# UNIVERSITY OF LJUBLJANA SCHOOL OF ECONOMICS AND BUSINESS

#### MASTER'S THESIS

# FACTORS INFLUENCING FINANCIAL INCLUSION THROUGH THE USE OF DIGITAL BANKING TOOLS IN KOSOVO

#### **AUTHORSHIP STATEMENT**

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#### **INTRODUCTION**

The effect of digitalization has been felt in all facets of business, and has affected companies in various ways in most industries. First, digitalization was a term used to explain, in technical terms, the process of moving from analogue information to digital representation, whereas nowadays, the term encapsulates the entire transition of societies in the digital world. As the importance of digitalized services and processes increases, companies are in greater pressure to integrate digitalization in the core of business models, or fear to be left behind (Harchekar, 2018).

With this great push towards digitalization, the banking industry has been transformed as well into a new reality, with new technologies and very much, different customer behaviour. And as the industry changes, both banks and customers have faced misbalance in what is offered and what has been demanded, therefore, studies and research have been seen as a critical point to restore this balance (Maixé-Altés, 2018). Strategic steps that banks should take are the creation of new products and channels, adaption to the new technological infrastructure, and lastly, changes in the core of their business plans that result in inclusion of technology.

The impact of internet and mobile phones has changed this industry as well, and a profound transformation of banking services is a result of exactly these two. Through internet and mobile phones, customers now have the option to be linked to their bank accounts and their financial transactions 24/7 (Aziz, Badrawy & Hussien, 2014).

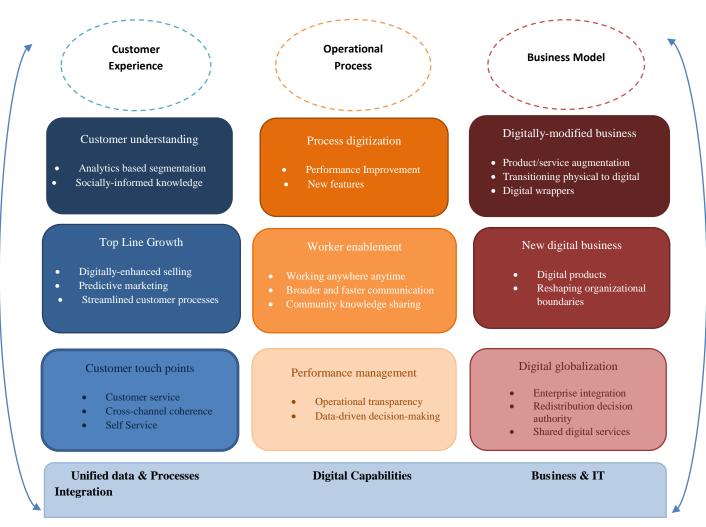
For the purpose of this paper, digitalization is defined as the structure that links all media networks, and creates a holistic infrastructure for communication between channels. And, it is not to be mistaken for the term digitization which is just a small part of digitalization, and it is the concept of converting information into a digitalized format (Jünger & Mietzner, 2019).

Digitalization is the appropriateness of technology as means of new business model creation, which in turn creates new revenue and value creation streams. Therefore, digitalization is greater at encapsulating the digital society than digitization. Consequently, digital transformation and digitalization are interchangeable, since both have in their core the restructuring of business processes in order to enable companies' core capabilities to gain new competitive advantages. A successful digitalization is not only a result of technology use but a result of thorough transformation of the whole organizational structure in a technological manner (Teichert, 2019).

For different industries, digitalization means different things. Digital transformation includes a change of customer experience, operational processes and/or the business model. But still, for most companies it means the advance towards offering services through mobile applications and digital marketing (Fitzgerald, 2014)

The rise of digital technologies (social networks, mobile, big data, etc.), firms of all industries took the initiative to explore and exploit their benefits. This process often includes transformation of operations which affects products, processes, as well as the whole organizational structure as companies need to establish workforce that can govern these transformations (Nadkarni & Prügl, 2020).

Figure 1. The Building Blocks of Digital Transformation



Source: Westerman et al., MIT Center for digital business and Capgemini Consulting, (2011).

Digital transformation can also be seen as the connectivity of multiple digital technologies with the purpose of reaching extensive and sustainable competitive advantages by transforming business models, customer experiences and business processes. Although the genesis of digitalization is during the 1990s, the level and the complexity of current initiatives exceed the previous transformations. Research finds that the logic has shifted from service dominant to the value created by several actors in a collaborative process, which is a result of the application of skills and capabilities (Štemberger et al., 2019).

The fourth industrial revolution is here, and it has been brought up by digitalization which revolutionized the business. A new age can be witnessed, the age of smart industries

through the use of Internet of Things technologies, with big data exchange and predictive analytics. The benefits of this era are the automation and optimization of processes that play a pivotal role on profitability and productivity improvement. The new industry era will see an increase of 15-20% in efficiency, and more than 20% increase of revenue in the following years (Parida et al., 2019).

The characteristic of this new era is that it takes on new dimensions and new forms daily. Due to their structure and form of business banks are less likely to embrace changes, still they have been adjusting to these changes in a business context and as a result adopted processes imposed by the digital era. We are witnessing the creation of new products and services that are directly linked to this process, and this is a sign that the banking industry has understood and embraced these changes so as to reach a new position on this market.

According to Mekinjic (2019), the Fourth Industrial revolution consists of four key parts that are involved in this action plan:

- Enabling digital infrastructure access of all industrial companies, especially SMEs;
- Enabling digital industry leadership takeover by automotive and aviation industry;
- Enabling the labour force to be digitally capable;
- Increasing security and accountability by the adaptation of proper regulatory solutions

The most widespread association to digital economy is the E-commerce and E-banking, but this concept encapsulates much more than that. This economy is represented by the fact that is based in digital tools, information technologies in all areas of the economy. Moreover, there are also definitions that see digital economy as the new, post-industrial globalized economy, based on internet transactions (Xu et al., 2018).

Financial literacy is a concept that is engraved in the digital world and that it represents the ability to use the knowledge and skills necessary in order to achieve financial benefits, whereas financial education is a process by which the human resource improves the understanding of financial products and services so as to improve their decision making in this matter (Khalevinsky, 2018)

However, with the digital age come the risks of this nature. The risks that are of this nature consist of Cyber Risks (cybercrime, information leak, technical failures), and are the biggest concerns of of all companies in the world. As domestic regulators have identified potential risks within the preservation of financial stability, recommendations are to increase information systems resilience by introducing the most up to date protection measures (Piirainen, 2017).

However, all the risks from this era are essential parts of the development that new generations see as essential. According to Mekinjic (2019), contributions by embracing this era in the banking sector come in the form of:

- Increased efficiency in business models;
- Decrease of operational costs;
- Reaching new clients;
- Cheaper services for customers;
- Degree of transactions;
- Market penetration;
- New products and services;
- Increased revenue;
- Increased efficiency of organizational structure.

Moreover, by laying out the pros and cons of this era the banking sector faces a dilemma of some factors that are a matter of corporate strategy. This dilemma is a result of choosing between traditional and digital banking which results in dismissal of labour force, closing of bank branches and loss of traditional clients (Xu et al., 2018).

Research shows that three dimensions are key to the analysis of digitalization in any industry and an overview of these dimensions is laid out in the following part:

- Customer behaviour is seen as the major driver of digitalization and the existing literature suggests that customer loyalty is the biggest factor influencing this relationship in the digital age.
- Strategic perspective of enterprises that defines their goals and prospects in the digital implementation
- IT department and their capabilities of embracing this big change. (Schmidt et al., 2017).

In this paper, digital banking will be analysed under the definition of delivery of products and services to users through electronic channels, consisting of internet channels and mobile channels.

Digital finance and financial inclusion benefits all stakeholders, from users, providers, governments and the economy itself. Access to digital technologies enables financial services such as online banking, mobile banking, e-wallets, mobile wallets, and credit and debit cards. While a part of the population gets comfortable with all the innovation in the banking industry, some of them are being left behind by poor network coverage, high transactional costs, lack of technological knowledge and so on, that holds them back from adopting the new banking ways. The convenience that the digital financial services provide enables low-income and poor people in developing countries to save and borrow.

Kosovo is a developing country that has seen fast transformation from basic services to provision of advanced technology based services. In the banking industry, Kosovo has gone from no technology, to the start of high-tech era in only a decade. Internet coverage in Kosovo is one of the highest in Europe, and banks can use this in their favour to reach

customers and increase financial inclusion, making them a powerful competitor in this industry in the future. To enable competition with new entrants, retail banks have to go through the process of digitization and make it their top priority.

The most recent cross-country statistics available from the 2017 Global Findex database indicate that 52% of Kosovar adults, aged 15 and over, have a formal account, with gaps of 17 and 13 percentage points between men and women, and rich and poor, respectively. The Global Findex database shows that 69% of adults now have an account, compared to the 63% of adults in developing economies and 94% of adults in high-income economies. Gender inequalities persist, regardless of the increase in account ownership, with 72% of men having an account, compared to 65% of women. Moreover, the gap between the richer and the poorer remains too (Demirguc-Kunt & Klapper, 2012).

Utilization of technology in the banking industry has had a powerful impact on service delivery and cost reduction. Traditional banking is one where transactions can only take place at the branch, thus, making it inconvenient because of the time loss. With modern banking, physical presence of the customer has become a choice for the somewhat educated population, since all the services are provided online and only those familiar with the online world can utilize this opportunity. Financial inclusion, as defined by the Atkinson and Messy (2013) is the process of promoting affordable, timely and adequate access to a wide range of regulated financial products and services to all parts of society. This process is put into place through the implementation of existing and advanced approaches, that consist of increased financial awareness and education that directly promotes socioeconomic inclusion (Atkinson & Messy 2013).

Financial inclusion is considered a modern tool for the eradication of poverty, being an important economic factor that interests policy makers and plays a significant role in economic development. Financial inclusion links people with bank accounts and enables a financial system to play its genuine role of promoting economic growth. A prerequisite for exponential financial inclusion is the ability of the poor to access easy, affordable and safe financial services (Serrao, Sequeira & Hans, 2012; Nalini & Mariappan, 2012).

Banks have increased customer satisfaction through reliable, secure, and affordable services that are a result of technology utilization. The impact of digital transformation will continue to change and shape this sector in years to come, and only through embracing it, banks will be able to create opportunities to branch out, reduce costs, and enhance customer services. Information and communication technology (hereinafter: ICT) is a key part of the banking industry, while banking is at the heart of every robust economy. ICT is a new opportunity for the world economy to globalize fully, providing users a competitive advantage over their rivals. Banks that use ICT related products can deliver high quality services with less effort (Berger, 2003). Financial transactions have been driven towards

online banking by huge investments in telecommunication and electronic systems, which in turn validated electronic banking as useful, and easy to use (Oni & Ayo, 2010).

Customers have an increasing influence within the digitalization of the banking industry. This relationship is influenced by education, age, and the geographical location. To understand this relationship, research points out that these three factors have to be precisely defined and explored alongside the level of digitalization and the services the sector provides for different socio-economic background of the customers (Harchekar, 2018).

This research paper gives a holistic overview of the banking sector in Kosovo, outlining the issues and the services provided, and attempts to depict the relationship all these factors have with the socio-economic background of the customers, thus, the demand side. This research paper contributes to ongoing challenge of both sides of this industry, the demand and the supply side, to identify and measure the level of development needed to reach mutual benefits. Compared to a few years ago, banks in Kosovo are digitalizing their products at a high level, and there is room for improvement on both sides, to reach a new equilibrium at a higher stage. Based on the aforementioned existing studies, this Master's Thesis is carried out on the aims of shedding light on the awareness and use of various digital banking tools by customers of banks in Kosovo. Moreover, this study investigates the factors influencing financial inclusion such as education, age, gender, work experience, monthly income, and geographical location, as well as what types of services are mostly being used through digital banking tools in Kosovo.

The study is conducted through the use of a questionnaire, including questions on demographics, questions on the use and adaptability of digitalized banking tools, and questions regarding the types of services used through digitalized banking tools. The questionnaire is distributed to people owning a bank account in one of the banks in Kosovo. There is no age criterion taken into account, since one of the purposes of the current study is also investigating age variations influencing the aforementioned factors, and in turn financial inclusion. In addition, the study includes a thorough and extensive literature review on the topic of financial inclusion through digitalized banking tools, as well as factors influencing financial inclusion as a whole, in order to better comprehend the financial inclusion situation after digitalized technology banking utilization in the country of choice – Kosovo.

#### 1 DIGITALIZATION

Digitalization is highly important in data processing and storage, as it enables categorization and processing of various types of information with same efficiency. Digitization describes pure analog-to-digital conversion of existing data and documents, and in the banking sector, this is translated into improved customer service. As convenience increases, financial inclusion increases appropriately, and as human error is

decreased, customer reliability is increased. With the adoption of the technology, the ways people engage with their finances changed drastically.

Additionally, until recently, the effect of millennials becoming the largest proportion of financial users has not been visualized. However, with many advantages that digitalization brings, banks should invest in data protection and handle cyber-attacks (Mohan, 2008; Harchekar, 2018). It is evident that digitalization has many advantages such as cost reduction, cashless transactions, ATMs, financial inclusion, increased convenience and decreased human error. Moreover, the gap between urban and rural areas will be eradicated, but all these come with the cost of job reduction, and an increase of cyber-threats (Siddarth, 2018). Customer knowledge highly influences the ways banks operate, and as such, with the increase of customer knowledge, banks have to adopt new ways to create customer satisfaction. An unprecedented opportunity to connect people to financial services has been brought about by digitalization.

In a way, banks have to work in two dimensions, one is digitization and the other is digitalization. The former is the use of means to make actual resources and processes more efficient and effective, while the latter is the use of digital assets to create new services that increase customer satisfaction, resulting in additional revenue. Banks have turned to digitalization due to the change in two important factors, innovation in technology and customer expectations.

Around the world, but also in Kosovo, banks are increasingly becoming digital. The push for digitalization comes from all stakeholders as customers, competitors, and more specifically, regulatory agencies push in this direction, due to the importance of increased access to 24/7 banking (Gabor & Brooks, 2017; Hockett, 2018).

For the purpose of this paper, digitalization means digitalized banking services through online banking or e-banking over the use of bank branches. This paper therefore, deals with the customer perspective of the services provided by enhancement of technology use. Digitalization in this case, is the use of online services for money transfers, bill payments, deposits, online management of accounts, and so on, rather than bank branches. However, in a broader view, this research paper is an attempt to contextualize digitalization as a process of digitizing the relationship between banks and their customers.

With the diffusion of internet and mobile phones, there is an evident shift of customers' habits, preferences, and their approach to interacting with digital media. Digital transformation is the view and use of technology as the irreplaceable tool for utmost performance in any industry (Westerman et al., 2011). This is a process of thorough organisational transformation that has the implementation of digital technologies in the core function of their operations.

There is a profound increase in demand for financial services; therefore, traditional banks are taking the challenge of digital transformation as a response. As stated in Cuesta, Ruesta, Tuesta and Urbiola (2015), the process of banking digitalization involves the generation of supply, the distribution and sales of financial products and services through digital channels, to comprehend and suitably anticipate to its customers' needs. Moreover, banking digitalization includes the communication of the customers with the bank through analogue and digital channels, as well as the automation of services.

New revenue streams and value-creation are all related to the proper implementation of digital technologies that unleash the opportunities for new business models (Gartner, 2016). While digitization is just the process of transforming analogue data into a digital format, digitalization is much wider and encapsulates the entire use of digital or computer technology not only by a specific enterprise, but a whole industry, country or even the society at large. While the paper of Kane et.al. (2017) goes from a general view of digitalization, it pins it down to the digitalization by an industry, more specifically, the banking industry.

Similarly, business processes must be restructured in a way that have digitalization or digital transformation at the centre of their strategic steps, helping companies create competitive advantages, although difficult ones (Reis et al., 2018). Digital transformation can be about the change of customer experience, operational processes or business model, and in most cases, companies embrace the use of mobile applications and digital marketing to offer increased customer satisfaction (Lee et al., 2017). With the rise of new technologies, for instance, social networks, mobile, big data and so on, firms of all industries are undertaking various initiatives to both explore and exploit the benefits that derive from them. Successful digital transformation necessitates the development of far reaching capabilities, which depend on the business context and the needs of the organization (Ross et al., 2016).

Digital transformation could be categorized in three dimensions: Technological – the use of new digital technologies, Organizational – changes in organizational processes, and Social - the transformation of society, as we know it. Therefore, a proper definition of digitalization would be, the provision of major business improvements that changes all aspects of customers' life through the use of digital technologies (Pigni et al., 2016).

Fitzgerald et al., 2014 defines digital transformation as the use of social media, mobile, analytics or embedded devices, so as to provide major improvements in customer experience. This transformation is more about digitizing resources and results in created value and new profit streams initiated from digital assets. The use of multiple new digital technologies that connects all operations of an organization, through the use of internet of things in order to realize an exceptional performance and a sustainable competitive advantage, is a proper establishment of what technology offers today (Ismail et al., 2017).

The improvement of every point in the customer experience through the realignment of technology is defined as Digitalization (Solis et al. 2014), and it is the effect that technology has in all aspects of human life.

Peppard et al. (2018) defines digital transformation, as "...the process of making IT-related matters a strategic point". Thus, organizations need to establish strategies and change their organizational structure that fits the technological world, although at first it may seem hard to find the best approach to this transformation (Matt et al., 2015).

According to Štemberger, Erjavec, Manfreda and Jaklič (2019), in order for a company to go through the process of digital transformation, certain organizational patterns, roles and their interplay need to be analysed. These patterns not necessarily are equally suitable to each digital transformation case; however, companies should consider various approaches when organizing and coordinating their activities in accordance with their current resources, skills, organizational culture, technical management capabilities, etc.

Digitalization of the banking system has progressed through digitalization of various banking tools, such as mobile banking, e-banking, ATMs, and Points of Sale (hereinafter: POS). Mobile banking is a type of banking where mobile phones are the facilitator. This banking allows customers to perform most of the transactions as online and in branch banking, but the fact that this form is still in its beginning it is prevalent that customers in developing countries are still reluctant to use it. In order for a service to be considered part of the transaction market it should meet the following criteria:

- Simplicity and Usability
- Universality
- Interaction
- Security, privacy and Trust
- Have same cost as traditional transactions
- Speed
- Global Payments

Research suggests that in case of mobile banking, the level of education of customers plays a role in the awareness of its use. Moreover, research suggests that high income groups are more knowledgeable of mobile banking transactions (Hanudin et al., 2007).

In addition, electronic banking can be described in many ways. It could be seen as the delivery of banking information and services via personal computers or mobile phones. It is also the tool for customers to use and perform different transactions from bill payments to investments. The convenience presented by the use of internet banking makes it so useful and enabled customers to have access in their accounts and finances at all times and places. The main advantages of using electronic banking flow from attentiveness, responsiveness, care and friendliness. Whereas, the main disadvantages of this service are integrity, reliability, responsiveness, availability and functionality. The above characteristic

is a result of customer perception and sometimes reality is different. Moreover, customers have trust issues and privacy policies that do not understand and therefore, cause the main reluctance to using this service (A et al., 2014). Security issues that customers perceive in relation to electronic banking are also a matter of lack of information and therefore have little to do with the actual facts. Since, assurance and security are usually provided by banks, some people will lack willingness to engage in it.

Regarding the awareness that customers have about Online banking, research suggests that in developing countries customers know that their banks facilitate such service but their knowledge on how to use it are low. There is a difference in awareness about online banking among age groups, as research suggests that youngsters and middle aged group are more aware of this service. It is evident that the level of education plays a role in the level of awareness in the case of online banking. High-income groups are found to have better knowledge on online banking use (Bauer et al., 2005). In order for a change of customers' perceptions banks should provide privacy statement and explanatory security measures (Khalaf Ahmad & Ali Al-Zu'bi, 2011).

Until recently, ATMs were one of the most updated electronic banking tools that banks offered. Today's ATMs are cash withdrawal and deposit machines, from which you can withdraw cash but also be able to deposit and make payments through. ATMs automatically show and perform all teller operations from which the customers can make their decisions based on the speed and efficiency of this machine. Banks use ATMs to substitute branches in institutions, hotels, big malls, and pragmatically serve their customers with all cash involved transactions in their location (Wan et al., 2005). The main advantages of ATMs are: increased access on banking services, ability to make payments at any time, decrease customer traffic in branches, ease of performance.

Customers choose their bank based on convenience. Since Cash is the most used form of payment in Kosovo, availability of ATMs play a crucial role on selecting a bank. Next thing is friendliness and favourable interest rates. Key findings in this matter suggest that there's increased awareness of ATMs and transactions enabled through the use of ATMs. Nonetheless, some customers still choose bank branches as their first option to perform these transactions. There's good awareness for ATM availability among all age groups. Moreover, the level of education seems to not play a role on the awareness of ATMs use. In case of the existence of ATMs and ATM cash withdrawal options, all groups regardless of their income are aware, but when it comes to other services that can be performed by using ATMs, the awareness level is lower for lower income groups (Al Hawari & Ward, 2006).

Points of Sale devices are the most common payment tools used for credit and debit cards in retail and wholesale environment. POS is a device that enables automatic transactions from purchaser to seller via telephone or network connection to bank systems. Besides, it

also performs account balance check, account billing, postponed purchases and daily reports etc. POS is a globally acknowledged device and is often considered as the facilitator of global economy system (Cynthia & Biu, 2019).

Numerous evident benefits from using POS devices include:

- Decreased customer traffic in branches
- Less depreciation of ATMs
- Less worn out cash
- Cash held in banking systems
- Promoting public health
- Nonetheless, customers still find issues with using this device due to lack of trust and lack of clarity in financial affairs (Ganjikhah et al., 2017).

All age groups have good awareness of credit and debit cards, with young generation having a slightly better insight in their use. Moreover, the level of education plays a role in the awareness of the use of credit and debit cards, as highly educated groups are found to have high awareness when compared to other groups. Regarding the income factor on the awareness of the use of credit and debit cards, it is found that awareness drops as the level of income decreases (Gera, 2011).

Although it is evident there are several phases of transformation depending on the level of maturity, the study of Cuesta et.al. (2015) has punned the process down to three main phases, being Reaction to new competition, Technology Adaptation and Strategic Positioning. Reaction to new competition is the initial phase of the digital transformation process, where banks respond to changes in the supply and demand for financial services by creating new digital banking tools and channels (Hopperman, 2015). With the modernising of financial platforms, banks have effort fully made mobile devices accessible also as a distribution channel. In addition, banking apps with interactive interfaces have also been created for smart-phones or tablets. The process of creating new distribution channels involves combining new systems onto the pre-existing technological architecture.

Technological adaptation marks the second phase of banking digitalisation. In this stage, the banking technology platform is modified and converted into a flexible infrastructure which allows new technologies to be integrated, which then has to be adapted to comply with regulatory requirements set by local, national, and supra-national authorities (Cuesta et.al., 2015). Considering that, it is vital to have the capability to offer multi-channel, convenient, and user-friendly experiences and services to satisfy the customers' needs in full availability and immediacy; banks must model a sophisticated and thorough technological infrastructure and platform.

Another crucial factor in the path to digitalization is improving the efficiency and speed of the system, by cutting out manual and repetitive tasks to more automated processes. In this phase, automation is of high significance, since it is an important aspect of building loyalty among customers, by for instance, applying artificial intelligence to improve scoring, and by providing personalised advisory services (Bain & Company, 2014). However, it is important to note that upgrading the technology infrastructure means new investments for a bank, and thus, additional IT spending.

Last phase of the banking digitalization process, as stated in Cuesta et.al., (2015), is strategic positioning, which implies the pursuing of digital strategies to improve solutions for the customer, and also bring in customers and build up loyalty. Banks that are more digitally developed, set more ambitious goals to improve the productivity of distribution channels, and invest a lot more in the transformation process; contrary to more traditional banks.

Developed banks need to set up proper metrics in order to quantify the effect of digital investments, in order to set successful spending and investment priorities. Another fundamental change that banks must apply has to do with the rapid software development approaches, contrary to the lengthy two previous phases. Such an incentive is needed since, at times when the period between the analysis of customers' needs and the software coming on stream was so long that it no longer matched the needs of the business (Cuesta et.al., 2015). Banks at times, apart from being slow, are also downright resistant to changes demanded by the technological age, due to the unclear idea as to what they are changing into (Skinner, 2014).

Banks that are able to apply the aforementioned three phases to successful digital transformation, will be better-prepared towards competition in this technological era, as well as better-placed to take on a leading position in providing suitable and satisfactory financial services for their customers. By constructing and applying appropriate metrics, banks are able to analyse whether the investments made are proper and they produce the expected results. The digital revolution that is actually occurring is definitely reshaping the customer relationship in the banking industry. Now, people from all socio-demographic backgrounds are connected to their financial data and accounts, whereas, the new generations of people born in the internet era are pushing towards a major change by necessitating an increased satisfactory customer experience. The millennial generation is also more flexible comparing to the previous generations, and for better options, they are ready to switch between banks easily.

Moreover, the 24/7 access to banking services through digital channels has improved interactions with clients and therefore, banks need to offer the best computer-generated assistance and managing tools. On another note, organizations that don't have a clear vision of the implications of digital transformation, thus, seeing it as an experiment and not as a strategic move will fail to survive in the upcoming years (Galazova & Magomaeva, 2019).

#### 2 BANKING DIGITALIZATION IN KOSOVO

Kosovo is a parliamentary republic that declared its independence on 17<sup>th</sup> of February 2008. Kosovo's economic growth has outperformed its neighbours, but has not yet been ample to significantly reduce the high rates of unemployment, increase formal jobs for women and youth, or even reverses the trends of population exodus. Kosovo's growth is highly dependent on remittances that fuel domestic consumption that only lately shifted towards investment and export.

Kosovo's population stands at 1.8 million (2017 - latest report), with a GDP of 7.1 US Billion Dollars, which is at 3,877 US dollars per capita, and a life expectancy at birth at 71 years. In the recent years, Kosovo saw favourable developments to the financial stability that supported the high resilience of financial sector. Sustainable economic growth continues in the euro area, coupled with the positive prospects for regional economic recovery, contributing to further improvements of factors that influence economic growth of Kosovo. Supported by consumption and driven by public investment and service exports, Kosovo's growth in 2017 was estimated at 4.2 percent. To accelerate its convergence to European Union standards of living, Kosovo needs to increase its productivity and competitiveness to fully exploit its growth potential.

If Kosovo would invest on increasing labour force skills, with the average age of about 26, it would make it a comparative advantage and a key resource for economic growth. Employment and output in Kosovo's economy are dominated by non-tradable sectors, with service industry being the largest sector with a share of 54% of GDP (Shala, 2018).

#### 2.1 Financial Sector in Kosovo

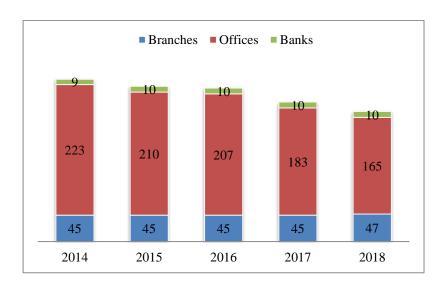
The financial sector in Kosovo is rather healthy, dominated by the banking sector. Banks are profitable with high capital adequacy ratios and low, even declining, non-performing loans of 2.7% in 2017. Labour market conditions have been upgraded due to the increase in economic activity, coupled with reduced funding cost and improved loan quality, which in turn, affected the increase in loan demand. Continuously, the banking sector is regarded as highly stable, based on the level of indicators that measure financial health and performance.

The continuous increase in lending will give raise to the burden of capital position, as the pressure to the profitability will increase, and the interest rates on loans will suffer a continuous decrease. Although many indicators give signals of risk reduction, the continuous increase of digitalization in financial services is highly increasing the exposure to cybercrime and operational risk, which should not be overlooked, thus, demanding proactivity in protection against this risk (Hoti, Alshiqi - Bekteshi & Livoreka, 2014).

Commercial banks have launched their operations after the Kosovo War, and they perform in accordance with the central bank regulations. Figure 1 below depicts the number of banks, branches and sub-branches in Kosovo. Licensed banks that are operating in Kosovo are:

- NLB Banka
- Banka për Biznes
- Turkiye Cumhuriyeti Ziraat bankasi
- Banka Ekonomike
- Raiffeisen Bank Kosovo
- ProCredit Bank
- TEB SH.A.
- Banka Kombëtare Tregtare
- Turkiye Is Bankasi
- Komercijalna Banka ad Beograd.

Figure 2. Number of Banks, Branches and Sub-Branches of Banks in Kosovo



Source: Central Bank of Kosovo, Annual Report, 2018, p. 51, Figure 48.

Banks have operated in a total of 57 branches and 165 offices within the territory of Kosovo, by the end of 2018. Banks have opened two branches, and three sub-branches, and have relocated 15 branches and closed 21 offices. The tendency to narrow physical network is regulated and approved by the Central Bank of Kosovo, and this relocation is done because of the assessment of their performance and efficiency and the expansion of automated services. There has been an increase in bank territory coverage despite the decrease in branches and offices, due to automated services (Central Bank of Kosovo, 2018).

#### 2.2 Bank Industry Digitalization

Financial system has been highly affected by the digital revolution that accelerated the adoption of advanced technology systems and the creation of infrastructure for the establishment of digitalized services. The banking sector in Kosovo, having been highly affected by the aforementioned developments, has seen heavy investments in the creation of electronic banking services in recent years. The accelerated reliance on digitalized services exposes the sector to risk of errors in information technology systems or potential cyber-attacks, events that cause material loss and most importantly, create uncertainty and loss of customer confidence on financial system.

The banking industry in Kosovo has gone through different levels of digitalization in a short period of time. In 20 years, it went from no tech to high-tech era with almost all banks currently transforming their operations. The industry has responded to the customer and competition requirements that asked for rapid development of electronic instruments. Although the necessary infrastructure exists, banks lack innovative vision and flexibility, combined with lack of customer knowledge on the financial systems and its digitalization. Majority of transactions are still performed in branches, not through e-services. The law on digital signature has not been implemented in Kosovo; therefore, the physical contact between banks and customers is still a necessity (Zogjani, Mazelliu & Humolli, 2018). Majority of national and international transfers (78%) are performed in bank branches, and only 22% through e-channels. Only 44% of the ATMs in the industry provide cash depositing option. While there is visible digital service transformation in this sector, there is still lack of technologies in use compared to developed countries. Technologies such as biometric authentication, NFC digital wallets, cloud-computing, robo-advise, big data driven credit scoring, AI/Machine learning, are not implemented by any bank in Kosovo because of the lack of infrastructure on this matter. This is a result of a number of combined factors such as legal infrastructure, lack of expertise, and the risk-averse culture. Nevertheless, with the increase of participation of the younger generations in the financial market, there will be more pressure for banks to meet the digital requirements (Kupina & Salko, 2015). Out of the 10 banks operating in Kosovo, nine offer internet banking. Financial inclusion and knowledge has increased since banks started to offer digital banking platform for all technological devices. Nevertheless, with the development of digital platform, the customer needs have developed too. Customers are getting more knowledgeable and their needs are getting more complex and more demanding. E-banking services are the fastest, easiest, and safest way for banking and are available non-stop. Banks are continuously implementing practices to improve the digitalization process to offer advanced retails services that result in easy cost-free and 24-hour access to accounts. However, the digitalization has come with a cost, as banks have digitalized, they have also closed branches and have changed the client profile they want to serve. Banks have been decreasing their employee numbers and have focused on banking for businesses (Hasanaj, Shala & Qarkagjija, 2017).

Table 1. Banking Industry Structure

Description	2012	2013	2014	2015	2016	2017	2018
Number of Bank	310	298	277	265	262	238	222
Branches							
Number of ATMs	483	496	498	540	522	512	491
Number of POS	8,592	9,071	9,349	9,705	10,589	11,501	13,183
Number of E-banking accounts	97,089	131,365	157,761	187,297	230,905	214,444	250,733
Number of Bank Cards	708,674	769,397	813,026	862,779	1,013,155	1,090,949	1,187,644
Number of employees	3,727	3,549	3,507	3,375	3,375	3,320	3,255

Source: A. Sadiku, Digitalization of banking services in Kosovo; Trends and comparison to neighbourhood countries, 2019, p.3, Table 3.

Aside from the fact that digitalization is an ongoing process banks have to maintain their traditional business models due to the nature of the customers in Kosovo. Another reason for the banking sector in Kosovo not introducing the latest trends of innovation and digitalization, already adopted by European banks, is the lack of expertise and innovation. Table 2 below depicts the facts of the use of advanced technologies by the banking sector in Kosovo.

Table 2. Digital and Innovative Solutions Implemented by Banks in Kosovo

Banks Innovations	Implemented in Kosovo
E-Signatures and Secure Document Uploading	No
Telematics / Biometrics / Wearable Technologies	No
Innovative Uses of Data / Data Profiling / Big Data	No
Use of DLT for digital identity	No
Digital wallet solutions for mobile payments	No
Online account opening (client on-boarding)	No
Credit scoring	No
Use of biometric authentication for costumer identification purposes	No
Use of cloud computing for material activities	No
Virtual & Augmented Reality	No
Social Media Marketing	Yes
AI / Machine Learning	No
Digital Distribution / E-Commerce Sales	Yes
Mobile Payments	Yes
Reg Tech	No
Innovative Uses of Data / Data Profiling / Big Data	Yes
Social Media Complaints Handling	Yes
Secure Messaging	No
OCR Technology to Pre-Populate Data	No
Automation of Financial Advice / Robo-Advice	No
Distributed Ledger Technology / Blockchain	No

Source: A. Sadiku, *Digitalization of banking services in Kosovo; Trends and comparison to neighbourhood countries*, 2019, p.4, Table 6.

The technological opportunities are evident, and they offer high-level customer experience across various channels, as a result, a strategic development is required in order to embrace this opportunity. As the clients are observant and are becoming friendlier with technology, they expect this sector to improve as well. Kosovo has the youngest population in Europe, with almost 50% being less than 25 years old. This increases the pressure on banks, as the younger generations are born in the world of technology.

The internet penetration in Kosovo is the highest in the region, and as of 2018, it was 81%, compared to that of Macedonia 76%, Albania 66%, and Montenegro 70% (Internet World Stats, 2017). Lack of innovative vision and flexibility in this sector will not be of any good in the near future. Banks need to increase financial service delivery channels and online access to finance.

Kosovo's banking sector is continuously the largest contributor to the stability and the expansion of financial undertakings in the country. The structure of this sector has remained unchanged in the recent years, with ten licensed banks that operate in this market. Institutions that dominate the banking sector come from the European Union (EU); however, banks from other origins have increased their presence.

The total assets from banks with the origin of EU make up to 61%, while banks from Turkey reached 16.5% this year. This sector saw an increase of up to 4.8 billion euro in total assets, which increased from 3.88 billion euro in 2017. This growth is mainly a result of the increase in loans and advances to customers, which were at 64% of loans for non-financial corporations and 36% of loans to individuals. New loans continued to rule by the service sector with an overall share of 71%, followed by the industry with 13% and, the remaining 9% went to construction. On another note, the share of loans to individuals was mainly attributed to customer loans, with 73%, mortgage loans of 18% and other types of loans with 9%.

Business Loan Concentration

• Energy
• Industry
• Mining
• Construction
• Agriculture
• Services

• Other Loans
• Mortgage Loans
• Consumer Loans

Figure 3. Business Loan Concentration

Source: Raiffeisen Bank Kosovo, Annual Report, 2018, p.12.

This sector attained a good financial performance at profitability and non-performing loans, with income increasing to 253 million euro, expenses going up to 166 million euro. This increase is a result of interest income increase that resulted from loans and advances to customers, whereas the increase in expenses is a result of the increase in deposits levels and increase in the average rates, which, together with the increase in administrative expenses of 0.7% resulted in a total of 166 million euro increase. At the end of 2018, the net profit of this sector was 87 million euro.

In the process of digitalization, the need for bank branches has been transformed as well. Regardless of the new options for undertaking bank transactions, bank branches remain the most dominant channel for account opening and customer satisfaction is highly dependable on it. It is apparent that loyalty and advocacy flow from customer satisfaction, and research in this topic shows that satisfaction from bank branches is higher than from online or mobile channels. Digitalization has taken its toll with regard to the number of bank branches around the world, with large numbers of branches closing as a consequence of business decisions that focus on digital services, as seen in Figure 4, the average number of bank branches per 100,000 adults. However, it is not yet a wise decision to cut on all bank branches as bank branches remain the key channels for building and sustaining strong retail banking franchises (Cortés, 2015). The development of highly automated ATMs, has resulted in higher presence of them, and a decrease in bank branches, as depicted in Figure 4. While their direct effect in this industry is evident, their impact on customer welfare is yet to be witnessed.

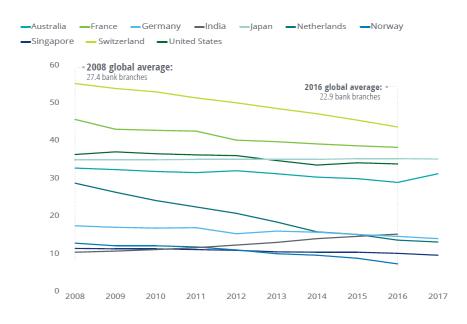
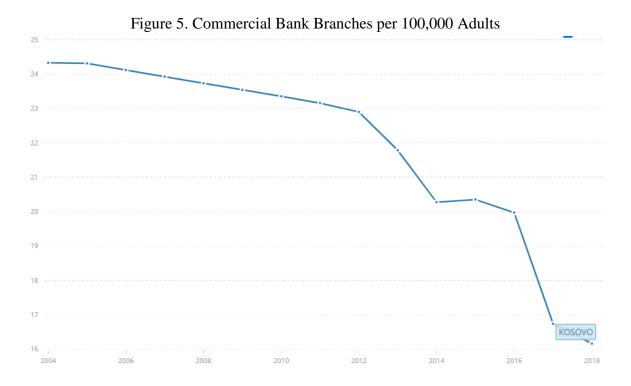


Figure 4. The Declining Number of Bank Branches

Source: World Bank, *Retrieved on January 2020, from*: https://data.worldbank.org/indicator/FB.CBK.BRCH.P5?end=2017&locations=AU-FR-DE-IN-JP-NL-NO-SG-CH-US&start=2008

Technological developments have had a huge impact on the number of bank branches, due to services being delivered remotely through new delivery mechanisms, and also the introduction of ATMs with updated technology (Lelissa & Metasebiya, 2017). As around the world, the same has occurred in Kosovo, with the average number of Bank Branches per 100 adults decreasing, see Figure 5.



Source: World Bank, Retreived on January 2020, from:

https://data.worldbank.org/indicator/FB.CBK.BRCH.P5?locations=XK

In this digital age of efficiency, banks should keep bank branches as a powerful tool for human contact experience, which is clearly needed for some services. With the digitalization amplifying, banks should invest in the remaining bank branches and their employees, to secure qualitative interactions with customers, that would result in higher satisfaction and customer loyalty (Sengupta & Dice, 2019).

The largest push towards change in this industry has been new generations who, unlike their predecessors who were used to concluding business and transactions at a branch or face-to-face with an employee, are content at performing their tasks digitally and with few clicks. Findings, showing that almost half of millennials are reluctant at using physical offices, 71% of them seeing online or mobile banking as essential, prove that digital transformation has been undertaken by this generation. There are opinions and findings that conclude that 80% of the customers in the banking industry view bank interactions as simply transactional, and not as they were traditionally seen, as relationship building (Wang & Shan, 2013).

The infrastructure of ATMs is made of banks, ATM machines, and telecommunication network that enable transactions. At first, when the use of ATMs was initiated, ATMs could only be found at bank branches. Now, we have ATMs everywhere, which have a higher cost for transactions than those at bank branches. ATMs are seen as a replacement for most services provided by employees at bank branches, resulting in reduced demand for employees. Until recently, ATMs in Kosovo only offered balance checks and cash withdrawals, whereas now, they offer deposits, loan payments, and to some extent, bill payments (Critchfield, 2016). In order for ATMs to have a positive effect on the welfare of the users, banks have to first provide the education and make a slow transition from bank branches to only ATMs (Ogbuji, Onuoha & Izogo, 2012), and subsequently introduce internet banking and the other digitalized banking tools.

Internet Banking is one of the most crucial developments in the banking industry, allowing customers to interact with their banking accounts virtually, from anywhere and at any time. In developing countries, where there is lack of technological literacy, this service cannot be fully utilized; thus, the need for bank branches with human contact prevails. Another challenge that this service faces is security, although tools such as security token devices and passwords are present, many clients find it unsecure and untrustworthy (Bakare, 2015).

The most evident benefits of the use of online or internet banking is convenience. Through internet connection, the interaction with one's bank account has been made easy 24 hours per day, 365 days a year. Interaction with the bank account means balance checking, bill payment, loan payment, account updating and so on. The other beneficial factor of internet banking is efficient rates, which means lower rates for both the customer and the bank. On the other hand, most of the disadvantages of the internet banking are perceived by the customer, and are not always true. One disadvantage of internet banking is lack of human contact, which some customers still need. Due to customer knowledge and technology literacy, services provided by the banks still need assisting (Ping, 2017).

Mobile Banking is the performing of banking services through the use of mobile phones. The scope of offered services depends on the app, but usually most of the tasks performed at bank branch, can also be performed through the app as well. Advantages presented by mobile banking are similar to that of electronic banking. Saving time, increased security due to cashless transactions, decreased costs, account monitoring, and so on. The setback of the utilization of this service is that in developing countries most transactions are performed in cash. The advantages of cash payments are lack of transaction costs, privacy, and immediacy. While mobile banking offers many advantages, it also poses the same issues as internet banking, and are mostly linked to security (Verkijika, 2018).

All in all, mobile banking is a very powerful tool, and if used correctly can set the infrastructure for easy financial transactions, and even economic development. But in order

for this service to be fully adopted, it has to be available to all mobile phones, and the demand side has to be educated towards it (Dziubliuk, 2019).

#### 3 FACTORS INFLUENCING FINANCIAL INCLUSION

The supply factors responsible for financial exclusion, are considered to be lack of customized products and services, distance from the bank branch, 'Know Your Client' rules, rigid terms and conditions, age factor, faulty business model etc. Of the various demand side factors, financial literacy or education is the foremost one that determines the extent of financial inclusion (Sukumaran, 2015).

In terms of use, if we focus on the factors that determine whether people use financial services or not, we find that the level of education, income and age are very crucial factors. In addition, individual factors, which affect the perception of different barriers to financial exclusion, generally are income level and age. Even though income level may possibly be a structural problem, age may reflect the absence of financial products that meet the needs of different groups (Tuesta et.al, 2015).

Awareness of the obstacles perceived by excluded individuals is important when proposing strategies for action that financial institutions could initiate to promote a more inclusive financial system, which improves the quality of people's lives and at the same time, ensure sustainable economic growth. Financial development affects existing inequalities in societies. The research presents evidence divided among suggestions that financial development increases inequalities, and that it disproportionately helps the poorer in a way that the income of the poorer grows faster than the GDP per capita; therefore, resulting in a decreased inequality (Bruhn & Love, 2014).

The outreach can be represented by assessing the differences in regional availability of services, claiming that, due to the absence of adequate financing, certain segments of society remain at a disadvantageous position. Another example is when there are preconditions in order to use certain services, such as Internet access or a specific level of digital literacy. In both examples, financial exclusion exists due to reasons that are out of the scope of that segment of the society. Policy recommendations to remedy this problem are straightforward and suggest increased network/education efforts in certain areas in order to enable access for disadvantaged population (Swamy, 2014).

Financial inclusion can have far more macro-level policy implications in addition to the impact on micro-level. It directly affects the economy by altering the behaviour of customers and entrepreneurs. Disadvantaged segments of the society demand small sized credit, which is not favourable for lending institutions that see this type of financing as costly. This results in a deeper financial exclusion that consequently disturbs the economic stability of that country (Morgan & Pontines, 2014).

Major issues like the aforementioned, have put financial inclusion into the focus of researchers that have found significantly different effects and responses among different countries. Literature suggests that three dimensions have to be central to any research that aims to measure financial inclusion. The three being outreach, usage, and quality of financial services. In a way or another these dimensions are represented in literature. Outreach, discussed as regional availability of services, varies among countries and regions, thus, resulting in disadvantaged populations to be held at that position. The existing preconditions such as internet access or digital and financial literacy to certain services also plays a significant role in exclusion (Gortsos, 2015).

Table 3. Account Possession With a Financial Institution by Country

	Male	Female	Difference (sign.)			
Young Population						
Albania	0.33	0.29	0.04			
Bulgaria	0.42	0.58	-0.16			
Bosnia and Herzegovina	0.41	0.36	0.06			
Cyprus	0.81	0.70	0.12			
Czechia	0.73	0.68	0.05			
Estonia	0.94	0.93	0.00			
Croatia	0.63	0.71	08			
Hungary	0.61	0.58	0.03			
Kosovo	0.43	0.42	0.01			
Lithuania	0.46	0.46	-0.00			
Latvia	0.86	0.86	-0.01			
FYR of Macedonia	0.58	0.53	0.04			
Malta	0.91	0.93	0.03			
Motenegro	0.54	0.45	0.09			
Poland	0.75	0.67	0.08			
Romania	0.68	0.43	0.24			

Source: V. Botric and T. Broz, *Gender differences in financial inclusion: Central and South Eastern Europe*, 2017, p. 214, Table 1.

There are cases when financial exclusion is seen as voluntary, such as cases when access is enabled, but individuals are reluctant to use them are seen as such. The most difficult factor to assess is the quality of services provided, due to the perceptive factors that are relative to individual backgrounds. Moreover, it is also difficult for policy makers to address the issue of discrimination towards customers. In a study Botrić and Broz (2017), covering data on individuals having an account, as the most generic indicator, found that there are gender differences of at least 10% in South Eastern Europe. In the countries of this region, men are significantly more likely to have an account in a financial institution. Moreover, this study found that there are differences also in case of older population. (Botrić & Broz, 2017).

As depicted in the Table 3, 4 and 5 below, financial inclusion in the case of older population is significant in countries like Albania, Bosnia and Herzegovina, and Kosovo

etc. Moreover, in all these countries, it is more probable to have an account as a man, than as a woman. Moreover, in case of the younger population, the gender differences are less significant, and appear in fewer countries.

Table 4. Account Possession with a Financial Institution by Country

	Male	Female	Difference (sign.)			
Active Population						
Albania	0.61	0.45	0.16			
Bulgaria	0.84	0.86	-0.02			
Bosnia and Herzegovina	0.76	0.61	0.17			
Cyprus	0.94	0.96	-0.02			
Czechia	0.93	0.93	-0.01			
Estonia	0.99	0.99	0.00			
Croatia	0.93	0.95	-0.02			
Hungary	0.88	0.87	0.01			
Kosovo	0.66	0.41	0.26			
Lithuania	0.95	0.99	-0.04			
Latvia	0.97	0.98	-0.01			
FYR of Macedonia	0.92	0.80	0.12			
Malta	0.99	0.99	0.01			
Motenegro	0.73	0.76	-0.02			
Poland	0.92	0.87	0.05			
Romania	0.71	0.75	-0.06			

Source: Valerija Botric & Tanja Broz, Gender differences in financial inclusion: Central and south eastern Europe, 2017, p. 215, Table 1.

Table 5. Account Possession with a Financial Institution by Country

	Male	Female	Difference (sign.)			
Older Population						
Albania	0.39	0.27	0.12			
Bulgaria	0.58	0.53	0.04			
Bosnia and Herzegovina	0.57	0.43	0.14			
Cyprus	0.97	0.93	0.01			
Czechia	0.82	0.74	0.08			
Estonia	0.98	0.98	0.00			
Croatia	0.93	0.91	0.02			
Hungary	0.67	0.68	-0.01			
Kosovo	0.76	0.38	0.38			
Lithuania	0.82	0.84	0.01			
Latvia	0.86	0.85	0.01			
FYR of Macedonia	0.89	0.74	0.15			
Malta	0.98	0.95	0.03			
Motenegro	0.66	0.56	0.1			
Poland	0.78	0.67	0.1			
Romania	0.61	0.45	0.52			

Source: Valerija Botric & Tanja Broz, Gender differences in financial inclusion: Central and south eastern Europe, 2017, p. 215, Table 1. There are various factors influencing the decision of banks on where to expand, starting from risk diversification, including general economic and demographic trends, population shifts, technological developments etc. By operating in a geographically diverse network, banks can reach greater diversification of their deposit base and loan portfolio, resulting in reduced risk of substantial deposit outflows. Changes in population, the movement of existing households, and the addition of new households has resulted in numerous changes in banking branches.

Financial inclusion, through access to financial services and use of financial services, is an important economic goal. Therefore, this issue lies in the interest of policy makers to understand the drivers of financial inclusion. It is evident that the functioning of financial markets requires both good infrastructure and informed customers. Banks in Kosovo may have the necessary infrastructure to engage in full digital transformation, but they lack innovative vision and flexibility. The lack of flexibility is a result of customer financial and internet illiteracy.

Banks have been gradually increasing their investment in digitalization but it is still not the primary channel for customer engagement and service, because there is a predominance of in-bank transactions. Seventy-eight percent of transfers are carried out through bank branches, whereas only 44% of ATMs in the industry provide cash in option, meaning that the majority of cash deposits are carried out through bank branches (Sadiku, 2019). Lack of awareness about the financial services among rural or uneducated people makes digitization a complicated process in developing countries. Banks have to be ready for the competition brought by new financial services, and need to reach or stay in touch with the less educated population.

Demand for financial services is highly affected by income level, saving levels, availability of bank branches, availability of ATMs, transaction costs, banking products, etc. The common belief in most studies remains that demand for financial services is a function of income, savings, and transaction costs. In cross sectional studies, income levels are most often observed to be closely linked to financial services demand by the customers. Therefore, it is evident that the higher the income level, the greater the sophistication of the financial services demanded (Varaprasad, Getachew & Abebe, 2019).

Literacy has proven to be impactful on individual financial success and the efficient operation of the financial markets. Informed individuals can make informed choices, and when this is combined with relevant financial information, it sets the terrain for efficient financial market system (Edem, Mbaba, Udosen & Isioma, 2011).

This can be very well understood from one of its definitions, by the Organization for Economic Co-operation and Development (hereinafter: OECD): "The process by which financial customers improve their understanding of financial products, concepts and risks,

and through information, instruction and objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being" (RBI, 2008).

Financial inclusion tends to improve as education levels rise. There is evidence of the fact that improved schooling can improve financial well-being, but also unexplored factors such as individual ability or family resources could also affect this relationship. On the other hand, there is still a significant disparity among the people living in rural and urban area in using the services of the financial system. There is a drastic need for effective tools in order to bridge the gap and include every section of people from all parts, whether rural or urban, to use and adapt to the digitalized financial services.

Financial education and financial capability are two concepts that are depicted more often in academic circles, compared to financial literacy. Financial capability, apart from including the component of financial literacy, also takes into account other affecting factors, such as behavioural factors, financial services, emotions and social influences (Sherraden, 2010).

People make financial decisions on the basis of their ability, knowledge, skills as well as their current economic circumstances. Therefore, one's tendency to deal with his/her own personal or household finances and be financially included, does not only depend on factors as financial education and skills, but also on the individual's economic and social position. Pointedly, it is the link of internal factors and social/economic structure, which influences one's attitude, confidence, expectations, motivation and financial behaviour (Mzobe, 2015).

#### 3.1 Education Level, Financial Education and Financial Literacy

According to Atkinson and Messy (2013), financial education is defined as the process that helps individuals in making informed choices, improve their financial well-being and become aware of the risks and opportunities that exist for them to spoil. Through information, instruction, and objective advice, financial education enhances the understanding of financial consumers or investors of financial products, concepts and risks, and helps at developing the skills and confidence turning them into aware players in the financial system (OECD, 2005).

Financial literacy is the level of understanding of personal finance and the use of that knowledge into personal finance applications. It is a term that describes the set of skills and knowledge that enables individuals to make informed and effective decisions in the financial system (Huston, 2009; 2010). Financial illiteracy and financial inclusion are associated, because of lack of awareness relevant to financial products and financial

decisions, low confidence, and certain behaviours that set the terrain for increased barriers to access.

The lack of knowledge on financial products and their use reduce the prospect of inclusion. The aforementioned issues also prevent individuals from using the existing products. In such case, important mechanisms, meant to increase trust and protect customers, are left unused or are met with low demand. The 'financial literacy' term specifically defines the combination of awareness, knowledge, skills, and attitude required to make sound financial decisions which in turn increase the financial wellbeing of that individual wellbeing' (Atkinson & Messy, 2012).

An international survey, conducted by Gardeva and Rhyne (2011), looked into this issue by surveying 301 financial service providers, investors, and members of support organizations. The study found that low financial levels are most probable to be considered a major barrier to financial inclusion. This report concluded that financial literacy is seen as the enabling factor for unlocking other key dimensions of financial inclusion. The barriers taken into consideration in this report are clearly affected by financial education as it can improve levels of financial literacy, help individuals overcome this vulnerability that is created by their personal background and possibly breakdown psychological barriers. Moreover, financial education plays a role at reducing geographical barriers as it allows people to learn about technological advancements.

A report of The Global Findex by Demirguc-Kunt et.al (2018) specifies that levels of financial inclusion vary globally, and as such, the highest proportions of financially excluded adults most probably can be found in countries that suffer from poverty or inequality. Segments of population most vulnerable to exclusion are those with disabilities, the very elderly, new immigrants, people who face financial difficulties and those with low levels of education (Employers Forum on Disability, 2007).

The typical target of financial education is usually low-income groups, and their background could be categorized into rural, isolated or disadvantaged populations, microentrepreneurs, the young and women. On the other hand, those included are still inexperienced and most likely have limited access to product types. One of the main causes of financial exclusion is financial illiteracy. There is lack of awareness regarding financial services among people who have also been struggling to find a consultation platform. Financial literacy thus would be very crucial for increasing the penetration of financial products and services.

The magnitude of financial exclusion in emerging economies indicates that limited opportunities for learning from peers and relatives results in almost no social pressure at becoming more financially included. The need for ambitious and profound policy solutions that address this issue is a necessity in such countries. According to Leonard (2011), these policies must pursue and develop sustainable distribution mechanisms, establish networks

of trust and shifting social norms. Customers should be educated on the usage of bank accounts and new technology as the first step towards financial education that sets the terrain for financial inclusion.

#### **3.2** Age

On age factor, the financial service providers often focus on the middle of the economic actively population, looking thoroughly on the design of appropriate products for younger or older potential customers. There are hardly any policies or schemes for the younger lot, or the retired seniors, as the banks do not see any profitable business from this population. Young adults are found to be the most probable to be financially excluded, it being evident that their levels of financial literacy remain below those of older generations, and there is display of excessive credit use that in turn results in their future exclusion (Kempson, Atkinson & Piley, 2004; Atkinson & Messy, 2012).

Age influences the adoption of technology by individuals, because older people are less comfortable and were not born in the age of technology. In simple terms, youth adopts technology immediately, and as a result, are more prone to further adopt new technologies in their life. As younger generations see technology as a useful tool to enhance their skills and save time, older generation have been found to focus on relationship building with their service providers and give less emphasis to using technology. However, things are changing due to the challenges presented by internet development, and the fact that older generations accumulate more wealth in their lifetime, therefore, undertaking more financial transactions than their younger counterparts. Regardless of the fact that digitalized banking has been designed to be easy to use, the problems older people encounter persist (BK, 2015).

According to Akudugu (2013), the age of individual adults was found to have a positive influence on the probability of inclusion in the formal financial market of Ghana. Meaning that, an extra year gained by individuals leads to an increase of about 0.02 in his or her probability of inclusion in the formal financial market of Ghana. However, this tendency reduces as one reaches an old age. This statistic is captured in the age-squared variable, which is negatively related to the probability of inclusion in the financial market and is statistically significant at 1 percent. Such evidence implies that age assumes a quadratic function.

As people move from childhood to adulthood, the probability of their financial inclusion increases up to a point when they pass the economically active age group and then the probability starts to decrease. Hence, as one reaches old age, every extra year gain leads to the probability of being included in the formal financial market declining by about 0.0002. This finding supports that of Akudugu (2012) stating that individuals' demand for financial

services from formal sources declines as their growth passes their economically active age group.

The adoption of technology based services is enjoyed by a group of people due to the elimination of need for human contact which they deem unnecessary. On the other hand, some prefer to have the human contact factor to interact with rather than with the machines, which makes the service more personal, resulting in a customized service. Customers desiring human contact may also be reluctant on adopting technology based services. The need for human contact in banking services has a negative impact on the use of digitalized banking, thus, it is evident that the older generations prefer more the human contact, therefore, disliking digitalized banking (Stříteský, Stříteský & Quigley, 2015).

The tendency to need human contact is also influenced by the individual's trust in technology, and more specifically in electronic banking. The adoption of ICT highly depends on the trust in information and communication technology. Trust promoted by these technologies, offers reliable acquisition of information and supports transparency, and is seldom connected to the reputation that technological service has. In the case of electronic banking, users have high confidence on the service providers such as banks. Electronic banking is performed in environments where cyber threats and cyber-attacks can be discovered too late. It is important to point out the difference between security and trust in electronic finance and banking lies in the fact that trust is generated by bank supervision and monitoring by higher authorities. Bank clients sometimes are cautious about the risks of electronic banking, when deciding on its adoption (Vejačka & Štofa, 2017).

One of the most critical factors influencing trust on internet banking is satisfaction, followed by perceived benefits of online banking, fairness, security, privacy, and ease of use (Skvarciany & Jurevičienė, 2018).

#### 3.3 Gender

The purpose of financial inclusion is to connect people to banks, where both parties benefit. Emerging economies face challenges in ensuring that the transformation of the financial system and the banking sector brings financial inclusion. Access to safe, easy, and affordable finance and other services are seen as a prerequisite for growth acceleration, which would reduce income gap and poverty. A proper financial system creates equal opportunities, and enables inclusion of the socially excluded people (Dahan & Hanmer, 2015).

Although women play an active role in the economy, the development processes have avoided women and we still live in a world of inequality. Women represent nearly 50% of world's population, perform nearly two thirds of the world's work, and receive only one

tenth of world's income. Women face discrimination in all spheres of life. Societies that discriminate based on gender pay the cost of greater poverty, slower economic growth, weaker governance, and a lower living standard. In the context of internet banking, a service designed for general population's use without regard for personal attributes or gender; there are gaps in the adoption of this technology, especially in under-developed or developing countries. In a study by Yuen, Yeow and Lim (2015) gender variables were found to have an important effect on the use of digitalized banking.

However, contrary to most beliefs, this study found out that women have a more positive attitude towards internet banking in particular, while men perceive it as more useful and easier to use. Research suggests that women prefer higher levels of security and personal contact, but when this is accompanied with lower level of education in developing countries, the result is non-usage of digitalized services (Mols, 2000).

Gender affects financial inclusion even in cases when individual characteristics are controlled. Financial education that targets women enables development of a reasonable understanding of financial systems. Women are less likely than men to own a bank account. Financial technology is seen as an instrument for establishing financial inclusion and narrowing the gender gap. Digital finance delivered through various devices will enable reliable digital payment systems that anyone can use. A major part of the excluded population owns a technological device that can be used for financial services. Innovative solutions can facilitate easier and safer circulation of money with lower costs (Suri & Jack, 2016). Equal financial opportunities are specifically significant in cases when the gender dimension is included.

Regardless of the good documentation of wage, employment, and income gap, there is still lack of data on the gender gap of the equal access to finance. The existence of this type of gap is only confirmed in developing countries. Research suggests that exclusions from financial services, based on gender, are a result of exclusion of other socio-economic factors such as income, education, and employment (Adeyemi, Mustafa & Oladipo, 2013).

#### 4 RESEARCH DESIGN

Financial development is highly dependent on the access to financial services provided to the demand side. It is therefore, of high interest to policy makers and the sector itself to understand the drivers of financial inclusion. So far, research points out to the relationship between financial inclusion and factors as cost for financial accounts, physical presence of financial institution and the strong legal system, thus, depicting a lack of focus on the demand side. It is evident that a functioning financial market depends on informed customers alongside the operational infrastructure. The fact that better financial decisions come from informed customers supports the evidence that the financial system is improved

by demanding sophisticated services, thus resulting in financial inclusion (Ajayi & Ross, 2017).

The effects of education, age, gender and geographical location in financial inclusion have not been thoroughly explored in the banking sector in Kosovo, respectively. Therefore, the purpose of this research is shedding light on the factors that directly influence the awareness and adaptability of digital banking tools and in turn enhance financial inclusion. Moreover, the current study aims at understanding more thoroughly what types of digital banking tools are mostly being used in Kosovo and what aspects of the tools are disadvantageous for the population.

Therefore, the aims of the present study are:

- Analysing awareness and use of various digital banking tools of bank customers in Kosovo.
- Comparing and analysing factors that influence an individual's financial inclusion through digital banking tools, such as education level, age, gender and geographical location.
- Exploring what types of services are mostly being used through digital banking tools in Kosovo.

Previous literature has suggested that education and the awareness and use of digital banking tools are associated, as well as an important factor of financial inclusion is age. It has been found particularly useful to examine the frequency of digitalized banking tools usage as well as what services are they mostly being used for. Moreover, instead of only examining the positive aspects of digitalized banking tools, it has been found crucial to also investigate the disadvantages of such tools, in order to comprehend what is there to be improved in the future.

Based on these findings, the current study is conducted on the basis of these expectations:

- Education is significantly associated with awareness and use of digitalized banking tools.
- Education is significantly associated with trust on online banking.
- Education and gender are significantly related.
- Age and awareness and use of digitalized banking tools have a significant relationship.
- Age and human contact are significantly associated.
- Age and type of service have a significant relationship.
- Age and trust on online banking are significantly related.
- Age and frequency of use have a significant relationship.
- Gender and awareness and use of digitalized banking tools are significantly associated.
- Gender and monthly income are significantly related.
- Monthly income is significantly associated with frequency of use.

- Place is significantly associated with type of service.
- Place and trust on online banking are significantly related.

The current study is a descriptive design, cross-sectional, within-participants, exploring how people of different traits and backgrounds respond and adapt to certain digital banking tools and services. The study examined the relationship of awareness and use of digital banking tools, frequency of usage, types of services through which the banking tools are used, trust on online banking, online banking disadvantages, points of sale disadvantages, human contact and frequency of banking services use with demographic variables such as age, gender, education, monthly income, work experience and geographical location.

#### **5 METHODOLOGY**

### **5.1 Participants**

Two-hundred and twenty-eight participants completed the questionnaire, originally and currently living in Kosovo. The participants are customers of banks in Kosovo, that have switched to digital technology based banking. There were no age criteria for the individuals participating; however, the sample is gender balanced. Forty-one percent of the respondents are from the age group of 25-30. On the other hand, the age groups of 18-24 and 31-49 share the percentage of 28. Important to mention, only six respondents, out of the total 228, are in the age group of 50-64. From our sample population, 117 were male and 111 female. Informed consent was read and agreed upon, by each individual, prior to participation.

#### 5.2 Materials and Procedure

Data was collected through a questionnaire, containing questions regarding awareness and use, frequency of usage, and types of services used through technological banking tools. Scores were conducted on a basis of 1-3 awareness/usage scale (use it, aware but don't use it, and unaware), as well as 1-5 frequency scale on the basis of one month (1-5 times a month, 5-10 times, 10-15 times, 15-25 times and over 25 times). In addition to this, the questionnaire also included demographic questions, such as age, gender, education level, monthly income, work experience and geographical location. The digital banking tools, which the questions are based upon, are ATM, internet banking, mobile banking, cards and points of sale. Types of services used in the questionnaire are customer bills, bank transfers, balance consultations/declarations, shopping, and ticket bookings, taking loans and cash deposit/withdrawal.

Considering that there is no available questionnaire ready to be sought and used, tackling the exact measures this thesis intended to tackle, the questionnaire was compiled and adapted from the one used in the Sudalaimuthu (2017) study. The researched measures

were chosen on the basis of previous literature, with education being one of the main factors influencing financial inclusion, together with financial income, age, gender and geographical location.

Moreover, the awareness and use of digitalized banking tools was also adopted as an investigative component of the research, as well as types of services used through digital banking tools. These aforementioned measures are detrimental for the research of people's attitudes and behaviours when engaging on banking services. In addition, advantaged and disadvantages of online banking and points of sale have been investigated, as measures to comprehend what attracts people to effectively use technology in banking, and what is considered as a mishap. Similarly, considering that the goal of banks through digitalized banking tools is limiting or emitting the visiting of points of sale by customers and increasing other alternative channels, the advantages and disadvantages of visiting points of sale have also been examined.

Correspondingly, the questionnaire included questions of trust on online banking, disadvantages of online banking and those of points of sale and importance of human contact. The questionnaire is written in Albanian, it being the participants' mother tongue, to ensure full understanding of the questions and what is required of them. The participants are sought throughout the internet and social networks, and in turn are asked whether they are customers of any bank in the country, in order to stay in line with our participants' selection criteria. The questionnaire was distributed using the Google Survey platform. After having requested the participants to take part in the research, they read an informed consent thoroughly and agreed upon, prior to filling in the questionnaire.

#### **5.3 Ethical Considerations**

The sample consists of individuals who have bank accounts at any certain bank in Kosovo. Considering that there is no age limit, the questionnaire is prepared in a simple manner, in order for seniors to be able to fill it in as well, and not have any trouble understanding the context. Participants were given instructions in advance, and presented with a consent form to read and agree upon, as a way of consenting to taking part in the study. However, they had the right to withdraw from the study, as well as ask for their data to be destroyed and not be taken for analysis.

#### 6 RESULTS

The current study examined the relationship of awareness and use of digital banking tools, frequency of usage, types of services through which the banking tools are used, trust on online banking, online banking disadvantages, points of sale disadvantages, human contact and frequency of banking services use. Additionally, by asking demographic questions such as age, gender, education, monthly income, work experience and geographical

location, we were able to conduct comparisons, and have a more thorough understanding as to which factors influence the financial inclusion of people in the banking system in Kosovo, after digital technology. Moreover, we examined how people of different backgrounds and traits respond and adapt to certain digital banking tools. The outcomes of the data analyses are presented below.

## **6.1 Descriptive Statistics**

Despite the fact that 10 banks operate in Kosovo, respondents in this research paper were customers from only eight of them. The majority of the respondents were customers from Raiffeisen Bank and TEB. Regarding place of residence, 87.7% of the respondents reside in the capital city of Kosovo - Prishtina, as depicted in Table 6. This proves to pose limitations to this research, as one of the attempts of the thesis was analyzing the relation of geographical location with the type of banking tool used, more specifically, whether the two factors are dependent on one another or exist independently.

Table 6. Frequency and Percentage of Participants' Place of Residence

		Frequency	Percent
Valid	Prishtine	200	88
	Drenas	1	.4
	Ferizaj	8	4
	Vushtrri	4	2
	Gjakove	3	1
	Podujeve	3	1
	Gjilan	5	2
	Mitrovice	1	.4
	Peje	1	.4
	Suhareke	1	.4
	Prizren	1	.4
	Total	228	100

The majority of the respondents (41%) are from the age group of 25-30. On the other hand, the age groups of 18-24 and 31-49 share the percentage of 28, as seen in Table 7. Important to mention, only six respondents, out of the total 228, are in the age group of 50-64. Therefore, the responses gathered from this age group, cannot be considered representative of the senior population.

Table 7. Frequency and Percentage of Participants Based on Age Groups

	Frequency	Percent
Valid 18-24	64	28
25-30	94	41
31-49	64	28
50-64	6	3
Total	228	100

Table 8. Frequency and Percentage of Participants Based on Gender

		Frequency	Percent
Valid	Men	117	51
	Women	111	49
	Total	228	100

As intended, there is a gender balance of our examined population, with 51% of the respondents being men, and 49% being women, see Table 8.

The outcomes show that 53% of the respondents have a Bachelor's degree, 35% have a Master's degree, 11% and 0.9% of the respondents have only a high school diploma and primary school diploma, respectively. As noticed, the majority of our sample population is well educated, with higher education degrees, which poses a limitation to our study.

Table 9. Frequency and Percentage of Participants' Education Level

		Frequency	Percent
Valid	Lower Secondary Education	2	.9
	Higher Secondary Education	25	11
	Bachelor	121	53
	Master	80	35
	Total	228	100

The respondents in this study had a monthly income relatively higher than expected, as 44% earn more than 800 euro/month, as seen in Table 10. In addition, 19.3% of the participants were in the group of earning 601-800 euro/month, whereas, the remaining percentage was shared by the remaining income groups. Considering that the majority of

our sample population possesses a Bachelor or Master's degree, it is expected that their monthly income is higher than the average wage in Kosovo, which by the latest statistical analysis in 2018 is 558 euro/month.

Table 10. Frequency and Percentage of Participants' Monthly Income

		Frequency	Percent
Valid	0-150	13	6
	151-300	23	9.9
	301-450	23	10
	451-600	26	11.3
	601-800	44	19.3
	800+	99	43.5
	Total	228	100

As seen in Table 11, and as expected, there is an income gap in the gender dimension. Out of the 99 respondents that earned a monthly income of 800 or more euros, 62 are men and only 37 are women.

Table 11. Frequency and Percentage of Need for Human Contact

		Frequency	Percent
Valid	Yes, completely	33	14.5
	Somewhat	96	42.1
	I am not sure	14	6.1
	Not at all	85	37.2
	Total	228	100

As seen in Table 11, the majority of our respondents believe human contact is somewhat important (42%), whereas 37% of our respondents believe human contact is not important at all. Taking into account the education level, age of our sample group, as well as their work experience, such a result is expected, taking that the majority of our sample group is of an adult age, and is familiarized with technology enough to trust technological services. Moreover, a high number of our sample group also possesses a higher education degree, meaning their literacy and financial literacy is of a higher level as well.

Table 12. Frequency and Percentage of Work Experience

		Frequency	Percent
Valid	No work experience	11	4.8
	1-4 years	92	40.3
	5-9 years	52	22.8
	10-19 years	56	24.6
	20+	17	7.5
	Total	228	100

Our sample population is a rather experienced group when considering work. The majority of our respondents are from a range of 1-4 years of experience (40%), with 23% of them having 5-9 years experience, and 25% of them with 10-19 years of work experience, as seen in Table 12. Important to emphasize that eleven (11) of our respondents have no work experience at all. Such result plays a role, taking that regular income is one of the fundamental factors affecting financial inclusion.

Table 13. Frequency and Percentage of Type of Service for which ATMs are Mostly Used

		Frequency	Percent
Valid	Bill Payments	26	11.4
	<b>Balance sheet consultations/</b>		
	Financial statements	37	16.2
	Bank Transfer	30	13.2
	Purchasing	14	6.1
	<b>Ticket Reservations</b>	3	1.3
	Bank Loans	3	1.3
	Deposit/ Cash withdrawal	109	47.8
	Not Applicable (NA)	6	2.6
	Total	228	100

One of the main purposes of the current study is also examining for what services are banking services are mostly used. Frequency analysis showed that ATMs are mostly used for deposits/cash withdrawals with 48% of the respondents using them for such. Second most frequently, people use ATMs for financial statements (37%); thirdly, for bank transfers (30%). Our sample group uses ATMs least for bank loans and ticket reservations, as noticed in Table 13, respectively.

Table 14. Frequency and Percentage of Type of Service for which Online Banking is Mostly Used

		Frequency	Percent
Valid	Bill Payments	53	23.2
	Balance sheet consultations/		
	Financial statements	27	11.8
	Bank Transfer	70	30.7
	Purchasing	34	14.9
	<b>Ticket Reservations</b>	17	7.5
	Bank Loans	1	0.4
	Deposit/ Cash withdrawal	5	2.2
	Not Applicable (NA)	21	9.2
	Total	228	100

Online Banking seems to mostly be used for bank transfers (31% of respondents), bill payments (23%), and purchasing (15%), as seen in Table 14. One aspect that has influenced the perception of points of sale, is fast bank transfers through online banking, lack of waiting and no working hours.

Table 15. Frequency and Percentage of Type of Service for which Cards are Mostly Used

		Frequency	Percent
Valid	Bill Payments	34	14.9
	Balance sheet consultations/		
	Financial statements	19	8.3
	Bank Transfer	25	11
	Purchasing	111	48.7
	<b>Ticket Reservations</b>	10	4.4
	Bank Loans	3	1.3
	Deposit/ Cash withdrawal	17	7.5
	Not Applicable (NA)	9	3.9
	Total	228	100

Cards are mainly used by our sample group for purchasing items (49%), then for bill payments (15%), and bank transfers (11%), as seen in Table 15.

Table 16. Frequency and Percentage of Types of Service for which Points of Sale are Mostly Used

		Frequency	Percent
Valid	Bill Payments	42	18.4
	Balance sheet consultations/		
	Financial statements	61	26.8
	Bank Transfer	29	12.7
	Purchasing	8	3.5
	<b>Ticket Reservations</b>	8	3.5
	Bank Loans	40	17.5
	Deposit/ Cash withdrawal	12	5.3
	Not Applicable (NA)	28	12.3
	Total	228	100

Points of sale are mostly used by our respondents for financial statements with 27%, then for bank loans with 17% of participants answering as such. Considering that financial statements nowadays can also be downloaded through online banking, it could be assumed that people using points of sale for financial statements, are not yet users of online banking, or do not trust it enough to use it for balance sheet consultations and financial statements, and prefer human contact.

Table 17. Frequency and Percentage of Types of Service for which Mobile Banking is Mostly Used

		Frequency	Percent
Valid	Bill Payments	46	20.2
	Balance sheet consultations/		
	Financial statements	53	23.2
	Bank Transfer	26	11.4
	Purchasing	15	6.6
	<b>Ticket Reservations</b>	5	2.2
	Bank Loans	2	0.9
	Deposit/ Cash withdrawal	6	2.6
	Not Applicable (NA)	75	32.9
	Total	228	100

Mobile banking, generally, is the least used digitalized banking tool to carry out services by our sample population; hence, 33% responded with the NA answer choice. However,

the ones using it, mainly use it to conduct balance sheet consultations and financial statements (53%), and bill payments (20%).

Table 18. Frequency and percentage of Trust on Online Banking

		Frequency	Percent
Valid	Yes Absolutely	127	55.7
	Somewhat	87	38.2
	I am not sure	12	5.3
	Not at all	2	0.9
	Total	228	100

Results show that the majority of our sample population trust online banking absolutely (58% of respondents), and 87% of them somewhat trust it, see Table 18. Considering that internet is a crucial part of most people's daily lives, trust in internet services is gradually developing, and same goes for online banking.

Such an issue is very important to shed light upon, since all factors influencing financial trust, financial literacy and financial inclusion in turn are important to be identified and considered in order to find new approaches to financially include more customers.

Table 19. Frequency and Percentage of Disadvantages of Using Online Banking

		Frequency	Percent
Valid	Overall difficulty of using	24	10.5
	banking system online	27	10.5
	Lack of assistance	34	14.9
	Security concerns	75	32.9
	Limited Service	44	19.3
	Lack of human contact	8	3.5
	Dependence on online service	6	2.6
	Unreliability	3	1.3
	No disadvantages	34	14.9
	Total	228	100

Another important crucial aim of the current study is identifying disadvantages of online banking perceived by our population. As seen in Table 19, among eight most commonly referred disadvantages, our respondents are mainly concerned with security issues (33%) and limited service (19%). Surprisingly enough, human contact seems to not be an

important disadvantage for our population, and neither does tendencies of unreliability. Thirty-four (34) of our respondents believe online banking has no disadvantages.

Table 20. Frequency and Percentage of Disadvantages of Using Points of Sale

		Frequency	Percent
Valid	Waiting	127	55.7
	Distance (proximity problem)	47	20.6
	Opening hours	29	12.7
	<b>Quality of Services</b>	19	8.3
	No disadvantages	6	2.6
	Total	228	100

Apart from understanding the disadvantages perceived by people regarding online banking, this study also analyzed the perceived disadvantages of points of sale as a banking tool. From four most commonly perceived disadvantages, the most crucial one, as per our respondents, is waiting, with a second crucial one being distance (proximity problem). Six of our respondents believe points of sale have no disadvantages, as seen in Table 20.

Table 21. Distribution of Men and Women on the Basis of Monthly Income

		Monthly Income						
Gender		0-150	151-300	301-450	451-600	601-800	801+	Total
Man	Count	5	11	12	11	16	62	117
	Expected Count	7	11	12	13	23	51	117
Woma	Count	9	10	11	15	29	37	111
n	Expected Count	7	10	11	13	22	48	111
Total	Count	14	21	23	26	45	99	228
	Expected Count	14	21	23	26	45	99	228

Respondents of the study are mainly of a higher education level. Out of the 80 respondents that have a Master's degree, 46 of them are women; see Table 22 for more details. Whereas out of the 121 that possess a Bachelor's degree, 65 are men.

Table 22. Distribution of Men and Women on the Basis of Level of Education.

		Lower	Higher			
		Secondary	Secondary			
Gender		Education	Education	Bachelor	Master	Total
Men	Count	0	18	65	34	117
	Expected Count	1	13	62	41	117
Women	Count	2	7	56	46	111
	Expected Count	1	12	58	38	111
Total	Count	2	25	121	80	228
	Expected Count	2	25	121	80	228

## **6.2 Test of Independence**

A chi-square test of independence was performed to investigate the relation between variables influencing financial inclusion, such as education, gender, age, monthly income, and geographical location. The average variance of a 0.5 is used as evidence of convergent validity (Fornell & Larcker, 1981).

### 6.2.1 Education

Education, being one of the most important factors in our study, has shown to be significantly related to only some of the factors of the awareness and use of banking tools. Education showed a significant relationship with the awareness and use of ATM. Meaning that, depending on the level of education, people tend to be aware or not of the advantages of ATM and its use. Such a relationship showed a significant test of independence with  $X^2$  (6, N = 228) = 5.34, p=.50. On the contrary, form our data sample, education level seems to not have a relation with awareness and use of online banking,  $X^2$  (6, N = 228) = 5.83, p=.44, seeing the relationship is insignificant. Similarly, education demonstrates an insignificant relationship with awareness and use of mobile banking and point of sale, with  $X^2$  (6, N = 228) = 7.32, p=.29, and  $X^2$  (6, N = 228) = 9.25, p=.16.

Education also showed an insignificant relationship with gender, showing that our sample population's education level did not differ in relation to their gender. The results from the test of independence show the relationship,  $X^2$  (3, N = 228) = 9.15, p=.02. Regardless of the importance of Education as a factor in our study, its relationship with a number of our investigating factors has shown to be insignificant, for a reason or another yet to be explored. Yet again, no relation has been shown between education and trust on online banking as well as human contact, with results as  $X^2$  (9, N = 228) = 915.42, p=.08;  $X^2$  (12, N = 228) = 20.92, p=.051.

### **6.2.2** Gender

Gender as a factor has shown to be unrelated to most of the factors of the awareness and use of banking tools variable, with ATM which demonstrated a relationship of  $X^2$  (4, N = 228) = 7.61, p=.107; with mobile banking  $X^2$  (4, N = 228) = 5.11, p=.27, and with point of sale  $X^2$  (4, N = 228) = 4.92, p=.29. The only banking tool that gender has demonstrated a strong relation with is online banking, with  $X^2$  (4, N = 228) = .81, p=.93.

A chi-square test of independence showed that there was no significant association between gender and type of services used,  $X^2$  (3, N = 228) = 2.74, p=.43. Gender has also not shown to be related to the monthly income of our sample population,  $X^2$  (5, N = 228) = 11.76, p=.03. However, when analyzing the association of gender with work experience, the test of independence showed significance with  $X^2$  (5, N = 228) = 3.55, p=.61. Gender has demonstrated to have no significant relationship with any of the factors of frequency and use, with ATM the analysis has shown  $X^2$  (4, N = 228) = 5.66, p=.22; with online banking  $X^2$  (4, N = 228) = 7.88, p=.09; Card  $X^2$  (4, N = 228) = 4.31, p=.36; point of sale  $X^2$  (4, N = 228) = 6.75, p=.14; mobile banking  $X^2$  (5, N = 228) = 7.00, p=.22. These constructs seem to exist independent of one another, meaning that the frequency and use of digital banking tools does not differentiate depending on the gender of the person.

## **6.2.3** Age

The chi-square test of independence showed that there was a significant association between age and awareness and use of ATM,  $X^2$  (6, N = 228) = 15.65, p = .01. Such a relationship is important to our study, taking into account that it shows that the awareness and use of ATM works as dependent on the age of the person, supporting our expectations. Age has shown a significant association with the other investigated banking tool, online banking  $X^2$  (6, N = 228) = 17.34, p = .00; and insignificant relationship with mobile banking  $X^2$  (6, N = 228) = 10.64, p = .10; and with point of sale  $X^2$  (6, N = 228) = 10.01, p = .12.

Age as a factor has shown to have no effect on the type of service used, the test of independence has shown an insignificant relationship  $X^2$  (9, N = 228) = 14.87, p=.09. Among the frequency of use of the investigated banking tools, online and mobile banking show to be dependent upon the age of the person, with online banking the relationship has shown  $X^2$  (12, N = 228) = 28.62, p=.00; and mobile banking  $X^2$  (15, N = 228) = 42.53, p=.00. As with the relationship of age with frequency of use of ATM, the test shows insignificance  $X^2$  (12, N = 228) = 20.48, p=.058; similarly with frequency of use of card  $X^2$  (12, N = 228) = 8.94, p=.70; and frequency of use of point of sale  $X^2$  (12, N = 228) = 14.44, p=.27.

Important to emphasize is that the relationship between age and human contact shows to be

significant,  $X^2$  (12, N = 228) = 51.38, p = .00; meaning that, depending on the age of the person, there is tendency to prefer to carry out services through human contact rather than remotely via digital tools. Similarly important finding is that the results show that whether a person trusts online banking or not is dependent on the age of that individual, with a significant relationship of  $X^2$  (9, N = 228) = 23.31, p=.00.

## **6.2.4 Monthly Income**

Frequency of use of most of the banking tools shows to be dependent on monthly income. The frequency and use of ATM has shown to be significantly related to monthly income,  $X^2$  (20, N = 228) = 43.73, p=.00; online banking  $X^2$  (20, N = 228) = 45.95, p=.00; and card  $X^2$  (20, N = 228) = 46.90, p=.00. Nevertheless, the frequency and use of point of sale and mobile banking is demonstrated to differentiate regardless of the level of monthly income of the individual, with  $X^2$  (20, N = 228) = 17.80, p=.60; and  $X^2$  (25, N = 228) = 31.11, p=.18.

Reason of use of ATM has shown to be an independent factor to monthly income, demonstrating an insignificant relationship  $X^2$  (35, N = 228) = 34.47, p=.49. On the other hand, reason of use of online banking, card, point of sale and mobile banking has shown to be dependent on the level of our sample population's monthly income. The relationships have reached significance, and the tests of independence show:

Monthly income and reason of use of online banking  $X^2$  (35, N = 228) = 74.38, p=.00. Monthly income and reason of use of card  $X^2$  (35, N = 228) = 52.01, p=.03. Monthly income and reason of use of point of sale  $X^2$  (35, N = 228) = 64.22, p=.00. Monthly income and reason of use of mobile banking  $X^2$  (35, N = 228) = 62.08, p=.00.

## **6.2.5** Geographical Location

The type of service used by the researched individuals has shown to be independent on the geographical location, contrary to our expectations. The outcomes show this relationship to be insignificant,  $X^2$  (30, N = 228) = 29.79, p = .47. However, trust on online banking has demonstrated to have a significant relationship with the geographical location or place of residence of the individual. The relationship shows significance of p=.00,  $X^2$  (30, N = 228) = 69.52.

## **7 DISCUSSION**

The current study was conducted using a questionnaire measuring factors influencing financial inclusion through the use of digitalized banking tools, such as ATM, online banking, mobile banking, card, and points of sale in Kosovo. Contrary to the presented previous literature, and this study's expectations, awareness and use of examined banking

tools (ATM, online banking, mobile banking and points of sale) was found to be an independent factor from education; meaning that, from our sample population, there was no evident relationship between the two measures.

However, the outcomes show that on a Bachelor's level of education the awareness and use of digitalized banking tools was highest, whereas lowest awareness and use of banking tools was shown on people with lower and higher secondary education, as expected. Such results indicate that people could be more financially included if they are educationally more experienced and possess higher level of understanding in relation to non-traditional banking systems.

Education level seems to have a role in relation to trust on online banking, especially by graduate people, being the ones who trust online banking mostly. Human contact seems to be somewhat important to 96 individuals from our population, whereas 85 of them believe human contact is not important at all when engaging in financial services. On the other hand, 33 respondents believe human contact is important when making financial transactions. Based on the study's outcomes, human contact and education are shown to be independent from one another. Meaning that, the attitude towards human contact when engaging in financial services, is not related to the education level of the individual, but exists regardless of it.

Additionally, education seems to have a relation with the gender of our population, however weak. From our sample population, the majority of graduate people are male, whereas the majority of postgraduates are female. On the other hand, the awareness and use of digitalized banking tools seems to be independent of an individual's gender. Gender also shows to be independent of types of services used by our participants; however, women and men differentiate in terms of monthly income, with 62 men earning more than 800 euros/month, and only 37 women earning the same amount. Whereas, nine women earn nothing to 150 euros/month, and from men, five do so.

On another point, gender and frequency of use of banking tools show to not be significantly related to one another. People aged 25-30 showed the highest rates of awareness and use of digitalized banking tools, as based on previous literature, it being the most active working age in relation to financial inclusion (Atkinson & Messy, 2012).

Additionally, among all banking tools, online banking is the one mostly used by the aforementioned age group, as expected. Mobile banking showed the highest rates of unawareness and inadaptability from all age groups. However, since mobile banking is an essential part of the movement through the digital era, banks should analyze the factors that make customers in Kosovo reluctant to using it.

Recommendations are that research should focus on giving insights on this issue and provide satisfactory information that will further develop the use of mobile banking in Kosovo by presenting the benefits of this electronic banking service. The purpose of this

paper was to provide extensive information and priority to the challenges faced by banks and customers in the digital era. Banks' main task nowadays is presenting products and services through the use of technologies that include ATMs, POS, online banking, mobile banking, and credit cards. Customers' judgements evolve around the capabilities that these products achieve on helping them solve daily issues. Most important factors in this matter are security, transaction speed, friendliness, ease, trust and privacy. These factors make or break a relationship between the bank and its customers.

The accelerated development of information technology has had a huge impact in the banking industry, and mobile banking is a result of it. Although research finds mobile banking as very useful tool for facilitating transactions, but customers seem not well aware of its benefits and might have exaggerated perception of risks involved with its use. Thus, recommendations are to educate the customers on the benefits of this tool since although most of respondents in this research were of high income and high education, its use was still little.

Moreover, in relation to mobile banking, the age of our sample population showed to be independent. Such an outcome could best be explained by the fact that the population in Kosovo is not yet familiarized with the concept and/or is familiarized, but does not prefer it in comparison to the other digitalized banking tools. Points of sale showed to be visited at the highest by adults aged 18-30, in comparison to the older population. Important to mention, waiting was found to be the most disadvantageous aspect of visiting a point of sale, with distance being the second drawback. Unfortunately, our sample size consists only as of six people in the age group 50-64; therefore, the results regarding this sample cannot be considered as a representation of a wider population, however important.

The outcomes of the study show that the majority of people from our investigated population reside in Prishtina, with 200 out of 228 in total. Such a result poses a bias of the study, taking into account that one of the aims of the study is also examining the relationship of beliefs and uses of people from various geographical locations. Consequently, when presenting the outcomes of the geographical location, the distribution of the population plays a big role in their interpretation.

Based on previous research conducted in under-developed countries, it was expected that the type of banking tool used to carry out a financial transaction would be dependent on geographical location-city of residence of the person (Leyshon., French, & Signoretta, 2008; Salemink, Strijker & Bosworth, 2017). This assumption, due to the distance factor to a point of sale in rural areas, the easier access to education and financial literacy in bigger and more developed cities, higher possibilities for a job in more developed cities, leads therefore to higher opportunities to be financially included. The results of the study show online banking as the most used tool and respondents from Prishtina are in majority as users.

The second most used banking tool is ATM. From our outcomes, geographical location shows to be unrelated to the type of service mostly used by our population. The frequency of use of ATM also seems to be unrelated to geographical location. However, the frequency of use of online banking shows to significantly be related to geographical location. Such a finding suggests that online banking still persists to be the mostly used digitalized banking tool also in relation to the geographical factor. The results show a medium strong link of the two variables, with frequency of use of online banking being dependent on the city where the participants live. Geographical location, however, was shown to be independent of how frequently the respondents use cards. Mobile banking seems to be the least used and preferred banking tool. Such an outcome could be because of lack of financial literacy in the country, lack of adaptation to this tool, and the lack of banks' promotion of telephone banking in relation to the other tools.

Types of services carried out through digitalized banking tools were also examined in this study. Results show ATMs to be mostly used for cash deposits, cash withdrawals, balance sheet consultations and financial statements, bill payments, and for purchasing. The investigated population use ATMs least for bank loans and ticket reservations, respectively. Online banking was found to be mostly used for carrying out bank transfers and bill payments. Such a result is expected taking that e-banking offers fast transfers, lack of waiting and flexibility in terms of its working hours. Whereas, respondents use online banking least for bank loans and deposits or cash withdrawals. Cards, as expected, are mostly used for purchasing, bill payments, and bank transfers; and least for bank loans, ticket reservations, and financial statements.

Lastly, points of sale are mainly used for balance sheet consultations and financial statements, bill payments, and bank loans. On the other hand, points of sale are least used purchasing, ticket reservations, and deposit and cash withdrawals. Even though results have shown that mobile banking is the banking tool least used from our investigated population in Kosovo, a number of people still use it to carry out such services as balance sheet consultations and financial statements, bill payments, and bank transfers. Whereas, it is least used for bank loans and reserving tickets.

An important factor influencing financial inclusion is also trust in online banking. Out of the whole examined population, 55% trust online banking completely, 38% trust it somewhat, whereas only 2 people out of 228 dont trust online banking at all. These results show to be positive in relation to the approach towards digitalized banking tools. This outcome supports the finding of online banking being the mostly used tool by our population (Sadiku, 2019).

Nevertheless, when asked, what the disadvantages of online banking are, majority of the respondents believe safety to be the main problematic issue, with limited service being the

second problem, and lack of customer help the third one. As expected, age shows to be one of the most important factors influencing financial inclusion in Kosovo. Age, and awareness and use of digitalized banking tools show to be two significantly, associated factors. Awareness and use of ATMs and online banking are dependent on the age group of the population, whereas points of sale and mobile banking are less used, regardless of the age group.

Frequency of use of online, and mobile banking as present in the results, is dependent on the age group of the population, with both relationships being moderate in strength. Meaning that, in some cases depending on the age group of the person, one engages in financial transactions through the use of online or mobile banking. As expected, age seems to play a role in the attitude towards the need for human contact when using financial services. People aged 18-24 and 31-49 believe human contact to be somewhat important for financial inclusion; the age group of 25-30 mostly believe that human contact is not at all necessary. Once again, the age group of 50-64 and more cannot be taken into account when analyzing results due to the low number of representatives from the whole population examined in the study, therefore, their results are not interpreted. The people's trust in online banking shows to be related to the age group. From all age groups, the individuals trust online banking mostly either absolutely or somewhat.

As explained above, there were variations in our results when analyzing our population's monthly income. People's monthly earning is seen to be related to the gender of the person, most likely due to societal factors influencing a woman's possibility to work and in turn be responsible and handle the finances (Demirguc-Kunt & Klapper, 2012; Osabuohien & Karakara, 2018). Moreover, the variations of monthly income in our population show to be related to the frequency of use of online banking. Based on previous research, such a result is expected, taking into account that higher cash flow influences the frequency of use of banking tools (Demirguc-Kunt & Klapper, 2012). These elements are also related to the standard of life, with higher income, people are more prone to access higher education, get a job, and in turn result in being more financially included.

An important aspect derived from this study regarding financial inclusion in Kosovo after digitalization of the bank sector, is that a considerable number of people in Kosovo are financially included and do use most of the digitalized banking tools; some more than others. However, a number of explored factors, such as education, monthly income, age, proximity issue (distance), working hours, security aspect, affects the extent to which these banking tools are used, and so on. Moreover, these factors, in turn, influence one's perspective of the banking system, their trust in banking services and lastly, their tendency to use new more effective measures and adapt them in his/her life. By understanding Kosovo's population perspectives and characteristics of their behaviour to adapt to changes in the banking sector, banks will be able to improve their approach towards their customers and enhance financial inclusion.

One aspect demonstrated as evident and crucial is financial education and literacy. A high number of people still show resistance to changes in their financial lives, solely due to the unknowing aspects of the service they are interested in using, and due to not being able to understand it completely. As such, banks in Kosovo are recommended to invest more in financial education of their customers, initiate campaigns for financial education/literacy, be more transparent with their customers in terms of the whole process of the service one chooses to carry out, and adapt the campaigns to the level of education of their customers, as well as the population in Kosovo. A factor known to be influencing resistance to change is the unknown. As according to Edem, Mbaba, Udosen and Isioma (2011), informed individuals can make informed choices, and when the individuals are presented with relevant financial information, this sets the ground for resourceful financial market system.

Important to note this study is biased in terms of some factors, and did not manage to analyze all explored aspects as intended; for instance, due to the fact that the questionnaire was distributed online, this study is biased in terms of the impossibility to control for external factors influencing the individuals' answers in that point in time.

In addition, factors that might have influenced the outcomes of this thesis could also be external noise, time/period of the day when the questionnaire was completed, whether it was completed at work or in a café (location) with many distracters or at home, whether in the morning with a clear mind and energy boost, or in the evening feeling tired and lacking attention. Such factors influence the cognition of the individual and in turn their performance, perspective, approach and perception.

Research shows that during the morning hours, people have higher levels of energy arousal influencing the person's mood; however, during evening hours people show higher accuracy with faster responses and better selective attention (Jankowski & Zajenkowski, 2016).

However, these results are not general, but important to consider for future research, in order to try to manage them in controlled environments; therefore, conducting the research collection in physicality with extra measures added. All the aforementioned possible influencing factors could be moderators in this study; thus, this leaves space for improvement in future research.

## **CONCLUSION**

The results disclosed above show a rather mixed situation in relation to financial inclusion in Kosovo. The aims of the study have been achieved on some of the expectations. This research has shed light on the topic of financial inclusion through awareness and use of digitalized banking tools, on factors influencing it in the population in Kosovo, on types of services mostly used by this population, and what digitalized banking tools are mostly preferred and used. Online banking was shown to be the mostly used banking tool,

presenting an insight that the examined population in Kosovo is somewhat financially included through some of the digital banking tools. Mobile banking shows to be the least preferred tool, due to unawareness of it and its use and/or the lack of familiarization with it.

Taking into account that the banking sector in Kosovo has only recently adapted various digitalized banking tools, the situation seems to be satisfactory. The majority of the examined people trust online banking, as an important factor influencing financial inclusion. This factor could have influenced the attitude and behaviour of the population towards awareness and adaptation of digital banking tools, as well as their efforts to learn more about it and be financially more literate and included. Taking that the majority of the participants possess a graduate or postgraduate degree, the effect of education has not been realistically presented in this research. This leaves space for future research to manage and control the equal distribution of individuals in educational levels, in order to test for significant results with higher validity.

Initially, important to point out, this study is biased in terms of the age and geographical distribution of the examined population. Forty-one percent of the individuals are from the age group of 25-30, and 28% from 18-24 and 31-49 years. The senior individuals, age group of 50-64 and more are a minority with only 3%; therefore, all analysis and responses from this age group, cannot be taken into account when interpreting the results.

In that way, future research should continually monitor the population during data collection, in order to control for such an issue, as well as change the approach to the dissemination of the questionnaire. One technique could be distributing the questionnaires physically in person and in a controlled environment. This technique could also serve as a control for other factors that might have affected the population's responses leading to insignificant results, such as external disturbances (noise, light/shadow and/or time of the day), lack of attention, loss of interest throughout the completion of the questionnaire, etc. Controlling for these factors might affect the outcomes of future research, with more significant relations between the examined variables, and a more realistic representation of financial inclusion in Kosovo.

Moreover, taking into account that questionnaires are not the most valid and reliable tool when it comes to interpreting results of attitudes, the participants might have also not responded realistically when answering the questions. In addition, there was a total of 228 respondents in this study, leaving room for improvement for future research to increase the number of participants, especially by also including a higher number of elders to the examined population, in order to reach higher validity and significant results of data.

Regardless of the fact that we now live in the digital era and its effects are inevitable in all aspects of life, this term tends to be neglected in the scholarly literature, especially in

Kosovo. This could be a result of seeing the digitalization as a management practice, or as previous IT initiatives for change. But evidence shows that researchers should focus on the effect that digitalization has in all aspects on all industries in every country. In this paper we conclude that managers should adapt their business models to the digital reality and give time for their customer's education in this matter.

Moreover, as the main limitation of this paper is the limited number of participants in the survey, recommendations are that a bigger sample would shed light into the discussed matter and contribute to the knowledge of the banking sector and therefore bring about the new equilibrium that is needed between what banks offer and what customers need in the digital age.

This study offers some benefits to bank managers, as it is evident that customers still worry about trust, third-party concerns, and security. In cases when these worries are not softened by banks, customers may retaliate by not using these services. Hence, communication is a key factor to solving these issues. Banks should work together with their customers on building confidence about the technologies they use for online services. This could be done by spreading brochures, newsletters and banks website.

There are still customers that are reluctant at adopting these services, especially mobile banking, so strategic marketing can be used to capture this segment. This study shows that there are still people that see the difficulty of using these services. Moreover, the fact that there's absence of physical contact with someone responsible in their banking process is seen as a major issue for some.

Taking into account that today's electronic banking system has become one of the main technology driven revolution in carrying out financial transactions, banks have to focus their attention on customers' acceptance and validation of the technological banking tools. Customers have to be validated to accept the electronic banking system as useful and easy to use (Adesina & Ayo, 2010). By the same token, the acceptance of digitalized banking tools by customers is closely related to the convenience aspect of the service, ease of use and its compatibility with their lifestyle (Aliyu & Tasmin, 2012).

Technology today plays an important role in banks' risk management, taking into account the positive effect it has had on the financial industry in Kosovo. However, regardless of the positive effects technological developments have on the banking industry, the nature of the banking business is threatened by various risks. According to Sahiti, Sahiti and Aliu (2017), one of the main causes of risks for the digital banking, is the complication of financial products. Apart from it, banks also face various risks on the corporate level, such as operational, legal, credit, market risks and liquidity. Such issues should be converted and dealt with as a composite measure, in order to apply adequate risk management strategies, and in turn expand to developed financial systems and a mature economy.

This study concludes that a number of customers are accepting digitalized banking due to many favourable factors. Nevertheless, a certain number of our respondents also tend to prefer the traditional way of banking, with human contact involved as it is seen as more valid and reliable.

This thesis has shown a number of limitations, beginning with the choice of distribution of questionnaire, misbalance of the age and education factors among our sample population, as well as a misbalance of the geographical aspect of our population. Moreover, future research should take into account a bigger sample size in order to investigate more valid responses, taking into account that questionnaires tend to be less reliable in terms of investigative measures used. Therefore, future research should consist of a more representative sample of the population, in order to understand thoroughly the attitudes and behaviours towards digital banking of the target population, and in turn, modify and influence the financial inclusion.

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### **Appendix A: Abstract in Slovenian Language**

Ta magistrska naloga je poskus da osvetli stopnjo finančne vključenosti z uporabo različnih bančnih orodij, ki jih digitalna revolucija v bančni industriji. zagotavlja. Ker je učinek digitalizacije spremenil vsako podjetje v vsaki panogi, se je učinek tega občutil tudi v bančnem sektorju, pri čemer so stranke bolj poznavale storitve, ki jih ponuja tehnologija. Zato je namen te magistrske naloge da raziskal dejavnike, ki vplivajo na ozaveščenost in prilagodljivost orodij za digitalno bančništvo in posledično povečajo finančno vključenost. Poleg tega ta raziskava raziskuje tudi vrste digitalnih bančnih orodij, ki se večinoma uporabljajo na Kosovu, in za kakšne storitve.

V tem prispevku je izraz digitalizacija raziskan in opredeljen kot struktura, ki povezuje vsa medijska omrežja in ustvarja celostno infrastrukturo za komunikacijo med kanali. Nato teza nadaljuje z analizo finančnega sektorja Kosova in z analizo obstoječe literature in ugotovi, da je država le v kratkem času prešla iz hitre preobrazbe iz osnovnih storitev v nekoliko napredne tehnološke storitve.

Zbiranje podatkov je potekalo z uporabo vprašalnika, ki vključuje demografska vprašanja, kot so starost, spol, stopnja izobrazbe, geografska lega, mesečni dohodek in delovne izkušnje. Orodja za digitalno bančništvo, na katerih temeljijo vprašanja, so bankomati, internetno bančništvo, mobilno bančništvo, kartice in prodajna mesta. Vprašalnik vključuje vprašanja o ozaveščenosti in prilagodljivosti digitaliziranih bančnih orodij, vrstah uporabljenih storitev, katera digitalizirana bančna orodja so večinoma prednostna in se uporabljajo ter pogostosti uporabe teh kanalov. Vprašalnik je izpolnilo dvesto osemindvajset udeležencev, kupcev osmih od desetih bank, ki poslujejo v državi, prvotno in trenutno živijo na Kosovu. V naši vzorčni populaciji je ravnovesje med spoloma 51% moških in 49% žensk. Presenetljivo je, da ima večina anketirancev vsaj diplomo in ima mesečni dohodek višji od povprečne plače na Kosovu.

Kot rezultat te študije je bilo ugotovljeno, da je finančna vključenost z uporabo digitaliziranih bančnih orodij na Kosovu mešana. Za nekatere od postavljenih hipotez je bilo ugotovljeno, da so pomembne. Izkazalo se je, da je spletno bančništvo orodje, ki ga večinoma uporabljajo naše stranke, predstavilo vpogled, da je preiskovana populacija na Kosovu nekoliko finančno vključena s pomočjo nekaterih orodij za digitalno bančništvo. Zdi se, da je mobilno bančništvo najmanj zaželeno orodje, saj se tega ne zavedajo in uporabljajo in / ali niso seznanjeni z njim. Glavne pomanjkljivosti pri uporabi spletnega bančništva so bile pomanjkanje podpore za človeške stike in storitve, medtem ko na prodajnih mestih ljudje mislijo predvsem na delovni čas in razdaljo.

Glede na to, da je večina naših anketirancev imel sedež v Prištini, študija ni mogla opraviti analize na podlagi geografske lege. Poleg tega, ker je izobrazba eden od glavnih dejavnikov, ki vplivajo na finančno vključenost, in večina naših anketirancev ima vsaj diplomo, ni vzorec realnega pregleda dejanskega stanja v zvezi s tem. Prihodnje raziskave bi morale več pozornosti nameniti porazdelitvi teh demografskih dejavnikov med vzorčno populacijo, da ne bi imeli pristranskih rezultatov in predstavljali boli realne rezultate.

## **Appendix B: Short Summary**

This master thesis is an attempt to shed light on the level of financial inclusion through the use of various banking tools provided by the digital revolution in the banking industry. As the effect of digitalization has revolutionized every business in every industry, the effect of it has been felt also in the banking sector, with customers becoming more knowledgeable about the services provided by technology. However, there is still a gap between technological advancements of the banking sector, and customers' financial inclusion. Banks need to progress and provide novel services that encapsulate more user-friendly and efficient technological channels, by also cutting the costs of their operations. Therefore, the purpose of this master's thesis is to explore the factors that influence the awareness and adaptability of digital banking tools, and in turn increase financial inclusion. In addition, this research also explores types of digital banking tools mostly being used in Kosovo, and for what services specifically.

In this paper the term digitalization has been explored and defined as the structure that links all media networks, and creates a holistic infrastructure for communication between channels. The thesis then continues to analyse the financial sector of Kosovo and through the analysis of the existing literature, it finds out that the country has gone through fast transformation from basic services to somewhat advanced technology based services, only in a short period of time. Therefore, a new balance needs to be established between the banking sector and the customers.

Data collection was carried out through the use of a questionnaire including demographic questions, such as age, gender, education level, geographical location, monthly income and work experience. The digital banking tools, which the questions are based upon, are ATM, internet banking, mobile banking, cards and points of sale. The questionnaire includes questions regarding the awareness and adaptability of digitalized banking tools, types of services used, what digitalized banking tools are mostly preferred and used, as well as the frequency of use of these channels. Moreover, the study analysed the disadvantages of use of online banking and points of sale. The questionnaire was completed by two-hundred and twenty-eight participants, customers of eight out of ten banks operating in the country, originally and currently living in Kosovo. There is a gender balance in our sample population, with 51% being men, and 49% women. Surprisingly, the majority of the respondents possess at least a Bachelor's degree, and have a monthly income higher than the average wage in Kosovo.

As an outcome, this study found that there is a mixed situation in regards to financial inclusion through the use of digitalized banking tools in Kosovo. Only some of the posed hypotheses were found to be significant. Online banking was shown to be the tool mostly used by our customers, presenting an insight that the examined population in Kosovo is somewhat financially included through some of the digital banking tools. Mobile banking seemed to be the least preferred tool, due to unawareness of it and its use and/or the lack of familiarization with it. Main disadvantages for the use of online banking were found to be

lack of human contact and service support, whereas regarding points of sale, people mainly mind the working hours, and distance.

Considering that the majority of our respondents were based in Prishtina, the study could not carry out analysis on the basis of geographical location. Moreover, as education is one of the main factors influencing financial inclusion, and the majority of our respondents possess at least a Bachelor's degree, the sample does not represent a realistic overview of the actual situation on this regard. Future research should pay more attention on the distribution of these demographical factors among the sample population, in order to not have biased results and represent more realistic outcomes.