questions made to the former Cacttus employee.

What role did you have in the company?

How did the company operate?

What were the company's competencies at the time you have worked?

2. Research results from point 5.1. A research in the attitude of three factors in Kosovo (Kosovars living in Kosovo, The Diaspora and the Businesses).

Public Administrations

<https://docs.google.com/forms/d/10zu6KGjix8qsQu3xte5rHf0AChVHaVcMTGPyRScC6EE/edit>

Kosovars living in Kosovo

https://docs.google.com/forms/d/1UQn-It9N2J_NHPAcnHcNFfx4UBAEI_V2E4VOkhGzR7s/edit

The Diaspora

https://docs.google.com/forms/d/1gDERTZjENgX0f905oL549IkJgGKcGOImOEgiEQOFa_M/edit?usp=forms_home&ths=tr

