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FACTORS INFLUENCING USAGE OF MOBILE BANKING IN THE REPUBLIC OF KOSOVO

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Abstract

Human civilisation has entered a new stage labelled as Information Society (IS) which implies intensive use of information in all activities, exerting a major impact on economic and social aspects of human existence. IS permits access to vast amounts of information for its members, enabling a new working and knowledge paradigm! It also creates a positive environment for economic globalisation and the increase of social cohesion. From the perspective of financial services, IS has helped electronic banking, which underlies the determinants of the banking business model, with the special aspect of mobile commerce. Mobile banking is a subset of electronic banking. The aim of this research is to evaluate the state at which mobile banking is being utilised in the Republic of Kosovo, and to what extent banks are taking advantage of this aspect of banking business. A survey was conducted and results discussed as part of this research.

Keywords: Banking, Electronic Banking, Mobile Banking, Banking in Kosovo, Security in banking

1. INTRODUCTION

In this study, a Conceptual Theoretical Research Proposal has been undertaken and discussed to analyse factors influencing usage of Mobile Banking in the Republic of Kosovo.

The last time that technology had a major impact in helping banks service their customers was with the introduction of the Internet banking. Internet Banking helped give the customer's anytime access to their banks. However, the biggest limitation of Internet banking is the requirement of a personal computer with an Internet connection, which was definitely a big barrier for the mobility. Mobile banking addresses this fundamental limitation of Internet Banking, as it reduces the customer requirement to just a mobile phone, or tablet devices. Mobile Banking advantage over Internet Banking is that it enables banking from anywhere. Customers do not need access to a computer terminal to access their bank accounts, they can now do so on the go.

Taking into consideration that the global economy and banking sector is becoming more and more competitive, commercial banks are investing in the strategy on expanding banking services through mobile banking. As Information Technology (IT) unfolds in the 21st century throughout the world, it is transforming itself into global investments with many traditional banks adding the magical "m" at the front of their names.

The expansion of the use of Information Technology affects the way people learn and work. Therefore, it is changing the user behaviour all over the world. Kosovo too, is growing and becoming a modern and prosperous country with many possibilities for its citizens. Of course, a lot of work has to be done, but considering the enthusiasm and optimism that the Kosovars display continuously (as supported by a number of happiness surveys), a good planned business strategy can redirect banking sector in making new innovations in the field of mobile banking.

Recent years have shown that the expansion of the mobile technology has followed initially, and later assisted the expansion of internet to the most remote places on earth. As such, the rapid growth of mobile technology throughout the world is a phenomenon that has been particularly remarkable. Along with other business aspects, the traditional method of banking is gradually paving the way for a modern method of banking in the 21st century. The traditional banking is the most common method of carrying out bank transactions in different countries, both developed and undeveloped (Luaran & Lin 2005). This definition of Luaran and Lin, however, is more applicable to 'brick and mortar banking'. Now people are becoming increasingly familiar with the Internet and mobile banking systems. Mobile technology, viewed as a payment or banking channel, has the potential to open up possibilities for financial institutions to deliver a great diversity of services at low cost to a large clientele of society and people living in remote areas.

The ever-increasing usage of smartphones has increased demand for mobile banking services. Commercial banks, microfinance institutions, software houses, and service providers responded to this demand by offering innovative services together with new sets of products and applications designed to extend their client reach (including to unbanked populations). This resulted in improved customer retention, enhanced operational efficiency, increased market share, and new employment opportunities (Shaikh, 2013).

The adoption of mobile phones and technologies has occurred at perhaps the fastest rate and to the deepest level of any consumer-level technology in history. Given the information-intensive nature of its operations and services, the banking sector is relatively amenable to innovative technologies (Polasik and Wisniewski, 2009).

Mobile banking can be defined as the ability to conduct bank transactions via a mobile device, or more broadly – to conduct financial transactions via a mobile terminal (Drexelius & Herzig, 2001). Definition found in (Kiesnoski, 2000) referred mobile banking as the “ability to bank virtually anytime, anywhere”. Mobile banking allows customers to use their mobile phones and other mobile devices as another channel for their banking services, such as deposits, withdrawals, viewing of statements, account transfers, bill payments, and balance inquiries. Most mobile banking applications add a new delivery channel to existing bank customers.

2. A BRIEF PREVIEW OF MOBILE BANKING CONCEPTS

Banking has always been a highly information intensive activity that relies heavily on information technology (IT) to acquire, process, and deliver the information to all relevant users. Not only is IT critical in the processing of information, it provides a way for the commercial banks to differentiate their products and services. Commercial banks find that they have to constantly innovate and update to retain their demanding and discerning customers and to provide convenient, reliable, and expedient services. Driven by the challenge to expand and capture a larger share of the banking market, some commercial banks invest in more bricks and mortar to enlarge their geographical and market coverage. Others have considered a more revolutionary approach to deliver their banking services via a new medium: the Internet. Since the introduction of the Internet in 1969, it has evolved from the sole domain of the computer nerd and the academic to a mainstream channel of communication (Nehmzow, 1997). Recently, it has been rapidly gaining popularity as a potential medium for electronic commerce (Crede, 1995; Ooi, 1999; U.S. Department of Commerce, 1999).

The rapid growth of the Internet has presented a new host of opportunities as well as threats and challenges to business. Today, the Internet is

well on its way to become a full-fledged delivery and distribution channel and among the consumer-oriented applications riding at the forefront of this evolution is electronic financial products and services. With the rapid diffusion of the Internet, banking in cyberspace is fast becoming an alternative channel to provide banking services and products.

The Internet is now being considered as a strategic weapon and will revolutionize the way commercial banks operate, deliver, and compete against one another, especially when competitive advantages of traditional branch networks are eroding rapidly (Nehmzow, 1997; Seitz, 1998). As "Business Week" noted, "Banking is essential to a modern economy, banks are not" (quoted in Financial Times, 1996). This statement is supported by a recent report from Booz Allen & Hamilton (Warner, 1996) that claims the Internet poses a very serious threat both to the customer base of the traditional banking oligopoly and to its profits. Their belief is that the Internet promises a revolution in retail banking of monumental proportions. High street or brick and mortar banks as we know them, may largely disappear.

2.1. Mobile Banking

The banking industry in recent times has been undergoing radical change and this is taking place in all aspects of the banking sector. One of these new changes in the banking industry is the information technology system (IT) and it is mainly used by commercial banks to reduce turnaround time and improve business in general. The introduction of mobile technology and its devices have brought efficiency in the manner, in which commercial and business activities are being carried out (Tiwari and Buse, 2006). Among this technological development is the introduction of mobile telephony. Mobile telephony serves as a platform for launching out innovative mobile phone applications and services. The use of mobile technologies for commercial purposes has generated the concept of mobile commerce. Mobile banking offers a new opportunity to banks to extend their services to their customers and therefore improve their competitiveness (Kohli, 2004). It is considered to be one of the most value added and significant mobile service, as cited in Lee et al. (2003).

Many researchers have given proof of the advantages that can be derived from using mobile banking services (Barnes & Corbitt; Herzberg 2003). Mobile banking is an application of mobile commerce which enables customers to bank virtually at any convenient time and place (Suoranta, 2003). Mobile Banking is a type of mobile commerce (m-commerce) service that allows consumers to perform banking services with the use of their mobile devices (Corbitt and Barnes 2003). It could be defined as a facility which provides banking services such as balance enquiry, funds transfer, bill payment, and transaction history via a user's mobile phone (Stair & Reynolds 2008). Kondabagil (2007) defines mobile banking as an occurrence, when customers access a bank's networks using cellular phones, pagers, personal digital assistants, or similar devices through

telecommunication wireless networks. It could also be defined as an application of mobile commerce that enables customers to bank virtually at any convenient time and place (Suoranta, 2003).

2.2. Mobile Banking Models

The growth, sustainability, and expansion of mobile banking services have been characterized by the use of several different models to support the delivery of a variety of banking products and solutions. The model implemented by a company to rollout mobile banking services is often dependent on the country's current financial laws and regulations in force and the degree of flexibility the financial regulator wishes to allow in order to make mobile banking available. It may also be the case that the primary operator within a market may not have an interest in providing the applications necessary to support mobile banking (Kabir Kumar, Claudia McKay, and Sarah Rotman 2010). There are two primary models used today: bank-based and nonbank-based model (International Telecommunication Union, 2011).

In the bank-based model, a customer establishes a direct contractual relationship with a licensed and supervised financial institution. The mobile banking customer's relationship with his or her bank may also be carried out through the utilization of agents as a means to provide services. In simplest terms, an agent is an extension of the bank, they are able to provide commercial or transactional services e.g. customer service, keep records, handle cash and manage liquidity (Michael Tarazi and Paul Breloff, 2011). Under a non-bank based model, a formal bank typically only serves as a holder of deposits. A non-bank based model has certain distinct characteristics. Customers have no direct contractual relationship with the regulated financial institution. Instead, customers exchange cash at a retail agent in return for an electronic record of value (USAID, 2010).

Mobile banking usage is increasing every year in all parts of the world. In the European Union, mobile banking usage has reached high quotas. During 2016, the average usage has reached 47 per cent, with Romania at lowest usage, only 22 per cent, and Netherlands at highest with 63 per cent. This average figure is 6 per cent higher compared to 2015, when mobile banking usage was 41 per cent. Expectations for the year 2017 for the mobile banking usage are to reach an average of 63 per cent (ING, 2017).

Republic of Kosovo, is considered to have a well-developed banking system. There are ten commercial banks operating in the Kosovar banking system, representing 69 per cent of the total assets in the financial sector. Their products and services include banking accounts, loans, domestic and international payments, banking cards, banking guarantees, letter of credit, e-banking. Access to these services is enabled through around 260 branches and sub branches, 540 ATM's, 10,500 POS and 230,000 e-banking accounts (BQK, 2016).

Their activity is mainly dominated by loans and the maturity can be up to 15 years (for some loans, such as mortgage loans, this period is extended to 20 or more years), depending on the type of loan. Credit portfolio takes place with 65.2 per cent of the total loans to enterprises. Most of these loans are absorbed by trading enterprises sector (51.8 per cent of loans to enterprises), whereas loans issued to the industrial sector (including mines, production, energy and construction) constitute 23.0 per cent of total loans to enterprises. The agricultural sector represents only 4.0 per cent of total loans. The household loans participation is 34.4 per cent of total loans. Commercial banks in the Republic of Kosovo have different shareholding structure. From the total number of commercial banks operating in the Republic of Kosovo, eight of them are foreign-owned banks and only two of them have local ownership. The banking industry in the Republic of Kosovo employs around 3,400 employees.

2.3. Consumer behaviour towards mobile banking

Lamb, et al. (2000) define consumer behaviour as the acts of decision-making which directly involve the obtaining and using need-satisfying products and services, which includes the decision-making process which precedes and determines these acts.

There are several predetermining factors that influence consumer attitude towards mobile banking and researchers have found out that motivation, demography and individual acceptance of innovation or new technology are some of the major causes. In developed countries, consumer's attitude may be influenced by previous experience in related technology and it has helped to increase the adoption rate due to previous experience but, this may be slightly different in the developing countries where technology is just taking its stand. According to Benamati & Serva (2007), many bank customers have to consider the issue of hacking, the integrity of the password been used, data encryption and personal protection of information when it comes to adoption of electronic banking. This and many more are the challenges faced by bank customers and this has either affected their decision positively or negatively.

2.4. Mobile Banking in the Republic of Kosovo

The Republic of Kosovo has a slowly developing economy. Its banking sector comprises of ten commercial banks with 69 per cent assets on financial market in the Republic of Kosovo (BQK, 2016), most of them very dynamic, bringing more technological changes every day. Some of the commercial banks have opened many branches in urban and rural areas. However, irrespective of how many branches these commercial banks can open, it is impossible to cover every edge of country, and be close to the customers. In order to offer access to some services around the clock, some commercial banks have started implementing around the clock self-service facilities, where customers can

withdraw, deposit cash, and make some utility services payments. To expand the plethora of their services to their customers, commercial banks have developed different mobile banking applications to allow customers serve themselves for many banking services they need. Furthermore, many public and private institutions have agreement with commercial banks to make their bills paid using their custom-made mobile application. In order for these services to be more attractive, commercial banks have decided to make them free of charge, unlike those at bank offices in which customers have to pay the transaction fees, and wait in queue.

The Republic of Kosovo has very young population; its average age is 30.2 years. According to Crabbe et al. (2009), demographic factors play a significant role in adoption decisions. A survey conducted in Malaysia (Sulaiman et al., 2007) reveals that both demographic and psychographic variables affect the adoption of innovations, such as mobile banking, in particular, age, gender, personal income, and education. According to Laukkanen and Cruz, (2012), the impact of demographics on the adoption of various electronic devices has also been extensively studied in the recent years. In spite of all these facilities and possibilities, usage of mobile banking system has not yet reached high levels. Hence, this study aims to explore what are the factors hindering usage of these services and what can be improved.

2.5. Features & Benefits of Mobile Banking (Mobile Payment Characteristics)

In order for a mobile payment service to become acceptable in the market as a mode of payment, the following conditions have to be met:

- a) **Simplicity and Usability:** The m-payment application must be user friendly with little or no learning curve to the customer. The customer must also be able to personalize the application to suit his or her convenience.
- b) **Universality:** M-payments service must provide for transactions between one customer to another customer (C2C), or from a business to a customer (B2C) or between businesses (B2B). The coverage should include domestic, regional and global environments. Payments must be possible in terms of both low value micro-payments and high value macro-payments.
- c) **Interoperability:** Development should be based on standards and open technologies that allow one implemented system to interact with other systems.
- d) **Security, Privacy and Trust:** A customer must be able to trust a mobile payment application provider that his or her credit or debit card information may not be misused. Secondly, when these transactions are

recorded, customer privacy should not be lost in the sense that the credit histories and spending patterns of the customer should not be openly available for public scrutiny. Mobile payments have to be as anonymous as cash transactions. Third, the system should be fool proof, resistant to attacks from hackers and terrorists. This may be provided by using public key infrastructure security, biometrics and passwords integrated into the mobile payment solution architectures.

- e) Cost: The m-payments should not be costlier than existing payment mechanisms to the extent possible. An m-payment solution should compete with other modes of payment in terms of cost and convenience.
- f) Speed: The speed at which m-payments are executed must be acceptable to customers and merchants.
- g) Cross border payments: To become widely accepted the m-payment application must be available globally, word-wide.

2.6. Advantages of Mobile Banking

A very effective way of improving customer service could be to inform customers in a better way. Credit card fraud is one such area. A bank, with mobile technology, could inform its clients each time a purchase above a certain limit has been charged to their card. This way clients are informed when their card is used, and what was the charge of such transaction. Similarly, the bank could remind clients of outstanding loan repayment dates, dates for the payment of monthly instalments or simply tell them that a bill has been presented and is up for payment. Clients can then check their balance on the phone and authorize the required amounts for payment. Clients potentially can also request for additional information. They can automatically view deposits and withdrawals as they occur and also pre-schedule payments to be made or cheques to be issued. Similarly, one could also request for services like stop cheque or issue of a cheque book over one's mobile phone. There are number of reasons that should persuade commercial banks to utilise client's mobile phones as part of their sales infrastructure. They are set to become a crucial part of the total banking services experience for the clients. Also, they have the potential to bring down costs for the bank itself. Through mobile messaging and other such interfaces, banks provide value added services to the client at insignificant marginal costs. Such messages also carry the virtue of being easily targeted and personalised making the offered services more effective. They will also provide better results on account of better client profiling. Yet another benefit is the anywhere and anytime characteristics of mobile services. A mobile is almost always with the customer. As such, it can be used over a vast geographical area. The customer does not have to visit the bank ATM or a branch to avail of the bank's services. Research indicates that the number of footfalls at a bank's branch has fallen down drastically after the installation of ATMs. As such with mobile services, a bank

will need to hire even fewer employees, as people will no longer need to visit bank branches apart from certain occasions. This will make credit cards redundant and also aid in checking credit card fraud apart from offering enhanced customer convenience. The use of mobile technologies is thus a win-win proposition for both the commercial banks and the bank's customers. The commercial banks add to this personalized communication through the process of automation. For instance, if the customer asks for his account or card balance after conducting a transaction, the installed software can send him or her an automated reply informing of the same. These automated replies thus save the bank the need to hire additional employees for serving client needs.

3. PRACTICAL AND THEORETICAL VALUE OF THIS RESEARCH

The need to understand what the factors are influencing the adoption of Internet banking is important for managers, providers and researchers. In the technologically developed world, IT adoption faces barriers, such as the lack of top management support, poor quality IS design and inadequately motivated and capable users (Kwon and Zmud, 1987). In the developing world, the same barriers appear to be often impenetrable (Danowitz et al., 1995; Knight, 1993). In addition, problems found in developing countries are attributed to a lack of national infrastructure (Odedra et al., 1993), capital resources (Goodman and Press, 1995), or government policies set in place to prevent technology transfer (Goodman and Green, 1992). Although there are isolated reports of countries where sufficient resources and government support exist, the technology has failed to be effectively transferred (Atiyyah, 1989; Goodman and Green, 1992). While the uses of IT are varied, the common tie of computer use in the developing countries is one of limited diffusion (Goodman and Green, 1992). Consequently, there will be some beneficial applications of this research to the Republic of Kosovo commercial banks and researchers in the Republic of Kosovo. Some of these practical applications are as follows:

1. The acceptance of Internet banking is a new topic in the Republic of Kosovo, and so it was worthwhile to conduct this study, the result of which could be used to improve the banking sector, and enhance the quality of Internet services in The Republic of Kosovo in the future.
2. Helping bank managers to identify factors that influence the adoption of Internet banking in order to increase the use of the service, as well as to encourage the general acceptance of new Information Technology services.

From the practical perspective, bank managers and other decision makers in the banking sector want information about how their customers act and react. Consumer acceptance models are valuable to managers as they help organize knowledge about consumers and their behaviour. Commercial banks are

able to acquire a better understanding and build a stronger relationship with their consumer base. The battle for customers has never been fiercer than it is today. Therefore, commercial banks must understand who their customers are and conduct analyses on their behaviour. It is only through this knowledge of consumer that commercial banks can satisfy the demands of consumers today and achieve a competitive edge over their competitors.

The Republic of Kosovo is a small country with 1.8 million people, and with population's average age around 30.2 years (The Republic of Kosovo Agency for Statistic, 2011). According to the Regulatory Authority for Electronic and Postal Communications Electronic Communication Report, 2014 (ARKEP) report, the Republic of Kosovo has around 1.58 million mobile phone subscribers, or 87.14% of population have active subscription.¹ Most of mobile phone subscriptions have Internet connection, as well.

Mobile banking is an electronic system that provides most of the basic services available in daily, traditional banking, but does so using a mobile communication device, usually a smart phone. Mobile banking services in the Republic of Kosovo are limited to electronic movement of funds and data retrieval. This includes balance checking, transaction history retrieval, transfer of funds between different accounts, paying utilities and purchasing through compatible vendor systems known as POS (Point of Sales), which is achieved through technology called NFC (Near Field Communications).

Despite all the investments on building Internet and mobile banking systems, studies and reports have indicated that potential users are not utilising these systems, although they are easily available. This drives the need for further research to identify the factors that determine the acceptance of mobile banking by the users in The Republic of Kosovo, although mobile banking services are offered free of charge.

3.1. Aim of the research

The aim of this research was to find out the level of usage of mobile banking in The Republic of Kosovo, and factors influencing its usage, as well as making recommendations for further development of this sector. With this in mind, this research aims to achieve the following objectives:

- Identify prospect of Mobile Banking services in the Republic of Kosovo
- Study the barriers in using Mobile Banking services in the Republic of Kosovo

¹ This statement must be taken under consideration with a dose of caution, as a significant number of mobile phone users will use more than one active subscription, usually with different providers, as a means of lowering inter-mobile network costs.

- Based on findings, suggest ways to improve the usage of Mobile Banking services in the Republic of Kosovo
- In order to achieve the above-mentioned objectives, this research will tackle the following questions:
- What are the key factors that influence the usage mobile banking services in the Republic of Kosovo?
- What is the level of consumer's knowledge about mobile banking services in the Republic of Kosovo?

4. LITERATURE REVIEW

Mobile banking had provided its first service by the end of 1990s with the cooperation of German company Playbox and Deutsche Bank (Shaikh & Karjaluoto, 2015). As such, mobile communications are now the fastest growing technology in the developing world and research has demonstrated that use of mobile phones has had significant socio-economic impact in communities (Abraham, 2006; Jensen, 2007; Overa, 2006). Thus, mobile banking is being defined as the medium which enables the interaction between the bank and the customer through mobile phones, personal digital assistants (PDA), and other tools in addition to smart phones and computers (Barnes & Corbitt, 2003; Tobbin, 2012; Tam and Oliveira, 2016)

Given that mobile phones are increasingly becoming part of the everyday people's lives, it can be argued that they have potential to become a low cost delivery channel for financial information, services and transactions (Porteous, 2006) thus facilitating innovations including micro-payments (m-payments), electronic money (e-money), and a banking channel (m-banking). Different researches suggest that customers are increasingly demanding, a broader range of micro-financial services that could be delivered via mobile phones or via mobile phone operators.

5. METHODOLOGY

This research will make use of qualitative but rely more on the quantitative research methods as defined by (Saunders et al., 2009; Blaxter et al., 2006; Thomas, 2003; Myers, 1997; and Creswell, 2003). With the intention of finding answers to questions of what key factors influence the usage of mobile banking services, and to what level consumers are aware of mobile banking services in the Republic of Kosovo, it was deemed necessary to conduct a survey and gather primary data.

According to Bryman and Bell (2007) and Saunders et al., (2009), there are two main approaches of collection data for a research, primary data collection,

and secondary data collection and this research utilises both approaches. Bryman & Bell (2003) suggest that there is no strategy superior to other, thus it is up to the researcher to select the one that best suits the research. For the aim of this research, a questionnaire has been developed to collect data.² The questionnaire has 18 questions, and was sent to selected respondents by email and social media. A pilot survey was sent to a few respondents to test the questionnaire, in order to identify and eliminate potential problems, before it was finally sent out. Target group were respondents who are using mobile technology, and have accounts in commercial banks in the Republic of Kosovo. Secondary data was collected through different reports, journals, and websites. Researchers are aware that this approach has its limitations, especially when it comes to representing the overall population, given that the target group representative is expected to be ranking above average, both intellectually and financially. Also, the gathered information is expected to provide a 'snap-shot' representation of reality and will lack depth that comes with recurring surveys.

Ethics and confidentiality were given the highest attention by researchers, as respondents were informed beforehand that the results are to be used for academic purposes only, and the questionnaire was filled and submitted anonymously.

6. DATA ANALYSIS

In order to utilise the information gathered via the questionnaire, spreadsheet software was used for further analysis. Researchers, being aware of the data limitations, as discussed in the section above, resorted to visually present and discuss simple statistical indicators rather than delve into deeper econometric analysis at this stage. Having said that, researchers exercised due care when using sample selection methodology. For instance, respondents with bank accounts and with access to their accounts via Mobile Banking are randomly targeted. The designed questionnaire was published as an electronic form using one of the online survey platforms.³ The link of the published questionnaire was distributed to the respondents by e-mail and different social media. Researchers then made sure that the data sample was collected in different regions of the Republic of Kosovo and from different groups of people. Given that the questionnaire was 'mobile phone friendly', and the fact that there are many mobile users in the country, this method proved very convenient in getting the respondents interested, which meant that quite quickly a respectable sample size of 257 observations was compiled. The questionnaire allowed for categorisation of respondents by gender, geographical region, education level, employment status and other relevant aspects of client characteristics.

² Questionnaire available upon request

³ For the purpose of this study, "Survey Monkey" platform was utilized: <https://www.surveymonkey.com/>

7. RESULTS

This section will present the results of analysing the data gathered from 257 respondents via the questionnaire. As stated earlier, the analytical part will be limited to visual representation of findings. This is done for two main reasons. First, the target audience for these findings are higher levels of bank managers and banking regulators, thus graphs and figures will be able to deliver the main points more efficiently. Second, econometric modelling, especially when used in specific conditions pertaining to this study require a lot of controlling variables, which in turn eats up degrees of freedom rapidly rendering the model not very robust.

As shown in Figure 1 below, the gender representation in the sample is quite balanced with female respondents accounting for 48.4% and male for 51.6%. Figure 2 shows that more than 59% of the respondents in the sample belong to the age group 26 - 45 followed by the age group 18 – 25 with 20%. As expected the older the respondents, their representation in the sample is smaller as one would expect that older generations will have their barriers to embracing technology changes and staying up to date. Also, given that Prishtina is the capital of the Republic of Kosovo, and as shown by numerous gravitation models, it carries the main part of economic activities in the country, this is reflected in our sample as almost 45% of respondents live in Prishtina followed by Peja, Prizren and Gjakova with 11.7%, 10.1% and 9.7% respectively. Other regions are represented in the sample with around 8.

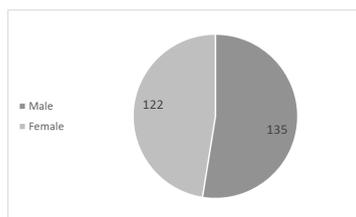


Figure 1: Gender Representation

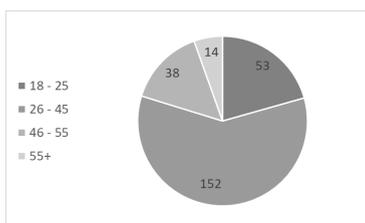


Figure 2: Respondents by age groups

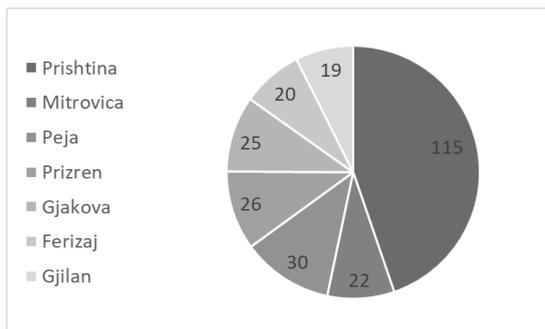


Figure 3: Respondent's living region

Table 1 below provides details of all respondents in regards to their age groups, gender and region of living.

Table 1

Respondent grouping by Age, Gender and Region

Age groups	Prishtina		Mitrovica		Peja		Prizren		Gjakova		Ferizaj		Gjilan	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
18 - 25	4	7	1	6	4	8	1	4	2	4	1	5		6
26 - 45	54	25	7	4	7	8	7	8	6	8	6	2	6	4
46 - 55	13	7		1	1	1	3	3	1		2	3	1	2
55+	3	2	3			1			1	3	1			
Totals	74	41	11	11	12	18	11	15	10	15	10	10	7	12
Totals per region	115		22		30		26		25		20		19	

This research also confirmed the intuitive assumption that the majority of working force in the service industry will have university and master degrees. Jointly these categories stand for almost 80% of respondents (university degree approximately 47%). As expected, there are fewer users of mobile banking services, with secondary education, mainly due to their age one would assume as many would not meet the age limit to have their own bank account. This is confirmed also by the following question where the proportion of respondents that answered they never used mobile banking services shows a growing trend as the age of respondents/education increases. Namely, for respondents with secondary education the proportion of responses is around 35% while it falls 16% for respondents with PhD degrees. This shows that there may be a positive correlation between level of education and use of mobile services. Figure 4 to Figure 6 and Table 2 illustrate findings discussed above.

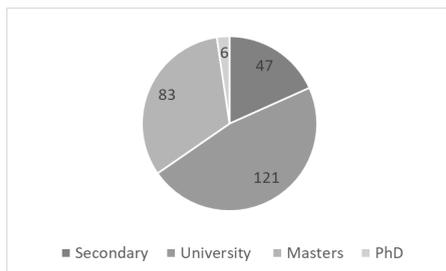


Figure 4: Respondent's level of education

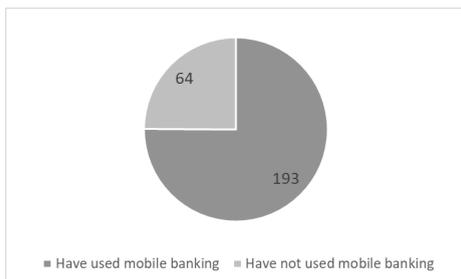


Figure 5: Respondent's mobile banking services usage

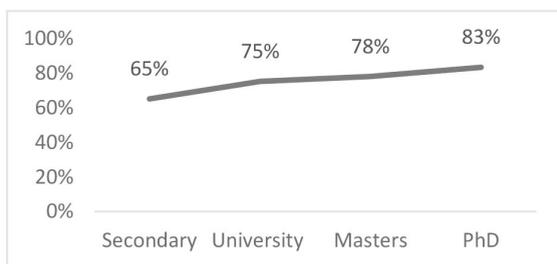


Figure 6: Usage of mobile banking services compared to respondent's educational level

Table 2

Mobile banking usage based on education degree

Mobile Banking Usage	Secondary	University	Masters	PhD	Total
Have used mobile banking	31	92	65	5	193
Have not used mobile banking	16	29	18	1	64
Total	47	121	83	6	

As shown in Figure 7 below, slightly more than 38% of respondents are employed in the public sector, about the same in the private sector, roughly 10% are still studying while unemployed respondents in this sample account for approximately 13%. This last figure is at odds with official unemployment rates in the Republic of Kosovo at least by a margin of 12-13 percentage points.

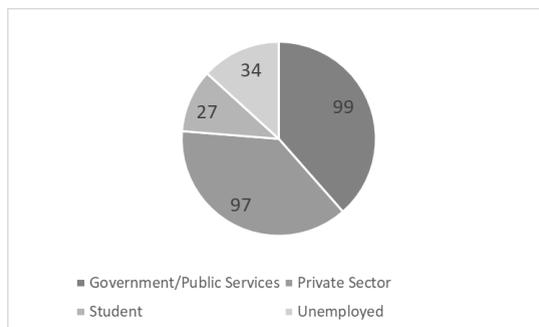


Figure 7: Respondent's employment sector

In addition, Figure 8 illustrates the positive correlation between education and employment of respondents in the sample.

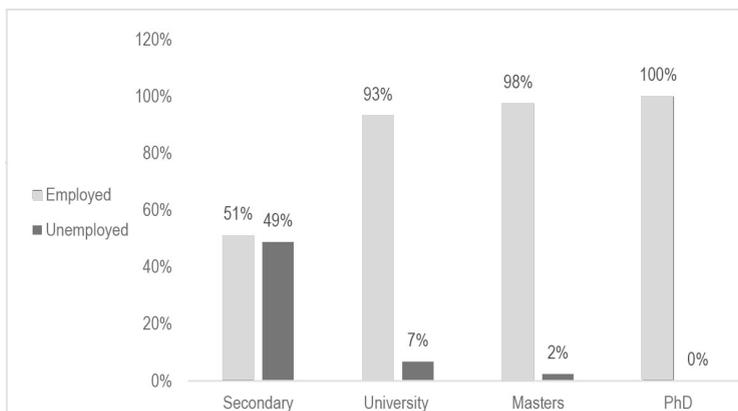


Figure 8: Employment status of the respondents

7.1. Banking services usage

Another interesting aspect, which can be attributed perhaps to aggressive sales techniques of banks operating in the Republic of Kosovo, was tested in this study, and that is if respondents have more than one bank account. As illustrated

by Figure 9, the sample is divided almost perfectly in half as slightly more than 50% responded positively, and slightly less than that negatively.

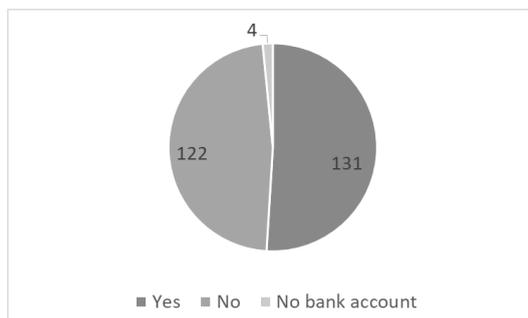


Figure 9: Respondent’s with more than one bank account

With that in mind, all the respondents in the sample have responded positively to using bank services. This is true even for the 0.01% (4 respondents) presented in Figure 9. Despite not owning a bank account, respondents in the sample have used banking services for making payments to entities that possess bank accounts. The commercial banks are frequented in different ways and their services are in use commonly by all. Even individuals who don’t possess a bank account, might need to make transactions either for themselves or for friends and/or family.

Figure 10 shows that the most frequent service used by the respondents in the sample is the ATM services roughly at 84% making payments via POS, internet banking (via PC) and the last is mobile banking.

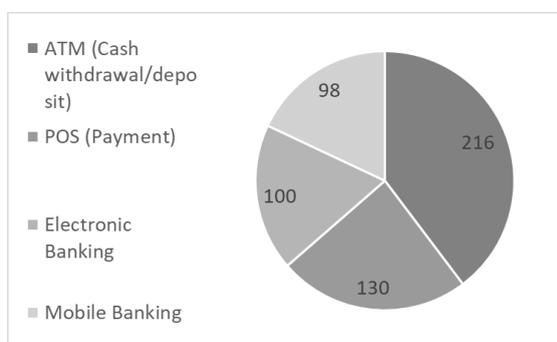


Figure 10: Usage of banking services by respondents

Given that the study is concerned with mobile banking, it was deemed interesting by the researchers to find out what is the spread of mobile phone

operating systems used by respondents in the sample. As shown in Figure 11 below more than half of respondents use Android, (53.8%), 40.5% use Apple products, and only 5.7% use Windows based mobile devices. These findings can help banks plan their application development resources more wisely.

In addition, the study inquired about familiarity of respondents with costs of mobile banking, and as shown in Figure 12, approximately 70% of respondents were aware of that fact.

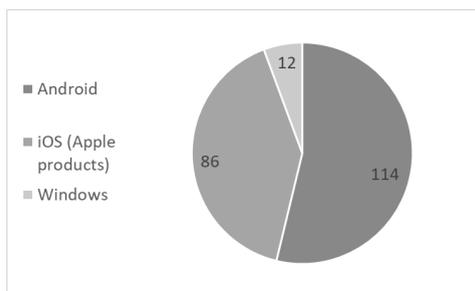


Figure 11: Type of mobile OS used by respondents

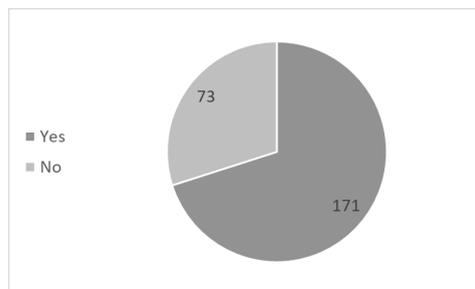


Figure 12: Familiarity with mobile banking services costs compared to traditional banking

As with every other aspect of banking services, the perception of safety by users of mobile banking is very important aspect for the success or not of this way of conducting business. Answers of respondents who reacted to this question are illustrated in Figure 13. Given that the question asked for the perception, majority of responses lay in the 'Moderately Safe' and 'Very safe' area (about 58%). Only 3.6% of respondents in the survey consider mobile banking unsafe. However, a large number of respondents (36.6%) have no idea whether this service is safe. This triggered the interest of researchers to look more closely into this category and explore the level of education of this sub group. Findings are mixed. As shown in Figure 14, about 65% of respondents have listed secondary school as their level of education. University and Master educated respondents are about 30% each, but the puzzling result is that 50% of respondents with PhD

education have responded that they don't know whether mobile banking services are safe or not.

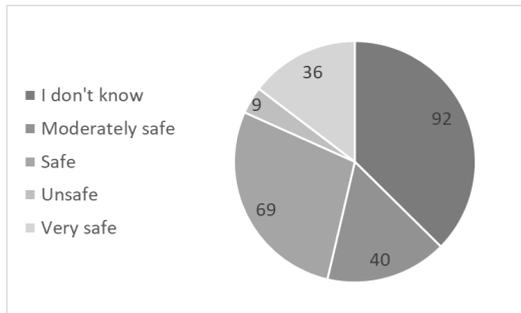


Figure 13: Safety of mobile banking services usage

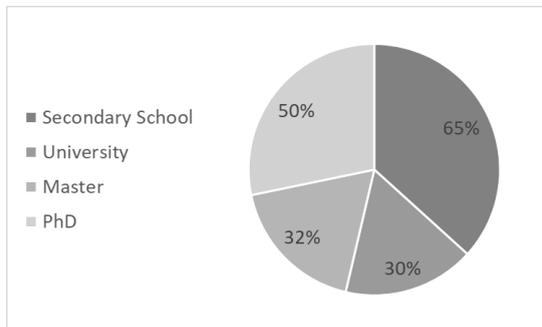


Figure 14: Knowledge about the safety of mobile banking usage

Similar results were witnessed when a similar question was posed, i.e. in responding to the question “Do you believe that vulnerability on your bank account is exposed while using mobile banking” almost 60% of respondents did not have a clear opinion.

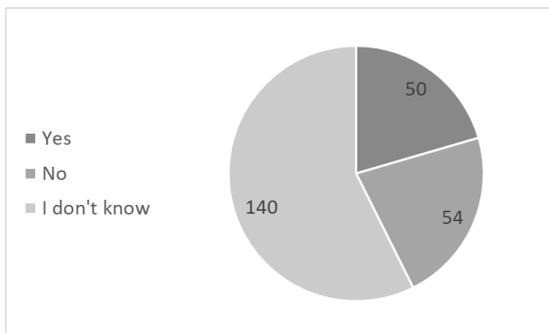


Figure 15: Exposure of vulnerability on bank account while using mobile banking

Next, the attention of the study was turned to the reasons why clients may decide to use mobile banking. In a set of questions, with the option to rate the importance (from 4 “very important”, to 1 “not important at all”) this study has identified four main reasons why clients choose mobile banking and those are: Lower transaction costs; Security from Fraud; Personal (physical) Safety; and Safe transaction with feedback on transfer. Figure 16 illustrates these findings.

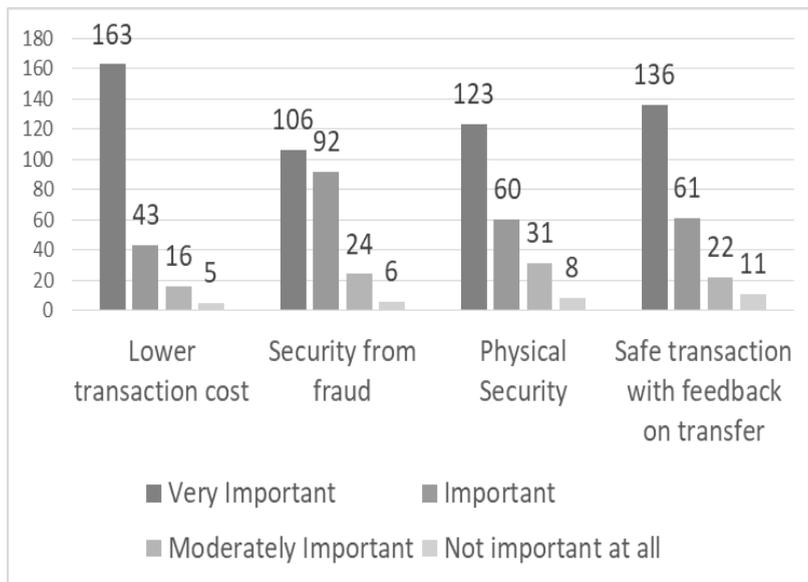


Figure 16: Important factor on mobile banking services usage

Having identified the incentives for using mobile banking, it was important to find out what services have been used most frequently. The responses show that mobile banking is being used mainly for basic operations such as checking the balance on the account. Figure 17 outlays five main reasons, respondents have listed.

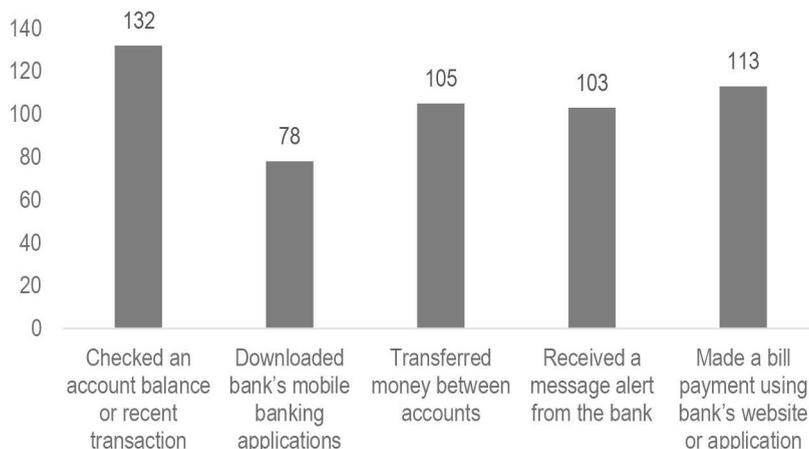


Figure 17: Mobile banking purpose usage in the last 12 months

As earlier in this study, one of the responses triggered the curiosity of researchers to get more information. This time it was the respondents that replied with downloaded bank’s mobile banking applications. Table 3 below gives a better insight of respondents that have chosen to download the mobile banking applications.

Table 3

Mobile bank application download based on age group and employment status

Downloaded bank's mobile banking applications			
Age Group	Number	Employment status	
18 - 25	15	Employed	60
26 - 45	41	Unemployed	8
46 - 55	15	Students	10
55+	7		
Total	78	0	78

Having discussed the reasons what makes clients use mobile banking services, this study turns to the reasons that put off clients for using the same service. Among six listed reasons and hindrance to clients using mobile banking, the one standing out the most is the concern for security of personal information. Other reasons listed in Figure 18 are more preferential to the user of the technology. However, this could serve as a very important indicator to banks that want to intensify the use of mobile banking services as it opens the way to inquire further into preferences of clients and their likes and dislikes.

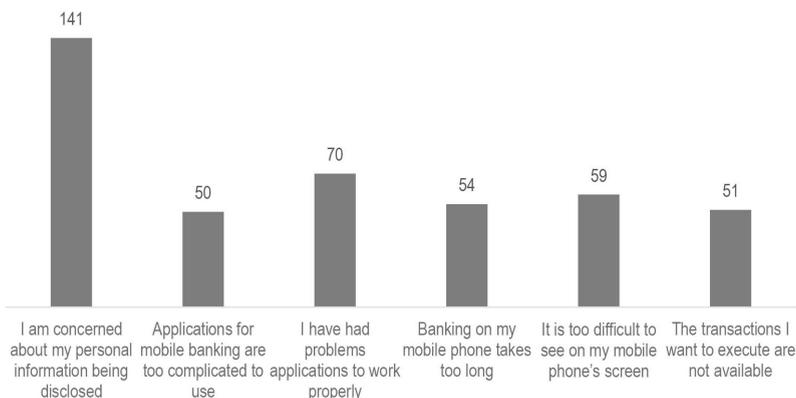


Figure 18: Respondent’s concerns hindering them from using mobile bank services

Finally, the research asked the questions what are the most irritable aspects of traditional banking for clients and how do they feel about that, to be followed by the question whether clients would recommend mobile banking to others. It does seem that respondents, as shown in Figure 19m do not like the time wasted to travel to the bank, branch location or accessibility, or being moved from one counter to the other. What is perhaps interesting is that most respondents (about 45%) do not mind poor service in the bank!

While around 80% of respondents, as shown in Figure 20 would recommend mobile services to friends or family.

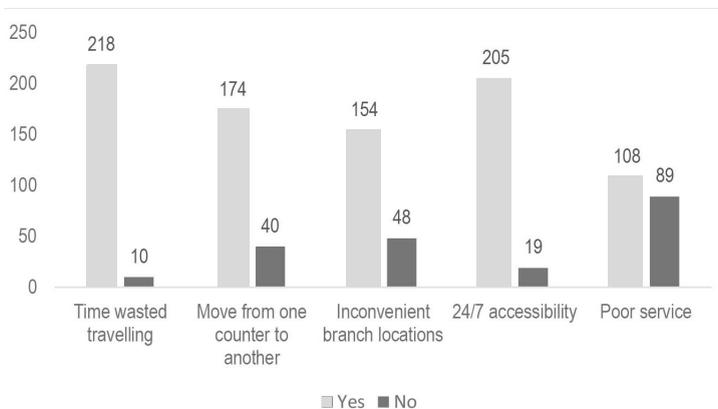


Figure 19: Problems with current traditional banking system in the eyes of respondents

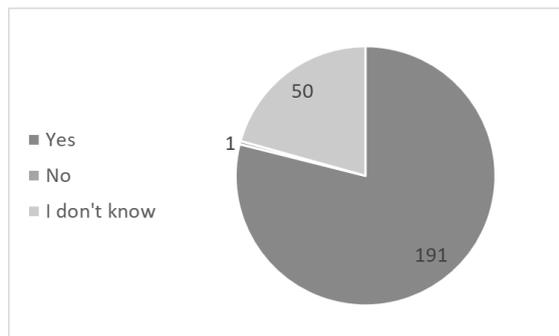


Figure 20: Service preference to the friends or family

8. CONCLUSION

To conclude, the idea of new developed services is at all levels linked with customer value creation, thus the banking concepts have been evolving especially in the last decade. The use of mobile phones today is a necessity and banking services were never this close. The importance to understand why people do or do not use mobile banking services is stressed in previous studies (Aarnio et al., 2002).

The idea of this study was to try and understand why people use or do not use mobile banking services in the Republic of Kosovo. This study, by pioneering this aspect of research in context of Kosovo, is aimed at higher levels of bank management and banking industry regulators as a tool to find out what is the general perception of clients with respect to mobile banking services, and what can be done to improve the situation.

The research found that there is a reasonable amount of people using mobile banking services. However, when looking in more detail, it turned out that the operations that these services are used for are quite basic. Furthermore, the study found that there are several aspects that act as hindrance for clients turning to mobile banking services.

Researchers are aware of limitations of this study, which mainly stem from the lack of depth of the database compiled. They also recognize that the level of analysis could be improved by employing more advanced econometric techniques. However, they may require amending the database, and offer potential for the future.

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ČIMBENICI KOJI UTJEČU NA UPORABU MOBILNOG BANKARSTVA U REPUBLICI KOSOVO

Sažetak

Ljudska civilizacija ušla je u novu fazu nazvanu informacijsko društvo (IS), koja podrazumijeva intenzivnu uporabu informacija u svim aktivnostima i znatno utječe na ekonomske i socijalne aspekte čovjekovog postojanja. IS omogućuje pristup neograničenim količinama informacija svojim članovima, pa stvara novu platformu za rad i stjecanje znanja. Također, stvara pozitivno okruženje za ekonomsku globalizaciju i bolju socijalnu koheziju. Iz perspektive financijskih usluga, IS pomaže u e-bankarstvu, koje je odrednica bankovnog modela poslovanja, posebice aspekta mobilne trgovine. Mobilno bankarstvo je grana e-bankarstva. Cilj istraživanja je procijeniti kako se mobilno bankarstvo primjenjuje u Republici Kosovo, te koliko se banke koriste ovim aspektom bankarskog poslovanja. Za potrebe rada provedeno je istraživanje i analizirani su rezultati.

Ključne riječi: bankarstvo, e-bankarstvo, mobilno bankarstvo, bankarstvo na Kosovu, sigurnost u bankarstvu.

JEL klasifikacija: G21.

