

THE EFFECT OF SERVICE QUALITY AND CUSTOMER INVOLVEMENT ON CUSTOMER SATISFACTION

Begimai Baimuratova

Kyrgyz State Technical University named after I. Razzakov, Kyrgyzstan.

ORCID : 0009-0001-8011-2429

E-mail: b.baimuratova@mail.ru

Zhao Haijun

Kyrgyz State Technical University named after I. Razzakov, Kyrgyzstan.

ORCID: 0009-0007-0807-9197

E-mail zhaohaijun1st@gmail.com

Elmira Derbisheva

Kyrgyz State Technical University named after I. Razzakov, Kyrgyzstan

ORCID:0000-0001-5690-0831

E-mail: elmira.derbisheva@kstu.kg

Tao Lei

Xian JiaoTong University, China

ORCID: 0000-0002-4648-8887

Email: leitao@mail.xjtu.edu.cn

Elzat Arstanbek kyzy

Kyrgyz State Technical University named after I. Razzakov, Kyrgyzstan

ORCID: 0000-0003-3896-1619,

E-mail: elzatarstanbek@gmail.com

Aizada Alieva

Kyrgyz State Technical University named after I. Razzakov, Kyrgyzstan

ORCID: 0009-0006-7038-2018

E-mail: zada.79@mail.ru

Editor Científico: José Edson Lara
Organização Comitê Científico
Double Blind Review pelo SEER/OJS
Recebido em 23.04.2023
Aprovado em 15.06.2023



This work is licensed under a Creative Commons Attribution – Non-Commercial 3.0 Brazil

Abstract

Many managers are curious about how to enhance customer satisfaction by improving service quality. Previous researches mostly considered only the effect of functional quality based on SERVQUAL model. While there are several other dimensions of service quality other than functional quality, it is not clear which dimension is the most important in forming satisfaction both directly and indirectly through involvement. The purpose of this research is to determine the connections between three quality dimensions, involvement and satisfaction in the banking industry of the Kyrgyz Republic. After analyzing the literature related to this area we designed the research framework, developed hypotheses and the questionnaire accordingly. The results revealed that different dimensions of quality have different impact on involvement and satisfaction. Only functional quality has a positive effect on image. And both functional and technical quality were found to have significant positive influence on satisfaction, also significant positive connection between involvement and satisfaction was revealed. Technical quality was revealed to have only direct significant impact on satisfaction, but it does not have influence on involvement. Also reputation of a bank was revealed not to have considerable influence on involvement.

Keywords: management, banking industry, customer satisfaction, service quality.

INTRODUCTION

With the emergence of economic reforms in the world in general and in the Kyrgyz Republic in particular (after the collapse of the Soviet Union), managers should improve the quality and involve their clients since when they are involved they become more devoted to services of a particular bank and the level of their satisfaction increases (Richins et al., 1986; Jayathilaka, 2020). Also researchers claim that sustaining quality on suitable level can be considered as a requirement for any company, so it can be used as a competitive facility (Abed et al., 2022; Le, Nguyen, 2020; Mhlanga, 2018; Machmud, 2018).

There are a number of researches that have been conducted concerning satisfaction and quality connections, but most of them have been based on SERVQUAL model proposed by Parasuraman, Zeithaml, and Berry (1988), but the researches based on the Gronroos (2001) model are bounded.

Among those used the Gronroos model analyzed only the effect of technical and functional facets of quality, but did not consider the third “image” facet and its clout on satisfaction (Ferguson et al., 1999; Lehtinen, Lehtinen, 1991; Shankar et al., 2020).

Additionally, it was not confirmed whether the connection between quality and involvement is straight or consequential (Roldán Bravo et al., 2020). At the same time some researchers found the indirect connection between quality and involvement considering the influence of different signals (Zaichkowsky, 1988). According to Tsotsou & Vasioti (2006), there is a direct linking between involvement and quality, that is, involvement is a significant identifier of quality. According to Charters and Pettigrew (2006), quality of a product or a service may affect the level of involvement among clients.

This research analyzes the connections between three constructs: quality of a service, involvement and satisfaction of clients in the banking industry of the Kyrgyz Republic. The impulse to conduct this research is to analyze whether the connections revealed in Western economies, also can be revealed in the context of banking services in a developing post-Soviet state such as the economy of the Kyrgyz Republic.

Specific research objectives:

- To determine the connections between quality facets and image.
- To determine the connection between quality facets and customer involvement.
- To determine the connection between quality facets and customer satisfaction
- To determine the connection between customer involvement and customer satisfaction.
- To make some suggestions and recommendations to managers of banks concerning satisfaction increase according to the research results.

In this research we decided to adopt the quality facets proposed by Gronroos's and Lehtinen's structures: functional, technical facet and "image" facet which mainly denotes reputation of a bank and is influenced by functional and technical aspects, that is, it acts as an intermediary between two quality facets and assessments of quality made by clients.

In this regard the research structure was designed according to researches related to above mentioned concepts and constructs, the research is to figure out which facet of quality is more important in forming involvement and satisfaction in the banking industry of the Kyrgyz Republic. The research framework is depicted below (Figure 1.).

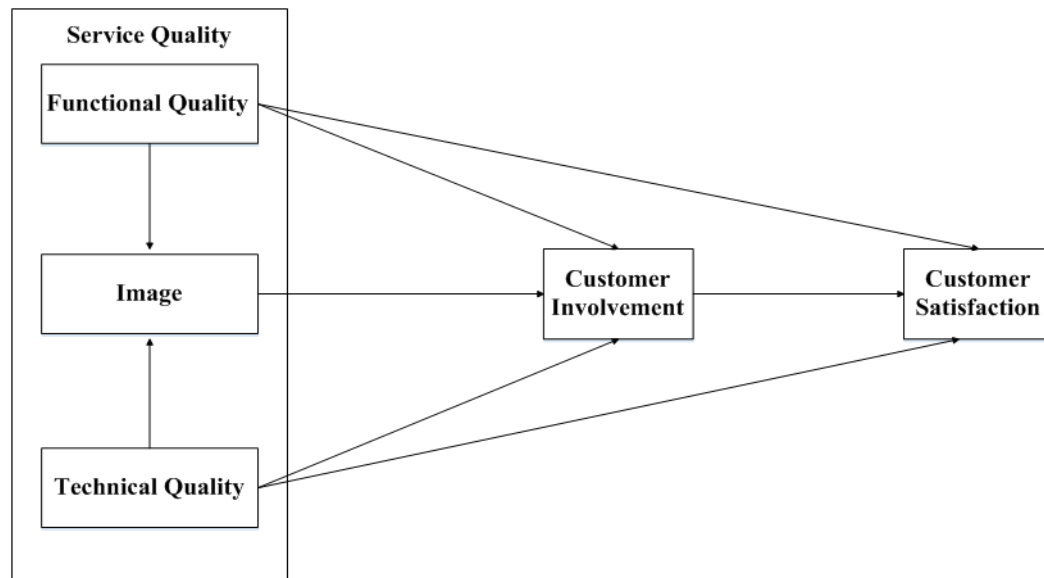


Figure 1. Research Framework
Source: Designed by author.

In this regard we put forward the following hypotheses:

H1: Functional quality has a positive effect on image

H2: Technical quality has a positive effect on image

H3: Functional quality has a positive effect on customer involvement

H4: Technical quality has a positive effect on customer involvement

H5: Image has a positive effect on customer involvement

H6: Functional quality has a positive effect on customer satisfaction

H7: Technical quality has a positive effect on customer satisfaction

H8: Customer involvement has a positive effect on customer satisfaction.

METHODOLOGY

Since this research aims to describe demeanor of clients and to obtain a comprehension of the connections between the constructs, it can be defined as using a descriptive mode (Hassim et al., 2020; Saunders et al., 2009; Assylbayev et al., 2023; Agresti, 2017; Bell et al., 2022). We mainly applied a quantitative mode, that is, this research mainly deals with the accumulation and analysis of numerical information and using the statistical software (SPSS) in order to analyze it and reveal some important connections between the constructs (Saunders et al., 2009).

In this research we should analyze the connections between three facets of quality, involvement and satisfaction of clients in the banking industry of the Kyrgyz Republic, we disseminated our designed questionnaire to clients of different commercial banks in the Kyrgyz

Republic, including RSK Bank, AKB Kyrgyzstan and KICB. We made a focus on these banks since they have considerable number of clients, that is, they are leaders in the market. We chose as the respondents for this analysis those clients who were willing to answer the questions, it means that they do not certainly describe all the clients of the banking industry of the Kyrgyz Republic.

It is obvious that vast volume and enormous size of a sample is preferable, at the same time the coverage of the all the people of the system may lead to the excess attrition and depletion of resources, therefore we decided to apply the convenience sample method.

The completion coefficient of this research is equal to 77.5%. It means that initially, we disseminated 160 questionnaires to the arbitrarily picked clients, but we received 124 filled questionnaires. Among those 124 filled questionnaires: 53 respondents were male and 71 were female, 38 were clients of AKB Kyrgyzstan, 54 were clients of RSK Bank and 32 were clients of KICB.

In this regard in order to accumulate the required primary information, we applied the designed questionnaires, we designed the questions using 5 point Likert scale, this method is convenient and does not require additional efforts from the respondents, also they require less time to answer each question.

The questionnaire comprises four components. In the first section there is individual information of the respondents, the second section includes questions related to quality facets, the third section includes questions related to involvement, the fourth part includes questions related to satisfaction.

In order to analyze and measure the quality facets we applied structures proposed by Gronroos (2001) and Lehtinen and Lehtinen (1991). In order to analyze and measure the construct of involvement of clients we applied the structure proposed by Kapferer and Laurent (1985) which includes four aspects such as: the imporisk, the sign, the pleasure, the risk probability. In order to analyze and measure the construct of satisfaction of clients we adopted and slightly modified the structure proposed by Oliver and Swan (1989).

As we can see in this research satisfaction of clients can be determined as dependent variable, while quality facets and involvement can be determined as independent variables influencing the level of satisfaction among clients.

RESULTS

This part of the research describes the results of the analysis that were obtained using the questionnaire mentioned above. First it presents descriptive analysis of the constructs and then outline the findings through applying mathematical instruments including correlation and regression analysis to characterize the connections between the constructs. The results of this research were considered applying the Statistical Package for the Social Sciences software (SPSS).

We investigate clients of three banks in the Kyrgyz Republic, namely, RSK Bank, AKB Kyrgyzstan and KICB, we chose these banks since they are the most rapidly developing banks in this industry, having the most considerable client base in the country. The share of clients of banks who filled the questionnaires: clients of RSK Bank – 43.55%, AKB Kyrgyzstan is equal to 30.65% and clients of KICB – 25.81%. Those banks tend to have the same priorities and purposes to achieve high level of satisfaction among their clients through enhancing the quality of services.

From the regression analysis between the constructs we can see from the table 1., among control variables only previous experience with a particular bank considerably affects the level of satisfaction.

Table 1. Regression analysis

	Dependent variables		
	Model 1	Model 2	Model 3
	Image	Customer Involvement	Customer Satisfaction
Independent variables			
Functional quality	0.777 ***	0.424 **	0.419 ***
Technical quality	0.098 ns	-0.062 ns	0.186 **
Image		0.253 ns	
Customer involvement			0.127*
Control variables			
How long	0.018 ns	0.013 ns	-0.112 ns
Membership	0.038 ns	0.100 ns	0.028 ns
Previous experience	0.022 ns	-0.121ns	0.195**
Income	-0.021 ns	0.089 ns	-0.054 ns
R square	0.768	0.311	0.646

Note: ns (not significant), *** (p<0.01), ** (p<0.05), * (p<0.1)

From the table 1., we can see that only functional facet of quality significantly influences image facet with appropriate probability level, that is, reputation of a bank can be increased only if its functional quality is high enough, according to the regression analysis, if functional quality increases by 1%, image of a bank may increase by 77.7%, at the same time the effect of technical quality is not considerable.

Table 2. Total effects of the quality facets and involvement on customer satisfaction

	Total impact	Influence
Functional quality	0.473 (0.424*0.127+0.419)	Significant
Technical quality	0.186	Significant
Customer involvement	0.127	Significant

Source: Designed by author

As to the connections between quality facets, involvement and satisfaction, it is emphasized that functional facet has both considerable direct and indirect influence on satisfaction of clients through involvement, that is, the total impact of functional facet on satisfaction is equal to 0.473 (0.424*0.127+0.419). It means that if functional facet of quality is increased by 1%, the level of satisfaction of clients will be increased by 47.3% in the banking industry of the Kyrgyz Republic.

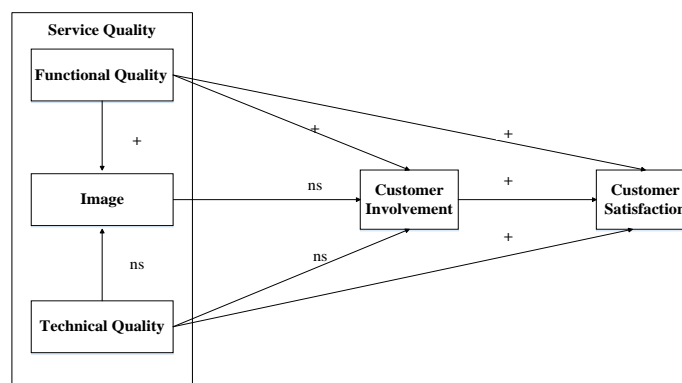


Figure 2. The results of the regression analysis
Source: Designed by author.

The results state that involvement has significant impact on the level of satisfaction, that is, if the level of involvement is increased by 1%, satisfaction will increase by 12.7%. In order to increase the level of satisfaction of clients, banks in the Kyrgyz Republic should focus on

improvement of functional and technical facets of quality, also they should focus on increase of involvement, since it considerably influences the level of satisfaction of clients.

Since we developed 8 hypothesis to be analyzed in this research, we should check the developed hypothesis and define whether each hypothesis is proved or denied according to its β values and probability levels.

H1: Functional quality has a positive effect on image

As we can see from the regression analysis in table 5-12 above, functional quality has a positive and significant influence on image of a bank, since its β value is equal to 0.777 and its P-value is less than 0.01. This hypothesis is proved and supported, and functional quality significantly influences image of a bank.

H2: Technical quality has a positive effect on image

Since β value of technical quality is positive 0.098, but its P-value is greater than 0.1, claiming that its influence on image is not significant, that is, this hypothesis is denied.

H3: Functional quality has a positive effect on customer involvement

Since β value of functional quality is positive 0.424 and its P-value is less than 0.05, therefore this hypothesis is proved and supported, that is, the higher functional quality, the higher the level of involvement of a client.

H4: Technical quality has a positive effect on customer involvement

Since β value of technical quality is negative and equal to -0.062 and its P-value is greater than 0.1, claiming that its influence on involvement is insignificant, so this hypothesis should be denied.

H5: Image has a positive effect on customer involvement

Since β value of image is positive and equal to 0.253, at the same time its P-value is greater than 0.1, that is, its influence on involvement is insignificant, this hypothesis is denied.

H6: Functional quality has a positive effect on customer satisfaction

Functional quality has a positive and significant influence on the level of satisfaction, since its β value is equal to 0.419 and its P-value is less than 0.01, for this reason this hypothesis is proved and supported.

H7: Technical quality has a positive effect on customer satisfaction

Since β value of technical quality is positive 0.186 and its P-value is less than 0.05, claiming that its influence on satisfaction is positive and significant, this hypothesis is proved and supported.

H8: Customer involvement has a positive effect on customer satisfaction

Since β value of involvement is positive and equal to 0.127 and its P-value is less than 0.1, this hypothesis is proved and supported.

Table 3. Hypothesis Analysis

Hypotheses	Proved	Rejected
H1: Functional quality has a positive effect on image	$\beta = 0.777, p < 0.01$	
H2: Technical quality has a positive effect on image		$\beta = 0.098, p > 0.1$
H3: Functional quality has a positive effect on customer involvement	$\beta = 0.424, p < 0.05$	
H4: Technical quality has a positive effect on customer involvement		$\beta = -0.062, p > 0.1$
H5: Image has a positive effect on customer involvement		$\beta = 0.253, p > 0.1$
H6: Functional quality has a positive effect on customer satisfaction	$\beta = 0.419, p < 0.01$	
H7: Technical quality has a positive effect on customer satisfaction	$\beta = 0.186, p < 0.05$	
H8: Customer involvement has a positive effect on customer satisfaction	$\beta = 0.127, p < 0.1$	

Note: ns (not significant), *** ($p < 0.01$), ** ($p < 0.05$), * ($p < 0.1$)

The results of the regression analysis in the table 5-12 revealed that some hypotheses are supported and proved. Managers of banks should invest more resources on functional and technical facets in order to satisfy their clients more effectively, in this regard they should better and thoroughly evaluate needs and wants of clients and then make specific improvements in service procedure in order to make it more favorable and pleasant for clients.

DISCUSSION

Most of previous researches, concerning the connections between quality, involvement and satisfaction, have been conducted in Western countries, so there is no certainty whether these connections between these constructs can be also revealed in the developing post-Soviet

countries. Also most researches were based on SERVQUAL model proposed by Parasuraman, Zeithaml, and Berry (1985), it means that only the effect of functional quality has been analyzed, but as Gronroos (2001) proposed two additional quality facets, namely technical and reputation facets should be also analyzed. Furthermore, researches based on the Gronroos model did not consider the third “image” facet and its impact on involvement. Also research gap was related to which quality facet is more important in forming satisfaction of clients and whether the connection between quality and involvement is straight or consequential (Zaichkowsky, 1988; Tsiotsou, Vasioti, 2006).

In this regard, in this research we applied the Gronroos model, including three quality facets in order to fully capture the construct of quality. As to the connections between functional and technical facets and image, the analysis revealed that only functional facet has considerable impact on image of a bank, at the same time the effect of technical quality is not considerable. It means that in most cases clients consider only the communication with a bank and its personnel demeanor when evaluating reputation of a bank in a market.

Also the analysis stated that there is a direct significant connection only between functional facet and involvement of clients, while technical and reputation facets do not have significant impact on involvement in the banking industry of the Kyrgyz Republic.

Also functional quality influences significantly the level of satisfaction both directly and indirectly through involvement, that is, functional quality is the most important and notable factor in forming satisfaction, followed by technical quality that has only significant direct influence on satisfaction.

The main theoretical contributions of this research are that only functional facet considerably affects reputation of a bank and involvement of clients; functional and technical facets and involvement have important direct influence on the level of satisfaction of clients. Thus, the most important and significant characteristic of quality, influencing satisfaction of clients both directly and indirectly through involvement, is its functional aspect. At the same time technical facet of quality should on appropriate level, since if it is not appropriate most clients will definitely switch to another bank, as it is the core of each service.

A number of researchers claim that the level of quality mainly affects satisfaction, also researchers emphasize that there can be a connection between the level of involvement of clients and their satisfaction. Ideally, banks should apply the following algorithm of interactions with

their clients in order to understand their needs and wants and then apply this knowledge to achieve high level of satisfaction:

- Attract clients through offering a wide and diversified range of services;
- Then conduct analysis in order to determine clients' needs, preferences and anticipations concerning banking services, that is, mainly strive to understand clients;
- Then banks should try to go ahead of its clients, that is, predict their wants and anticipations, and try to meet them fully and in advance;
- Then banks should analyze the level of satisfaction among its clients in order to examine what they are doing correctly and recognize the mistakes they omitted, and if necessary, they should conduct all the previous activities again.

So, as we can see the procedure of banking services is of great importance for satisfaction enhancement both directly and indirectly through involvement in the banking industry of the Kyrgyz Republic. It means that managers of banks should first of all emphasize the importance of this service aspect and improve its staff's skills appropriately through trainings and quality control strategies. It is recommended to apply quality control models based on foreign successful models, but with individual approach since economies in transition have some particularities.

CONCLUSION

The purpose of this research was to ascertain the connection between quality facets, involvement and satisfaction, also to ascertain which quality facet is important in forming satisfaction of clients in the banking industry of the Kyrgyz Republic.

One should emphasize that most researches have been conducted in order to determine the connections between these constructs, but all of them have been conducted in Western countries with developed economies and analyzed only functional facet of quality. In this research we applied facets of quality proposed by the Gronroos model, containing not only functional quality, but also its technical characteristics and organizational reputation of a bank, in order to fully analyze the nature of quality construct and to determine which quality facet has significant influence on involvement and as a result on satisfaction of clients.

In order to accumulate and analyze the necessary data we designed the questionnaire and disseminated it among clients of three banks in the Kyrgyz Republic, including RSK Bank, AKB Kyrgyzstan, KICB.

According to the regression analysis results, functional facet of quality tends to have the most considerable influence on satisfaction both directly and indirectly through involvement, followed by technical facet, at the same time only functional facet has significant impact on involvement.

The analysis states that technical facet and reputation of a bank do not have significant impact on involvement of clients in the Kyrgyz Republic. We suppose that it can be due to the fact that clients in most cases cannot assess technical aspects of quality appropriately, therefore base their judgments only on functional facet, also due to the fact that the banking industry of the Kyrgyz Republic is relatively immature and most banks have not built constant long-term connections with its clients, therefore reputation of a bank does not significantly influence involvement of clients.

The results state that managers should mainly focus on the level of functional quality and invests their resources and efforts on its considerable improvement and enhancement, that is, managers should adjust their service procedure to clients' requirements (quality control systems should be applied) in order to fully satisfy clients.

As each research and investigation tends to have its own limitations, in this research we viewed the construct of involvement as the whole concept, at the same time some researchers claim that the construct of involvement has several parts that can be included in the research framework. Also due to the time and resources restraints this research covered three banks with 124 respondents in total, so that this research was based only on the banking industry and did not cover other industries. Also since this research was to analyze several quality facets, it was required to include a number of additional questions in the questionnaire, in this regard some respondents were complaining the questionnaire to be time consuming, and may be for this reason some questionnaires were not filled appropriately. All these limitations may restrain the summarizing of the results and findings of this research.

Since this research has some limitations both theoretical and practical, there are some suggestions for further researches conducted in this area. First of all, new researches may include and apply several aspects of involvement in order to determine the influence of each

aspect on satisfaction. Further researches may cover other industries through using some other quality structures and facets, also researches in this area should be conducted in other post-Soviet countries in order to analyze if these results and findings are general for all post-Soviet countries.

REFERENCES

- Abed, H. M. A., Nofal, M. I., Alnasr, F., Alsheikh, G. A. A., & Alnawafleh, E. A. T. (2022). The Influence of Service Quality, Customer Satisfaction and Bank Image on Customer Loyalty in Palestinian Islamic Banks. *Journal of Management Information and Decision Sciences*, 25(4), 1–18.
- Agresti, A. (2017). *Statistical Methods for Social Sciences*. London: Pearson.
- Assylbayev, A. B., Safronchuk, M. V., Niiazalieva, K. N., & Brovko, N. A. (2023). Green Transformation and the Concept of Energy Efficiency in the Housing Sector. In *Approaches to Global Sustainability, Markets, and Governance (Vol. Part F175, pp. 567–577)*. Springer. https://doi.org/10.1007/978-981-19-4005-7_61
- Bell, E., Harley, B., Bryman, A. (2022). *Business Research Methods*. Oxford: Oxford University Press.
- Charters, S., & Pettigrew, S. (2006). Product involvement and the evaluation of wine quality. *Qualitative Market Research*, 9(2), 181–193. <https://doi.org/10.1108/13522750610658810>.
- Ferguson, R. J., Paulin, M., Pigeassou, C., & Gauduchon, R. (1999). Assessing service management effectiveness in a health resort: Implications of technical and functional quality. *Managing Service Quality: An International Journal*, 9(1), 58–65. <https://doi.org/10.1108/09604529910248821>
- Gronroos, C. (2001). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-44.
- Hassim, S. R., Arifin, W. N., Kueh, Y. C., & Yaacob, N. A. (2020). Confirmatory factor analysis of the Malay version of the smartphone addiction scale among medical students in Malaysia. *International Journal of Environmental Research and Public Health*, 17(11). <https://doi.org/10.3390/ijerph17113820>
- Jayathilaka, A. K. K. R. (2020). Relationship between Online Repurchase Intention and E-Satisfaction: Quantitative Research Study Based on Young People in Western Province in Sri Lanka. *Open Access Library Journal*, 07(12), 1–10. <https://doi.org/10.4236/oalib.1107007>
- Le, T., Nguyen, H. (2020). Total Quality Management: a Mediating Factor in the Relationship Between Customer Expectations and Satisfaction. *International Journal of Management and Marketing Research*, 13(1), 1–13. www.theIBFR.com

- Lehtinen, U., Lehtinen, J.R. (1991). Two Approaches to Service Quality Dimensions. *The Service Industries Journal*, 11(3), 287–303.
- Machmud, R. (2018). The Effect of System Quality, Information Quality and Service Quality on Use Intensity and Satisfaction of Integrated Academic Information System (SIAT) Users in Gorontalo State University. *Journal of International Conference Proceedings*, 1(2). <https://doi.org/10.32535/jicp.v1i2.320>
- Mhlanga, O. (2018). Measuring restaurant service quality in East London, South Africa: A comparison of restaurant customer expectations and perceptions. *African Journal of Hospitality, Tourism and Leisure*, 7(2), 1–12.
- Oliver, R. L., & Swan, J. E. (1989). Consumer Perceptions of Interpersonal Equity and Satisfaction in Transactions: A Field Survey Approach. *Journal of Marketing*, 53(2), 21–35. <https://doi.org/10.2307/1251411>.
- Richins, M. L., & Bloch, P. H. (1986). After the New Wears off: The Temporal Context of Product Involvement. *Journal of Consumer Research*, 13(2), 280–285. <https://doi.org/10.1086/209067>.
- Roldán Bravo, M. I., Stevenson, M., Moreno, A. R., & Lloréns Montes, F. J. (2020). Absorptive and desorptive capacity configurations in supply chains: An inverted U-shaped relationship. *International Journal of Production Research*, 58(7), 2036–2053. <https://doi.org/10.1080/00207543.2019.1642530>
- Saunders, M., Lewis, P., Thornhil, A. (2009). *Research methods for business students*. Essex: Prentice Hall.
- Shankar, A., Datta, B., Jebarajakirthy, C., & Mukherjee, S. (2020). Exploring Mobile Banking Service Quality: A Qualitative Approach. *Services Marketing Quarterly*, 41(2), 182–204. <https://doi.org/10.1080/15332969.2020.1742982>
- Tsiotsou, R., Vasioti, E. (2006). Using demographics and leisure activities to predict satisfaction with tourism services in Greece. *Journal of Hospitality and Leisure Marketing*, 14.
- Zaichkowsky, J.L. (1988). Involvement and the price cue. *Advances in Consumer Research*, 15, 323–327.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.