

# Service Innovation and Customers' Satisfaction of Selected Micro Finance Banks in Ogun State, Nigeria

Olayinka Abideen Shodiya<sup>1</sup>, Akinbiyi Akintaro<sup>1</sup>, John Olopade<sup>2</sup>

<sup>1</sup>*Crescent University, Abeokuta, Ogun State, Nigeria*

<sup>2</sup>*Federal Polytechnic, Ilaro, Ogun State, Nigeria*

*Corresponding author: olayinkashodiya@yahoo.com*

**Abstract** - The untimely adoption of modern business practice through technological innovation has hindered service quality, customers' satisfaction and the general growth of Micro finance banks in Nigeria. The study examined the effect of service innovation which consist of New Service Concept, New Service Process, and New Technology on customer satisfaction of selected micro finance banks in Ogun state Nigeria. The study adopted a cross- sectional survey research design with the aid of structured questionnaire which enabled the researcher to obtain firsthand information from the respondents. The population for this study is the customers of Micro Finance banks (MBF) in Ogun State in which (17) microfinance banks customers were conveniently selected for the survey. Due to the infinite nature of the population (MFBs Bank Customers) the study adopted a sample determination model by Cochran (1977) which is mainly used for an infinite population of this nature to arrive at the sample size of (384) respondents. The data collected was analysed using partial least square structural equation modeling (PLS-SEM 4.0). The findings of the study revealed that all the hypotheses (H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, and H<sub>4</sub>) are accepted, indicating that each of the independent variable dimensions has significant effect on the dependent variable. That's new service concept has significant effect on customers satisfaction of MFBs. The study concluded that the three dimensions of service innovation, namely New Service Concept, New Service Process, and New Technology, had a positive and substantial influence on customer satisfaction among the selected micro finance banks in Nigeria. Therefore, the study recommended that the management of microfinance banks in Ogun state should constantly adopt service innovation dimensions to outperform competitors in order to increase their customer satisfactions.

**Keywords** - *Service Innovation, New Service Concept, New Service Process, New Technology and Customers' Satisfaction.*

---

## ARTICLE INFO

Received 13 March 2024

Received in revised form 1 June 2024

Accepted 15 June 2024

Published 29 June 2024

---

DOI: <https://doi.org/10.24191//jibe.v9i1.901>

## I. Introduction

Microfinance banking has become a significant source of finance for small and medium-sized enterprises (SMEs) worldwide, particularly in less developing countries like Nigeria (Ibrahim & Yusheng, 2020). The introduction of formal microfinance banking coincided with technological advancements, leading to the adoption of technology-based innovations in microfinance bank operators' operations. Service delivery to rural communities is enhanced by telecommunication satellites mounted by telecom operators and on-site communication gadgets installed by MFBs, which enable communication between MFB customers and their banks through mobile phones and allied devices.

Microfinance has been described as an economic development approach intended to benefit low-income women and men, aiming to reach them with financial services that enable them to create wealth without discrepancies in sex. Microfinance banks are expected to be transparent, fair, and reasonable in their dealings with customers, embracing service innovation to meet and satisfy customer needs (Ajike, Nnorom, Kwarbai, & Egwuonwu, 2016).

Microfinance banks have played a significant role in Nigeria's economic development, with 874 licensed MFBs operating as of December 2020. Adopting service, process, and marketing types of innovations can make companies more efficient and adapt to changing market demand. Service innovation benefits both the firm providing the service and customers, enhancing their competitive edge (Agboola, 2019). Service innovation has become a critical factor in the success of microfinance institutions, leading to increased customer satisfaction and loyalty, which is essential for the long-term viability of microfinance institutions. In a highly competitive environment, the ability of microfinance banks to differentiate themselves from competitors through service innovation is crucial to their success (Tajeddini, 2018). Organizations need a capacity to get many customers in order to survive or exist, and excellent services and responsiveness to customer demands can directly increase satisfaction. Satisfied customers describe the quality of organizations, while unsatisfied customers remind organizations of low performance.

Customer satisfaction is crucial for the long-term success of businesses, including microfinance institutions. It is essential for maintaining customer loyalty and ensuring the sustainability of these institutions (Binsar Kristian & Panjaitan, 2014). To achieve customer satisfaction, banks must focus on factors such as convenience, customer care, transaction methods, pricing, products, and service. Satisfied customers are more likely to remain loyal and recommend the business to others (Bittner, Ostron, & Morgan, 2021).

To differentiate themselves from competitors and improve performance, many microfinance banks have focused on service innovation (Adirika, Ebue & Nnolim, 2021). Microfinance banks must be transparent, fair, and reasonable in their dealings with customers, avoiding sharp practices, untrue advertisements, non-disclosure of vital information, false promises, and reluctance or apathy towards grievance handling. This study aims to examine the effect of service innovation on customer satisfaction in selected Micro Finance Banks in Ogun State, aiming to fill the gap in the existing literature on the impact of service innovation on customer satisfaction in the Nigerian microfinance industry.

Microfinance banks in Nigeria face challenges in implementing modern technology and digital solutions, which hinders their ability to offer convenient services and customer satisfaction (Ravishankar & Christopher, 2020). Poor service innovation, including low new service concepts, processes, and late adoption of technology, has led to customer loss, increased competition, and declining profitability. Many banks have a limited range of financial products and services, often focusing solely on basic microcredit facilities, which can lead to dissatisfaction and potential disengagement. Inconsistency in service quality also undermines customer trust and confidence, making it difficult for banks to establish long-term relationships with customers (Saleem, 2022). To address these challenges, microfinance banks have adopted strategies such as service innovation, such as new service concepts, processes, and technology, centered on customer satisfaction (Küpper, 2020; Hauser 2021; Jaw, 2022; Carlborg, 2016; Yusif, 2017; Flint, 2018; Oke, 2019; Ahmad and Kamal, 2022). However, the extent to which these innovations have impacted customer satisfaction remains unclear in Nigerian microfinance banks. This study aims to fill the gap by examining the dimensions of service innovation on customer satisfaction in Ogun state Nigeria, contributing to the existing literature on service innovation and customer satisfaction in developing economies. Therefore, the problem addressed in this study was to investigate the effect of service innovation and customer satisfaction in Nigeria's microfinance banking industry in order to fill the identified gaps in the study area.

## II. Literature Review

### Service Innovation:

Service innovation refers to the introduction of new or improved services that create value for customers and enhance the service provider's competitive advantage(Agboola, 2019). This can involve new service offerings, improvements to existing services, or entirely new ways of delivering services. Service innovation is crucial for businesses to stay relevant, meet evolving customer needs, and leverage technological advancements(Bittner, Ostron, & Morgan, 2021).

Service innovation is crucial for organizations to stay competitive in a highly competitive market. It involves creating new solutions, distribution channels, technology, and service management approaches that enhance customer value and performance (Adirika, Ebue & Nnolim, 2021). This innovation can take various forms, driven by customer needs, technology advancements, and market opportunities. Research shows it positively impacts customer satisfaction, loyalty, retention, and financial performance. However, the literature shows scanty studies in service innovation, with manufacturing dominating innovation studies (YuSheng & Ibrahim, 2019). Improving the ability of firms to meet customer needs and perceptions is essential for firms to remain competitive and survive in the market (Tidd, Bessant & Pavitt, 2018). It is important to give attention to the first three years of introducing innovations into the marketplace and adopt a culture of innovation to meet customer needs (Viki, Toma, & Gons, 2017).

### Dimensions of service Innovation

#### New Service Concept

New service concept refers to an innovative idea for providing a service that significantly improves, transforms, or creates new ways to meet customer needs and preferences. These concepts often leverage new technologies, novel delivery methods, or unique business models to offer enhanced value, convenience, or efficiency (Viki, Toma, & Gons, 2017).

A New Service Concept is the core idea of providing services in a market, focusing on value creation in collaboration with customers. It outlines activities, customer relationships, outcomes, and problem-solving. Banking innovation has evolved from ATMs to mobile and electronic banking, transforming service delivery and customer engagement. New service concepts lead to increased satisfaction, loyalty, and improved business performance(Saleem, 2022).

#### New Service Process

Balakrishna and Prabhu (2020)defined new service process as the implementation of new or significantly improved production process, distribution method, or support activity for services. Process innovations must be new to your enterprise, but they do not need to be new to your market. The innovation could have been originally developed by your enterprise or by other enterprises”

New Service Process innovation is a process that combines client and service delivery, aiming to enhance operational effectiveness and efficiency. It involves implementing new methods, techniques, and tools to meet customer needs and create value for the organization(Ahmad & Kamal, 2021). This process can improve customer satisfaction, loyalty, retention, and financial performance. By developing new service processes, businesses can create new sources of value and differentiate themselves from competitors, leading to sustained customer loyalty, sales growth, and improved business performance. Den Hertog (2010), states that service process innovation is related to the internal arrangement of the organization in relation to the management of the service workers to perform and offer services to the clients. In other words, it involves the organization coming up with improved operational processes, and making sure these processes are used by the service workers in the delivery of the service to the customers.

#### New Technology

New technology refers to innovative tools, systems, devices, or methods that significantly improve existing capabilities or introduce unprecedented functionalities. These advancements often arise from cutting-edge research and development, integrating scientific discoveries and engineering ingenuity to solve problems, enhance productivity, or create new opportunities across various sectors (Ahmad & Kamal, 2022).

New technology, including advancements in science and engineering, is revolutionizing businesses by providing better services and creating new value for customers. It includes hardware, software, and tools like the Internet, AI, blockchain, and cloud computing. Microfinance banks are adopting new technology to improve efficiency, reach, and effectiveness of their services, particularly in emerging economies like Nigeria, which serve unbanked and underbanked populations ((Tidd, Bessant & Pavitt, 2018).

### **Customer Satisfaction**

According to Tsai and Hsu (2014), customer satisfaction is a product of the comparison customers make between the difference of the expectation had before the purchase of a product or service offering, and the actual experience on the commencement of the consumption of the offering purchased. Customer satisfaction is a crucial factor for a company's success, as it drives loyalty, purchases, and recommendations. It is measured by factors like convenience, customer care, transaction methods, pricing, and product quality. Understanding customer satisfaction and performance is essential for businesses to achieve growth in service (Kombo, 2021). Microfinance banks, serving low-income and financially underserved populations, can achieve satisfaction by understanding customer needs, providing transparent pricing, and offering tailored financial products. Customer happiness is determined by performance that exceeds expectations, and companies should consider differentiating products and presenting them in a unique way to enhance customer satisfaction. Recruiting new clients is often more expensive than maintaining existing ones, so businesses must focus on developing new and standard products to provide excellent customer service (Ahmad & Kamal, 2021). Customer satisfaction enhances loyalty, transaction reduction, lifetime value, and reduces bad word of mouth, ensuring stability and competitiveness.

### **Determinants of Customer Satisfaction of Banks Services**

Customer satisfaction is a complex issue that varies across cultures and industries. In the banking industry, factors such as fast and efficient service, confidentiality, speed of transactions, friendliness of staff, accurate billing systems, competitive pricing, and service quality significantly influence customer satisfaction (Fornell, 2020). Bank-specific characteristics are more important than other factors in determining customer satisfaction. Firms that prioritize meeting customer expectations achieve higher performance, leading to proactive marketing efforts and a competitive advantage (Newman, 2018; Caruana, 2020). Customer satisfaction is crucial for business success and performance, and a positive relationship exists between satisfaction and loyalty. Factors affecting customer satisfaction in banks include branch satisfaction, economic satisfaction, remote access satisfaction, and the presence of Automated Teller Machines (Sivadas & Newman, 2018; Caruana, 2020). Adopting these factors could lead to increased operational costs for banks. Overall, customer satisfaction is essential for business success and performance.

### **Theoretical Review and Framework**

#### **Service-Dominant Logic (SDL)**

Service-Dominant Logic (SDL) theory, developed by economists Frederic Bastiat and Vargo & Robert Lusch, emphasizes the importance of co-creation of value between service providers and customers through knowledge and resource exchange. In microfinance banks, service innovation can lead to increased customer satisfaction by developing new financial products and services that meet evolving customer needs and preferences. SDL is based on the belief that all economies are service economies, where economic activity is primarily centred around the exchange of service experiences. Adopting SDL principles in Nigeria's Microfinance Banks leads to enhanced customer satisfaction, as customers are actively engaged in the design and development of financial products and services. Building strong relationships with customers based on trust, transparency, and effective communication is crucial for fostering loyalty and achieving long-term customer value.

#### **Empirical Reviews**

Lindberg & Jimmie (2022) researched into customer service innovation in the banking industry. The empirical study of the research was performed through a pre-study with semi-structured telephone interviews and the actual study consisted of internet surveys. The surveys had 300 responses within the sample of the study. The study concluded that customers want communication methods which are not involving face-to-face interaction. Instead, they prefer mobile applications, social networks and the internet bank. Customers prefer to innovate together with other customers and employees of the bank.

Tidd, Bessant, and Pavitt, (2022) dived into impact of technological innovations on customers in the banking industry in developing countries. In their study based on the customer satisfaction model - SERVQUAL and the conventional economic efficiency theory, the paper employed the chi-square analysis to investigate customer satisfaction and the associated cost of electronic banking services. It was revealed that the costs associated with technological innovations in banking have also increased transactions costs to the disadvantages of customers. The study concluded that, banks need to have closer collaboration with the target segment of customers in developing new electronic products and services.

Martha (2022) examined service innovative practices in the Commercial Banking Sector and established the relationship that exists between service innovative practices and customer satisfaction in the commercial banking

sectors. Using descriptive survey, customers of 150 respondents of commercial banks operating in Kenya were drawn from 15 commercial banks.

The sample units were selected through convenience sampling method. From the study, 24% of respondents identified Automatic Teller Machines (ATMs) as an available service innovation practice, 17% indicated that Internet Banking was an available service innovation while 15% of respondents indicated that Electronic Funds Transfer and Branch Networking were available service innovation practices in their banks. 5% of the respondents indicated that electronic fund transfer and POS was an available service innovation practice while only 4% of respondents indicated that Telephone Banking was an available service innovation practice in their banks. However, the study concluded that majority of bank customers have relatively higher satisfaction in Branch Networking services, Internet Banking and Automatic Teller Machines services. Pedro and Hippel (2022), also studied Users as Service Innovators: The Case of Banking Services. Applying exploration study method, it analyzed the importance of services innovation by users, focusing on the field of commercial and retail banking services. With a sample of 36 corporate and retail banking services, the study concluded that service innovation is geared towards customers and industry growth. All service innovation in the banking industry should reduce efforts and improve satisfaction and retention.

Vesna and Roja, (2021) used a holistic approach to review innovation services and management in banking sector. Based on the survey results, they concluded that shifting from linear to nonlinear innovation processes, continually incorporating internal and external knowledge in the innovation process, consciously managing knowledge flows, intensifying partnerships with external stakeholders, creating a customer-centric organization and adopting the strategic innovation framework are leading principles of managing innovation, aiming at building sustainable competitive advantage and developing sustainable growth in banking.

Bittner, Ostrom, & Morgan (2021) conclude that Service Innovation is less disciplined and less creative than manufacturing and technology sector. In other words, innovation involving human behavior in its process is still rarely studied because of the nature of services that are easily replicated so that the development of innovation in services is rarely done. Gupta and Dev (2021) studied the factors impacting customer satisfaction in Indian banks and their effects on customer satisfaction. A questionnaire was given to 400 customers of 13 retail banks in India. Five factors were suggested driving customer satisfaction in banks namely: service quality, ambience, client participation, accessibility and financials. Sharma, Ravishankar and Christopher (2020) studied the factors influencing adoption of Internet banking in urban India. The factors of perceived usefulness, perceived ease of use, social influence, awareness, quality of internet connection and computer self-efficacy are primary determinants of the attitude toward the use of internet banking in urban India. The attitude toward the use of internet banking can be used to predict the intention to use of internet banking systems by users.

### III. Research Methodology

This study used a cross-sectional survey design with a structured questionnaire to gather data from customers patronizing selected Microfinance banks in Ijebu-ode and Abeokuta Local Government, the two local governments with the highest number of licensed Microfinance banks in Ogun state. Multi-stage sampling techniques were used, with a sample size of 384. Data was collected from primary sources through a validated questionnaire, and analyzed using descriptive and inferential statistics PLS-SEM 4.0 was used to test hypotheses and to estimate linear relationships between variables. The study aimed to understand the factors influencing the number of customers visiting Microfinance banks in these two local governments.

### IV. Result

The results from the study on service innovation's impact on customer satisfaction in Micro finance banks in Ogun state Nigeria. Out of 384 questionnaires, 354 were returned, with a 92% return rate. Statistical tools included descriptive statistics, pie charts, and percentages.

Cronbach's Alpha Reliability Test of Constructs

	No. of items	Cronbach's Alpha	Composite Reliability
NSC	5	0.710	0.721
NSP	5	0.727	0.735
NT	5	0.792	0.805
CS	5	0.821	0.836

*Source: Extracted from SMART-PLS Output, version 4.0*

From the table above, the internal consistency of the research measurement model using Cronbach's alpha and Composite Reliability was evidenced. The result indicated that the Cronbach's alpha coefficients range from 0.727 to 0.821. Composite Reliability ranged from 0.721 to 0.836. These values are above the recommended minimum value of 0.7, suggesting that the items used to measure each construct are reliable and consistent in assessing the underlying constructs. (Lowry & Gaskin, 2014).

### Measurement Model Evaluation

The study evaluates the quality of measurement models using Partial Least Squares-Structural Equation Modelling (PLS-SEM). The structural model is evaluated using items factor loadings, Average Variance Extracted (AVE), and Fornell and Larcker criterion. The model is presented in figure 4.1 showing direct model coefficients. The evaluation process ensures the validity of the model. This shows the direct relationships between the exogenous constructs (the service innovation proxies namely new service concepts (NSC), new service process (NSP), and new technology (NT)) and the endogenous construct /latent dependent variable (Customer satisfaction (CS)) as presented below in figure 1.

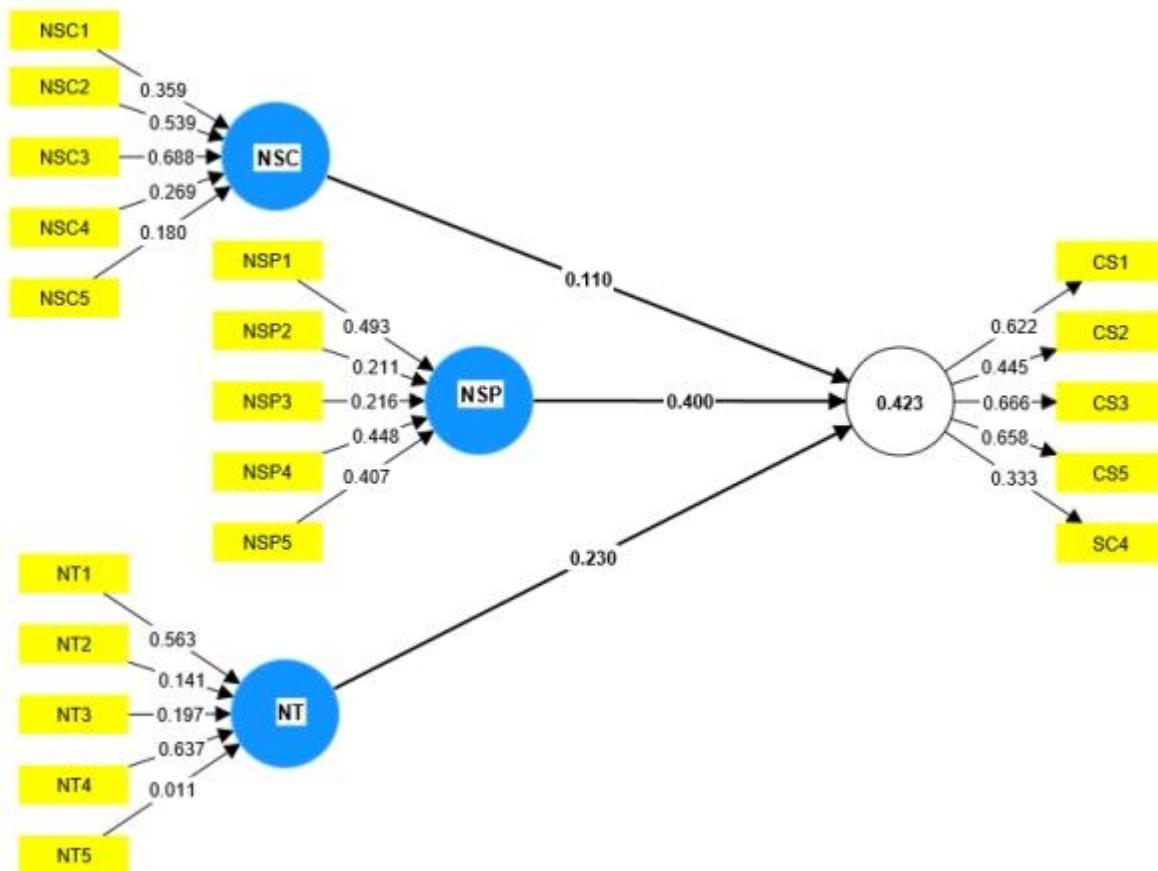


Fig. 4.1: PLS Algorithm for Direct Model

The path weights and coefficient of determination ( $R^2$ ) are presented in fig. 1. Result of the direct model coefficient indicated that about 42% of variance in CS is explained by NSC, NSP, and NT.

Table 4.2: Hypothesized measurement model (Convergent validity)

Model Construct	Indicators	Loading	Average Variance Extracted (AVE)
Customer Satisfaction	CS1	0.574	0.5330
	CS2	0.610	
	CS3	0.434	
	CS4	0.662	
	CS5	0.385	

	NSC1	0.436	
	NSC2	0.638	
New Service Concept	NSC3	0.566	0.5208
	NSC4	0.542	
	NSC5	0.422	
	NSP1	0.433	
	NSP2	0.654	
New Service Process	NSP3	0.585	0.5346
	NSP4	0.664	
	NSP5	0.337	
	NT1	0.708	
	NT2	0.532	
New technology	NT3	0.755	0.6624
	NT4	0.860	
	NT5	0.457	

Source: Extracted from SMART-PLS Output, version 4.0

Table 4.2 displays factor loadings and average variance extracted for convergent validity. The Average Variance Extracted measures variance encapsulated by indicators with respect to measurement error, always exceeding 0.50. The values ranged from 0.5208 to 0.6624, all above the threshold for Convergent Validity.

Table 4.3: Evaluation of the Full Structural Model

Variables	R <sup>2</sup> [R <sup>2</sup> Adjusted]	f <sup>2</sup>	Effect size rating
Customer Satisfaction	0.956 [0.956]	-	
New Service Concept	-	0.296	Small effect
New Service Process	-	3.906	Very large effect
New Technology	-	1.636	Very large effect

Source: Extracted from SMART-PLS Output, version 4.0

The prediction-oriented PLS-SEM approach aims to explain endogenous latent variables' variance, with high R<sup>2</sup> levels for key target constructs. The study found that NSC, NSP, and NT account for 95.6% of the variance in the CS. The effect size f<sup>2</sup> determines the impact of specific latent variables on dependent variables. NSC has a small effect on CS, while NSP and NT have large effects.

### Test of Hypothesis

#### Decision Rule

The critical value limit for the absolute value of the critical ratio (C.R.) is set at 2.00, the decision rule for accepting or rejecting the null hypothesis at a significance level of 0.05 can be stated as follows:

If |C.R.| > 2.00, we reject the null hypothesis.

If |C.R.| ≤ 2.00, we consider the test insignificant and fail to reject the null hypothesis.

In this context, if the absolute value of the computed C.R. is greater than 2.00, it suggests a significant relationship between the variables, leading to the rejection of the null hypothesis. On the other hand, if the absolute value of the computed C.R. is less than or equal to 2.00, it indicates an insignificant relationship, and we fail to reject the null hypothesis. This signifies that the higher the absolute value of the critical ratio the stronger the significance of the effect.

Table 4.4: Result of Hypothesis Testing (Structural Model Coefficients)

Hypothesis	Predicted Relationship	Beta Value	Standard Error	t-value	p-value	Remarks
H <sub>01</sub>	NSC → CS	0.165	0.025	6.600	0.000	Significant
H <sub>02</sub>	NSP → CS	0.601	0.254	2.366	0.000	Significant
H <sub>03</sub>	NT → CS	0.346	0.139	2.489	0.000	Significant

Source: Extracted from SMART-PLS Output, version 4.0

**Hypothesis One**

$H_{01}$ : New service concept has no significant effect on Customers' Satisfaction of selected microfinance banks in Ogun state, Nigeria.

For  $H_{01}$ , the estimate (regression weight) for the relationship between new service concept and customer satisfaction is given as 0.398, and the standard error is 0.052. The critical ratio (C.R.) can be calculated as: Since the absolute value of the computed C.R. (6.600) is greater than 2.00, we reject the null hypothesis ( $H_{01}$ ). This means that there is a significant effect of new service concept on customer satisfaction in selected microfinance banks in Ogun state, Nigeria. This in line with the finding of (Senguo and Kilango, (2018), Raja and Wei's, (2016) who concluded that new service concept improve customer satisfaction, MFBs performance and sustain competitive edge in Bangladesh micro finance banks also compliment the submission of Salawudeen and Ogunlowore, as well as Oladele, (2019) who conducted similar research in Ado-Ekiti and Lagos state respectively.

**Hypothesis Two**

$H_{02}$ : New Service process has no significant effect on Customers' Satisfaction of selected microfinance banks in Ogun state, Nigeria.

For  $H_{02}$ , the estimate for the relationship between new service process and customer satisfaction is given as 0.379, and the standard error is 0.053.

Since the absolute value of the computed C.R. (2.366) is greater than 2.00, we reject the null hypothesis ( $H_{02}$ ). This implies that there is a significant effect of new service process on customer satisfaction in selected microfinance banks in Ogun state, Nigeria. The findings from this study is consistent with the studies of other authors who found a positive relationship between new service and customers satisfaction (Raja & Wei, 2017), competitive advantage (Oke, 2019), organization growth (Massa and Testa, 2018; Morone and Testa, 2018) and performance (Tether, 2003; Van Auken, 2008; Varis and Littunen, 2010; Ar and Baki, 2011; Olughor, 2015).

**Hypothesis Three**

$H_{03}$ : New Technology has no significant effect on Customers' Satisfaction of selected microfinance banks in Ogun state, Nigeria.

For  $H_{03}$ , the estimate for the relationship between new technology and customer satisfaction is given as 0.249, and the standard error is 0.035. The critical ratio (C.R.) can be calculated as:

Once again, since the absolute value of the computed C.R. (2.489) is greater than 2.00, we reject the null hypothesis ( $H_{03}$ ). This also implies that there is a significant effect of new technology on customer satisfaction in selected microfinance banks in Ogun state, Nigeria. This also in line with conclusion of Olopade (2020), Aaker & McLoughlin, (2018), Ezzi & Jarboui, (2018).

**Hypothesis Four**

$H_{04}$ : Service innovation has no combined effect on customers' satisfaction of Nigeria microfinance banks.

For  $H_{04}$ , the estimate for the relationship between service innovation and customer satisfaction is given as 0.986 for the squared multiple correlation coefficients ( $R^2$ ). The squared multiple correlation coefficients represent the proportion of variance in customer satisfaction explained by the combined effects of the three dimensions of service innovation. As  $H_{04}$  is about the combined effect of service innovation, it is not directly tested with a critical ratio. Instead, the squared multiple correlation coefficient of 0.956 suggests that approximately 95.6% of the variance in customer satisfaction can be explained by the combined effects of new service concept, new service process, and new technology. This indicates a strong and significant combined effect of service innovation on customer satisfaction in Nigeria microfinance banks.

In summary, based on the critical ratio test, all the hypotheses ( $H_{01}$ ,  $H_{02}$ ,  $H_{03}$ , and  $H_{04}$ ) are rejected, indicating that each of the independent variables (new service concept, new service process, and new technology) has a significant effect on customer satisfaction, and the combined effect of service innovation is also significant in explaining customer satisfaction in Nigeria microfinance banks. The findings were in line with previous researches (Nguyen et al., 2014), (Kofi Wireko, & Ameme, 2016), (Mahmoud, 2017), (Muhammad & Muhammad, 2018), (YuSheng and Ibrahim 2019), (Kurniawan, Nirwanto, Firdiansjah, 2019), (Balakrishna. & Prabhu, 2020).

## **V. Discussion**

The study found a positive relationship between service innovation dimensions and customer satisfaction in microfinance banks in Ogun state, Nigeria. The dimensions of new service concept, process, and technology significantly impacted customer satisfaction. This suggests that continuous improvement and implementation of innovative ideas, optimizing service processes, and incorporating advanced technologies can enhance customer satisfaction. The study also found that 95.6% of customer satisfaction variance can be explained by the joint impact of these dimensions. This highlights the importance of service innovation in meeting evolving customer expectations and fostering long-term customer loyalty. A comparative analysis of the previous studies showed that the findings of this study agree with the works of other scholars who attempted to relate the dimensions of service innovation via viz new service concept, new service process and new technology respectively innovation to customer satisfaction. (Zuñiga-Collazos and Castillo-Palacio 2021) who reported that the combined dimensions of service innovation improve customer satisfaction and the image of company's products and services in Colombia, (Lee et al., 2022 ) who observed that usage attitude of technological innovation is the major determinant of customer satisfaction among mobile app services users in Taiwan, (Senguo and Kilango, 2019) who concluded that service innovation improve customer satisfaction, performance and sustain competitive edge of micro finance banks. The findings above are also in line with the findings by Babatunde, and Salawudeen and Ogunlowore (2018) and Oladele, (2019) who conducted similar research in Ado-Ekiti and Lagos State respectively.

## **VI. Conclusion**

The study reveals that the adoption of new service concepts, processes, and technologies significantly impacts customer satisfaction in microfinance banks in Ogun state, Nigeria. This is consistent with previous research that suggests creating new ideas and concepts can enhance customer satisfaction and brand loyalty. Advanced technology can also help microfinance banks outperform competitors by delivering rapid and reliable services. The relationship between new service concept (NCS) and customer satisfaction (CS) is significant, with a regression weight of 0.398. The relationship between new service process (NSP) and customer satisfaction (CS) is also significant, with a regression weight of 0.379. The relationship between new technology (NT) and customer satisfaction (CS) is also significant, with a regression weight of 0.249. The study concludes that the dimensions of service innovation (NSC, NSP, and NT) collectively predict customer satisfaction in Ogun state, Nigeria. This aligns with previous studies that have found that service innovation is related to customer satisfaction, customer retention, product price, perceived value, and service efficiency. Customer characteristics moderate the relationship between service innovation and customer satisfaction, with initiatives that meet customers' functional, social, and emotional value expectations enhancing satisfaction. The study concludes that service innovation adoption with core and reliable services, quick service processes, and sophisticated technology in Nigeria microfinance banks effectively influences customer satisfaction. Based on the findings of the study, the following recommendations are given:

- Microfinance banks in Ogun state should enhance service quality through the implementation of new service concepts like e-banking, mobile banking, debit/credit cards, ATMs, and customized options.
- Microfinance banks in Ogun state should adopt a seamless online service interface, automated options, modern interaction media, and innovative marketing services to increase customer satisfaction. This can be achieved by adopting a flexible approach and developing in-house solutions.
- Microfinance banks in Ogun state should adopt new technology, including payment systems, internet banking, mobile banking, direct banking, e-check, and online banking systems, to enhance service efficiency and invest in infrastructure

## **Acknowledgment**

The researchers would like to acknowledged the Crescent University, Abeokuta, Ogun State, Nigeria and Federal Polytechnic, Ilaro, Ogun State, Nigeria for their support and aid in the success of the study,

## **Declaration**

The authors of this manuscript declare that there is no conflict of interest pertaining to the contents presented in this research.

### Authors contribution

Olayinka Abideen Shodiya, Akinbiyi Akintaro, John Olopade contributed to the design and implementation of the research, to the analysis of the results and to the writing of the manuscript.

### References

Aaker, A. M. & McLoughlin, J. P. (2020). The influence of service innovation in customer satisfaction: Case study of hotel industry. *In 3rd International Conference on Applied Business and Management, Porto, Portugal.*

Adeoye, B. & Lawanson, O. (2012). Customer satisfaction and its implications for banks in Nigeria. *British Journal of Arts and Social Sciences*, 5(1), 13-29.

Adirika, E. O., Ebue, B. C. & Nnolim, D. A. (2001). Principles and practice of marketing (2nd edition). *Enugu: John Jacob's Classical Publishers Ltd* 1-322.

Agboola, A. (2019). Service Innovation in the Banking Industry of Ghana. *International Journal of Academic Research and Reflection*, 7(4).

Ahmad, J. and Kamal, N (2021) Customer satisfaction and retail banking: an assessment of some the key antecedents of customer satisfaction in retail banking. *International Journal of Bank Marketing*, (20)4, 146-160.

Ar, M., & Baki, B. (2011). The Impact of Service Quality on Customer Satisfaction and Loyalty in Turkish Banks. *Journal of Financial Services Marketing*, 16(2), 143-155. DOI: <https://doi.org/10.36713/epra11080>

Babatunde, O., Salawudeen, S. A., & Ogunlowo, O. (2018). The Impact of Service Quality on Customer Satisfaction and Loyalty in Ado-Ekiti. *Journal of Business and Management*, 10(1), 1-8.

Balakrishna, R. & Prabhu, B. (2020). Service innovation in manufacturing. *Journal of Service Management*, 23(3), 440-45.

Beck, T., Demirgic-Kunt, A. & Levine, R. (2003). Law and finance. Why does legal origin matter? *Journal of Comparative Economics*, 31, 653 – 675.

Bellingkroch, R. & Wallenburg, S. (2019). Impact of Service Innovation on Customer Satisfaction: An Evidence from Pakistani Banking Industry. *Emerging Economy Studies*, 5(2), 125–140

Bellingkrodt, S. & Wallenburg, C.M (2015). The role of customer relations for innovativeness and customer satisfaction: A comparison of service industries. *The International Journal of Logistics Management*, 26(2), 254-274.

Bergfors, M. E. & Larsson, A. (2019). Product and process innovation in process industry: a new perspective on development. *Journal of Strategy and Management*, 2 (3), 261-276.

Binsar, B., Kristian, N. & Panjaitan, A. (2014). The Effect of Service Innovation on Customer Satisfaction Indihome Internet Provider in Central Java Through Corporate Reputation As Variable Intervening. *International Journal of Scientific & Technology Research*, 8(10), 144-151

Biswakarma, G., Khatri, B., & Gnawali, A. (2020). Antecedent of service innovation effectiveness in small and medium enterprises: a case of hospitality sector in Nepal. *International Journal of Operational Research/Nepal -IJORN*, 9(1), 9-32.

Bittner, A., Ostron, F. M. & Morgan, R. (2021). Service Innovation in Hong Kong: Attitudes and Practice. *The Service Industries Journal*, 18(2), 112-124.

Carlborg, P., Kindström, D. and Kowalkowski, C. (2014). The evolution of service innovation research: a critical review and synthesis: *The Service Industries Journal*, 34 (5),373-398.

CBN (2022) *Central Bank of Nigeria statistical bulleting*. CBN Publications

Chakravarty, S., Feinberg, R. & Rhee, E. Y. (2004). Relationships and individuals bank switching behavior. *Journal of Economics and Psychology*, 25(8), 507 – 527.

Daragahi, G. A. (2018). The Impact of Innovation on Customer Satisfaction: A Study of the Cosmetics Producer in Tehran. *International Review* 1(2), 121-132.

Daragahi, J. (2019). *The Organization of Innovation in Services*, Roskilde University Press, Roskilde.

Darroch, P. & McNaughton, S. E. (2021). Service Innovativeness and Customer Satisfaction of Four Star Hotels in Rivers State. *International Journal of Research in Business Studies and Management*4(3), 55-65.

Den Hertog, P. (2010). Managing service innovation: Firm-level dynamic capabilities and policy options. *Dialogic Innovatie & Interactie*.

Dhakal, D. P. (2020). I Customer's Satisfaction towards Service Delivery System of Nepal Bank Limited (A Case Study of Birendranagar Branch, Surkhet, Nepal) (*thesis*).

Diaw, B., Asare, G., (2018). Effect of Innovation on Customer Satisfaction and Customer Retention in the Telecommunication Industry in Ghana: Customers' Perspectives. *European Journal of Research and Reflection in Management Sciences*, 6(4), 15-26.

Dolfsma, K. (2018) examined service innovative practices in the Commercial Banking Sector and established the relationship. *British Journal of Mathematics & Computer Science* 20(4), 1- 8.

Domeher, D., Frimpong, J.M. and Appiah, T. (2015), "Adoption of financial innovation in the Ghanaian banking industry", *African Review of Economics and Finance*, 6 (2) 88-114.

East, P. (2018). Defining service innovation: A review and synthesis. *Journal of Business Research*, 69(8), 2863-2872.

Ekpenyong, D. B. & Acha, I. K. (2011). Banks and economic growth in Nigeria. *European Journal of Business Management*, 3(4), 155 – 166.

Etale, L. M. (2020). Dangote Cement PLC capital structure and financial performance link in Nigeria. *American International Journal of Business Management (AIJBM)*, 3(8), 0110.

Ezzi, F. & Jarboui, A. (2018). Does innovation strategy affect financial, social and environmental performance? *Journal of Economics, Finance and Administrative Science*, 21, 14-24.

Fan, S., Chen, Y. & Miao, L. (2018). Discussing the Effect of Service Innovation on Customer Satisfaction Based on Statistics Education – A Case on Qianjiangyue Leisure Farm. *EURASIA J. Math., Sci Tech. Ed.* 14(6), 2467–2474

Firdous, R. F., & Faroogi, S. (2019). Service innovation: A service-dominant logic perspective. *MIS Quarterly*, 39(1), 155–175

Flikkema, M. (2018), "Service development and new service performance", *PhD thesis, Vrije University, Amsterdam*, 1-187

Fornell, C. (2002). A national customer satisfaction barometre: The Swedish experience. *Journal of Marketing*, 56(4), 6-21.

Fornell, C.,& Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.

Gallouj, F. and Savona, M. (2019), "Innovation in services: a review of the debate and a research agenda", *Journal of Evolutionary Economics*, 19 (2), 149-172.

Garoui, N., Sessi, F. & Jarboui, A. (2013). Determinants of banks performance: Viewing test by cognitive mapping technique. A case biat. *International Review of Management and Business Research*, 2(1), 20-33.

Gideon, A. (2019). Service Innovation In The Banking Industry Of Ghana. *International Journal of Academic Research and Reflection*, 7(4), 19-25.

Giri, S., & Shakya, S. (2018). ICT and Service Delivery Mechanisms in Civil Service of Nepal. *International Journal of Computer Science and Mobile Computing*, IJCSMC, 7 (4), 47 – 52.

Gupta, C. R. & Dev, G. A. (2021). Services innovation: successful versus unsuccessful firms. *International Journal of Service Industry Management*, 4, 48-64

Gustafsson, A. (2012). Service loyalty: The effect of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7), 26-45.

Hertog, G., Van der, B., Aa, F. & Jong, A. (2020). Antecedent of service innovation effectiveness in small and medium enterprises: a case of hospitality sector in Nepal. *International Journal of Operational Research/Nepal*, 9(1), 9–32.

Ibrahim, M., & Yusheng, K. (2020). Service Innovation and Organizational Performance: Mediating Role of Customer Satisfaction. *International Journal of Management & Entrepreneurship Research*, 2(3), 97–108. <https://doi.org/10.51594/ijmer.v2i3.142>

Ilo, W. Ari, S.T. & Chijioke, O. (2018). Realizing innovation in services. *Scandinavian Journal of Management*, 18, 155-171.

Junarsin, M. M. (2021). *Managing service innovation: measuring and modelling dynamic service innovation capabilities*. Working Paper No. 14.07, Eindhoven Centre for Innovation Studies (ECIS), Technische Universiteit, Eindhoven.

Kanyurhi, E.B (2013) Evaluation of customer satisfaction with services of a micro- finance institution: Empirical evidence from Women Association for Social and Economic Gain customers' in Togo. *African Journal of Marketing Management*, 5(2), 26-37.

Kofi-Wireko, J., & Ameme, B. (2016). Impact of Technological Innovations on Customers in an Emerging Banking Industry in Ghana. *Academy of Management Review*, 7(3), 388-397.

Kombo, F. (2021). Factors for customer satisfaction and customer dissatisfaction in commercial banks. *Mediterranean Journal of Social Sciences*, 6(452), 584-589.

KPMG (2019). 2014 Banking industry customer satisfaction survey. [kpmg.com/ng](http://kpmg.com/ng), 1-32.

Kurniawan, B., Nirwanto, B., Firdianstah, A. (2019). Service innovation, customer satisfaction and behavioural intentions: A conceptual framework. *Journal of Hospitality and Tourism Technology*, 11(3), 529–542.

Kuusisto, C. R. & Riepula, D. A. (2018). Level of success inputs for service innovations in the same firm. *International Journal of Service Industry Management*, 6(4), 40-56.

Kwarteng, P. B. (2019). Impact of Innovative Services on Customer Satisfaction and Enhancing Tourism: Airline and Hotel Services from Tourist Perspective. *Journal of Critical Reviews*, 7(1).

Laursen, K. & Salter, A. (2020). Open for Innovation: The role of openness in explaining innovation performance among UK manufacturing firms. *Strategic Management Journal*, 27, 131-150.

Lee, C. Y., Tsao, C. H., & Chang, W. C. (2022). The relationship between attitude toward using and customer satisfaction with mobile application services: An empirical study from the life insurance industry. *Journal of Enterprise Information Management*, 28(5), 680 – 697.

Lindberg, J., & Jimmie, L. (2022)). The relationship among customer satisfaction, loyalty and financial performance of commercial banks. *E&M Economics and Management*, 19 (1). dx.doi.org/10.15240/tul/001/2022-8-08

Mahammad, Z. H. & Muhammad, U. A. (2018). Demand and innovation in services: the case of mobile communications. *Res. Policy* 39, 945–955.

Martha, M. R. (2022). Developing new services: improving the process makes it better. *Journal of Services Marketing*, 3(1), 15-20.

Massa, S. & Testa, S. (2018). A knowledge management approach to organizational competitive advantage: Evidence from the food sector. *European Management Journal*, 27, 129-141.

Mick, R., & Fournier, T. (2018). *Dimensions of Service Innovation*. Research Gate.

Miles, I. (2007), Research and development (R&D) beyond manufacturing: the strange case of services R&D. *R&D Management*, 37. (3), 249-268.

Morone, A., & Testa, G. (2018). Service Innovation and Firm Growth: A Systematic Review of the Literature. *Journal of Business Research*, 91, 143-155. doi: 10.1016/j.jbusres.2018.02.015

Ndubisi, C.E, Nwankwo,C.A .(2019). Customer Satisfaction and Organizational Performance of Nigerian Banking Sub-Sector. *International Journal of Business and Management Invention (IJBMI)*, 8(3), 79-87.

Ndukw. E (2018) The Place of the Consumer in the Nigerian Telecoms Industry – Being a keynote address presented at the Third Stakeholders Forum organized IT & Telecom Digest at *Golden Gate Restaurant Ikoyi, Lagos*, on Monday 9th June, 2018.

Nemati, J. S., Jhan, H. & Iftikhar, A. Y. H. (2019). Service Delivery Innovation: Antecedents and Impact on Firm Performance. *Journal of Service Research*, 12(1), 36–55.

Nguyen, N. T., Tran, T. T., & Wang, C. N. (2014). An Empirical Study of Customer Satisfaction towards Bank Payment Card Service Quality in Ho Chi Minh Banking Branches. *International Journal of Economics and Finance*, 6(5), 37-46.

Nijssen, R. E. (2016). The Influence of Service Innovation and Service Quality to Customer Satisfaction and Loyalty in Banking Industry. *European Journal of Molecular & Clinical Medicine*, 07(1), 4026-4038.

Odusina, K. (2018). Differential potency of factors affecting innovation performance in manufacturing and services firms in Australia. *Journal of Product Innovation Management*, 13, 35-52.

Ogunlowore, P.E. (2018). The impact of service innovation on firm-level financial performance. *The Service Industries Journal*, 31(13), 2071–2090.

Ogunnaike, J.A.. & Osotimehin, O.C. (2018) Consumer Dissatisfaction: The Effect of Disconfirmed Expectancy on Product Performance, *Journal of Marketing Research*, 10 (1),38-44.

Oke, A. (2021). *Barriers to innovation in services*. STEP Group Oslo.

Oke, A.(2019). Strengthening the innovation chain: The role of internal innovation climate and strategic relationships with supply chain partners. *Journal of Supply Chain Management*, 49, 43–58

Oke, A., Prajogo, D. I. & Jayaram, J. (2013). Strengthening the innovation chain: the role of internal innovation climate and strategic relationships with supply chain partners. *J. Supply Chain Manag.* 49, 43–58.

Oladele, C. (2019). The evolution of service innovation research: a critical review and synthesis. *The Service Industries Journal*, 34 (5), 373-398.

Olopade, O.J. (2020). *Assessment of Technological Innovation on Customer Patronage of selected Money Deposit Banks in Abeokuta*. An Undergraduate research Project: Unpublished.

Olughor, E. O. (2015). The Impact of Service Quality on Customer Satisfaction and Loyalty in Nigerian Microfinance Banks. *International Journal of Economics and Finance Studies*, 5(2), 123-134.

Polder, R. (2010). Innovation strategies and competitive advantage. *Modern Economics: Problems, Trends, Prospects*, 8(1), 10-26.

Raja, M. W., & Wei, S. (2016). Relationship between innovation, quality practices and firm performance: A study of service sector firms in Pakistan. *Journal of Management Research*, 6(4), 124–140

Ravishankar, B., & Christopher, P.B. (2020). Impact of Innovative Services on Customer Satisfaction and Enhancing Tourism: Airline and Hotel Services From Tourist Perspective. *Journal of Critical Reviews*, 7(3), 22-32 <https://www.bibliomed.org/mnsfulltext/197/197-1592981957.pdf?1621696398>.

Sahaf, M. A. (2019). Strategic marketing: Making decisions for strategic advantage. *Phi Learning Private Limited*, Delhi – 110092.

Salawudeen, A. A., & Ogunlowore, O. (2019). An Empirical Analysis of the Impact of New Concepts on Customer Satisfaction in Microfinance Banks in Nigeria. *International Journal of Economics and Finance*, 11(2), 1-12. doi: 10.5539/ijef.v11n2p1

Saleem, O.J. (2022). A study on the impact of covid-19 pandemic in the adoption of *tech driven banking in India*. <https://doi.org/10.31124/advance.19105505>.

Schumpeter, J.A. (2002), The Creative Response in Economic History. *Journal of Economic History*, 50(2), 110-141.

Sebastian, M., & Paiola, K. (2019). Service Innovation and Organizational Performance: Mediating Role of Customer Satisfaction. *International Journal of Management & Entrepreneurship Research*, 2(3), 97–108.

Senguo, R. A., & Kilango, N. C. (2018). Marketing innovation strategies for improving customer satisfaction: Vodacom Tanzania. *Open Journal of Business and Management*, 7(15), 127–132.

Shang-Ping, P., Chuan-Ching, D. & Pi-Yun, C. (2019). The evolution of service innovation research: a critical review and synthesis. *The Service Industries Journal*, 34(5), 373-398.

Sharma, J. P., Ravishankar, A. J. & Christopher, J. A. (2020). *Innovation in service firms explored: what, how and why*, EIM: Zoetermeer.

Sivadas, E. & Baker-Prewitt, J. L. (2021). An examination of the relationship between service quality, customer satisfaction and store loyalty. *International Journal of retail and Distribution Management*, 28(2), 73-82.

Smriti, S.S. (2022). Service Innovation, Service Delivery and Customer Satisfaction in Nepalese Commercial Banks. *A Graduate Research Report Submitted to in partial fulfillment of the requirements for the degree of Master of Finance And Control Tribhuvan University: Unpublished*

Stocka, G. N., Greis, N. P., & Fischer, W. A. (2019). Absorptive capacity and new product development. *The Journal of High Technology Management Research*, 12(1), 77-91.

Sundbo, J. (2019). Management of innovation in services. *Service Industries Journal*, 17(3), 432-455.

Tajeddine, F. M. (2018). Innovation in services: a review of the debate and a research agenda. *Journal of Evolutionary Economics*, 19(2), 149-172.

Tether, B. S. (2003). The Sources and Acquisition of Innovation: A Study of the Small and Medium-Sized Enterprise Sector in the European Union. *International Journal of Entrepreneurship and Innovation*, 4(2), 131-144.

Tetler, T. M. (2013). The relationships among experiential marketing, service innovation, and customer satisfaction—A case study of tourism factories in Taiwan. *Sustainability*, 11(4), 1041

Tidd, G.J., Bessant, P. G. & Pauhi, S.P. (2022), An empirically-based typology of product innovativeness for new financial services: Success and failure scenarios. *The Journal of Product Innovation Management*, 18(5), 324-342.

Tidd, J., Bessant, J., Pavitt, K., (2018). Managing Innovation - Integrating Technological, Market and Organisational Change. *John Wiley & Sons, 2nd edition*.

Toor, B., Hunain, N., Ali, O. S. & Shahid, A. (2019). The effect of service innovation on customer satisfaction indihome internet provider in central java through corporate reputation as variable intervening. *International Journal of Scientific and Technology Research*, 8(10), 144–151.

Tsai, K.H., & Hsu, T.T., (2019). Cross-Functional Collaboration, Competitive Intensity, Knowledge Integration Mechanisms, and New Product Performance: A Mediated Moderation Model. *Industrial Marketing Management*, 43 (4), 293-303. <https://doi.org/10.1016/j.indmarman.2013.08.012>.

Van Auken, H. E. (2008). Service Innovation and Firm Performance: A Study of the Relationship between Service Innovation and Firm Performance in the US Hotel Industry. *International Journal of Hospitality Management*, 27(3), 433-441. doi: 10.1016/j.ijhm.2007.02.004

Van-Auken, D. I. (2018). Service innovation and performance in SMEs. *International Journal of Operations & Production Management*, 32(2), 216–237

Varis, M. and Littunen, H. (2010) Types of Innovation, Sources of Information and Performance in Entrepreneurial SMEs. *European Journal of Innovation Management*, 13, 128-154.

Varis, M., & Littunen, H. (2010). The Role of Service Innovation in Firm Growth: A Study of Finnish Small and Medium-Sized Enterprises. *Journal of Business Venturing*, 25(5), 537-548. doi: 10.1016/j.jbusvent.2009.09.003

Vesna, G. M. & Roja, V. (2021). Service Innovation multi-country launch: causes of delays. *European Journal of Innovation Management*, 3(1), 35-44.

---

Vijayaragavan, A. (2019). *Entrepreneurship, Service Innovation, International Expansion and Performance in SMEs: Empirical Evidence*. Saint-Petersburg: Lappeenranta University of Technology.

Viki, T., Toma, D., & Gons, E. (2017). *The corporate startup*. How established companies can develop successful innovation ecosystems.

Vivie N.P. Rantyanti, R.E & Halim. (2020). The Influence of Service Innovation and Service Quality to Customer Satisfaction and Loyalty in Banking Industry. *International Journal of Advanced Science and Technology*, 29 (12), 1541-1553. Retrieved from <http://sersc.org/journals/index.php/IJAST/article/view/22826>.

Vos, A.H. (2019), Service Innovation: Managing Innovation from Idea Generation to Innovative Offer, University of Twente, Faculty of Management and Governance, Exser, *Dutch Centre for Service Innovation*, August, 2023.

Vyas, V. & Raitani, S. (2019). Drivers of customers' switching behaviour in Indian banking. *International Journal of Banking and Economics*, 130(2), 236-245.

Walker, N. P. & Craig, R. E. (2018). The Influence of Service Innovation and Service Quality to Customer Satisfaction and Loyalty in Banking Industry. *International Journal of Advanced Science and Technology*, 29(12), 1541-1553.

Yusif, B. (2012). Adopting a specific innovation type versus composition of different innovation types: case study of a Ghanaian bank. *International Journal of Bank Marketing*, 30(3), 218-240.

Zain, M. O. & Saidu, B. M. (2016). The Customers Satisfaction on Retailers' Brand Products: A Study on Selected Areas in Klang Valley. *Journal of Economics and Finance*, 35 (4), 18-427.

Zainal Abidin, S. B., Mokhtar, S. S., & Yusoff, R. Z. (2019). A systematic analysis of innovation studies: A proposed frame-work on relationship between innovation process and firm's performance. *The Asian Journal of Technology Management*, 4(2), 65-83

Zuñiga-Collazos, A & Castillo-Palacio, M. (2016). Impact of Image and Satisfaction on Marketing Innovation. *Journal of Technology Management & Innovation*, 11(2), 70-75.

Zuñiga-Collazos, A. & Castillo-Palacio, M. (2021). Impact of image and satisfaction on marketing innovation. *Journal of Technology Management & Innovation*, 11(2), 70-75.