
Model for Evaluation of Banking Services' Quality

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Abstract

In modern business, quality is one of the key factors for recognising a product or service on the market. For this reason, quality is becoming a new business paradigm in all spheres of human activities, whether we talk about material products or services. Therefore, increasing attention is paid to quality management that is focused on meeting the requirements of clients in order to keep the old and attract new ones, so that the organisation can survive in conditions of fierce competition. It is evident that nowadays quality management is becoming a leading asset in competitive business in all industries. World companies are focused on quality, so we may often hear that the 20th century was actually the century of productivity, but the 21st century will be, without doubt, the century of quality. Bearing in mind the importance of the quality of services, there were valid reasons to focus the scientific research attention in this paper on defining the model of valuation of the quality of banking services, as a research objective. In achieving this goal, there were valid and scientifically justified reasons to apply the statistical method, as a general method, and the descriptive (Survey-Research) method, as a special one. The model for evaluating the quality of banking services, which is defined in this way, represents an important assumption of contributing to the improvement of relations with clients (Customer relationship management – CRM) with the goal of satisfying their needs and wishes, but also with the realization of business benefits.

Keywords: service quality, quality indicators, quality factors, quality model

Model for Evaluation of Banking Services' Quality

Simultaneously with the origin and evolution of humanity, quality as a concept, view, idea and abstraction has emerged and has been developing since. Accordingly, the quality of products and services, quite reasonably, plays the leading role in attracting new and retaining existing clients. The key to improving competitiveness in the market is quality. Hence, it is understandable that the survival and expansion of business activities, as well as the success of a business, is conditioned by the ability of the quality management system to clearly define and ensure the stability of product and service quality with minimum costs.

Given the growing importance of services and their major participation in national economies, the quality of services is, quite logically, set as a priority in modern business by which organisations will be recognisable in highly competitive environment. In general, in service industry, two trends can be observed in highly developed countries – services become the dominant sector of the economy, and at the same time the products that are offered, to an increasing extent, represent a combination of products and services as a response to greater and more objective understanding of client's needs. Therefore, in modern business, quality becomes a new paradigm in all spheres of human activity, whether it is material products or services.

Modern age and market globalisation put increasing demands on business entities in terms of adaptation to new market conditions, starting from a greater range of banking services, to improving their quality with the purpose of meeting various demands of clients, whose needs expand with the growth of innovations, technology and increasingly competitive market. Authors who address quality of banking services, mostly, not without reason, share an opinion that there is a significant interrelation between the quality of services and the bank performance.

Due to a huge competition on the market, the concept of quality is gaining more and more importance. In order to fulfil the needs and expectations

of its clients and other stakeholders, it is necessary that an organisation use its internal organisational and material capacities and resources purposefully. To achieve those goals, one of the essential effective tools is the implementation of quality management system in accordance with SRPS ISO 9000 standards. Quality management system can help an organisation in improving clients' and stakeholders' satisfaction. Quality management system encourages the organisation to analyse clients' and stakeholders' needs and expectations and to identify processes which ensure the delivery of products according to their demands, and to control and constantly improve those processes.

The operation of banks on the world market leads to competition increase, which makes banks strive for providing new services, which will contribute to clients' satisfaction, both natural persons and legal entities, and particularly to the satisfaction of entrepreneurs and multinational companies, government institutions and economy as a whole. Gaining a global advantage is reflected in the positioning of financial institutions, with the help of improving the quality of services. In present circumstances, this especially refers to the increase in quality and quantity of services, which clients can get at home, like "home banking", or using different internet platforms, mobile applications, or telephone banking. The end result, i.e., the goal, is clients' satisfaction. In this process of rendering services and thinking about the quality of banking services, we may notice that this improvement not only contributes to banks' competitiveness and clients' satisfaction, but also provides guidelines for improving some of the internal capacities and work organisation (human resources, education), and particularly contributes to the impact that increased service quality has on marketing and branding of certain banks and their financial services. In today's conditions of significant monetary changes, and considering the unstable situation on the world stock exchanges, which is a result of the global economic crisis, it is not easy to survive and achieve competitiveness. There is a constant customers' demand for facilitating the performance of banking operations, so that banks, in their operation, should achieve some kind of uniqueness by which their services can be distinguished from those

offered by others, thus ensuring the attraction of new clients. As Radojević and Marjanović (2011) argue, when it comes to Serbian market, it can be seen that most of the new services has already been offered on the market over previous years.

Development of Service Quality Models

Taking into account the previous views, it is quite logical that one of the most common questions to which we seek answer addresses the models and methodologies by which the quality of services can be measured and expressed in the most objective manner, in order to be empirically as accurate as possible and applicable in practice. In order to define a service quality model in banking, it is completely logical to look at models in service industries that exist and have been significantly established, as well as to incorporate this knowledge into research to the extent possible.

When studying bank operations, it can be observed that banks, during the 1980s, began to pay more and more attention to the issue of service quality. Before that, they usually measured the quality of material goods that were offered for sale, while the quality of services was not examined and was ineffective (Parasuraman, A, Zeithaml, V, A. and Berry, L, L, 1985).

One of the leading analysts, who was the first to address the quality of service is Parasuraman. He introduced the following determinants of quality, according to the model that he referred to by its abbreviation *Servqual*.

Determinants of service quality according to this model are:

a) *Reliability*, which includes consistency of performance. This determinant assumes that a certain business entity performs the service in a high-quality and expected manner, and honours the promises made. This includes – accuracy in calculation, orderly record keeping, as well as the performance of services in indicated time.

b) *Responsibility*, which refers to tendency or readiness of employees to provide the service. In fact, this determinant implies timely service, timely

dispatch of the transaction slip, quick notification to the client, fast provision of other services, etc.

c) *Competence* indicates the possession of the necessary skills and knowledge to perform the service. It implies knowledge and the skills of the contact staff, and the knowledge and skills of the staff for providing operational support (e.g. research, i.e. analytical skills).

d) *Access*, includes accessibility and easy contact between clients and service provider. In that sense, the service is easily accessible by phone (the lines are not busy and do not put client on hold), waiting time for receiving the service does not exceed reasonable limits, working hours are "convenient", as well as the location of the service facility.

a) *Courtesy* implies helpfulness, respect, consideration and professionalism of the contact staff. This determinant also includes care for clients' property, clean and neat appearance of public relations staff.

b) *Communication* involves informing clients in language they understand and ability to listen to the client.

c) *Credibility* includes trustworthiness, plausibility, honesty. This determinant implies that the focus is on the best interest of the client. These factors also contribute to credibility: company name, reputation, contact person personality and better interaction with the customer depending on the level of "hard sell".

d) *Security* implies protection from hazards, risk or suspicion. This includes: physical safety, financial security, confidentiality.

e) *Understanding* – knowing the customer, implies investing efforts to recognise the customer's needs. Within this determinant, it is important to timely observe specific customer's requirements, pay individual attention and identify regular customer.

f) *Tangibles* include material evidence of service, such as: physical objects, evidence that serves for staff appearance, tools or equipment used to provide services; a physical representation of the service, such as a credit

card or a bank statement, as well as other customers in the facility that renders the service (Parasuraman, A, Zeithaml, V, A. and Berry, L.L. 1985).

It can be concluded that Parasuraman's service quality model, which is used very often, stresses communication as one of the most important components in measuring the quality of banking services. This model can be used for measuring, quite precisely, clients' satisfaction i.e., users of banking services, and certain psychological processes of the client are very important for that, such as the client's previous experience with other banks, or the bank that is the subject of research.

Contrary to Parasuraman's *Servqual* model, Cronin and Taylor (Cronin and Taylor, 1992) believe that to measure the quality of services, only a statement from the party, i.e., the client is required about the five types, i.e. dimensions of service quality, which is why they propose the application of the *Servperf* model. This model is based, as highlighted, on five service dimensions: tangibles, reliability, responsiveness, assurance and empathy, with two sets of 22 items.

Tangibles refer to the physically visible aspects (cleanliness of toilets, availability of parking, etc.).

Reliability is the ability to provide a service effectively, promptly and accurately.

Responsiveness implies expectations of clients to get an accurate answer when the service will be performed, how fast and whether adequate cooperation of employees with the client can be expected, and to what extent the busyness of employees may affect their ability to respond to clients' demands quickly, accurately and without delay.

Assurance implies that clients trust employees and feel safe in doing business with them. That, of course, also implies the courtesy of the staff, because, otherwise, many doubts would be arisen. That's why it is absolutely reasonable to expect that employees should be adequate support to management in efficient and effective performance of their jobs.

The last dimension – *empathy* – represents good communication, personal attention and understanding of clients' needs. For example, this

can be reflected in the adapted business hours to best suit the clients, in the waiting time to receive service etc. (Rasyida and all, 2016).

The quality of service in this model is measured by multiplying the weights with the perception scores, where SQ_j is service quality of item statement j , W_{ij} is the weighting factor of item statement j to an individual i , and P_{ij} is perception of individual j with respect to the performance on item statement j .

$$SQ_i = \sum_{j=1}^k W_{ij} \cdot P_{ij}$$

The weighting factors is the score:

$$W_{ij} = \frac{I_{ij} - Min}{Max - Min}$$

Where I_{ij} is the importance score obtained from the questionnaire, Min is the minimum score and Max is the maximum score of the importance score.

Bankserv model is also interesting because of its simplicity, which originated in the Australian banking sector (Avkiran, 1994). This model measures the quality of service from the client's perspective, as well as the measurement scales in the previous two cases, but is focused on the bank specificities as a business entity.

Avkiran describes this model as a simple set of easy-to-use items when listening to the perception of clients. In this model, there are four discriminant factors. Those are staff conduct, credibility, communication and access to teller services (Avkiran, 1994).

Avkiran also believes that a visit to the branch is crucial for forming opinion about service quality, and stated:

Client service in banks is characterised by multiple encounters between clients and branch staff. *BANKSERV* is designed to capture the multi-faceted nature of client service quality issues that arise in such environment and allows the client to reflect on perceptions and expectations in a single statement (Coetzee, van Zyl and Tait, 2013).

The mentioned four dimensions consist of 17 individual characteristics: willingness of staff to help customers, providing prompt service, polite greeting by the staff when it is customer's turn to approach the teller, expression of genuine concern always for any mistake, politeness of staff, bank employee's neat dress and professional appearance, ability to apologise for any mistake, keeping customers informed always about the matters of concern to them, rectifying mistake properly, maintaining security for customers dealings, helping customers learn how to keep down their banking costs, having adequate knowledge of bank's services and products, providing good financial advice, notifying customers about different types of available accounts and investments, telling customers about the actual time to perform the services, adequate number of open tellers and staff during the busy hours of the day.

It cannot be said that there is a perfect model for determining the quality of banking services. Each of them has certain advantages and disadvantages, and the one that in given the circumstances can provide the most objective information necessary for making certain conclusions shall be applied.

Method

As in any research, the methodological aspects in this research are determined by the goal of the research, i.e. by the nature of the scientific knowledge that determines it. Given that the goal of this research is to define a model for valuation of the quality of banking services, a methodological path was chosen that enables a deep and versatile insight into the essence, breadth

and complexity of the issue of the quality of banking services from the clients' perspective. Consequently, it is quite logical that in this research, in addition to general scientific methods, special ones are also used.

General scientific methods are inherent in all scientific knowledge, regardless of whether natural or social phenomena are concerned. In this research, among the general scientific methods, the statistical method is the most represented.

Considering the essence of the basic questions posed in this paper, in order to search for the answers, it was quite justified to apply the descriptive survey method (*Survey-Research Method*) as a special research method, because this variant of scientific description represents a combination of descriptive and analytical options, which ensures the active involvement of respondents in providing information about the phenomena being described, on the basis of which it is possible to get to the essence of the basic questions and discover cause-and-effect connections and relations.

In the operational phase of research implementation a *scaling technique* was applied to determine the level of agreement between the opinions and attitudes of surveyed bank clients with the arguments related to their satisfaction with the quality of provided services.

As a research instrument we used a scale of attitudes about bank clients' satisfaction with the quality of provided services. A list of 24 manifestations of the quality of banking services is offered on the scale that should be evaluated with marks from 1 to 5; at which for each manifestation of the quality of banking service grade 1 meant total disagreement, grade 2 implied general disagreement, grade 3 indecisiveness, grade 4 mostly agreement and grade 5 complete agreement.

The reliability of the scale was determined by the classical methods (Spearman-Brown-Cronbach alpha coefficient, Guttman Split-half coefficient) and it ranges from 0.7379 to 0.9369, namely:

Based on the obtained reliability coefficients it can be concluded that the applied tool has satisfactory reliability given the number of items

(manifestations of the quality of banking services) that are covered by it and that it can be applied in this research.

It is necessary to emphasize that this research was carried out on a convenience sample,¹ which consisted of users of banking services that could be reached most easily during the period of conducting the research (which were "at hand"). A total of 120 of them were surveyed.

This sample is suitable for knowledge gathering in a specific space and time. The selection of sample units outside of that space and time would be inexpedient.

When choosing this sample, the disadvantages that accompany it were not ignored. However, the specificity of the research subject allows even such a sample to be used representatively in such a research endeavour, as it is formed from users of specific banking services that are available at a given moment.

Research Results and Their Interpretation

The initial step in defining the banking services evaluation model from the clients' perspective includes the indicator, i.e. indicators (characteristics) of quality of banking services. In order to properly conduct this, verified ways of reaching the indicators should be applied in order to ensure that they are research-based. While doing this, special attention should be paid to validity, objectivity, reliability and precision of indicators. That, of course, does not mean that other research and methodological principles (norms, criteria) have been ignored, but that attention has been paid more to those that, given the projected methodology, techniques and instruments of research, had primary importance.

The validity of the description or explanation of the investigated phenomenon depends on the validity of the indicators and their number that should be optimal. In this research, 24 indicators were empirically identified

¹ The survey was carried out in a bank that gave the consent to the author for it.

and their validity was verified by the method of factor analysis of the scale of attitudes. At the same time, the communality data (Table 1) range from medium (only in case of two indicators) to high values (at 22 indicators). High communalities in factor analysis imply good internal consistency of the applied scale, and therefore the validity of the defined manifest variables (items), by which the validity of the applied instrument was also confirmed.

Based on the defined indicators, manifest variables were formulated by which attributive characteristics of the quality of the provided banking services were expressed from the aspect of clients' perception. Considering that there are 24 of them in total it was necessary to reduce them to a smaller number, which will represent all the others. This reduction of manifestations of quality of banking services to a smaller number can be carried out by "arbitrary" assessment, which is the simplest procedure, but it is not the most objective one. Therefore, grouping according to a unique criterion is more acceptable that leaves no room for bias and arbitrariness. For this purpose, factor analysis was used that allowed for a greater number of procedures and data, which show the quality of the banking services provided, to be grouped into several basic sets (factors), namely, based on their relation, i.e. correlation of the scores given by clients to evaluate their importance. In that way, a greater number (24) of quality indicators of the services provided from the bank clients' perspective (manifest variables), has been reduced to a smaller number of basic (latent) service quality indicators in banking – factors. PROMAX oblique rotation was used then because it allows hierarchical factor analysis and factors to be correlated. This analysis provides the most stable factorial solution with the minimum secondary saturations on separated components.

Based on the correlation matrix of all manifest variables, as a starting point for determining the factors of customer satisfaction with the quality of banking services, which matrix was subject to significance tests, it was also checked whether it was justified to apply factor analysis. At this point, a sample adequacy index was obtained which is 0.8261, which is considered a

good indicator². The value of Bartlett's Test of Sphericity is also high ($p=0.000$) and represents a reliable basis for application of factor analysis (table 2).

For determining the number of extracted factors, Cattell's "scree" test was used as a criterion, which indicates seven-factor solution, i.e. that *seven factors of clients' satisfaction with the quality of banking services* were identified which represent all manifest variables (24) – indicators of the quality of rendered banking services (Graph 1). According to this criterion, only those factors were retained whose characteristic root value is greater or at least equal to 1.00, i.e. factors with the following values of characteristic roots: 7.654; 2.381; 1.819; 1.372; 1.287; 1.172 and 1.036. They make 69.66% of the cumulative proportion of total variance (Table 3).

Table 4 shows the matrix of the pattern factor, and Table 5 shows the matrix of the factor structure of the quality of provided banking services from the perspective of clients. To define the factors, it was necessary to simultaneously take into account only those indicators of the quality of provided banking services (manifest variables) that have a weight factor above 0.3 and a correlation with the factor above 0.3.

The first factor is determined by the following manifest variables: (1) bank employees are courteous to clients using banking services (3/0.869; 0.796)³, (2) clients are treated with respect (6/0.809; 0.872), (3) bank employees are helpful and always ready to assist (3/0.791; 0.879), (4) clients using banking services are timely provided with necessary information (7/0.731; 0.819), (5) services are adapted to meet the clients' needs (11/0.542; 0.667), (6) bank branch has a pleasant atmosphere (18/0.436; 0.593) and (7) whenever possible certain concessions are made to the client (10/0.412; 0.677).

Manifest variables that cover this factor are mostly related to kindness,

² The following scale is used to evaluate the sample adequacy index: approx. 0.90 – excellent; around 0.80 – very good; about 0.70 – good; about 0.60 – medium; around 0.50 – poor; lower than 0.50 – unacceptable (Fulgosi, 1988, p. 277).

³ The first number in parentheses indicates the serial number of the questions in the questionnaire, the second number represents the factor weight, and the third indicates the correlation coefficient of the variable with the factor.

respect and consideration, which is why it may be reasonable called *kindness and willingness to help the client*.

The second factor is most closely related to the following manifest variables: (1) individual approach to each client (8/0.709; 0.713), (2) personal and financial information of the client is protected (16/0.705; 0.724), (3) price of banking services is affordable (17/0.664; 0.635), (4) clients have a wide range of banking products and services at their disposal (9/0.627; 0.669), (5) whenever possible certain concessions are made to the client (10/0.595; 0.765), (6) services are adapted to meet clients' needs (11/0.564; 0.705) and (7) for credit products, the amount of paperwork has been reduced when filing loan application (15/0.497; 0.578).

It is evident that the individual approach to clients and the possibility of meeting their various needs form the base of this factor, which is why it may be called *adjustment of banking services to meet clients' individual needs*.

It is somewhat expected that this factor should be singled out because it is very important for clients that their requirements and problems are understood and that they are provided with advice how to solve them easily, while at the same time protecting their personal and financial information.

The third factor represents the following variables: (1) the orderliness and hygiene of the branch is at a high level (19/0.875; 0.848), (2) branches are equipped with state-of-the-art equipment (20/0.745; 0.755), (3) bank employees are characterized by a professional appearance (4/0.458; 0.624), (4) there is a pleasant atmosphere in the branch (18/0.445; 0.541) and (5) branches have parking space for clients (21/0.306; 0.379).

In general, it is evident that huge attention is paid to tidiness and hygiene in the branches, both of the staff and the premises. It is particularly important to provide parking space for bank clients. All this affects the formation of a positive image about the branch, as well as the bank staff. That is why we can accurately refer to this factor as *Comfort and visual impression*.

The fourth factor covers the following manifestations of the banking services quality: (1) service availability through ATMs providing payment and

deposit option and mobile applications 24/7 (14/0.805; 0.832), (2) services are adjusted to meet clients' needs (12/0.778; 0.845), (3) location and distribution of branches and ATMs is in accordance with the needs of clients (13/0.499; 0.594) and (4) people from vulnerable categories – pregnant women, disabled, etc. have priority in bank branches as they are first served (23/0.324; 0.370).

From the data presented, it can be seen that this factor is not unambiguous, so it is difficult to define it. However, we can say that such manifest variables are predominant according to which it can be referred to as – *distribution and business hours of bank branches*.

The fifth factor is determined by only three manifest variables: (1) the speed with which bank employees provide services is quite acceptable (2/0.895; 0.869), (2) bank employees are efficient in providing services (1/0.855; 0.861) and (3) creative promotional campaigns are launched on regular basis (24/0.349; 0.397). Accordingly, the most acceptable name for this factor is *efficient service provision*, which makes sense.

The sixth factor is also determined by only three manifest variables, namely: (1) bank branches have a designated children area (22/0.821; 0.791), (2) bank branches have a parking space for clients (21/0.617; 0.657) and (3) the distribution of branches and ATMs complies with clients' needs (13/0.518; 0.636).

Given the variables that are most closely related to this factor, it can be called – *bank branch premises and infrastructure are adjusted to meet the clients' needs*.

The seventh factor is "covered" by the manifest variables which are not unambiguously directed, so it is difficult to define it. The following variables are in question: (1) in bank branches priority is given to vulnerable categories – pregnant women, disabled people, etc. (23/0.714; 0.687), (2) creative promotional campaigns are launched on regular basis (24/0.567; 0.585), (3) the bank branch has a pleasant atmosphere (18/0.481; 0.606) and (4) the price of banking services is affordable (17/0.320; 0.468). However, it could be said that this factor can be defined as – *in banking business, priority in service is given to*

categories of clients who need it.

Overall, the factor analysis identified a smaller number of latent dimensions (factors) which are manifested in a larger number of manifest variables, that is factors were identified empirically, which objectively express the satisfaction of clients with the quality of banking services provided, which created the conditions for rational *defining of the model for determining the quality of banking services.*

As emphasized, the key factors of banking service quality should constitute the basis for defining this model from the perspective of clients identified in this research. In that way, the level of satisfaction of clients using banking services can be quantified in a simple, affordable and exact manner and the basic reasons for their satisfaction or dissatisfaction can be perceived.

Considering the results of the research, it is evident that this model should be based on seven separate factors of client satisfaction with the quality of banking services. This methodological procedure was also used in some earlier researches that were not strictly aimed at banking services.

Designs of this model, from a technical point of view, can be quite different, and this paper presents one of the possible designs (Table 6).

Of course, it should be borne in mind that there are great differences in needs, interests, desires and personality traits among bank clients. However, this does not mean that the presented model for determining the quality of services in banking business does not provide enough space for adaptation to specific economic, social, psychological and other characteristics of banking clients.

Conclusion

It can be realistically expected that the final opinion on banking services quality shall be given by clients, but also by the bank itself that provides the service should have a defined quality management system for its business, so that it could provide adequate service. In this respect, in order to improve

the bank management, i.e., the operation of a bank branch certain frameworks have been introduced for measuring the quality of services. Accordingly, it is a very delicate task, out of all possible indicators, to determine the optimal scope of those indicators that give a complete picture of bank i.e. bank branch operation. If the number of indicators is higher than optimal, the efficiency of the managerial decision-making mechanism can be reduced which can cause the so-called "paralysis of analysis". On the other hand, a small number of indicators can jeopardize the effectiveness of measurement and monitoring of overall quality factors of delivered services.

Therefore, banking business inevitably imposes the need to theoretically analyse the existing practice of measuring the quality of services, and to empirically identify exactly the key indicators of the quality of provided services from clients' perspective and their classification, according to the predetermined mathematical and logical model, into appropriate representative groups (factors). This provides the basis for development of a quality model of banking services that enables easier assessment of factors that are most relevant to clients, faster identification of possible problems in the supply chain of banking services and efficient response of the bank management, i.e., bank branch.

Banking service models can be designed differently. In this paper, we presented a model defined on the basis of key factors from the clients' perspective that have been identified empirically, starting from defining the indicators of the quality of banking services (the first task of the research) as a basis for formulation of manifestations (24 of them) that express clients' opinion on the quality of services in the most objective manner, to classifying factors according to predetermined mathematical and logical conditions (the second task of the research). The research results convincingly demonstrate that the banking services quality evaluation model from clients' perspective should be based on seven separate factors, which ensures efficient, sophisticated and exact recognition of the level of satisfaction of clients using banking services (the third task of the research).

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. <https://doi.org/10.1108/02652329410063223>
- 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* [Factor analysis]. Školska knjiga
- Heleta, M (2009). Upravljanje kvalitetom [Quality management]. Beograd: Univerzitet Singidunum.
- Kilibarda, M. (2008). *Upravljanje kvalitetom u logistici* [Quality management in logistics]. Univerzitet u Beogradu: Saobraćajni fakultet.
- Kršev, B . (2012, August 16). *U avgustu se navršava 150 godina od osnivanja prve bankarske ustanove u Srbiji – Uprave fondova* [August marks the 150th anniversary of the establishment of the first banking institution in Serbia – the Fund Administration]. Vreme, br. 1128. <https://www.vreme.com/dodatno/u-avgustu-se-navrsava-150-godina-od-osnivanja-prve-bankarske-ustanove-u-srbiji-uprave-fondova/>
- Nešić, T. (2005). *Uloga kvaliteta u poboljšanju profitabilnosti*. Boneks inženjering.
- 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. <https://doi.org/10.2307/1251430>
- Radović-Marković, M, & Hanić, H. (2018). *Metodologija istraživanja u ekonomskim naukama* [Research methodology in economic sciences], Beogradska bankarska akademija, Fakultet za bankarstvo, osiguranje i finansije, Institut ekonomskih nauka.

- Radojević, P., & Marjanović, D. (2011). Kvalitet usluga u bankarstvu: nesaglasnosti, odrednice i istraživačke tehnike za unapređenje kvaliteta [Service quality in banking: discrepancies, determinants and research techniques for quality improvement]. *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, MATEC Web Conf., 68 [online].
<https://doi.org/10.1051/mateconf/20166806003>
- Shanin, A. (2006). SERVQUAL and model of service quality gaps: a framework for determining and prioritizing critical factors in delivering quality services. In *Delivering quality services – An introduction* (pp. 117–131). ICFAI University Press, Andhra Pradesh.

Appendix

Table 1.
Communalities

Variables (items)	Initial	Extraction
1.	1.000	0.800
2.	1.000	0.824
3.	1.000	0.738
4.	1.000	0.542
5.	1.000	0.799
6.	1.000	0.806
7.	1.000	0.733
8.	1.000	0.636
9.	1.000	0.499
10.	1.000	0.792
11.	1.000	0.729
12.	1.000	0.770
13.	1.000	0.670
14.	1.000	0.756
15.	1.000	0.441
16.	1.000	0.670
17.	1.000	0.684
18.	1.000	0.767
19.	1.000	0.773
20.	1.000	0.639
21.	1.000	0.652
22.	1.000	0.736
23.	1.000	0.624
24.	1.000	0.639

Note. Source: Author

Table 2.

Assessment Test for Verifying Factor Analysis Data Adequacy

Kaiser-Meyer-Olkin "Sample Adequacy Index"		0.826
Bartlett's Test of Sphericity	Chi - square Approximation Test	1416.248
	Number of degrees of freedom	276
	Significance	0.000

Note. Source: Author

Table 3.

Matrix of characteristic values and explanation of total variance

Manifest variables (components)	Initial Eigenvalues (characteristic values)			Extraction Sums of Squared Loadings		
	Total	% variance	Cumulative % of variance	Total	% variance	Cumulative % of variance
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	1.172	4.882	65.350
7.	1.036	4.315	69.665	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

Note. Source: Author

Table 4.
Pattern and structure matrix

Service quality indicators	PATTERN FACTORS						
	I	II	III	IV	V	VI	VII
1.	0.095	0.040	-0.040	0.025	0.855	-0.109	0.160
2.	0.184	-0.017	-0.182	0.092	0.895	-0.011	0.095
3.	0.869	-0.287	0.121	-0.060	0.155	0.124	-0.002
4.	0.258	0.152	0.458	0.030	0.137	-0.107	-0.039
5.	0.791	0.100	0.066	0.015	0.046	-0.122	0.014
6.	0.809	-0.008	0.185	0.028	0.058	-0.049	-0.066
7.	0.731	0.214	-0.128	-0.033	0.113	0.083	-0.005
8.	-0.053	0.709	0.236	0.016	0.107	-0.062	-0.229
9.	-0.021	0.627	0.091	-0.078	0.165	0.061	-0.022
10.	0.412	0.595	-0.174	0.189	0.052	0.009	-0.182
11.	0.542	0.564	-0.166	-0.106	-0.181	0.109	-0.103

12.	0.049	0.166	0.022	0.778	-0.042	-0.005	0.114
13.	0.034	-0.071	0.247	0.449	-0.041	0.518	-0.112
14.	-0.099	0.082	0.103	0.805	0.144	-0.002	0.118
15.	-0.004	0.497	-0.081	0.117	0.040	0.278	0.073
16.	-0.147	0.705	0.228	0.181	-0.035	-0.253	0.161
17.	0.003	0.664	-0.255	0.107	-0.254	0.005	0.320
18.	0.436	0.021	0.445	-0.094	-0.176	-0.030	0.481
19.	0.134	-0.112	0.875	0.053	-0.133	-0.032	0.128
20.	-0.049	0.127	0.745	0.107	-0.085	0.158	-0.060
21.	-0.160	0.350	0.306	-0.206	0.009	0.617	-0.012
22.	0.121	-0.128	-0.146	0.064	-0.097	0.821	0.243
23.	-0.105	-0.158	-0.010	0.324	0.153	0.130	0.714
24.	-0.120	0.305	0.044	-0.226	0.349	0.150	0.567

Note. Source: Author

Table 5.

Struktura matrix

Service quality indicators	STRUCTURE FACTORS						
	I	II	III	IV	V	VI	VII
1.	0.384	0.307	0.359	0.069	0.861	-0.018	0.160
2.	0.419	0.283	0.256	0.141	0.869	0.078	0.089
3.	0.796	0.211	0.367	0.143	0.394	0.083	0.091
4.	0.508	0.415	0.624	0.175	0.427	-0.019	0.090
5.	0.879	0.496	0.343	0.222	0.313	-0.089	0.189
6.	0.872	0.430	0.442	0.242	0.362	-0.020	0.100
7.	0.819	0.565	0.198	0.208	0.330	0.113	0.158
8.	0.353	0.713	0.432	0.175	0.362	0.102	-0.051
9.	0.333	0.669	0.315	0.103	0.353	0.179	0.115
10.	0.677	0.765	0.145	0.398	0.257	0.155	0.033

11.	0.667	0.705	0.060	0.155	0.055	0.153	0.104
12.	0.341	0.402	0.195	0.844	0.041	0.218	0.248
13.	0.156	0.181	0.323	0.595	0.119	0.636	-0.050
14.	0.238	0.322	0.289	0.832	0.198	0.238	0.211
15.	0.266	0.578	0.119	0.304	0.155	0.393	0.189
16.	0.326	0.724	0.385	0.304	0.164	-0.064	0.342
17.	0.260	0.635	-0.127	0.260	-0.201	0.104	0.468
18.	0.593	0.394	0.541	0.128	0.116	-0.030	0.606
19.	0.341	0.197	0.848	0.194	0.229	0.024	0.225
20.	0.227	0.328	0.755	0.270	0.256	0.265	0.050
21.	0.050	0.417	0.379	0.041	0.226	0.657	0.046
22.	0.048	0.087	-0.079	0.271	-0.080	0.791	0.226
23.	0.072	0.095	0.111	0.370	0.081	0.193	0.687
24.	0.188	0.448	0.270	-0.066	0.397	0.183	0.585

Note. Source: Author

Table 6.

Structure of the model for determining the quality of service in banking business

FACTORS	Service quality indicators	Score (1 to 5)	Σ (sum of scores)	MV (mean value)
1	2	3	4	5
1. Kindness and willingness to help the client	1. Bank staff is kind to clients using banking services		$\Sigma_1 =$	$MV_1 = \frac{\Sigma_1}{7}$
	2. Clients are treated with respect			
	3. Bank staff is helpful and always willing to assist			
	4. Clients timely receive necessary information			
	5. Services are adjusted to meet clients' needs			
	6. Bank branch has a pleasant atmosphere			
	7. Whenever possible certain concession are made to a client			

2. Adjustment of banking services to meet clients' individual needs	1. Individual approach to each client		$\Sigma_2 =$	$MV_2 = \frac{\Sigma_2}{7} =$
	2. Personal and financial information of the client is protected			
	3. Price of banking services is affordable			
	4. Clients have a wide range of banking products and services at their disposal			
	5. Whenever possible certain concessions are made to the client			
	6. Services are adjusted to meet clients' needs			
	7. For credit products, the amount of paperwork has been reduced when filing loan application			
3. Comfort and visual impression	1. Orderliness and hygiene of the branch is at a high level		$\Sigma_3 =$	$MV_3 = \frac{\Sigma_3}{5} =$
	2. Branches are equipped with state-of-the-art equipment			
	3. Bank employees are characterized by a professional appearance			
	4. There is a pleasant atmosphere in the branch			
	5. Branches have parking space for clients			
4. Distribution and business hours of bank branches	1. Service availability through ATMs providing payment and deposit option and mobile applications 24h		$\Sigma_4 =$	$MV_4 = \frac{\Sigma_4}{4} =$
	2. Services are adjusted to meet clients' needs			
	3. Location and distribution of branches and ATMs is in accordance with the needs of clients			
	4. People from vulnerable categories – pregnant women, disabled, etc.			

	have priority in bank branches as they are first served			
5. Efficient service provision	1. Speed with which bank employees provide services is quite acceptable		$\Sigma_5 =$	$MV_5 = \frac{\Sigma_5}{3} =$
	2. Bank employees are efficient in providing services			
	3. Creative promotional campaigns are launched on regular basis			
6. Bank branch premises and infrastructure are adjusted to meet the clients needs	1. Bank branches have a designated children area		$\Sigma_6 =$	$MV_6 = \frac{\Sigma_6}{3} =$
	2. Bank branches have a parking space for clients			
	3. Distribution of branches and ATMs complies with clients' needs			
7. In banking business, priority in service is given to categories of clients who need it	1. In bank branches priority is given to vulnerable categories – pregnant women, disabled people, etc.		$\Sigma_7 =$	$MV_7 = \frac{\Sigma_7}{4} =$
	2. Creative promotional campaigns are launched on regular basis			
	3. Bank branch has a pleasant atmosphere			
	4. Price of banking services is affordable			
Calculation of mean value of banking services quality indicators		$\Sigma = \Sigma_1 + \Sigma_2 + \dots + \Sigma_7$	$MV = \frac{\Sigma}{33} =$	
		$\Sigma =$	$MV =$	

Note. Source: Author.

Model vrednovanja kvaliteta bankarskih usluga

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Sažetak

U savremenom poslovanju kvalitet predstavlja jedan od ključnih činilaca za prepoznavanje nekog proizvoda ili usluge na tržištu. Iz tog razloga kvalitet postaje nova paradigma poslovanja u svim sferama ljudske delatnosti, bilo da se radi o materijalnim proizvodima ili o uslugama. Samim tim, upravljanju kvalitetom se posvećuje sve značajnija pažnja koja je usmerena na zadovoljavanje zahteva korisnika kako bi se oni zadržali i pridobili novi, a organizacija opstala u uslovima oštre konkurencije. Evidentno je da menadžment kvaliteta danas postaje vodeća poluga konkurentnog poslovanja u svim delatnostima. U fokusu interesovanja svetskih kompanija jeste kvalitet, pa se često može čuti da je XX vek ipak bio vek produktivnosti ali XXI vek će biti sigurno vek kvaliteta. Imajući u vidu značaj kvaliteta usluga, postojali su valjani razlozi da se naučno-istraživačka pažnja u ovom radu usmeri na definisanje modela vrednovanja kvaliteta bankarskih usluga, kao cilju istraživanja. U ostvarivanju ovog cilja postojali su valjani i naučno opravdani razlozi da se primeni statistička metoda, kao opšta, i deskriptivna (Survey-Research) metoda, kao posebna. Model vrednovanja kvaliteta bankarskih usluga, koji je ovim putem definisan, predstavlja bitnu pretpostavku doprinosa unapređenju odnosa sa klijentima (Customer relationship management [CRM]) u cilju zadovoljavanja njihovih potreba i želja, ali i uz ostvarivanje poslovne koristi.

Ključne reči: kvalitet, usluga, kvalitet usluga, indikatori kvaliteta, faktori kvaliteta, model kvaliteta