

Factors Influencing the Frequency of Use of E-banking Services in Albania

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Abstract

Development of Information and Communication Technology has helped banking business to evolve and has transformed banking services from traditional banking to e-banking services. Banks in Albania have invested in expanding and improving the Information Technology systems and have been developed a number of new e-banking services. The aim of this paper is to study the frequency of usage of electronic banking services by individual clients of banks in Albania. The objectives of this research are: to identify the frequency of electronic banking services that banks' individual clients use, to identify the benefits and barriers of using electronic banking services, and to evaluate the influence of socio-demographic characteristics of clients on frequent usage of electronic banking services. This study targets the population composed of individuals who have a bank account and use banking services. The results of descriptive analysis indicated that the most used electronic banking service was ATM followed by EPOS and Mobile banking. The results of logistic regression analysis indicated that banks' individual clients with age more than 30 years were less likely to frequently use e-banking services, whereas experienced clients were more likely to frequently use e-banking services. The findings of this study provide useful information for planning electronic banking promotion strategies, focusing in Mobile Banking and Internet Banking.

Keywords 1

Commercial Bank, Electronic Banking Services, Frequent user, Logistic Regression, STATA.

1. Introduction

The rapid development of information and communication technology in recent years has brought major changes in the field of economics. New electronic systems have changed the dimensions of competition in the banking sector. Recently, e-banking has more and more become a necessary factor of business strategy and for economic development.

Electronic banking is a process by which a customer may perform banking transactions

electronically without visiting a brick-and-mortar institution. The following terms all refer to forms of electronic banking: ATM (Automated Teller Machine), EPOS (Electronic Point of Sale), phone banking, internet banking, mobile banking also Electronic payments through Credit cards, Debit cards, and Electronic fund transfer.

Banks use such services as a competitive advantage and a method to efficiently expand their business beyond geographical barriers. Online banking is becoming one of the most popular payment methods in Europe and

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worldwide, allowing customers of a bank or other financial institution to develop a wide range of financial transactions through their websites. In 2019, it was found that 95 percent of the Norwegian population access online banking sites, making Norway the country with the strongest electronic banking penetration in Europe, followed by Iceland and Denmark [1].

On the other hand, some of the most underdeveloped countries in Europe, namely Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, and Serbia are still struggling for economic growth and the development of these services requires more time and effort [2].

In our country, electronic services became part of the banking system much later compared with developed western countries [3]. Transaction security has been one of the main problems that have accompanied the performance of electronic services in Albania.

The main objectives of this paper are to identify the electronic banking services that commercial banks in Albania are offering to their customer and the services that are used most. Also, the frequency of e-banking use and the factors that influence the clients' adoption will be an important part of the analysis.

2. E-banking Development in Albania

The digital banking technology in Albania continues to close the gap with more advanced European markets. Actually, among the 12 banks operating in Albania, 11 banks offer Internet banking and 7 of them offer Mobile Banking service [4]. The first bank to provide e-banking was the American Bank of Albania in 2002. Electronic retail banking technology started being introduced in Albania in the form of Internet Banking, then Mobile Banking and more recently, Mobile Payments.

Among all e-banking services offered from banks, as mentioned before, ATM and POS are the services the clients used the most. The highest number of ATM terminals is achieved in 2015. In the end of 2019, the number of ATMs is decreased by 2.2% compared to 2018, during the third quarter of 2020 the number of ATM is increased to 738 (Fig.1).

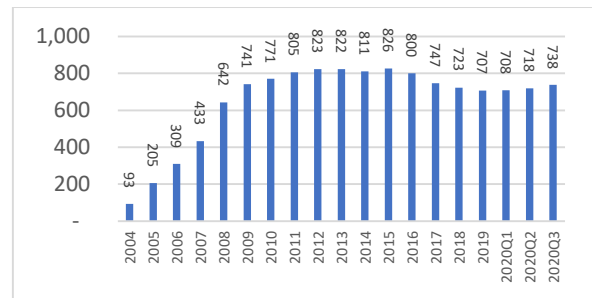


Figure 1: Development of ATMs during 2007-2019 (Source: [5])

The number of POS terminals increased from 155 in 2004, 4903 in 2010 and 11195 in 2019. At the end of 2019, the number of POS terminals increased by 28.3% compared to 2018. A slight increase of POSs number has been in three quarters of 2020 (Fig.2).

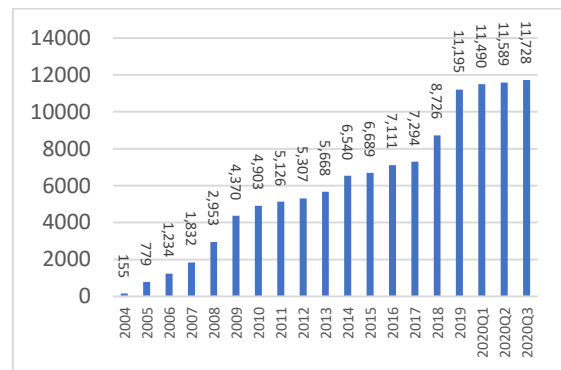


Figure 2: Development of POS terminals during 2004-2019 (Source: [5])

Results of the study of [6] indicated that the diffusion of ATMs and POS terminals have achieved their maturity level.

According to the total transactions at the end of 2020, about 71% are cash withdrawals from ATMs and only 25% are card payments at POS. Card payments at POS terminals indicate a predominance of the number of transactions performed through debit cards, in terms of value, credit card transactions appear significantly higher than debit cards except for year 2019 [5].

In customer transfers continue to dominate those in paper form (about 57%), while Electronic transfers include Internet Banking, Mobile Banking, Telephone Banking and Computer Banking (about 43%).

Card transactions include: ATM cash withdraw, ATM deposits, transfer order through ATMs, cash withdraw at POS terminals, payment by card, payment by electronic money. There is a growth tendency

related to the total number of card transactions including mostly ATM and POS cash withdraw, payment by debit or credit card. The highest number of transactions performed by cards is reached in 2019, about 22 million of transactions. (Fig.3).

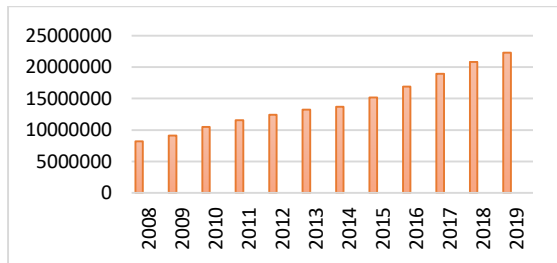


Figure 3: Total number of card transactions from 2008-2019 (Source: [5])

According to results of 2020 there is an increment about 621,657 of the total number of these transactions starting from April to the end of November. (Fig.4)

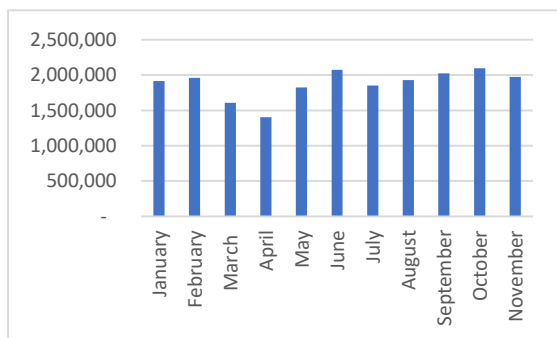


Figure 4: Total number of card transactions during 2020 (Source: [5])

On the other hand still referring to the card transactions in our country, during 2019, a total of 22.2 million card transactions (ATMs and POSs) were processed, with a turnover of ALL 230.6 billion. This is the highest value achieved in the last 10 years (Fig.5).

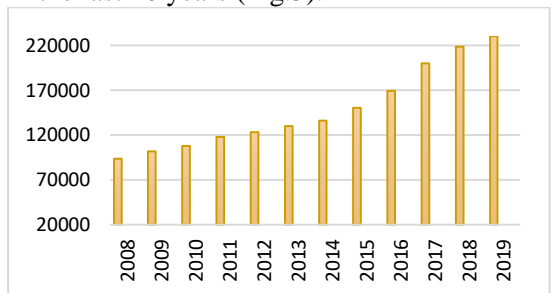


Figure 5: Total value of card transactions from 2008-2019 (Source: [5])

Related to the total value of card transactions, there is an increment of more than ALL 5 million from April to August of 2020. (Fig.6)

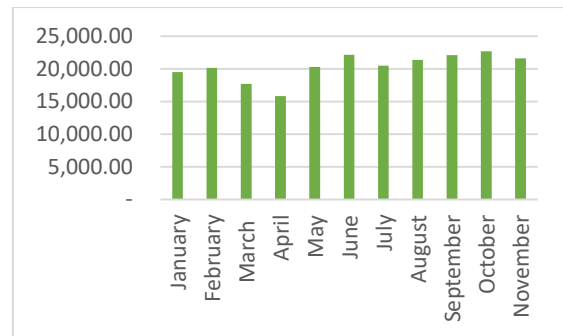


Figure 6: Total value of card transactions during 2020 (Source: [5])

Internet banking was the only online banking service during the period 2008-2010. The number of transactions was 88,261 in 2008 and was almost doubled in 2010.

Recently there is an increase of 29% from 2018 to the end of 2019 related to transactions mainly payments made using Internet banking (Fig.7).

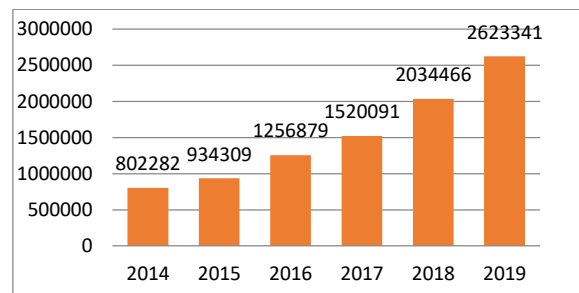


Figure 7: Total number of payments using Internet Banking (Source: [5])

There is an increase of 56% from 2018 to the end of 2019 related to the number of transactions mainly payments, made using mobile banking. The following figure also shows the drastic increase for the last three years (Fig.8).

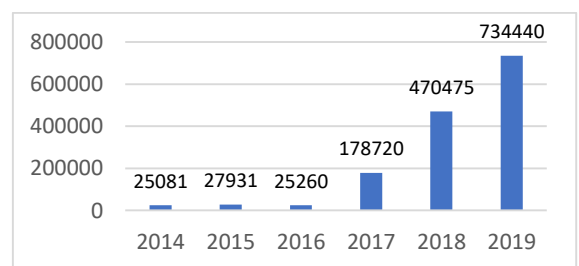


Figure 8: Total number of payments using Mobile Banking (Source: [5])

Number and value of banking transactions in the Internet is increased from 2017 to the present. The number of payments made through internet banking is higher than the number of payments made through mobile banking.

Internet Banking transactions were 609495 transactions in the first quarter, 649891 in the second quarter and 730480 in the third quarter of 2020. In terms of value 198684, 203067 and 227362, respectively (in ALL million) [5].

Mobile Banking transactions were 218240 transfers in the first quarter, 305953 in the second quarter and 334277 in the third. In terms of value 25577, 33081 and 41847 respectively (in ALL million) [5].

3. Literature Review

Most of the studies that study the factors impacting the adoption of e-banking services, also consider social and demographic characteristics of individual clients of the banks.

Reference [7] found that age, gender, income and education level have strong effect on the adoption level of mobile banking in Jordan. Educational level was the strongest positive factor that influence the adoption, whereas the income level was a negative factor that reduced the adoption levels of mobile banking.

Study of [8] found that education level and profession were significant factors impacting the adoption of Internet banking by the clients, whereas age and gender were not significant.

The study of [9] found that gender, religion and income level influenced the usage of e-banking services, while marital status, age and education level were not statistically significant.

In the study of [10] was found that income, the type of bank account, computer skills level and internet usage were related to the client's usage of e-banking services.

Reference [11] found that education level, monthly income level, computer literacy and internet literacy were significantly related to e-banking services usage.

In their study, [12] found that family size, work experience, home ownership and monthly income were associated with debit card use.

The results of [13] showed that residence, number of earners in the family, educational level, frequency of banking transaction and

marital status had significantly contributed towards the adoption of electronic banking.

According to the study of [14], ease of access, ease of use, trust and usefulness have a positive effect on satisfaction with the electronic banking services. Specifically, website accessibility and elements that enhance website usefulness such as updating information, better outcomes, productivity, etc., need to be taken into account when considering electronic banking users in general.

Reference [15] found that demographic characteristics such as sex, age, marital status, educational level and job position were associated with e-payments usage and significantly influenced EPS adoption by the money deposit banks of Nigeria.

The results of [16] indicated that age, income, educational level and occupational status have no significant influence on users' e-banking usage behavior, and gender has significant influence on users' e-banking usage behavior.

The results of [17] indicated that customers mostly prefer ATM service, followed by mobile banking and online banking. No relationship was found between online banking and different demographic variables. ATM usage was highly influenced by most of the demographic variables, whereas internet banking, mobile banking and telephone banking were influenced only by age groups, education level, and monthly income.

The study of [18] found some level of association between socio-demographic characteristics of ATM users and ATM usage. Results revealed that age, education, and income influence ATM usage. Service quality influenced ATM usage more than socio-demographic factors.

According to the study of [19] the results show that intention to use electronic banking services is positively influenced by factors of ease of use, privacy, trust and perceived usefulness.

The results of the study of [20] revealed that performance expectancy, effort expectancy, facilitating conditions and behavior intention significantly impact the adoption of e-banking services, whereas social influence was non-significant to the user's intention to adopt e banking services.

Reference [21] found that age, income, educational level and profession impact the adoption of e-banking.

In the study of [22] was found that perceived behavioral control, behavioral intention, subjective norms, attitude towards use, perceived usefulness, perceived ease of use, availability of internet/network connection and awareness have a significant positive impact on customers usage of e-banking service delivery channels, however, perceived risk has a negative significant impact on customers usage of e-banking.

Findings of the study of [23] supports the positive relation between e-trust and perceived usefulness, implying that e-banking customers also consider alternative banking service channels to be useful and easily useable, resulting in satisfied customers.

4. Research Methodology

This study targets the population composed of individuals over the age of 18 who have a bank account and also use banking services. All data were collected through a self-administered questionnaire in the period September-October 2020. Non-probability sampling was used to gather the data for this study. From 300 distributed questionnaires, only 133 questionnaires were returned completed.

The questionnaire included questions about the personal characteristics of the respondents such as age, gender, marital status, level of education, level of monthly income, place of residence as well as questions about time in years of using e-banking services: ATM, POS, internet banking, mobile banking, banking branches, etc., and the frequency of use of these services. The second part of the questionnaire consists of questions about the factors influencing the use of banking services by customers, and the expectations for the benefits and barriers of electronic banking services usage.

To analyze the relationships between socio-demographic variables and the frequent usage of e-banking services binary logistic regression was used. A respondent 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.

STATA12 was used to conduct the descriptive analysis, and logistic regression analysis.

5. Results and Discussion

The respondents were from Tirana (83%), 74% were female and 33% were married, 53% were between 18 and 28 years old and 24% were 31 or more years old. Most of the respondents (68%) have completed university, and 21% have completed master's degree. Majority of the respondents (34%) were state-employed, 15% work in private sector and 26% were students. Around 41% of the respondents had monthly income between ALL 30,000 and 60,000, and 36% less than ALL 30,000.

Also, around 41% of the respondents have been using e-banking services for less than 1 year, and 30% for 1 to 2 years and 20% from 2 to 5 years (Figure 10).

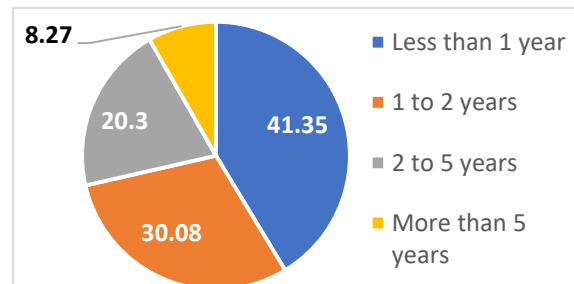


Figure 9: Years of using e-banking (n = 133)

Among all e-banking services offered from banks, ATM was used by majority of the respondents (96.25%), followed by POS (89.5%), mobile banking (82.7%) and internet banking (78.2%). The highest level of usage of ATMs compared with other channels is supported by the literature ([9]-[11], [17]).

Related to the frequency use of e-banking services, 82% of the respondents declared that they use ATM services at least once a month, 55% POS, 47.4% Mobile banking and 37.6% Internet Banking (Table 1).

Table 1: Frequency of use per month

Service channel	Never	Less than 1 time	1 to 3 times	4 to 8 times	More than 8 times
ATMs	3.75%	14.30%	26.32%	35.3%	20.30%
POs	10.53%	34.60%	30.83%	15.80%	8.28%
Internet Banking	21.80%	40.60%	26.32%	5.26%	6.00%
Mobile Banking	17.30%	35.34%	26.32%	12.78%	8.27%
Bank branch	14.29%	51.13%	24.81%	7.52%	2.25%

About e-banking services, the respondents are informed by bank employees (33.83%), through media advertising (25.56%), through

advertising on the bank's website (20.3%), and from the website of the bank (18%).

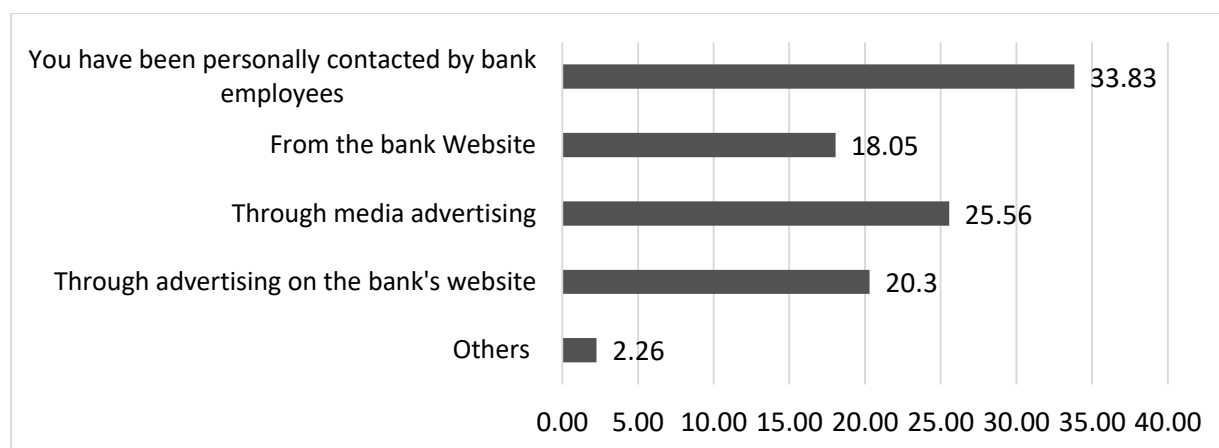


Figure 10: Information about e-banking

The most used services by the respondent were: account balance (67%), payments of bills (47.3%), transfers of funds through the bank (31.6%), to get information about products that

offered the bank (24%), only 9% to pay the monthly loan, and 5% to apply for a loan. (Fig. 11).

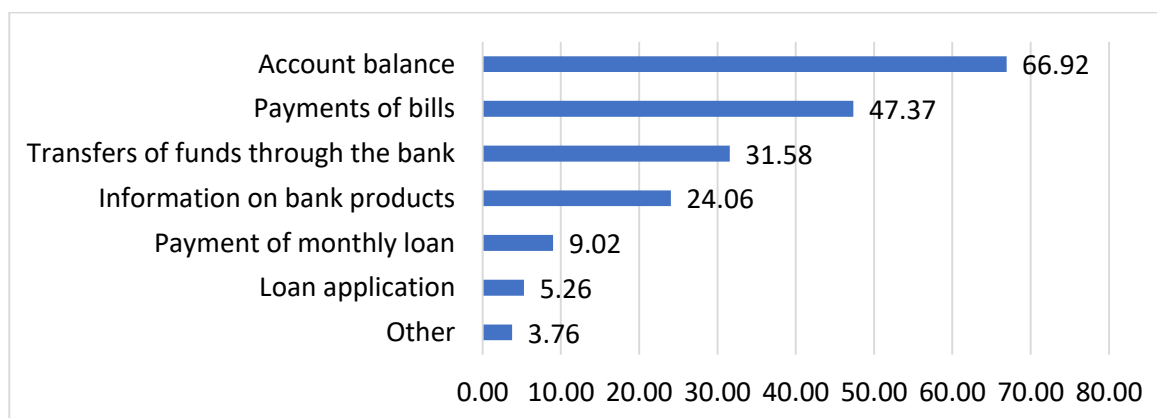


Figure 11: E-banking services

Among the benefits of e-banking use, 50.4% of the respondents have declared the convenience (24hour service), 24% accessibility, and 21.05% efficiency and speed. About 58% of the respondents have declared that the most barriers of e-banking usage was

security and privacy, followed by high commissions (28%) and difficulty in use (13.5%).

The results of binary logistic regression model, shown in table 2, indicate that the model was statistically significant (LR chi-square (11)

= 24.13, $p < 0.05$). The value of Pseudo-R² was 16.44 and the percentage of cases correctly classified was 78.2%. According to [24], the

classification accuracy should be at least 25% greater than that achieved by chance.

Table 2: Results of Binary Logistic Regression

Variable	Coefficient	p-value	Exp(b)
Age			
18 – 25 (ref)			1.000
26 – 30	-0.993	0.174	0.371
31 and above	-2.314	0.023	0.099
Gender			
Male	0.1632	0.771	0.849
Female (ref)			1.000
Marital Status			
Single (ref)			1.000
Married	1.130	0.103	3.096
Education level			
Secondary(ref)			1.000
University	-0.319	0.722	0.726
Master +	0.354	0.717	1.425
Employment status			
Employed	1.130	0.085	3.096
Unemployed(ref)			
Monthly income level (ALL)			
Less than 30,000 (ref)			1.000
30,000 to 60,000	0.890	0.191	2.435
More than 60,000	0.199	0.819	1.220
Time using e-banking			
Less than 1 year (ref)			1.000
1 to 2 years	1.702	0.008	5.484
More than 2 years	1.429	0.044	4.175
Constant	-2.922	0.005	0.054
LR chi-square (df),	24.13 (11)		
Prob > chi2	0.0122		
% correctly classified	78.2		
Pseudo-R²	16.44%		

Note: Ref. indicates the reference category.

The odds ratios (exp(b) values) indicated that the frequent usage of e-banking services was positively related to time using e-banking, that is, individual clients that use e-banking for a long period of time (at least 1 year) were more likely to frequently use these services. Also, the frequent usage of e-banking services was negatively related to age of the respondent, that is, respondents with age 31 years or more were less likely to frequently use e-banking services. Other socio-demographic variables were not significant at 5% level. However, married client, females, those with master diploma and those with higher level of monthly income were

more likely to frequently use e-banking services.

The finding about monthly income was inconsistent with the results of ([7], [9-12], [18], [21]) and consistent with the results of [16].

The finding about age was consistent with some studies ([7], [15], [17-18], [21]) and inconsistent with the studies of [8], [9] and [16].

6. Conclusions

Banking sector has undergone intensive transformation under the influence of information and communication technologies. More effective and efficient channels have produced to deliver banking services.

The main objective of this research study is to analyze the most important factors influencing banking customer's decision to frequently use e-banking services.

Based on the results of this study, among all four considered e-banking services offered from banks in Albania, the services that were used by most of the respondents were ATM, EPOS and Mobile banking. About the frequency use of e-banking services/channels, 82% of the respondents have used the ATM services at least once a month, 55% EPOS, 47.4% Mobile banking and 37.6% Internet Banking. The most used e-banking services were: account balance (67%), payments of bills (47.3%) and transfers of funds through the bank (31.6%).

The logistic regression model results indicated that time using e-banking was positively related to frequent e-banking usage, whereas age of the respondent was negatively related to frequent use of e-banking.

These findings give useful information about banking organizations and managers for proper market analysis and planning e-banking promotion strategies. Banks should give their clients more information about benefits of e-banking services and about the security and privacy of their account.

This study has some limitation. Firstly, the study identifies some socio-demographic characteristics of clients that influence the frequency of usage of e-banking services. Though other factors can influence the frequency of usage of these services. Secondly, the sample was small and it is not representative for all the country. Thirdly, the non-probability sampling was used to gather the data in short time.

In the future, the research must be performed to identify other factors that can influence the usage of these services such as: security, privacy, trust, perceived usefulness, ease of use, etc., using the structural equation modeling. Also, future research can study the factors influencing customer satisfaction and

customer loyalty using the structural equation modeling.

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