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# Digitization of Banking Services and Its Impact on Customer Satisfaction: Case, Republic of North Macedonia

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*Abstract*. Today, the banking system in the country has become so technologically advanced that almost all banking services are delivered through electronic platforms. Electronic banking in North Macedonia has a relatively recent history of its development. Of course in its beginnings, Electronic Banking has a small number of clients and a low volume of transactions on these platforms. This is due to their reluctance, low penetration of internet in local households or even the small banking development of these e-banking platforms.

Two main aspects will be considered in this paper: firstly, the management of the process of digitization of services and products in the Banking System in the Republic of North Macedonia will specifically examine the information security system, the credibility of the measure against the digitalization of the banking system and the risk of social engineering. Second, we will present a survey of 150 respondents on "Bank customers' satisfaction with e-banking in the Republic of North Macedonia and reliability of their data usage.
Digital banking as a new business model, offered through multiple integrated channels of electronic banking services is the future of every banking sector in a century when technological innovation knows no bounds. The challenge of the banking sector in Macedonia remains the use of electronic banking services by customers.

According to the results, banks need to improve the customer experience in using multiple sales channels. They should proactively encourage more massive use of electronic services, through more favorable pricing of electronic banking services. Customers should also be constantly informed and educated about the use of these services and the risks arising from the use of digital technologies. Research highlights that the highest percentage of users are in favor of digitizing banking services because they benefit in different ways. Some of these benefits for clients include avoiding unnecessary waiting in line to do some work at the bank, avoiding adjusting their personal schedule to that of hours when the bank is open, etc. The findings of our survey also show that bank customers' satisfaction with e-banking in Macedonia and the reliability of their data security during use is high.

*Keywords:* digitalization, services, banking system, satisfaction, etc.

**Introduction**

Kennedy and Jacky (2013) note that the digital banking technology has greatly advanced there by playing a major role in improving the standards of service delivery in the financial institution sector. Those days are long gone when customers would queue in the banking halls waiting to pay their utility bills, school fees or any other financial transactions. They can now do this at their convenience by using their ATM cards or over the internet from the comfort of their homes. Banks prefer their customers to be more oriented towards the use of digital banking or automation of services in order to use the staff more efficiently through their branches, instead of performing routine operations.

Consequently, it is very important for banks to have the knowledge that customers consider important for their operations, as well as to know what they are satisfied with in the operations of their home bank. A satisfied customer comes back again and recommends the company to his friends and colleagues. Banking is becoming more and more a part of people's lives, for example, the use of cash is decreasing, and the number of card payments is increasing, and high-quality customer service is also important, and therefore this topic is topical at the moment.

Following the examples of Western Banks, the banking system in North Macedonia in recent years is taking the direction of modernization. Following the competition and the demands of the customers, the banks in RMV have introduced the digitalization and automation of their services. Today, the banking system has developed so much technologically, where almost all banking services are realized through electronic platforms. E-banking is a way of banking where the customer can make financial transfers, municipal payments, and access to personal accounts, financial reports, etc. through the digital e-banking platform that the bank offers on personal computers or laptops.

This paper considers the current state of e- banking services for consumers in the North Macedonia to highlight the impact of the service quality on customer satisfaction. Customer satisfaction is the most important element in attracting and maintaining the customers, specifically in the banking sector (Ennew, Binks & Chiplin, 2015). Satisfaction is the key element in the process of creating and maintaining loyal customers. According to Philip Kotler (Kotler, 2013), the definition of customer satisfaction says that it is predetermined by how the expectations of the customer are met. So, customers compare their expectations about a specific product or services and its actual benefits.

**Literature Review**

In the literature review section, we would like to define two main terms related to this research topic: *services* or *digital banking services* and *customer satisfaction*.

The service is not something that can be evaluated simply as a product. Contrary to the services, it is easier to evaluate a product and we have our perception for its value.

Services are defined as “An activity, benefiting, and satisfaction that is on the market up for sale” (Srivastava, 2016). The characteristics of services are classified according to some features:

1. Intangibility

Intangibility describes the notion of a product which we can see, physically touch and we have a notion of its shape and components from which is made (Kotler and Armstrong, 2010).

Contrary on the Services, the illusion of good cannot be touched, making it a more mysterious concept.

2. Inseparability

This is one of the characteristics which differs from the goods.

In the case of a touchable thing, the product is independent of its producer, while this is not the case with the Services (Bose, 2010). This is because there cannot be a mediator or a distributor of the services in between the provider and the consumer of the service. The humans are a key factor, because the consumer is in direct contact with the provider of the service. To simplify it, it is best to illustrate it with the haircutter example: The Haircutter concept is that the physical objects are not remembered, but the serviceman is. So, the entire company is symbolized from the person that does the service. So, the front man of the service will create the positive or the negative impression of the company for the service.

The same applies for the banking services, because the consumer is not there to see how beautiful the chairs or the doors are but will create his impression based on the interaction with the employees and the way he will be treated.

3. Variability

Because services are variable and different, it is impossible to create an identical service. This depends on how the services are provided and by whom (Helmold, 2020).

Despite this, there are some parameters and standards put in place, which will be followed to make a similar experience, so the company can keep its promises to the consumer, and it is some kind of quality control for the services provided.

4. Perish ability

Services do not have the physical aspect like products, which are made of several components.

This means that services cannot be stored for later use (Burrow and Fowler, 2015).

This also makes it impossible to stock up services in a warehouse, to be used for later needs. The service is created at the moment of request and cannot be reused.

The quality of services is one of the most difficult elements to be measured, because we do not have to do with an object, instead with an abstract illusive thing. The concept of quality of services is very personalized and differs from the quality of a product (Harmse, 2012).

The consensus between researchers is that quality is the abstract illusion, but despite that, the debate between the American school and the Scandinavian school is ongoing.

According to the Nordic school, the quality of service must be measured using technical and functional aspects.

On the other hand, the American school uses descriptive terms that include the following dimensions of the quality (Campbell, 2017):

1. Reliability.
2. Reactivity.
3. Security.
4. Empathy.

The definition of the quality of services focuses mainly on the adaption and the fulfilment of consumer needs, while setting the standards and later evaluating up to which point the expectations are met.

The differences between the expectations and the perception of performance creates a bulge which will be either surplus or in deficit of the two. This term is called “Disconfirmation Paradigm” (Campbell, 2017).

The expectations in this case are based on individual norms, values, needs and wishes that are way too much personalized. The consumer expectations are beliefs that serve as standards or a reference point with which later quality is measured (Lagebram, 2017).

Digital banking is the digitization (or moving online) of all the traditional banking activities and programs that historically were only available to customers when physically inside of a bank branch. This includes activities like Money Deposits, Withdrawals, and Transfers, Checking/Saving Account Management, applying for Financial Products, Loan Management, Bill Pay and Account Services.

Full digitalization of banking services has already begun in the developed world and has entered the second phase in the Republic of North Macedonia, and is advancing rapidly, where most banks are digitizing their services because they are more efficient in providing their services to the client.
Three fields where banks focus on their digitalization include (Popkova and Sergi, 2020):

1. Cooperation between clients and with other banks for better digitalization and keeping their digitalization costs down.
2. Usage of digital ways to support their commercial clients to help them with their sales.
3. Creation of an IT department for the bank, which will manage the clients' data.

Customer satisfaction is the most important element in attracting and maintaining the customers, specifically in the banking sector (Ennew, Binks & Chiplin, 2015).
Consumer satisfaction is a function of customer perception and expectations and can be mathematically presented as the difference between these two variables (Vunjak, 2015):
SATISFACTION = PERCEPTION- EXPECTATIONS
The object of customer satisfaction may vary and may be related to different dimensions of the multiple product / service provider experiences. The customer is satisfied if the performance of the product / service is equal to his / her expectations (positive confirmation) and he / she is not satisfied if the performance of the perceived product / service is less than his / her expectations (negative confirmation).
Kotler (2012) in defining Customer satisfaction he says it involves customer creation, customer maintenance and retention.

**Research Methodology**
Two hypotheses have been raised in this research paper , by the help of which we will try to respond to our research questions:

- H1: Digitalization of banking services in RNM is in the process of development.
- H2: The efficiency, security, and privacy of e-Banking services positively affect customer satisfaction.

**A s**urvey using stratified random sampling was conducted, with 150 customers randomly selected for the study. The survey questionnaire is formulated to cover key issues like the level of digitalization of banking services and its impact on customer satisfaction.

**Results of Analysis**
The research seeks to find out the usability of e-banking in Macedonia, the way of performing banking services, the issue of security as well as the reasons for using e-banking and the level of user satisfaction. Data were collected from clients using questionnaires. This section presents the research findings and interprets the results of each question individually.

Table 1 shows the demographic characteristics of the respondents; out of 150 questionnaires only forty-nine were received from the respondents; 38.9% of them were males and 61.1% were females. From the second answer of the questionnaire, we got these results that we can see in Ttable 1: out of 150 respondents 53.3% of them were from the age group 18-30 years, 20.7% were from the age group 31-40, while the age group 41-50 years and 51 -60 years were represented by 12.7% of respondents. Only 0.7% belonged to the age group of over 60 years. We understand that the highest percentage belong to the young group and from the young generation we expect more positive results regarding the technology and its use in all areas in general and online banking and other online services in particular.

| | Frequency=150 | Percentage% |
|---|---|---|
| **Gender** | | |
| Male | 58 | 38.9% |
| Female | 91 | 61.1% |
| **Age of respondents** | | |
| 18-30 | 80 | 53.3% |
| 31-40 | 31 | 20.7% |
| 41-50 | 19 | 12.7% |
| 51-60 | 19 | 12.7% |
| 60+ | 1 | 0.7% |
| **Monthly income(euro)** | | |
| 100-250 | 24 | 16.2% |
| 250-450 | 51 | 34.5% |
| 450-700 | 19 | 12.8% |
| No income | 53 | 35.8% |

*Table 1. Demographic characteristics of the respondents*

The table below shows the respondents' level of education. So, the number of respondents with primary school was 7.3%, with secondary school - 16%, with high school - 12%, with an undergraduate degree - 38.7%, with a master's degree - 24.7%, and finally with doctorate and specialization degrees - 1.4 %. This showed that a higher number of respondents understand and have good knowledge about banking transactions, technology systems and internet use.

| | Frequency | % |
|---|---|---|
| Primary school | 11 | 7.3% |
| Secondary school | 24 | 16% |
| High School | 18 | 12% |
| Undergraduate | 58 | 38.7% |
| Master's Degre | 37 | 24.7% |
| Other | 2 | 1.4% |
| Total | 150 | 100% |

*Table 2. The level of Education*

The number of respondents who had a bank account in any of the banks in Macedonia was as follows: 30% use the Economic Bank, 28% of them use the Procredit Bank, 21% use the Commercial Bank and 18% the Tobacco Bank.

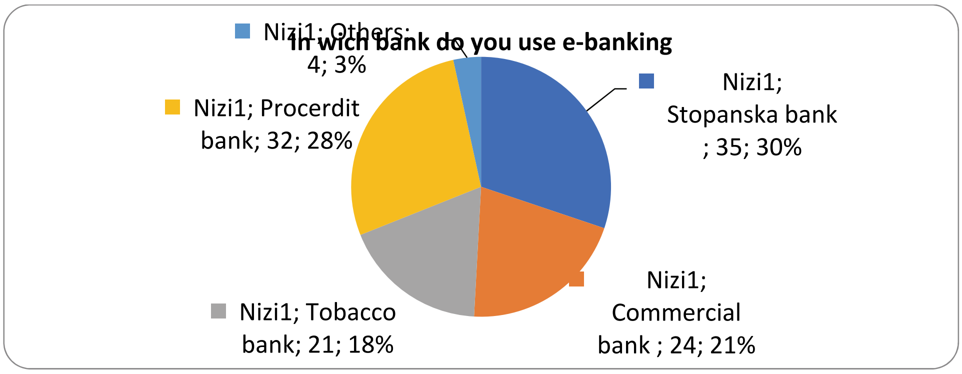


*Table 3. How would you assess the quality of electronic services in the banks of North Macedonia?*

Regarding the level of satisfaction of e-banking services, none of the respondents responded negatively. 17% of clients placed their satisfaction at average level, 47% said they were satisfied with the services, while 36% of the respondents appeared very satisfied. The reason for including this question was to find out the customer satisfaction level with regard to e-banking services as this was the main purpose of the thesis. The challenge banks have been facing is to work on further advancement of their services in order to increase the number of satisfied customers, while very satisfied customers can easily become loyal customers to the bank and its services.

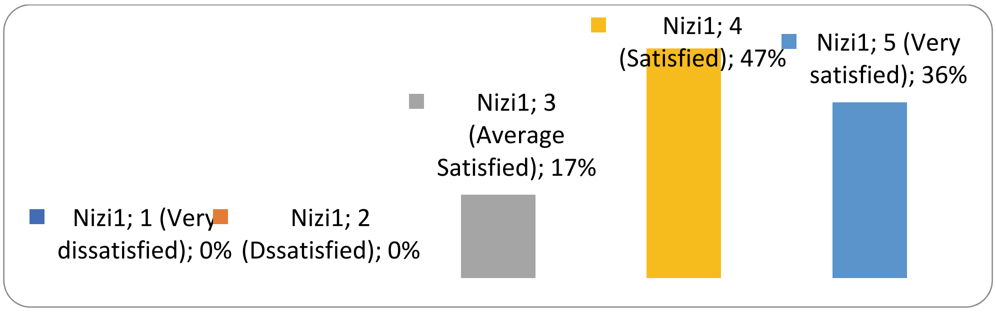


*Table 4. Satisfaction from digital banking services*

According to the Table 5, many respondents (48%) have been using digital banking services for 1 to 3 years; 22% of them have been using them for about 3 to 5 years, 2% have been using them for a period of more than 5 years, and 28% have been using them for less than 1 year. From this analysis, we came to know that most of the customers have been using digital banking for quite a long time.

| NO | How Long Digital Banking Service Have Been Used | % |
|---|---|---|
| 1 | < 1 year | 28% |
| 2 | 1 year to 3 years | 48% |
| 3 | 3 years to 5 years | 22% |
| 4 | Above 5 years | 2% |

*Table 5. Duration of Using Digital Banking*

| No | Frequency of Use of Digital Banking Services | % |
|---|---|---|
| 1 | Once every month | 54% |
| 2 | Twice every month | 27% |
| 3 | 3 times every month | 7% |
| 4 | More than 5 times | 11% |

*Table 6. Frequency of Use of Digital Banking Services*

In Table 6, we have analysed the frequency of using digital banking services. As we can see, the frequency of using digital banking services once every month is 54% of customers; 27% of customers have used digital banking twice every month; 7% have used it 3 times a month; 11% have used it more than 5 times a month. Thus digital banking services are mostly used by all of the banking customers at least for a single purpose in a month.

| **No** | **Why do you use e-banking services?** | **Percent** |
|---|---|---|
| 1 | Higher transaction speed | 68% |
| 2 | Save time waiting at the counters | 18% |
| 3 | Greater trust in electronic systems | 6% |
| 4 | Because it is modern | 8% |

*Table 7. Reasons for using e-banking services*

Regarding the question of what the reasons were behind their use of e-banking, we offered some more common options and an empty column in order to make it possible to write some extra reasons.
The results we got have been shown in Table 7 whereupon we can see that 68% use e-banking because of higher transaction speed, 18% for saving time, 6% use e-banking because they trust more the electronic system and 8% because they think it is a modern thing to do.

| **No** | **Type of digital Banking Technology** | **%** |
|---|---|---|
| 1 | ATM cards | 64% |
| 2 | Online Bill Pay | 17% |
| 3 | Mobile Money | 2% |
| 4 | Online payment options e.g., visa cards, pay pall | 18% |

*Table 8. Type of digital Banking Technology*

The findings as presented in Table 8 indicate that ATM cards were the most used, as shown by 64% of respondents; this was followed by online payment which is represented by 18%. The majority of the respondents used digital banking because they pay utility bills online, including electricity, water supply, TV and radio tariffs, central heating, telephony, mobile communications, etc. Regarding the use of mobile money, it could be deduced that the majority mostly used *channel* as it is reliable and easily accessible.

The study sought to determine how the speed of transactions of digital banking influences customer satisfaction in RNM. As we can see from Table 9, it was established that to a large extent (73%) the bank customers were satisfied with transaction speed. 17% of consumers were moderate extant and only

10% were of the view that the speed was not sufficient. This finding implies that the speed of digital banking in general is satisfactory.

| No | Extent of Satisfaction with Speed of Digital Banking | Percent |
|---|---|---|
| 1 | Small extent | 10% |
| 2 | Moderate extent | 17% |
| 3 | Large extent | 73% |

*Table 9. Extent of Satisfaction with Speed of Digital Banking*

The following table analyses the consumers' opinion on the effect of digitalization on the quality of banking services. According to the data, we can say that the respondents' attitudes are different. 44% of respondents think that the quality of banking services has increased as a result of the digitalization of the same; 32% of respondents think that the quality has not changed and 24% think that digitalization has reduced the quality of banking services.

| No | With e-banking, the quality of banking services is: | Precent |
|---|---|---|
| 1 | Increased | 44% |
| 2 | Remains the same | 32% |
| 3 | Decreased | 24% |

*Table 10. Impact of digitalization on the quality of banking services*

The results presented in the table below (11) shows that only 4% of respondents have no confidence at all in the security of digital banking services; therefore, according to them, digital banking services are not reliable; 13% of respondents believe security to be at an average level and most of them, 83% strongly believe in the security of online banking.

| No | Reliability of Digital Banking | Percent |
|---|---|---|
| 1 | Not reliable | 4% |
| 2 | Slightly reliable | 13% |
| 3 | Very reliable | 83% |

*Table 11. Reliability of Digital Banking*

## Conclusion

In general, the banking system in the Republic of North Macedonia in recent years has undergone major changes not only in its operation but also in the way of providing services and customer care. In addition, it has been proven that in the Republic of North Macedonia there is no full digitalization of banking services, so banks are in the process of developing the digitalization of their services and it will take longer to achieve full digitalization. Therefore, through this finding, we can also confirm the first hypothesis H1 that digitalization of banking services in RNM is in the process of development.

We can say that the second hypothesis, H2: The reliability, security, and speed of e-Banking services positively affect customer satisfaction, has also been proved.

The study concludes that the speed of transactions has an influence on customer satisfaction: as the transaction speed increases, customers become more satisfied.

Banks should ensure customers can adapt by passing information on how to use digital banking. Lastly the study concludes that there is a significant relationship between adaptability of digital banking and customer satisfaction. With an increase in adaption, customer satisfaction also increases.
Security must be constantly increased to guarantee the integrity of online transactions, as this will increase consumer confidence. Security provisions should be posted on banks' websites in a clear and understandable manner to improve the credibility and reputation of banks.

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