

FACTORS OF CUSTOMER SATISFACTION WITH THE QUALITY OF BANKING SERVICES AND PREDICTION OF THEIR SIGNIFICANCE

Nina MITIĆ^{1*}, Miodrag BRZAKOVIĆ²

¹Faculty of Applied Management, Economics and Finance, Belgrade, Serbia, nina.mitic58@gmail.com

²Faculty of Applied Management, Economics and Finance, Belgrade, Serbia,
miodrag.brzakovic@mef.edu.rs

Abstract: *In modern business, the quality of products and services is, not without reason, given considerable attention. That is why it is understandable that quality is considered a key business paradigm in banking as well. In particular, the quality of banking services is viewed as an essential prerequisite for gaining new clients and retaining existing ones. In this paper, scientific attention is focused on researching the factors of customer satisfaction with the quality of banking services and predicting their importance. In line with that, a descriptive "survey" method (survey-research method) was applied, while other methods were not completely ignored, because without of them a complete answer to all the questions could not be given. By applying factor analysis (orthogonal varimax method), five factors were obtained, which were, in further data processing and analyzing the research results, treated as the main factors of client satisfaction with the quality of banking services. One-factor analysis of variance - ANOVA - was used to predict the importance of selected factors from the client's point of view. The results of this research can contribute to the improvement of customer relations by improving the existing practice of managing customer relations.*

Keywords: *quality, service, service quality, quality indicators, quality factors, bank branch.*

Original scientific paper

Received: 05.05.2023.

Accepted: 19.05.2023.

Available online: 23.06.2023.

1. Introduction

Quality is a concept that has been around since ancient times. It can be said that the first written traces related to the existence of human civilization have some record related to quality. Of course, the term itself and its explanation was always in the context of the time in which it was created. From that initial period to the present day, the meaning of quality has evolved significantly. Today, the term "quality" is indispensable in any form of communication. That is why it can be quite justified that without high quality there is no survival of the organization on it but we have to bearing in mind the competition that reigns in the world market. It is evident, that today products or services on the market are most often recognized by their quality. Consequently, it is quite understandable that significant attention is paid to quality, which

* Corresponding author

raises quality to the level of a new paradigm in modern business systems. Accordingly, it is quite understandable that the question of the quality of banking services is increasingly being raised in the banking industry as a priority for gaining a prominent position in a competitive business environment.

In conditions of increasingly difficult acquisition of new clients, banks take all necessary measures to retain existing users of their services for as long as possible. At the same time, by maintaining their level of satisfaction with the quality of the provided services, the bank encourages its clients to recommend it to new potential users. In those circumstances, functionality, security, reliability and integrity are the basic prerequisites for the vitality of banking services. Care, kindness, flexibility, responsibility and courtesy do not have to be expected from the user, but if they are provided, they can significantly improve the user's perception of the service provided. Factors with the potential to produce customer delight, such as commitment, attentiveness and helpfulness, represent areas where banks gain a good reputation and perfection of service delivered. The challenge for a bank that wants to delight its clients is to convince its workpeople to demonstrate warmth and sympathy towards their clients.

Different approaches and models are observed in quality analysis, and the following four models that are most often used:

- *Quality as customer satisfaction.* It is achieved by analyzing buyers/clients and planning products and/or services that meet these needs;
- *Quality as a process.* Delivery of goods and services can be considered a set of processes, a chain that connects needs analysis, general setting of goals, definition of plans, production of products or preparation of services, placement of goods and/or services. Similar sets of processes can be defined in management procedures, but also in each link of the chain. Quality implies that each step of the process is implemented in the correct way;
- *Results-based quality.* The quality of the product or service must also be taken into account when evaluating the efficiency of the process. It is difficult to judge quality based on pure results alone;
- *Value-based quality.* It is relatively easy to define in production and most service activities, but there are also activities in which this model is difficult to apply. Some of these could be education, judiciary, healthcare, etc.

For the success of the policy of improving the quality of banking services, several key dimensions were introduced (Bahtijarević- Šiber et al., 1991):

- *reliability* - the probability of failure-free operation in a certain period of time or after a certain number of cycles;
- *performance* - basic operational characteristics (ability, features, functions);
- *convenience* - in creating transactions and obtaining customer services;
- *sensitivity* - according to the needs of service users, and
- *adaptability* - individual customization of the service.

Banks focus their efforts, for the most part, on appreciating and highlighting the previously mentioned dimensions. At the same time, reliability, openness in the specificities of banking products and clients' trust in the services provided by the bank, becomes the most important dimension, and performance loses its importance over time.

When looking at data and analyzing the wide range of aspects from which the user evaluates the quality of a banking service, it can be concluded that it is very difficult to provide all these dimensions in one service. That is why banks, in order to achieve their competitive advantage, pay attention to a certain group of quality dimensions.

2. Problem and subject of research

Experience and research unequivocally say that the quality of products and services play a crucial role in gaining new and retaining existing users. That is why it is understandable that the basic assumption of the progress of competitive advantage in the market is quality. Therefore, the basic premise for the survival and improvement of business activities and success of a business entity is the skill of the quality management system to ensure reliable and unchanging quality of products and services with minimal costs.

Considering that services have a great importance and a large participation in national economies, which is especially manifested in developed countries, research attention in this paper is devoted to that aspect. Therefore, the *quality of banking services* is in the field of scientific research, which is *a research problem*. Bearing in mind that this problem can be studied from different aspects, it is quite justified to narrow it down to *the specific subject of research - the factors of clients' satisfaction with the quality of banking services and predicting their importance*.

3. Method of research

3.1. Research methods

Considering the nature of the problem and subject, it was quite justified to apply the descriptive "survey" method (survey-research method) in the research. This variant of scientific description involves the active involvement of the respondents in providing information about the advent that are the subject of study, based on which they can get to the essence of the research problem and determine its condition, but also reveal cause-and-effect connections and relationships. However, this does not mean that the application of other research methods was completely ignored. On the contrary, in order to be able to answer to all the questions raised by this research, beside the descriptive, as a special, but also basic scientific research method, it was also necessary to apply general research methods, of which the statistical method was the most represented in this research.

However, this does not mean that the application of other research methods is completely ignored, on the contrary, in order to answer all the questions posed by this research, beside this basic scientific research method, it is necessary to rely on the following methods: synthesis analysis; inductions - deductions; abstractions - concretizations; generalization - specialization, as well as the method of special sciences - the method of content analysis. Such a methodological approach ensured that the research was more consistent and trustworthy.

Also, the application of the content analysis method as an individual scientific research method was unavoidable in this research.

3.2. Research instruments

For the purposes of this research, it was necessary to construct and validate an instrument for examining the opinions and attitudes of clients on satisfaction with the quality of provided banking services. This procedure is complex and involves a certain procedure that takes place as follows: first, the variables that most fully represent the features, features or characteristics of the research object are defined, and then, depending on the direction of influence, they are conditionally classified into independent (predictor) and dependent (criterion).

The basic instrument is a scale of attitudes of users of banking services (clients) about satisfaction with the quality of services which was constructed and validated in 2022. by Nina Mitić for the purpose of preparing a doctoral dissertation.

The validity of the manifest variables expressing the satisfaction of clients with the quality of the provided banking services was also confirmed by the utility values (Table 1.). We started

from the knowledge that high communalities values indicate good internal consistency of the applied scale and also the validity of the defined manifest variables (items), as well as the validity of the applied scale as a whole. The data in the above table unequivocally state that the utility[†] values range from acceptable (0.373) to high (0.799)

Tabel 1. Communalities

	Initial	Extraction
V1	1.000	0,769
V2	1.000	0,781
V3	1.000	0,677
V4	1.000	0,537
V5	1.000	0,788
V6	1.000	0,799
V7	1.000	0,713
V8	1.000	0,546
V9	1.000	0,484
V10	1.000	0,748
V11	1.000	0,699
V12	1.000	0,635
V13	1.000	0,541
V14	1.000	0,581
V15	1.000	0,430
V16	1.000	0,562
V17	1.000	0,578
V18	1.000	0,491
V19	1.000	0,758
V20	1.000	0,610
V21	1.000	0,413
V22	1.000	0,494
V23	1.000	0,373
V24	1.000	0,505

Source: Mitić (2023)

The reliability of the scale of attitudes is determined by the Cronbach's alpha coefficient (Cronbach's Alph), which is 0.8968, that means that it has high reliability considering the number of items, and the statements (24) which are included in it.

3.3. Sample research

The research was carried out on a convenience sample, which was formed from users of banking services who could be reached during the period of the research (who are "near at hand"). For practical reasons, the sample on which the research was conducted was formed in a bank that gave its consent to survey clients in its office.

Of course, this sample has certain disadvantages. However, the specificity of the research subject allows a sample to be used representatively because it was formed from users of

[†] Communalities represent the part of variance explained by common factors for each variable (item). If there are variables (items) whose communalities are too low, those variables are ignored or deleted (Pallant, 2009, p. 198).

banking services who were available at the given moment. A total of 120 of them were examined.

The selected sample can be considered large, because it exceeds the upper limit of the small sample. Namely, the threshold value is, according to some authors, somewhere in the range of 25 to 30 respondents (Gilford, J. P, 1968), and according to others, below 50 respondents (Petz, B, 1981).

The structure of the sample according to the information on the basis of which the respondents decided to use the services of a particular office, i.e. bank, is shown in the following chart:

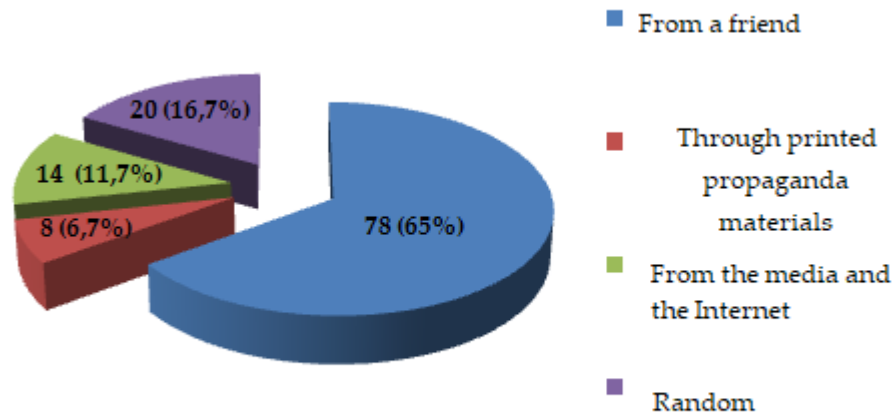


Chart 1. Choice of bank branch

Source: Mitić (2022)

As it can be seen in the chart, the recommendation of a friend had the most significant influence on respondents to choose for the services of a particular bank branch, while the influence of printed propaganda materials was the least on the scale.

4. Research results and their interpretation

The attempt to empirically determine the manifestations of client satisfaction with the quality of banking services is often reduced to a greater number of procedures by which they are expressed. Therefore, in this research, they were summarized according to a single criterion that leaves no room for bias and arbitrariness. In line with that, a factor analysis was applied, which enabled a larger number of manifest variables to be reduced to a smaller number of latent variables - factors based on their mutual connection and according to predetermined mathematical and logical conditions. After that, the obtained factors were rotated using the orthogonal varimax (Varimax) method and in further data processing and analysis of research results were treated as the main factors of client satisfaction with the quality of services provided.

To determine the influence of differences in the choice of bank branches on the differences in the importance given to the isolated factors of the quality of banking services, a one-factor analysis of variance - ANOVA was applied.

4.1. Factor structure of the quality of banking services

The initial basis for determining the factors was the inter correlation matrix of all manifest variables (24) that expressed the satisfaction of users of banking services. The matrix was subjected to significance tests to check whether the data in it were acceptable for factor analysis. This resulted in a very good (0.826) Kaiser-Meyer-Olkin "Sample Adequacy Index" of 0.826, which is considered a very good indicator. (Table 2). The data in this table also show that the value of Bartlett's test of sphericity is high ($p = 0.000$) and rightly represents a reliable basis for the application of factor analysis.

Table 2. Data suitability tests for factor analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,826
Bartlett's Test of Sphericity	Approx. Chi-Square	1416,248
	df	276
	Sig.	0,000

Source: Mitić (2023)

To determine the number of common factors of client satisfaction with the quality of banking services, Kaiser's (Kaiser, H. G) criterion was applied, according to which only factors with characteristic values (eigenroots) greater than unity that can be used to explain the variance, and in this case there are five of them (7,654; 2,381; 1,819; 1,372; 1,287). Those five factors explain a total of 60.468% of the variance, which is shown in Table 3.

Table 3. Matrix of characteristic values and explanations of total variance (Total Variance Explained)

Manifest variables (Component)	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total**	% of Variance	Cumulative %
1	7,654	31,890	31,890	7,654	31,890	31,890
2	2,381	9,919	41,809	2,381	9,919	41,809
3	1,819	7,578	49,387	1,819	7,578	49,387
4	1,372	5,719	55,106	1,372	5,719	55,106
5	1,287	5,363	60,468	1,287	5,363	60,468
6	1,172	4,882	65,350			
7	1,036	4,315	69,665			
8	0,876	3,649	73,314			
9	0,807	3,361	76,675			
10	0,765	3,188	79,863			
11	0,656	2,734	82,597			
12	0,604	2,518	85,115			
13	0,496	2,067	87,182			
14	0,460	1,916	89,098			
15	0,420	1,750	90,848			
16	0,359	1,494	92,342			
17	0,346	1,440	93,782			
18	0,325	1,356	95,138			
19	0,247	1,030	96,168			

20	0,242	1,010	97,178
21	0,229	0,955	98,132
22	0,179	0,744	98,876
23	0,143	0,596	99,472
24	0,127	0,528	100,000

* Characteristic values of all manifest variables (components)

** Manifest variables (components) that have characteristic values more than 1.

Source: Mitić (2023)

Katel's scree test (*Scree test*) was also used as a criterion for checking the number of isolated factors, which confirmed the five-factor solution, i.e. that five factors were isolated and they are representing all 24 manifest variables – the indicators of the quality of the banking services (Chart 2.).

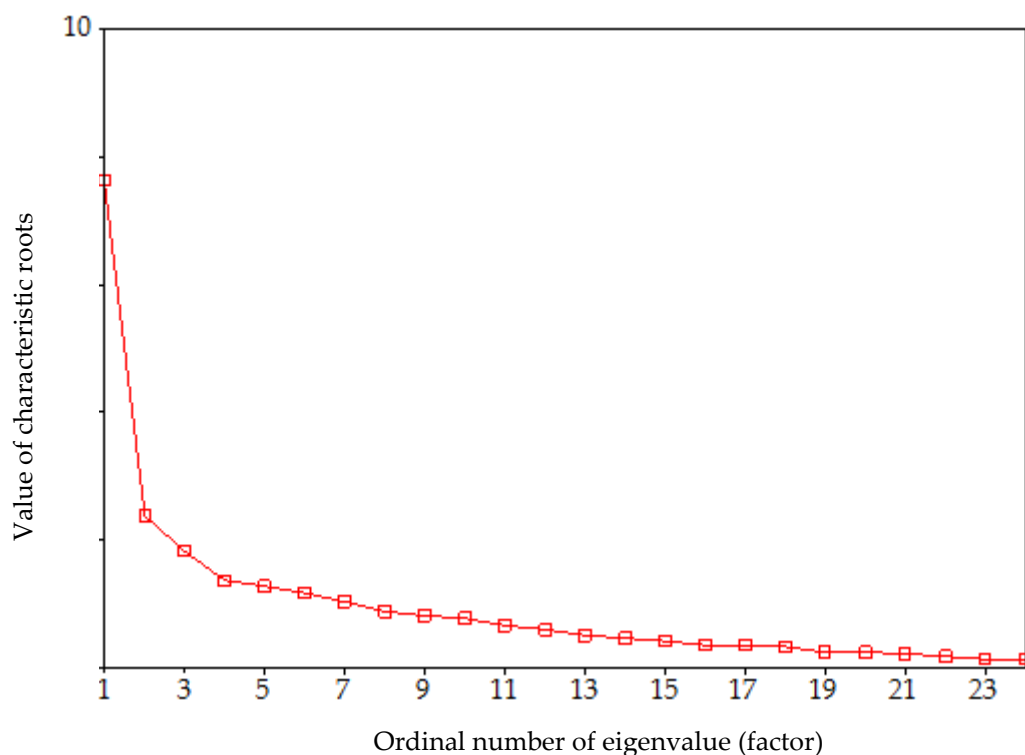


Chart 2. Katel's "scree" test for determining the number of factors of client satisfaction with the quality of banking services

Source: Mitić (2023)

Table 4 shows the matrix of the factor structure of clients' satisfaction with the quality of banking services. The statements (attitudes) expressed by the manifest variables that are listed in the same order as in the rating scale.

Each of the isolated factors represents several manifest variables of satisfaction with the quality of the provided banking services. At the same time, for the definition of the factor, only those manifest variables were taken into account whose correlation coefficient with the factor is greater than 0.30, which is the best indicator of the adequacy, that is, the uniqueness of that representation, and at the same time the starting point for determining the nature of that factor.

The first factor is most significantly defined by the following manifest variables[‡]: bank employees are attentive and always ready to help (5/0.818), customers are approached with respect (6/0.816), bank employees are kind to users of banking services (3/0.755), the users of banking services the necessary information are provided in a timely manner (7/0.730), whenever possible certain concessions are made to the client (10/0.589), the services are adapted to the needs of the client (11/0.549), there is a pleasant atmosphere in the bank branch (18/0.414), bank employees are characterized by a professional appearance (4/0.409), the speed of bank employees in providing services is quite acceptable (2/0.376), bank employees are efficient in providing services (1/0.318) and a quality mobile application is available to clients (12/0.302).

It is noticeable that the listed manifest variables are uniquely directed towards clients with the aspiration to meet them. Therefore, this factor can be defined as KINDNESS AND WILLINGNESS TO HELP THE CUSTOMER.

Table 4. Matrix of the factor structure of satisfaction with the quality of banking services

Ordinal number	Assertions (manifest variables)	FACTORS				
		I	II	III	IV	V
1.	Bank employees are efficient in providing services.	0,318	0,064	0,006	0,159	0,799
2.	The speed of bank employees in providing services is quite acceptable.	0,376	0,033	0,096	0,033	0,792
3.	Bank employees are are kind to users of banking services.	0,755	-0,057	0,087	0,207	0,232
4.	Bank employees are characterized by a professional appearance.	0,409	0,183	0,003	0,530	0,235
5.	Bank employees are helpful and always ready to help.	0,818	0,245	0,012	0,202	0,135
6.	Clients are treated with respect.	0,816	0,150	0,045	0,296	0,142
7.	The users of banking services are provided with the necessary information in a timely manner.	0,730	0,362	0,097	0,032	0,195
8.	The approach to each client is individual.	0,218	0,589	-0,030	0,346	0,176
9.	A wide range of banking products and services is available to clients.	0,169	0,579	0,032	0,215	0,271
10.	Certain concessions are made to the client whenever it is possible.	0,589	0,606	0,173	0,006	0,066
11.	Services are adapted to the needs of clients.	0,549	0,626	0,039	-0,042	-0,054
12.	A high-quality mobile application is available to clients.	0,302	0,241	0,675	0,140	-0,106
13.	The distribution of businesses and ATMs is in accordance with the needs of clients.	0,073	0,053	0,682	0,257	-0,034
14.	Availability of services through payment and deposit ATMs and mobile applications 24 hours a day.	0,201	0,135	0,686	0,221	0,048
15.	For credit products, the paperwork for applications has been reduced.	0,111	0,533	0,342	0,033	0,124
16.	The client's personal and financial data are protected.	0,171	0,628	0,092	0,350	0,082
17.	The price of banking services is affordable.	0,114	0,690	0,236	-0,139	-0,121
18.	The bank branches has a pleasant atmosphere.	0,414	0,227	0,127	0,491	0,107
19.	The orderliness and hygiene of the bank branches is at a high level.	0,210	-0,018	0,119	0,833	0,070
20.	bank branches are equipped with the most modern equipment.	0,078	0,156	0,227	0,723	0,072
21.	Bank branches have a parking space for clients.	-0,177	0,402	0,284	0,310	0,209

[‡] The figures in parentheses indicate the ordinal number of the claim (manifest variable) in the matrix of the factor structure (Table 4) and the value of the correlation coefficient of the claim with the factor ("r").

22.	Bank branches have a separate area for children.	-0,095	0,120	0,671	-0,142	0,024
23.	In banking branches, priority is given to vulnerable categories – pregnant women, disabled people, etc.	-0,047	0,036	0,554	0,072	0,240
24.	Creative promotional campaigns are regularly implemented.	-0,038	0,397	0,124	0,169	0,550

Source: Mitić (2023)

The second factor is determined by variables that are mainly focused on the individual needs of users. These are: the price of banking services is affordable (17/0.690), the client's personal and financial data are protected, the services are adapted to the needs of the clients (16/0.628), the services are adapted to the needs of the clients (11/0.626), whenever possible, the client is certain concessions (10/0.606), access to each client is individual (8/0.589), a wide range of banking products and services are available to clients (9/0.579), bank branches have parking spaces for clients (21/0.402), regular creative promotional campaigns are implemented (24/0.397) and users of banking services are given the necessary information in a timely manner (7/0.362). According to the mentioned manifest variables, this factor can be labeled as INDIVIDUAL APPROACH TO CLIENTS.

The third factor is mostly determined by the following manifest variables: availability of services through payment and deposit ATMs and mobile applications 24 hours a day (14/0.686), the spread of businesses and ATMs is in accordance with the needs of clients (13/0.682), clients have a quality mobile application available (12/0.675), bank branches have a special area for children (22/0.671) and in bank branches priority is given to vulnerable categories - pregnant women, disabled people, etc. (23/0.554).

According to the content of the manifest variables, it can be seen that they refer to the temporal and spatial availability of bank branches and ATMs and that they are aligned with the needs of all categories of clients. In line with that, the most adequate name for this factor is AVAILABILITY OF BUSINESS OFFICES AND ATMS TO ALL CATEGORIES OF CUSTOMERS.

The fourth factor is most closely related to the manifest variables related to equipment, their neatness and hygiene, without which there is not even a pleasant environment. The following variables are in question: the cleanliness and hygiene of the bank branch is at a high level (19/0.833), the bank branch is equipped with the most modern equipment (20/0.723), the bank employees are characterized by a professional appearance (4/0.530), the bank branch has a pleasant atmosphere (18/0.491), personal and financial data of the client are protected (16/0.350), access to each client is individual (8/0.346) and bank branches have a parking space for clients (21/0.310). According to the mentioned variables, the most adequate name for this factor is EQUIPMENT, TIDY AND HYGIENE OF THE BANKING OFFICE.

The fifth factor unites manifest variables directly and indirectly focused on efficiency in the provision of services, and they determine it to the greatest extent: bank employees are efficient in providing services (1/0.799), the speed of bank employees in providing services is quite acceptable (2/0.792) and regularly implement creative promotional campaigns (24/0.550).

Bearing in mind the common features of the presented variables, this factor can be called - EFFICIENCY IN PROVIDING BANKING SERVICES AND PROMOTIONAL CAMPAIGNS.

As can be seen, the factor analysis made it possible to reduce the 24 manifest variables related to customer satisfaction with the quality of banking services to five factors (latent dimensions), with each of them representing several manifestations of the quality of banking services with which it is correlated. ($r \geq 0.30$).

4.2. The importance of factors of satisfaction with the quality of banking services

The identified factors of satisfaction with the quality of banking services do not have the same importance, because they have different participation in explaining the total variance. All five factors participate in explaining the total variance with 60.468% (Table 5). At the same time, the defined factors, as well as the manifest variables that determine them, are sufficiently relevant indicators of client satisfaction with the quality of the provided banking services. However, all the isolated factors of client satisfaction with the quality of banking services provided (Table 5) do not participate equally in the total variance, and therefore, do not contribute equally to the variability of the researched phenomenon, that is, they do not have the same significance. This is indicated by the fact that all five isolated factors explain the total variance with 60.468%. At the same time, the first singled out factor - *kindness and willingness to help the client* - is undoubtedly the most significant and has the greatest impact on the total variance (31.890%). Of course, that was realistic and to be expected, because it is known that customers expect, if nothing more, at least a fair relationship from officials from any field of activity.

Table 5. Factors of client satisfaction with the quality of provided banking services

Ordinal number	NAME OF FACTOR	Percent explained of total variance	Cumulative proportion of total variance
1.	Kindness and willingness to help the client	31,890	31,890
2.	Individual approach to clients	9,919	41,809
3.	Availability of bank branches and ATMs to all categories of clients	7,578	49,387
4.	Equipment, tidiness and hygiene of the bank branches	5,719	55,106
5.	Efficiency in providing banking services and promotional campaigns	5,363	60,468

Source: Mitić (2023)

Directly related to this factor is the next (second) factor - *individual approach to clients* - (9.919%) because it is impossible to be kind and willing to help a client without an individual approach. It is realistic to assume, because banking transactions are carried out individually in order to protect customer data.

The third factor - *the availability of branches and ATMs to all categories of clients* - participates in explaining the total variance with 7.570%, which is not negligible. Many choose to use the services of bank branches and ATMs of banks whose clients they are just in order to avoid paying commissions that are charged when using services in other bank branches, as well as their ATMs.

Apparently, the fourth factor - *the equipment, orderliness and hygiene of the bank branches* - participates in explaining the total variance with 5.719%, which is understandable, because clients attach great importance to the attitude of bank employees towards them and simpler access to bank branches and their ATMs.

The fact that the fifth factor - *efficiency in providing banking services and promotional campaigns* - modestly participates in explaining the total variance (5.363%) is not unexpected, because the previous factors include variables that agree with this factor as well.

As it can be seen, the first three factors are the most significant, because they explain the total variance with almost 50% (49.387%), while the remaining two factors with only 11.081%. This does not mean that the last two factors should be ignored, because they must also be taken

into account if a more realistic picture of the factors of client satisfaction with the quality of the provided banking services is to be formed.

4.3. The influence of the choice of a banking branch on the differences in giving importance to factors of satisfaction with the quality of banking services

In this analysis, attention is focused on the comparison of average values. To compare the average results of more than two groups, it was necessary to apply one-factor analysis of variance (ANOVA), which was emphasized earlier.

4.3.1. The influence of the choice of a bank branch on the differences in giving importance to the first factor - kindness and willingness to help the client

In this part of the researched aimed to determine whether there is a statistically significant difference between the arithmetic means of the factor scores of the first factor in the four groups of bank branches.

If you look at the value of Levine's test of homogeneity of variance in Table 6, you can see that it is 0,118[§], and it can be concluded that it is above the threshold value of 0.05. This suggests that the assumption of equality of variances in the results of each of the four groups was not violated in determining the differences in the influence of the choice of banking MPs in giving importance to the first factor.

Table 6. Test of Homogeneity of Variances
REGR factor score 1 for analysis 1

Levene Statistic	df1	df2	Sig.
1,999	3	116	0,118

Source: Mitić (2023)

According to the data in Table 7, it can be concluded that there is no statistically significant difference between the factor scores of the first factor in the four groups of bank branches selections. In other words, this means that the differences in the way of accessing information about the banking branches do not have a statistically significant effect on the reporting of differences in the importance given by respondents to the first factor of customer satisfaction with the quality of banking services, marked as - *kindness and willingness to help the client*. This statement stems from the fact that $p > 0.05$, because $F = 0.534$, and the level of significance is $p = 0.660$. In essence, clients, regardless of what information they were guided by the banking branch, have approximate attitudes about kindness and willingness to help the client.

The previous findings that the influence of differences in the mean values of the groups (categories) of bank branches selection on the first factor is very small and that is confirmed by the value of the eta square, which is only 0,01. **

[§] Values of the Levine homogeneity test are significant for further articulation of the calculation and interpretation of the F-ratio value and its significance.

**

$$\text{Eta square} = \frac{\text{The sum of squared deviations of different groups}}{\text{Total sum of squares}}$$

[From: Pallant, J, SPSS: The Survival Manual - A Step-by-Step Guide to Data Analysis Using SPSS for Windows [Version 15], 3rd Edition Translation - Miljenko Šučur. (2009), Belgrade: Mikro knjiga, p. 250]

Table 7. The influence of the choice of bank branches on the preference of the first factor

		N	Arithmetic average	Standard deviation (SD)	F ratio	P
	From a friends	78	0,0623565	0,85757735	0,534	0,660
	Through printed propaganda media	8	0,1299408	0,78117378		
	From the media and the Internet	14	-0,0924793	1,00711393		
	Random	20	-0,2304313	1,50951167		

Source: Mitić (2023)

If you look at Chart 3., you can see that clients who chose bank branches based on printed propaganda materials attach the greatest importance to kindness and willingness to help the client. The reason for this is probably the information and promises contained in the written propaganda materials.

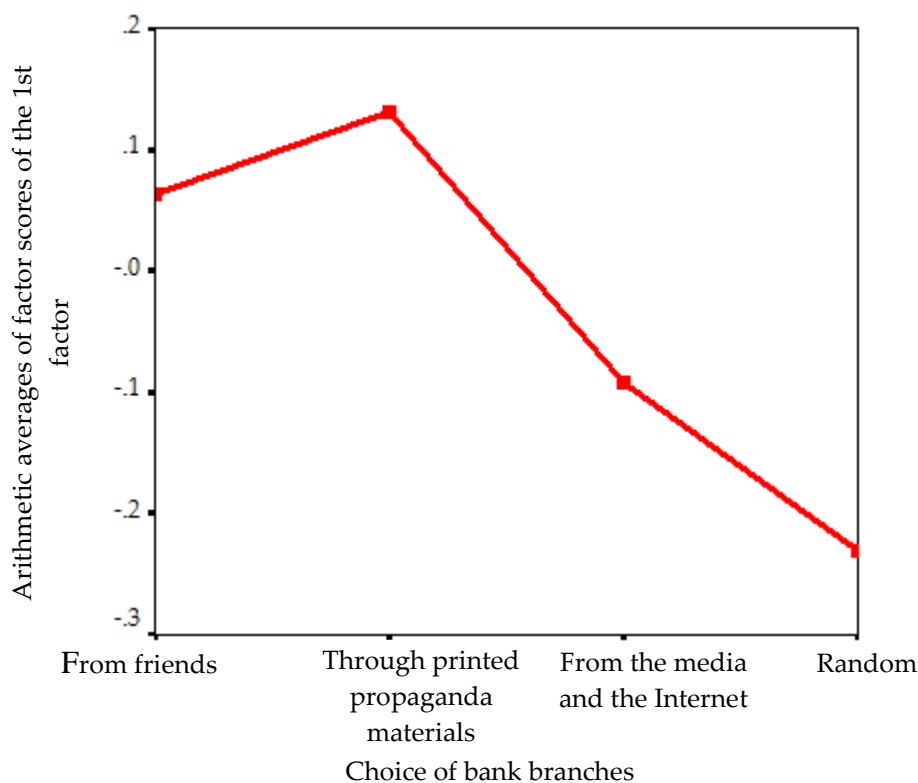


Chart 3. Arithmetic averages of the factor scores of the first factor in in relation to the choice of a bank branches

Source: Mitić (2023)

4.3.2. The influence of the choice of bank branches on the differences in giving importance to another factor - individual approach to clients

Even when we are looking at the influence of the choice of bank branches in giving importance to the second factor, Levin's test of homogeneity of variances (Table 8) suggests that the level of statistical significance is 0.387, which significantly exceeds the threshold value of 0.05. This indicates that the assumption of equality of variances in the results of each of the four groups was not violated when determining the differences in the influence of the choice of bank branches in giving importance to the second factor.

Table 8. Test of Homogeneity of Variances
REGR factor score 2 for analysis 1

Levene Statistic	df1	df2	Sig.
1,019	3	116	0,387

Source: Mitić (2023)

According to the data in Table 9, it can be observed that there is no statistically significant difference between the arithmetic means of the factor scores of the second factor in all treated groups of the banking post card selection. Based on this, it can be concluded that the influence of differences in the way of choosing a bank branches on the differences in giving importance to the second factor of client satisfaction with banking services - *individual approach to clients* - is statistically insignificant, because $p > 0.05$, $F = 1.021$, and the level of significance $p = 0.386$. In line with this, it can be stated that users of banking services, regardless of what guided them to choose a particular bank branch, have similar attitudes when it comes to the individual approach of bank employees to clients. This statement is supported by the value of eta square, which is 0.026. This indicates that the influence of the differences in the mean values of the factor scores for certain ways of choosing a bank branches on the other factor is small.

Table 9. The influence of the choice of bank branches on the preference of another factor

		N	Arithmetic average	Standard deviation (SD)	F ratio	P
Choice of bank branches	From a friends	78	-0,0531926	0,99782704	1,021	0.386
	Through printed propaganda media	8	-0,3231038	1,41320575		
	From the media and the Internet	14	0,0301349	1,03547081		
	Random	20	0,3155982	0,77306626		

Source: Mitić (2023)

According to the data shown on Chart 4, it can be seen that clients who chose a certain bank branch random (by chance) attach the most importance to the second factor of satisfaction with the quality of banking services, which is probably in accordance with their nature, because they themselves, *ad hoc*, chose a bank branches for the performance of certain financial transactions. On the other hand, surveyed clients who chose a particular bank branch based on printed propaganda materials attach the least importance to this factor. It is likely that this group of respondents has a discrepancy between what was promised in the printed propaganda materials and the actual access of clients to banking branch.

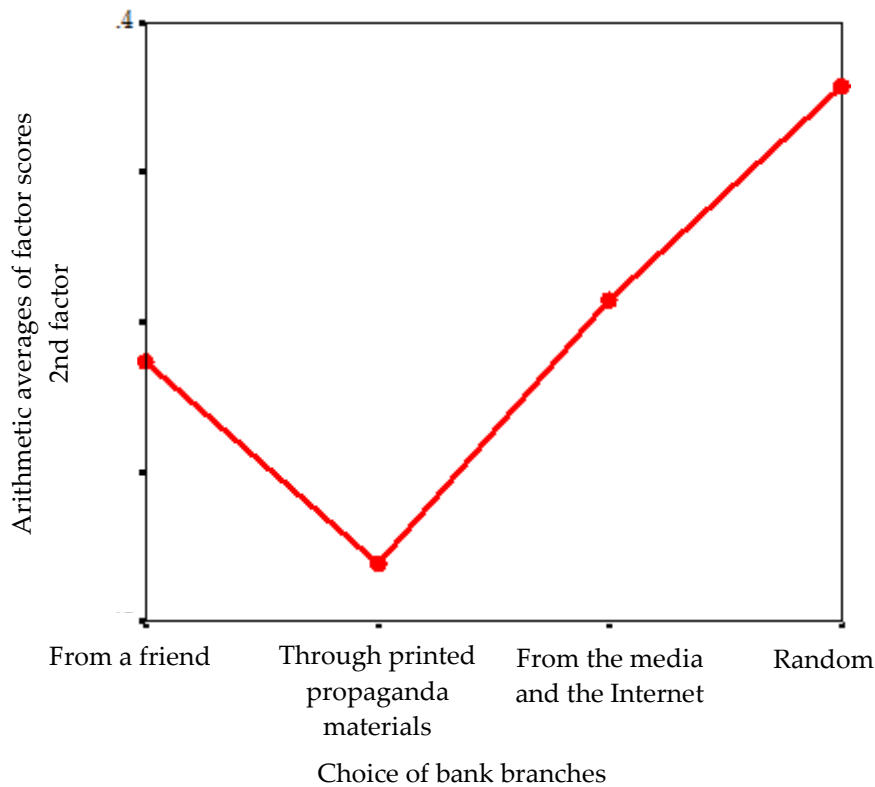


Chart 4. Arithmetic averages of factor scores of the second factor in relation to the choice of a bank branches
Source: Mitić (2023)

4.3.3. The influence of the choice of a bank branch on the differences in giving importance to the third factor - the availability of bank branches and ATMs to all categories of clients

In line with this the Levin's homogeneity of variance test (0.293), which is above the value of 0.05, in determining the differences about the influence of the choice of bank branches in assigning importance to the third factor of satisfaction with the quality of banking services - the availability of bank branch and ATMs to all categories of clients, the assumption of equality of variances in the test results of each of the four possibilities offered.

Table 10. Test of Homogeneity of Variances
REGR factor score 3 for analysis 1

Levene Statistic	df1	df2	Sig.
1,257	3	116	0,293

Source: Mitić (2023)

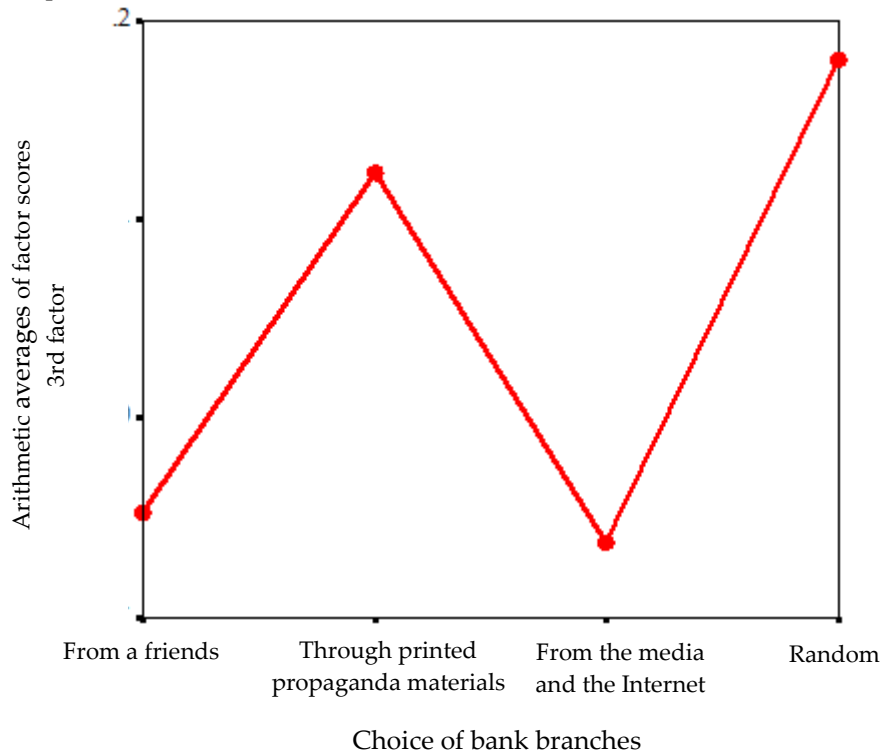
Based on the data in Table 11, it can be concluded that the influence of differences in the choice of a bank branches and giving importance to the third factor of client satisfaction with the quality of banking services - the availability of branches and ATMs to all categories of clients - is not statistically significant, because $p > 0.05$ ($F = 0.329$; $p = 0.804$). This is in agreement with the values of eta square, which is 0.01. This finding is relatively acceptable, because clients sometimes use other bank branches, especially their ATMs. This can also be understood as a reminder to banks to plan the layout of their offices and ATMs.

Table 11. The influence of the choice of bank branches on the preference of the third factor

		N	Arithmetic average	Standard deviation (SD)	F ratio	P
Choice of bank branches	From a friends	78	-0,0476531	1,00171281	0,329	0,804
	Through printed propaganda media	8	0,1239517	0,88463330		
	From the media and the Internet	14	-0,0627050	0,78324349		
	Random	20	0,1801597	1,19821404		

Source: Mitić (2023)

Chart 5 clearly shows that two groups of surveyed clients attach the greatest importance to the third factor. This is the group of respondents who chose a bank branches quite random (by chance) and the group who did it through printed propaganda materials. But this is understandable, because friends are not often territorially well connected, and the media act frontally in providing information about bank branches and their ATMs.

**Chart 5.** Arithmetic averages of the factor scores of the third factor u in relation to the choice of a bank branches

Source: Mitić (2023)

4.3.4. The influence of the choice of bank branches on the differences in giving importance to the fourth factor - the equipment, orderliness and hygiene of the bank branches

Considering the value of Levin's homogeneity of variance test (0.924), which significantly exceeds the threshold value of 0.05, in determining the differences about the influence of the choice of bank branches at giving importance to the fourth factor of satisfaction with the quality

of banking services, the assumption of equality of variances in the results of each of the four tested groups of bank branches choices (Table 12).

Table 12. Test of Homogeneity of Variances
REGR factor score 4 for analysis 1

Levene Statistic	df1	df2	Sig.
0,158	3	116	0,924

Source: Mitić (2023)

According to the data in Table 13, it can be observed that there is no statistically significant difference between the arithmetic means of the factor scores of the fourth factor in all four groups of bank branches choices. This can be understood as the relative uniformity of the equipment, orderliness and hygiene of bankbranches, so the influence of differences in the choice of bank branches does not come to the fore. This is also confirmed by the value of eta square, which is very low (0.01).

Table 13. The influence of the choice of bank branches on the preference of the fourth factor

		N	Arithmetic average	Standard deviation (SD)	F ratio	P
Choice of bank branches	From a friends	78	0,0288180	1,02404788	0,499	0,684
	Through printed propaganda media	8	0,0382033	1,00371746		
	From the media and the Internet	14	-0,3041569	0,86822359		
	Random	20	0,0852383	1,02298513		

Source: Mitić (2023)

However, if you look at the data on Chart 6, it can be seen that the group that decided to choose a bank branches based on information from the media and the Internet attaches the least importance to the fourth factor. It is obvious that these are clients whose expectations regarding the equipment, tidiness and hygiene of the banking offices are unjustified.

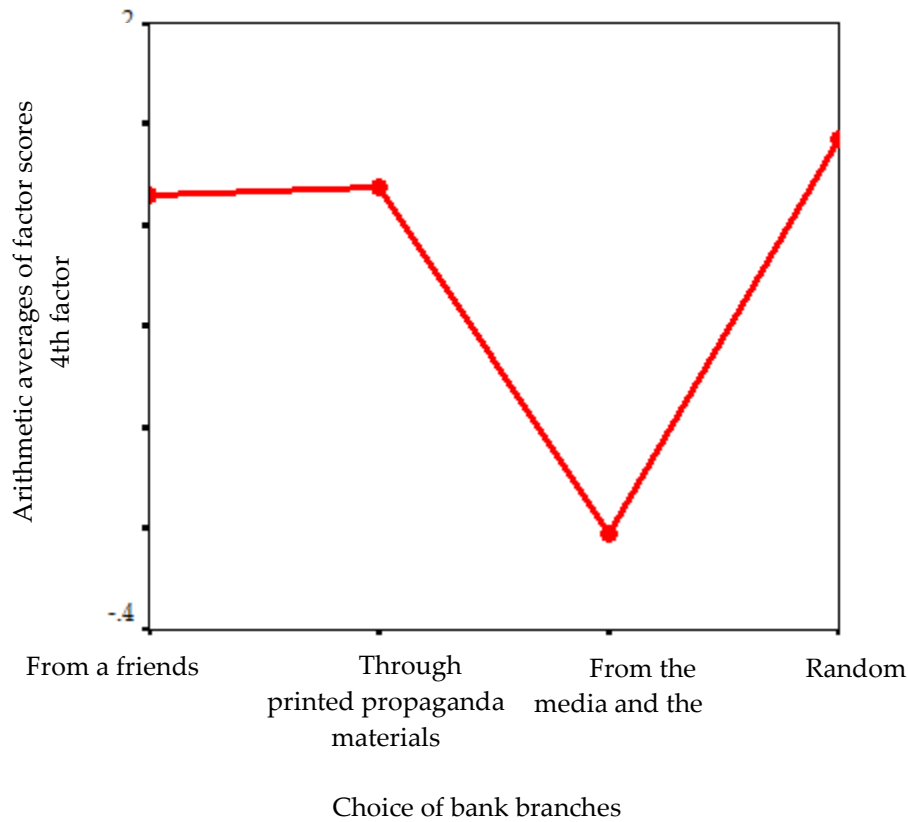


Chart 6. Arithmetic averages of the factor scores of the fourth factor u in relation to the choice of a bank branches
Source: Mitić (2023)

4.3.5. The influence of the choice of a bank branches on the differences in giving importance to the fifth factor - efficiency in the provision of banking services and promotional campaigns

Considering According to the data in Table 14, it can be seen that the obtained value of Levin's test of homogeneity of variance is 0.161, which indicates the fact that the assumption of homogeneity of variance was not violated, because Levin's test significantly exceeds the threshold value of 0.05.

Table 14. Test of Homogeneity of Variances
REGR factor score 4 for analysis 1

Levene Statistic	df1	df2	Sig.
1,750	3	116	0,161

Source: Mitić (2023)

It is evident that the F-ratio value is 2.913 (Table 15), which is at the significance level of 0.37 ($p < 0.5$). This indicates that the influence of the differences in the values of the arithmetic averages of the factor scores by groups of bank branches choices significantly affects the difference and giving importance to the fifth factor - *efficiency in the provision of banking services and promotional campaigns* - as a factor of client satisfaction with the quality of services provided. The eta square (0.07) is in agreement with this finding, which indicates that the influence of the differences in the arithmetic averages of the factor scores by categories of bank branches selection is medium.

Table 15. The influence of the choice of bank branches on the preference of the fifth factor

		N	Arithmetic average	Standard deviation (SD)	F ratio	P
Choice of bank branches	From a friends	78	-0,1292531	0,99086574	2,913	0,37
	Through printed propaganda media	8	0,1252010	0,74485126		
	From the media and the Internet	14	-0,1669303	0,50576585		
	Random	20	0,5708581	1,21080752		

Source: Mitić (2023)

Table 16 shows the results of mutual group differences (*Post Hoc Multiple Comparisons*). From the mentioned data, it can be seen that there is a statistically significant difference between the group that decided to choose a bank branches based on the recommendation of a friends and the group that did so by chance ($p=0.026$; $p<0.5$).

Table 16. Differences between compared groups

Choice of bank branch		Difference of average arithmetic of groups	P
From a friends	Through printed propaganda materials	-0,2544541	0,896
	From the media and the Internet	0,0376772	0,999
	Random	-0,7001112(*)	0,026
Through printed propaganda materials	From a friends	0,2544541	0,896
	From the media and the Internet	0,2921313	0,906
	Random	-,4456571	0,696
From the media and the Internet	From a friends	-0,0376772	0,999
	Through printed propaganda materials	-0,2921313	0,906
	Random	-0,7377884	0,138
Random	From a friends	0,7001112(*)	0,026
	Through printed propaganda materials	0,4456571	0,696
	From the media and the Internet	0,7377884	0,138

Source: Mitić (2023)

Why this difference can be best seen in Chart 7? The group of respondents (clients) who chose a certain bank branch by chance (random) attach the most importance to the fifth factor. The reason for this is of course the positive experience gained by using the services in the selected bank branch. On the other hand, the group of clients who were guided by the recommendations of friends attach the least importance to the fifth factor - *efficiency in the provision of banking services and promotional campaigns*. It is obvious that they did not "get" what they expected based on the recommendations of a friends.

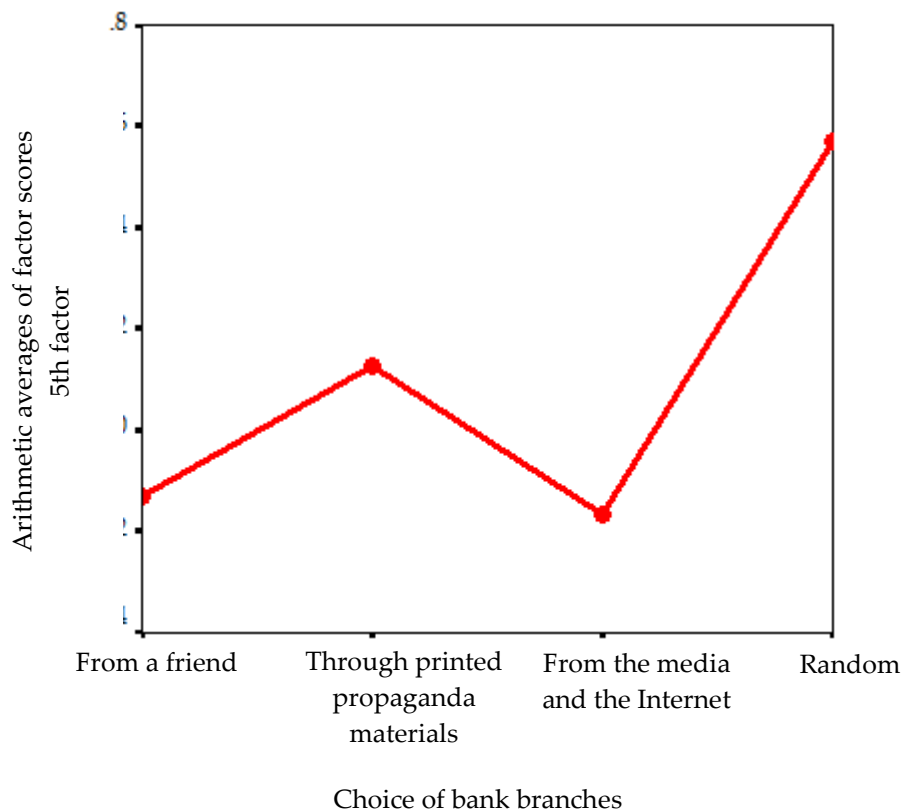


Chart 7. Arithmetic averages of factor scores of the fifth factor in relation to the choice of a bank branches
Source: Mitić (2023)

Overall, the influence of the choice of bank branches on the preference of the customer satisfaction factor with the quality of the provided services is statistically significant but only in the case of the fifth factor, when the group that decided to use the services of certain bank branches based on the recommendation of a friends or completely by chance. It can also be stated that the influence of the differences of arithmetic means of factor scores by groups of bank branches selection on the previous four factors of satisfaction with the exists quality of banking services, but is not statistically significant.

5. Conclusion

It is evident that the importance of services is growing, as well as that their participation in national economies and it is large. Therefore, it is quite logical that in modern business, the quality of services is given priority in all organizations that want to balance their services in a highly demanding environment. That is why the quality of banking services, i.e. the factors of satisfaction with the quality of banking services and the prediction of their importance, were found in the field of scientific-informative orientation of this work.

Satisfaction that is given with the quality of banking services can be expressed by a greater number of variables, it was necessary to carry out their selection, which was done by creating a scale for assessing clients' views on satisfaction with the quality of banking services provided. The scale consisted of 24 manifest variables. Manifest variables were summed up by factor analysis, using the orthogonal varimax (Varimax) method. Thus, 24 manifest variables were

reduced to five factors of customer satisfaction with the quality of banking services, which explain the total variance with 60.468%.

The first identified factor - *kindness and willingness to help the client* - is undoubtedly the most significant and has the greatest impact on the total variance (31.890%). This is logical, because clients expect at least a minimum of attention from bank employees.

The second factor - *individual approach to clients* - is also significant because it participates in explaining the total variance with 9.919%. It is closely related to the previous factor, because kindness and willingness to help the client is difficult to achieve without an individual approach.

The third factor - *the availability of bank branches and ATMs to all categories of clients* - has a solid share in explaining the total variance (7.570%). Its allocation is logical, because most users of banking services tend to have bank branches and ATMs "within one's reach".

The fourth factor - *equipment, orderliness and hygiene of the banking branch* - participate in explaining the total variance with 5.719%. This factor significantly contributes to a pleasant environment in the bank branches, as well as the area where the ATM is located. No one can stand untidiness and bad air in the room, as well as the rain all over their shoulders or the blinding of the ATM screen by the sun when withdrawing money from the ATMs.

The fifth factor - *efficiency in providing banking services and promotional campaigns* - has a modest share in explaining the total variance (5.363%). This was expected because the previous factors to some extent include manifestations that agree with this factor as well.

In the case of the first four factors of satisfaction with the quality of banking services, the research showed that the differences in the way of accessing information about the banking branches do not have a statistically significant effect on the occurrence of differences in giving importance to these factors. Only in the case of the fifth factor was found a statistically significant difference (0.026) when the group that decided to use the services of certain bank branch on a friend's recommendation or completely random (by chance).

By understanding the factors of client satisfaction with the quality of the provided banking services, it contributes to take measures to avoid the negative aspects, and to further tendency the positive aspects of the banking business.

References

- Avkiran, N. K. (1994). Developing an instrument to measure customer service quality in branch banking. *International journal of bank marketing*, 12(6), 10-18.
- Bahtijarević-Šiber, F. (1991). *Organizacijska teorija*. Zagreb: Informator, p. 181–291.
- Coetzee, J., Van Zyl, H., & Tait, M. (2013). Perceptions of service quality by clients and contact-personnel in the South African retail banking sector. *Southern African Business Review*, 17(1), 1-22.
- Fulgosi, A (1988). *Faktorska analiza*. Zagreb: School book, p. 277.
- Gilford, J. P. (1968). *Osnove psihološke i pedagoške statistike*. Belgrade: Modern administration.
- Glušica, Z. (2001). *Implementacija TQM*. Novi Sad: Mobes Quality.
- Heleta, M. (2009). *Upravljanje kvalitetom*. Belgrade: Universiti of Singidunum.
- Jovičević, P, *Kvalitet – put do srca lojalnog potrošača*, Belgrade: Faculty of Applied Management, Economics and Finance. Available at:
http://www.profitmagazin.com/izdanja/broj_112.1059.html (pristupljeno 25. 04. 2023).
- Kilibarda, M. (2008). *Upravljanje kvalitetom u logistici*. Beograd: Saobraćajni fakultet.
- Kršev, B. (2012). *150 godina bankarstva u Srbiji*. Belgrade: Vreme, p. 1128.

- Marković, V., & Đurić, M. (2022), *Pregled standarda za menadžment ljudskih resursa, uz analizu metrike koja se koristi u njima*, Belgrade: International Congress on Process Industry, PROCESING, 35 (1), p. 309-318.
- Mešić, I., Lazić, Đ., & Unkić, F. *Upravljanje odnosima sa klijentima u e-poslovanju*, <https://core.ac.uk/download/pdf/235122298.pdf> (accessed 22. 04. 2023).
- Mitić, N., Popović, J., Kvrđić, G., Avakumović, J., & Milošević, D. (2021). The consumer's satisfaction impact on the image of a modern organization. *Ecologica*, 28(101), 91-98. <https://doi.org/10.18485/ecologica.2021.28.101.14>.
- Mitić, N., Srebro, B., Popović, J., Kvrđić, G., & Dedjanski, S. (2021). Factors influencing the development of green women's entrepreneurship in Serbia. *Economics of Agriculture*, 68(3), 627-645. doi:10.5937/ekoPolj2103627M.
- Nešić, T. (2005). *Uloga kvaliteta u poboljšanju profitabilnosti*. Belgrade: Boneks inženjering.
- Pallant, J. *SPSS: Priručnik za preživljavanje – Postupni vodič kroz analizu podataka pomoću SPSS-a za Windows [verzija 15]*, Translation of the 3rd edition – Šućur, M. (2009). Belgrade: Mikro knjiga, p. 198.
- Papić, Lj. (2011). *Menadžment kvalitetom*. Prijedor: Research Center for Quality and Reliability Management.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49(4), 41–50.
- Petz, B. (1981). *Osnove statističke metode za nematematičare*. Zagreb: SNL.
- Radović-Marković, M., & Hanić, H. (2018). *Metodologija istraživanja u ekonomskim naukama*, Beograd: Belgrade Banking Academy – Faculty of Banking, Insurance and Finance and Institute of Economic Sciences.
- Radojević, P., & Marjanović, D. (2011). Kvalitet usluga u bankarstvu: nesaglasnosti, odrednice i istraživačke tehnike za unapređenje kvaliteta. *Bankarstvo*, 40(7/8), 34-59.
- Rasyida, D. R., Ulkhaq, M. M., Setiowati, P. R., & Setyorini, N. A. (2016). Assessing service quality: a combination of SERVPERF and importance-performance analysis. In *MATEC Web of Conferences* (Vol. 68, p. 06003). EDP Sciences.
- Savković, M., Đurić, M., & Barjaktarević, M. (2021). Model Lean & Six Sigma kao osnova menadžmenta kvaliteta u automobilske industriji. *Zbornik Međunarodnog kongresa o procesnoj industriji–Procesing*, 34(1), 205-220.
- Shanin, A. (2004). *SERVQUAL and Model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors in Delivering Quality Services*. Isfahan: Department of Management, University of Isfahan, Iran.
- Todorović, Z. (2009). *Upravljanje kvalitetom*, Banja Luka: Ekonomski fakultet.
- Velojić, M., Atlagić, P. and Đurić, M. (2021). *Relations between Artificial Intelligence and Quality Management and Standardization*, Novi Sad: International Congress on Process Industry, PROCESING, 34(1), p. 183-204.
- Vujović, S. and Vujović, T. (2021). *Održivi marketing u funkciji održive urbane mobilnosti*. *ODITOR*, VII(03), 167-183.

