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ABOUT THE RELATIONSHIP BETWEEN CONSUMERS DEMOGRAPHIC FEATURES, SOCIO-ECONOMIC FACTORS AND THE USE OF E-BANKING SERVICE IN KOSOVO

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Abstract

Second level banks in the Republic of Kosovo are committed to providing e-banking services. The aim of this study is to identify and assess the relationship between consumers' demographic features, social economic factors and use of e-banking service. Analysis of data declared by 351 consumers, selected randomly, showed that currently in Kosovo, ATM and POS services are the most preferred by consumers of banking services. The frequency of use of e-banking services is not affected by the gender and level of education of the consumer ($p>0.05$). The age of the consumer, his civil and employment status, income level and residence affect the frequency of use of e-banking services ($p<0.05$). Consumers who have been using e-banking services for more years also have higher monthly frequencies of their use. ($p<0.05$) In general, consumer behavior towards e-banking services offered by second level banks in Kosovo does not differ significantly from consumer behavior of these services in other countries.

Keywords: E-banking, demographic features, socio-economic factors, Kosovo



INTRODUCTION

The success of implementing e-banking services is, to a considerable extent, the result of the action and interaction of factors related to the provider of this service, the bank and the factors that condition the consumer's behavior towards this service (Margaret, & Ngoma, 2013; Sharma, 2014; Serener, 2016; Meghai & Gokhru, 2020; Ismaili & Braimllari, 2021; Chaudhary et al, 2022; Fathima, 2022; Schmidt-Jessa, 2023; Muthukumar et al. 2024). Identifying these factors, assessing the extent and manner of their impact on the implementation of e-banking services and studying the connections that exist between the service provider and the factors that condition the behavior of the beneficiary of this service are very important research objects. In particular, such research is necessary to be carried out in countries that are in the early stages of the process of implementing e-banking services because the results obtained from them are very important information to guide the work aimed at continuously increasing the success that second-tier banks aim to achieve in the financial market (Shankar et al, 2013; Baptista & Oliveira 2015; Lohana & Roy, 2021).

Meanwhile, it should be noted that even in countries where banks have successful experiences in providing e-banking services, studies in this field are necessary to be conducted, periodically. This need is conditioned by the continuous changes that occur in consumer behavior, as a result of various socio-economic factors (Choudhury, and Bhattacharjee, 2015; Jibril et. al 2020).

Although the banking system in Kosovo, as a system of an independent state, is relatively new (Zogjani, and Kovaci-Uruci, 2023), the investments made and the care taken to establish a system capable of functioning effectively in the financial market of Kosovo but also in the regional and global market, are assessed as successful. Currently, this system possesses characteristics and operational capabilities that do not differ, in an essential way, from those of banking systems with long experience in the financial market and operating in countries with developed economies (Central Bank of the Republic of Kosovo, 2012; Beytulla, 2015).

One of the main objectives of the banking system in Kosovo is to develop its capacities to offer consumers e-banking services in the most effective way. Based on the experiences of other countries, the conception and implementation of this service in Kosovo is being developed as a process of cooperation between banking institutions and consumers of e-banking services. The trend of this service is the increase in the diversity of online services and the continuous expansion in the territory (Sejdija, 2017; Baholli, 2018; Fejza et al. 2018; Sadiku, 2019)

The way in which the factors that determine the consumer's behavior towards e-banking services interact with the factors that the service providers, banks, take into account during the process of conception and implementation of these services is important and should always be

kept in mind. The success of e-banking services to a considerable extent depends on the instruments that are built to increase the manifestation of positive synergy in the interaction of these two groups of factors (Hudson, 2008; Juan C. Correa et. al. 2022; Lila & Tanushev, 2024; Haxhosaj & Kume, 2024).

The object of this paper is to identify and assess the links between consumers demographic features, social-economic factors and e-banking service in Republic of Kosovo.

LITERATURE REVIEW

Demographic features and use of e-banking service

The findings published by different authors on the links between consumers' demographic features and use of e-banking services are different. Lohana (2021) defines gender, age, education, marital status of consumers as demographic factors that should be studied to assess their effect on consumer behavior towards e-banking services offered by second-tier banks. According to this author, the age and level of education of the consumer are two factors that have an important effect on the formation of this behavior, while gender and marital status do not affect. According to Choudhury, and Bhattacharjee (2015) consumers with different levels of education and with different marital status have different behaviors towards e-banking services. Theuma, (2016) has concluded that the consumer's educational level positively affects the frequency of use of e-banking services, while gender and age of the consumer do not affect. Alafeef et al. (2011) identified age, gender, and educational level of the consumer in Jordan as factors that significantly influence his behavior towards e-banking services.

In a study on Albanian consumer behavior towards e-banking services, Ismaili and Braimllari (2021) concluded that frequent use of e-banking services is negatively related to the consumer's age, while, according to them, the effect of other demographic factors such as gender, marital status and level of education do not affect the frequency of use of e-banking services. Lila, & Tanushev, (2024) identified a positive relationship between the level of education of Albanian consumers and the use of e-banking services.

Ali Gul et al (2022) have identified statistically significant differences ($p < 0.05$) in the behavior towards e-banking services between women and men. According to them, female consumers are more inclined to use this service. Margaret & Ngoma (2013) have identified a positive relationship between frequency of use of e-banking and educational level, age, gender of consumers.

Choudhury & Dibyojyoti, (2015) showed that educational level and marital status had significantly contributed towards the adoption of electronic banking.

The variations in the relationship between e-banking usage and consumers' demographic features across countries indicate that there is no single, uniform pattern for these relationships in each country. The relationships vary over time and space, and therefore it is necessary to study and assess them for each country and reassess them over time.

Socio-economic factors and use of e-banking service

Jibril et al (2020) based on the results of their study, emphasize that: "there is a significant impact of socio-economic factors on the advent of Fintech, in particular, e-banking transactions".

Various authors claim that income level, work experience and residence are factors that influence consumer behavior towards e-banking services (Alafeef et al, 2011; Ismail and Osman, 2012; Spaho and Ramaj, 2014; Choudhury and Dibyojyoti, 2015).

According to Ismail & Brahimllar (2021) the use of e-banking services by consumers in Albania is not statistically affected ($p > 0.05$) by their employment status, while the level of monthly income is a factor that affects the frequency of use of e-banking services. Ahmet & Zeqiri (2020) emphasize that the use of e-banking services in Kosovo is not very frequent. Meanwhile, according to them, the dependence between the frequency and types of e-banking services used and the employment status and monthly income of the consumer identifies the existence of positive relationships. Employed consumers and those with higher incomes are also identified as more frequent users of these services.

Conrad et al (2020) claim that there are significant differences ($p < 0.05$) in the frequency of use of e-banking services between consumers living in urban areas and consumers in rural areas of Germany. According to these authors, consumers in rural areas, who generally have a higher average age and a relatively lower educational level. are more exposed to the risk of losing access to basic financial services as a result of their digitalization.

Meghai & Gokhru, (2020) have identified significant differences in the use of e-banking services by consumers in urban, semi-urban and rural areas. According to these authors, "the situation in semi-urban and rural area is quite disappointing because people there do use e-banking but mostly are using only debit card and not any other e-banking services". Similar results are reported by Jha, (2019) "... usage of internet banking is very less in rural area as compare to urban bank customers"

The study of the relationship between socio-economic factors and use of e-banking service is particularly important for developing countries, in which, as a rule, differences in socio-cultural development between urban and rural areas are significant (Jha, 2019; Meghai & Gokhru, 2020).

RESEARCH METHODOLOGY

Aims

Assessments of the impact of factors related to the individual, consumer of e-banking services, and the social and economic environment will be used as information for the formulation of policies and programs that will be implemented by second-tier banks in Kosovo with the aim of increasing the effectiveness of e-banking services

Objectives

- Identification of demographic and socio-economic factors that influence consumer behavior towards e-banking services offered by second-tier banks in the Republic of Kosovo.
- Assessment of the extent of the impact of these factors.

Research hypotheses

Ho – Consumer behavior towards e-banking services is influenced by their demographic features- gender, age, education level and civil status

H1 - Consumer behavior towards e-banking services varies depending on employment status, monthly income and residential areas

H2 - Frequency of use of e-banking services is influenced by experience, time of use by consumers of digital services offered by second-tier banks

Conceptual research model

In accordance with the purpose, objectives and hypotheses, the conceptual model of the research was constructed as in Figure 1.

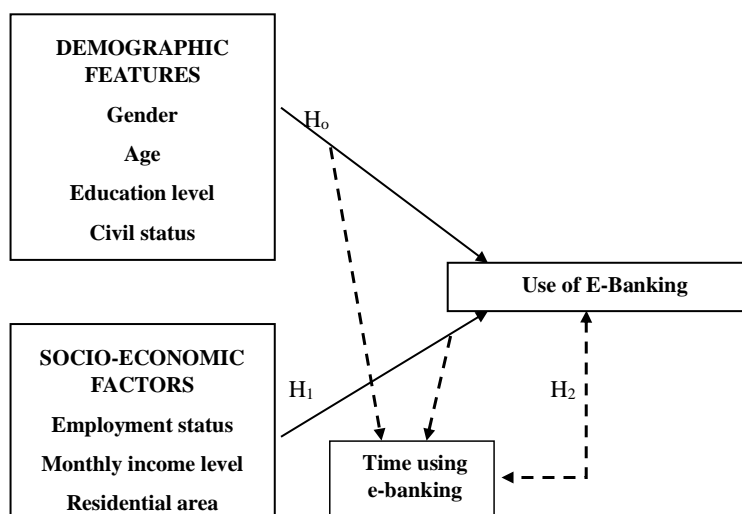


Figure 1 Conceptual research model

This model predicts the relationships between demographic and socio-economic factors with consumer behavior towards e-banking services as factors that act unconditionally from each other and that, a priori, it is accepted that there is no difference in the manner and strength of their influence. Time using e-banking is included in the model as a corrective factor in the effects of demographic and socio-economic factors on the frequency of use of e-banking services.

Data

The data used for this study are self-reported data from consumers of banking services. The data were collected online. For this purpose, a questionnaire self-designed, by us was used. To avoid as much as possible inaccuracies in the response and bias in relation to the data, the questionnaire was accompanied by clear instructions. The questionnaire emphasized that participation was voluntary and anonymous. The questionnaire began with a request for demographic information and was followed by questions regarding the consumer's use of e-banking services offered by second-tier banks in Kosovo. The questionnaire contained closed questions. Of all the questionnaires returned completed by consumers, after their initial processing, a total of 351 questionnaires were accepted for analysis for the purposes of this study. The data were collected during the period September-November, 2024. The random sample formed has the structure as in Table no. 1.

Table 1 Sample characteristics

Variable	Category	Number	%
Gender	Male	103	29.3
	Female	248	70.7
Age	18-29 years old	143	40.7
	30-39 years old	119	34.0
	40-50 years old	59	16.8
	>50 years old	30	8.5
Education level	Elementary	104	29.6
	High school	58	16.5
	University	287	81.8
Employment status	Unemployed	104	29.6
	Self employed	21	6.0
	Employed	226	64.4
Monthly income level	Less than 300 €	80	22.8
	300-600 €	93	26.5

	601-1000 €	44	12.5	Table 1...
	More than 1000 €	134	38.2	
Time using e-banking	Less than 1 year	119	33.9	
	1-2 years	89	25.3	
	2-5 years	79	22.5	
	More than 5 years	69	19.7	
Civil status	Single	163	46.4	
	Married	188	53.6	
Residential area	Rural area	84	23.9	
	Urban area	267	76.1	

Methods of analysis

Descriptive analysis was used to calculate the frequencies of use of different e-banking services, to judge the frequency of use of different service channels and the evaluation regarding Using Different Types of Internet Banking Services.

To identify and evaluate relationships between demographic features, socio-economic factors and the use of e-banking services, a binary logistic regression analysis was performed according to the following model:

$$Y_{ij} = \beta_{0j} + \beta_{1j}X_{1ij} + \beta_{2j}X_{2ij} + \epsilon_{ij}$$

where:

Y - dependent variable-Profile of the consumer of e-banking services-, whose value is one of two states: Frequent user (1), Non frequent user (0)

X_{1ij} - independent variable that reflects the demographic features of consumer: gender, age, education level, civil status

X_{2ij} - independent variable that reflects socio-economic characteristics: employment status, monthly income, residential area, time using e-banking

A consumer was considered a frequent user of e-banking services when he/she used at least once a month at least three of four e-banking services considered in the study.

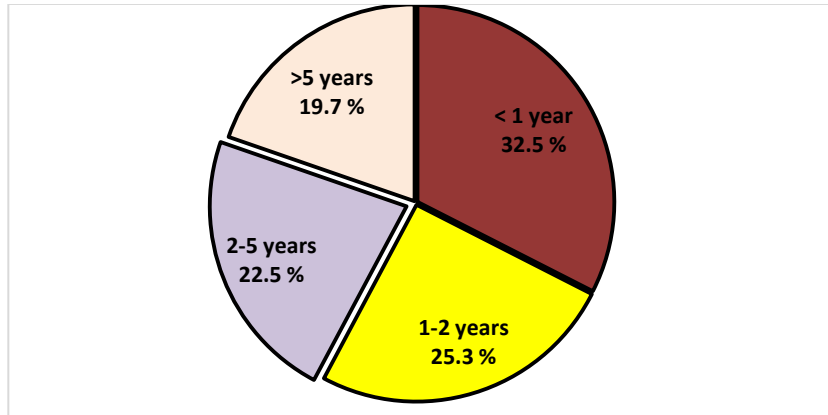
RESULTS AND DISCUSSION

Descriptive analysis

According to the statements of the consumers who responded to the questionnaire, about 67.8% of them are users of e-banking services for a period of time longer than one year. Among these consumers, about 29.2% of them declare that they have been using these services for more than 5 years. Considering the fact that e-banking services in Kosovo are

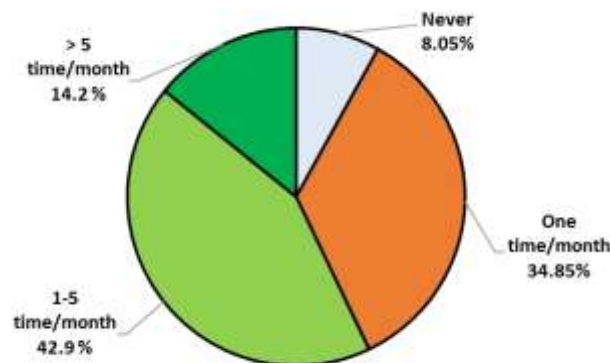
relatively new, this sample structure is in favor of the assertion that the formed sample is representative.

Figure 1 The structure of the sample according to the years of use by consumers of e-banking service



Regarding the frequency of use of e-banking services during a month, the sample structure results as in Figure 2.

Figure 2 The structure of the sample according to the frequency of use of e-banking during a month

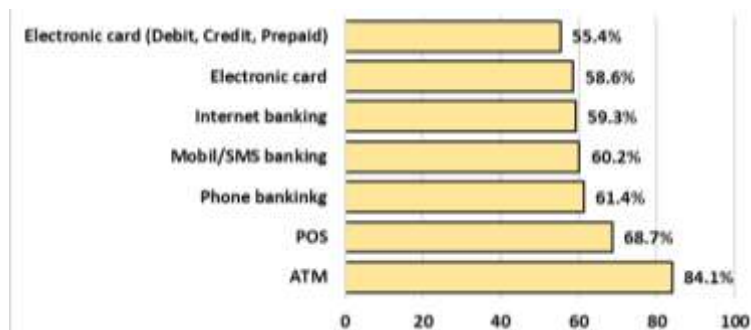


As can be seen, about 57.1% of consumers declare that they use the online service offered by second-tier banks more than once a month. An assessment of this level has also been published by Nuha (2019). The assessment of the increase, during the period 2019-2024, by about 7.1% of the number of consumers who use e-banking services more than once a year is an argument in favor of the assertion that, despite the fact that e-banking services are a

relatively new offer for the consumer of banking services in Kosovo, the reaction and behavior of the consumer is characterized by loyalty and a growing trend of their use.

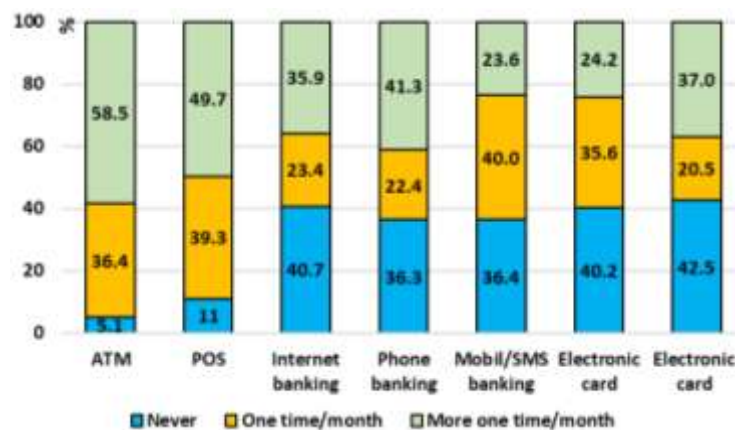
The respondents' responses regarding the digital service channel they use to receive online services from banks are given in Figure 3. Among all the e-banking services offered by second-tier banks, ATM is used the most, followed by the e-banking service consumer in Kosovo who uses the POS service. Similar consumer behavior in choosing the channel through which they receive e-banking services has been published by other authors (Spaho & Ramaj, 2014; Hossain, 2016; Meghai and Gokhru,2020; Ismaili & Brahimllari, 2021; Lila & Tanushev, 2024).

Figure 3 Use of e-banking service by respondents

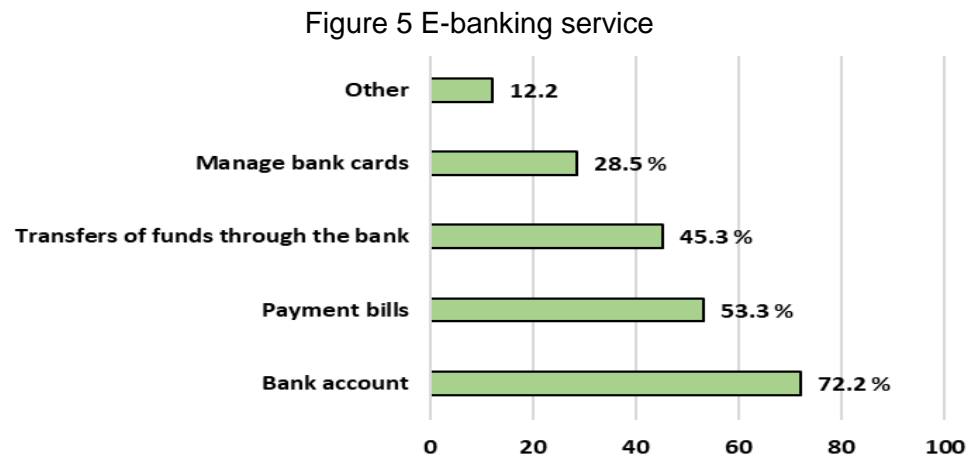


The frequency of use during a month of the channel that the consumer chooses to receive e-banking services varies depending on the channel (Figure 3)

Figure 4 The frequency of use of the channels offered by the e-banking service



ATM and POS and after them Phone banking are declared as channels through which most of the consumers who use them, receive services from them several times a month (Figure 4). This fact shows that the behavior of consumers in Kosovo towards e-banking services does not have fundamental differences from that of consumers of these services in other countries. The results reported by Mia, et al (2007); Ighomereho et al. (2018); Ismaili & Brahimllari, (2021); Lila & Tanushev, (2024) support this statement.



The e-banking services most used by consumers in Kosovo are Bank account and Payment bills (Figure 5). The preference for using these two services has also conditioned the investment of second-tier banks to increase access to them by increasing the number of ATMs and POS (Haxhosaj & Kume (2025). Similar results have been published by Ismaili & Brahimllari, (2021) who have studied this problem in the case of consumers of e-banking services in Albania.

Binary logistic regression analysis

Table 2 Results of logistic regression

Items	Dependent variable: Profile of the consumer of e-banking services Frequent user (1), Non frequent user (0)	
	β	odds ratios
Gender		
Reference: Male		
Female	0.073 ^{NS}	1.075
Age		
Reference: 18-29 years old		
30-39 years old	0.802 [*]	2.299
40-50	-0.469 ^{NS}	0.625
>50 years old	-0.284 ^{NS}	0.753

Table 2...

Civil status		
Reference: Single		
Married	1.323**	3.754
Education level		
Reference: Elementary		
High school	0.064 ^{NS}	1.066
University	-0.075 ^{NS}	0.927
Employment status		
Reference: Unemployed		
Self employed	0.408*	1.504
Employed	1.203**	3.331
Monthly income level (Euro)		
Reference: Less than 300 €		
300-600 €	0.024 ^{NS}	1.024
601-1000 €	0.921*	2.512
More than 1000 €	1.107*	3.025
Time using e-banking		
Reference: Less than 1 year		
1-2 years	0.625*	1.868
2-5 years	1.905**	6.719
More than 5 years	1.856**	6.398
Residential area		
Reference: Rural areas		
Urban areas	1.062*	2.892

^{NS} p>0.05; * p<0.05; ** p<0.01

Based on these results, it can be stated that the demographic features and socio-economic factors included in the above binary logistic regression model differ from each other in the effect they have on shaping consumer behavior in Kosovo towards e-banking services. The cumulative effect of all these factors is estimated to be responsible for explaining about 18% ($R^2 = 0.18$) of the total variance of the binary dependent variable "Profile of the consumer of e-banking services". Referring to the values of *odds ratio* coefficients, it can be affirmed that:

-The consumer's gender effect is not significant ($p>0.05$). This result is the same as that reported by Spaho & Ramaj (2014); Ismaili & Brahimllari, (2021) and different from the results reported by Margaret & Ngoma (2013); Meghani, & Gokhru (2020); Ali Gul et al. (2022).

-Age is a factor that has a partial impact on consumer behavior. A statistically significant positive effect ($p<0.05$) is found only for the age group 30-39 years old. Compared to consumers aged 18-29 years old, consumers of this age are estimated to have about 2.3 times more chances of being frequent users of e-banking services. The above results highlight the existence of a tendency for a negative relationship between the age of consumers > 40 years old and the frequency of their use of e-banking services. The relationship between the age of the consumer in Kosovo and the frequency of their use of e-banking services is characterized by patterns almost identical to those reported by other authors (Meghani, & Gokhru, 2020); Ismaili & Brahimllari, 2021; Chaudhary et al. 2022). Referring to the results reported by Rodrigues, et al.

(2023), it is important to emphasize that in order to identify and evaluate the links between the consumer's age and his behavior towards e-banking services, it is necessary to conduct in-depth research on the basis of which second-tier banks should plan and implement policies and programs aimed at increasing the use of e-banking services.

- Civil status results in a factor that has a statistically significant effect ($p < 0.01$). Married consumers are found to have about 3.7 times more chances of being frequent users of e-banking services compared to single consumers.

- Educational level is assessed as a factor that does not have a significant effect on the frequency of use of e-banking services. Furthermore, the analysis highlights the tendency of a negative effect on the use of e-banking services among consumers who belong to the "University" level. Such a result differs from the results of studies on this subject reported by many other authors. Meanwhile, it should be noted that this result is to a considerable extent a consequence of the fact that, among the consumers who have been part of this study, many of those who have declared that they belong to the "University" level of education are students, as a rule unemployed.

- Employment status is assessed as a factor with an important, statistically significant effect ($p < 0.05$) on consumer behavior in Kosovo towards e-banking services. Self-employed and employed consumers are respectively 1.5 and 3.3 times more likely to be frequent users of e-banking services compared to unemployed consumers. This result does not differ from the published result for consumers of these services in Sri Lanka (Kariyawasam & Jayasiri, 2016), in Nepal (Tan, et al. 2020) in Albania (Ismaili & Brahimllari, 2021), in Zambia (Sambaombe & Phiri, J. 2022).

- Monthly income is a factor that begins to show its impact on the frequency of use of e-banking services ($p < 0.05$) only after its value is greater than 600 Euro/month. Compared to consumers with incomes up to 300 Euro/month, consumers who earn monthly incomes of 601-1000 Euro and > 1000 Euro are, respectively, 2.5 and 3.02 times more likely to use e-banking services several times a month. This result is similar to results reported by other authors (Spaho & Ramaj, 2014; Ismaili & Brahimllari, 2021; Hammoud et al (2018); Dhanya & Velmurugan (2023).

- Time using e-banking is evidenced as a factor with a significant positive impact on consumer behavior towards e-banking services ($p < 0.05$; 0.01). The increase in years of using these services is associated with an increase in the frequency of their use during a month. Meanwhile, it should be noted that this relationship has a curved character. The increase is exponential when comparing consumers who declare that they have been using these services for 1-2 years, with consumers who have been using them for 2-5 years. For consumers who declare that they have been using e-banking services for more than 5 years, a small decrease in the

chances of them being frequent users is observed compared to consumers who use the services during a period of 2-5 years. The relationship is similar to that reported by Singer et al. (2012) and Ismaili & Brahimllari, (2021).

-Residential areas are assessed as a factor that has a statistically significant impact ($p < 0.05$) on the frequency of use of e-banking services. Consumers residing in urban areas are about 2.9 times more likely to be frequent users of these services compared to consumers residing in rural areas. This result is similar to the results published by Jha, (2019); Meghai & Gokhru, (2020), Sagar, (2023). Explaining the reasons for the differences in behavior towards e-banking services between consumers residing in urban and rural areas requires an in-depth study. Meanwhile, considering the territorial distribution of the population in the Republic of Kosovo, conducting this study is a need of the hour because a significant number of potential consumers of banking services reside in rural areas.

LIMITATIONS OF THE STUDY

The study includes demographic features that are most often used in studies of this nature. Increasing the number of these features is the subject of ongoing research. The socio-economic factors included in the study were selected based on the hypothesis that these factors can be ranked among the factors with the greatest effect on consumer behavior towards e-banking services. Conducting the study using data declared by a random sample of consumers of banking services, the conclusions of this study should be used as statistical statements with certain probabilistic certainty. The study does not exhaust the need to identify and assess relationships between consumers` demographic features, socio-economic factors and use of e-banking service in Republic of Kosovo.

CONCLUSION

Consumer behavior towards e-banking services offered by second-tier banks in Kosovo does not differ significantly from consumer behavior towards these services in other countries.

Among the services offered, consumers in Kosovo use ATMs and POS more for bank accounts and bill payments.

The frequency of e-banking use varies depending on the consumer's age, civil and employment status. The level of education and gender of the consumer do not affect their behavior towards e-banking services. An increase in monthly income increases the consumer's interest in using e-banking services.

Consumers who have longer periods of time using e-banking services use these services more frequently.

Consumers residing in urban areas of Kosovo are more active users of e-banking services. Further research to identify and assess factors that influence consumer behavior towards e-banking services is necessary to better orient the policies and programs of second-tier banks in Kosovo to provide effective online services and user-friendly facilities.

RECOMMENDATIONS

Banks in Kosovo that offer e-banking services should prepare information materials dedicated to consumers of different ages and depending on their civil status and employment.

Banks should pay increased attention to Informing and encouraging consumers living in rural areas to use e-banking services

Informing young people about the advantages of e-banking is recommended to be one of the priority actions in the marketing policies and programs implemented by banks.

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