*NDA Journal of Management Sciences Research*
*2025, Vol. 5, No. 2, Pp. 33-33*

*ISSN: 2795-2770 (Print)*

# Business Model Innovation and the Performance of Microfinance Banks in North Central, Nigeria

**Saidu Muhammed Suleiman, Ijaiya Mukaila A., Dauda Abdulwaheed, Dauda Chetubo Kuta, Bello, Ibrahim Enesi**
Department of Entrepreneurship, Federal university of Technology Minna, Niger State, Nigeria

**Email Address:**
ibrm.bello@futminna.edu.ng

***Abstract:*** *Business Model Innovation is believed to have the capacity to improve the performance of small firms especially those in the service sector like the Microfinance banks (MFBs). However, the review of extant literature revealed that there is a paucity of empirical studies investigating the effect of Business Model Innovation (BMI) on MFBs performance in North-Central, Nigeria. Therefore, to fill these gaps in literature, the study investigated the effect of BMI on MFB performance in North - Central Nigeria. To do this, the study used a structured questionnaire to source primary data from 301 sampled MFBs across the states in North-Central Nigeria inclusive of Abuja utilizing a multi-stage sampling technique. The study employed both descriptive statistics and Structural Equation Modelling (SEM) The result showed that value creation (β=-0.061; p=0.738) and value capture (β= -0.056; p = 0.469) have insignificant negative effects on the performance of MFBs, while value proposition (β= 0.143; p=0.555) has an insignificant positive effect on MFBs' performance, leading to the conclusion that BMI has no significant direct effect on MFB performance in North -Central Nigeria. The study recommends among others the entrenchment of a continuous practice of BMI by MFBs in the study area to enhance their performance.*

**Keywords:** Business model innovation, microfinance banks, performance, North-Central Nigeria, Value creation

**Introduction**

The Performance of microfinance banks (MFBs) has become a central issue for research in the global financial industry due to the importance of banks in facilitating global trade and investments (Anh *et al.,* 2020). MFBs encourage savings and investment, provide the capital needed for development; enhance local and international trade as well as providing managerial and financial advice. Hence, the strategic roles of the MFBs to the nation's economic growth and development cannot be overemphasised. Micro entrepreneurs rely largely on MFBs to access credit, the same way government and other institutions raise funds through banks to finance their economic activities (Olufolahan *et al.,* 2023).

BMI has been conceptualised as a tool for identifying and describing the key components of a business and depicts how this component interacts with one another (Ammirato *et al.,* 2021). The first basic element of the business model (BM), value creation, refers to the tasks a firm performs to provide an offer to customers by using its resources and capabilities. On the other hand, the value proposition dimension indicates the company's bundle of products and services that are of value to customers and the way in which they are offered (Schaffer *et al.,* 2022). Finally, the value capture dimension defines how value offerings are converted into revenue streams and then captured as profits by firms (Clauss, 2017). Its ability to enhance firm's profit higher than product and process innovation has been established by scholars (Kraus *et al.,* 2019a), positioning BMI as a tool to enhance the competitiveness and sustainability of firms.

The performance of MFBs in the North-central Nigeria has not been impressive. A casual observation will show that some of these firms have ceased to operate due to inability to compete with others in the industry while those that are in operation are barely struggling to survive. These MFBs suffers from poor performance in terms of shrinking market share, poor customer service delivery, insolvency, competition intensity and higher transaction cost, as well as high levels of non-performing loans (Central Bank of Nigeria (CBN), 2017). In May 2023, the CBN further revoked the

licenses of 132 MFB (Federal Government official gazette website of CBN) clearly indicating that the performance problems across the Nigerian banking industry is more worrisome in the MFB subsector. A good number of these were from North-Central Nigeria.

The assumption is often that BMs used by these MFBs are not sophisticated enough to guarantee effective performance. To overcome these problems and challenges, BMI is thus required for MFBs to compete successfully within the Nigeria banking sector.

Few studies (Lin and Wu, 2014; Aminu *et al*., 2015; Najmi *et al.,* 2018) have attempted to investigate the relationship between BMI and performance but their results have not been consistent with one another. More so, soe of these existing studies failed to decompose BMI making it difficult to have a complete understanding of the effects of each component of BMI on performance. Likewise, the few studies that successfully examined the influence of BMI on organisational performance used financial performance as the dependent variable for their studies (Kao and Liu, 2014; Kaur and Gupta, 2015; Ray, 2016), thus, leaving out non-financial performance measures. It is against this backdrop that this study seeks to examine the effect of BMI on MFBs' performance in North-central Nigeria using Structural Equation Modelling (SEM) aided by Analysis of Moment Structures (AMOS) Version 22 software.
To achieve this, the study will focus on achieving the specific objectives stated below. To:

i. assess the effect of value creation on performance of MFBs in North-central Nigeria
ii. analyse the effect of value proposition on performance of MFBs in North-central Nigeria.
iii. examine the effect of value captured on performance of MFBs in North-central Nigeria.

**Literature Review**

The various concepts that constitute the variables of the study are discussed in these sections. Theoretical issues as well as empirical review of relevant recent papers were also carried out.

**Conceptual Review**

**Business model innovation**

Attempts have been made to define BMI among various scholars (Amit and Zott, 2021; Hendricks, 2023). According to Hendricks (2023) BMI is 'the enhancement of an organisation's existing BM to adapt to consumer behaviour and external factors. It signifies innovation in creating, delivering and capturing value, thus attracting a customer base and enhancing profitability.

**Dimensions of BMI**

***Value creation innovation***

According to Clauss (2017), value creation innovation refers to a firm's ability to create value for potential customers and clients using technology, partnerships, and re-engineering as its core processes. Broadly speaking, value creation could be seen as actions and procedures that that lead to improvement in the overall business of an organisation (Upadhyaya, 2017). Value creation continues to be one of firms' topmost priority. From a financial perspective, value creation takes place as the profits of a business grow in comparison with its expenses. As claimed by Venugopal *et al.* (2019), value for shareholders shares similarities with value creation for the other components of the firm. Therefore, managers should give recognition to optimum value creation as a way of improving the fortunes of their firms.

***Value proposition innovation***

Value proposition captures the value that a firm pledge to deliver to its consumers across sales networks and how this partnership is designed. It encompasses offerings, brand, products and services (Schaffer *et al.,* 2022). Superficially, value delivery could simply mean that all a firm needs to do in other to be successful is to endeavour to offer a product to the target market. However, value delivery process in the microfinance banking subsector is less about what the bank presumes it can offer and more about customer's perception of the product and its acceptance. Hence, the utmost decision here is the ability of firm to persuade customers to be favourably disposed to accepting and using the proposed value (Clauss *et al.,* 2019).

***Value capture innovation***

Value capture innovation focused on how businesses generate profits that offset their expenses and guarantee reliable profitability. It provides solutions to the problem of how a firm makes money. Value capture considers decisions on cost and revenue such as prices and quality as well as selecting and designing appropriate revenue streams and models (Schaffer *et al.,* 2022). Often firms can avoid worrying about capturing demand if they offer a lot of novel goods and

services in a traditional way. Nevertheless, if value capturing process is not monitored, it usually leaves behind more market opportunities to be exploited and captured by rivals (Teece, 2018).

**Microfinance bank business model**

Microfinance implies the provision of a wide range of non-financial and financial services in an affordable form to low-income groups, individual and entrepreneurs that lack access to traditional financial system (Olufolahan *et al.*, 2023). A microfinance bank BM is tailored towards offering financial services to those who are typically excluded from traditional banking systems, such as the poor, low-income earners, and small businesses. The economic importance of MFBs includes enhancement of financial inclusion, promotion of entrepreneurship development, poverty alleviation, and women's empowerment (Mokuolu and Ajayi, 2023).

**Performance**

Gomide Jr *et al.* (2022) defined performance in terms of organisational efficiency, where the organisation achieved its strategic goals without extreme effort from the employees. Performance can be measured financially, non-financially or a combination of both. Financial measure of performance entails the use of financial metrics such as profit, Return on Investment (ROI), Return on Assets (ROA) and Earnings Per Share (EPS). Non-financial measures on the other hands entail the use of non-financial metric such as market share, customer satisfaction and level of innovation capability and operational efficiency. This study adopts non-financial measure of performance. Specifically, performance in this study is measured in terms of market penetration which is one of the basic tools recommended by the United Nations Capital Development Fund (UNCDF) (2018) for measuring the performance of microfinance institutions (MFIs). This measure which is also known as outreach, measures performance in terms of the number of clients or accounts that are active at a given point in time. It records active customers in order to reflect actual service delivery.

**Conceptual framework**

The relationship amongst the various concepts of the study that have been discussed is depicted in the conceptual framework shown in Figure 1.

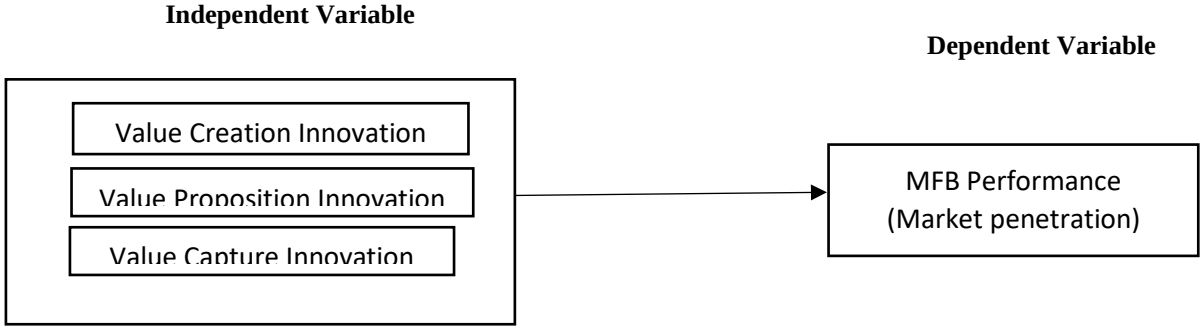


**Figure 1: Conceptual Model of the Study**
**Source: Developed from Reviewed Literature**

Figure 1 suggests that a direct relationship exists between BMI and MFB performance in North-Central Nigeria. The effect and direction of this relationship is what the study seeks to establish.

**Theoretical Review**

This study is underpinned by Dynamic Capability Theory (DCT). The theory was originated by Professor David Teece of Haas School of Business at the University of California and Pisano in 1994 to explain how firms fulfil two seemingly contradictory imperatives - They must be sufficiently stable to continue to deliver value in their own distinctive way and resilient and adaptive enough to shift on a dime when circumstances demand it (Samsudin and Ismail, 2019). The DCT is an explanation of how, in dynamic markets, organisational responsiveness and innovativeness become timely, rapid, and flexible through entrepreneurial orientation. DCT goes beyond the idea that sustainable competitive advantage is based on a firm's acquisition of valuable, rare, inimitable and non-substitutable (VRIN) resources (Bleady *et al.*, 2018).

The dynamic capabilities framework reflects the interdependence between BMs and strategy. Dynamic capabilities and strategy coalesce to form a sustainable BM, which steers organisational change, and facilitates a

level of profits sufficient to maintain and improve organizational resources and capabilities. In firms with dynamic capabilities, BMs can be modified swiftly and effectively to meet changing market conditions (Bashir *et al.,* 2022).

DCT was derived from Resource-Based theory and was intended to make up for theory's weaknesses when the focus is on sustainable competitive advantage and superior performance in an environment characterised with dynamism. However, the theory also has weaknesses which include the nature of the term itself and difficulties in determining the merits of the outcomes of the theory (Zahra *et al.,* 2006), and a lack of clarity about what constitutes its core concepts (Ambrosini and Bowman, 2009).

**Empirical Review**

The argument that the easiest way for firms to gain better performance is through value creation for consumers was bolstered by Chen (2023) through empirical examination of the effect of value creation on startups performance in the digital environment using digital startup firms in China. An on-site survey dataset of 323 digital startup firms were used in the study. Employing SEM for data analysis, results showed that value creation activities by startup firms enhanced their performance. Analysing the effect of BMI on the competitive advantage of manufacturing firm in Rivers state, Nigeria, Kalu and Onuoha (2023) used a cross-sectional survey design and a total population of 290 supervisors and managers from ten (10) manufacturing firms in Rivers State. A sample size of 165 managers and supervisors was drawn as the sample size of the study. The primary data collected was analysed using the Spearman's Rank Order Correlation and Partial Correlation. The finding of the analysis indicated that the value creation innovation had a significant positive relationship with differentiation and organizational responsiveness.

Ilyas and Osiyevskyy (2022) explored the effect of sustainable value proposition on firm performance. Based on the analysis of a large panel dataset across different industries analysed through the application of regression analysis, sustainable value proposition was found to have a positive impact on a firm's market-based financial performance. Similarly, Khaddam *et al.* (2021) explored the impact of BMI on firm performance. The sample of the study consisted of 120 managers from Alban Al-youm Company in Jordan, a leading dairy company. Data were collected using a questionnaire administered to managers. The results indicate that value proposition innovation had significant effects on company performance. However, in a result that runs counter to the above results, Guo *et al.* (2022) has confirmed a slightly different result that showed that value proposition innovation has a positive but an insignificant effect on firm performance. This conflict in previous findings has a created a state of inconclusiveness on the effect of value proposition innovation on firm performance which provides a basis for further studies to be conducted.

Menter *et al.* (2023) conducted research which sought to disentangling the complex longitudinal relationships between business model innovation and firm performance. The study collected cross-industry data based on more than 35,000 press releases, capturing over 2,300 events of BMI from 60 German publicly traded corporations, and regressing them against firm performance measures. Results revealed that although BMI has a positive, albeit lagged effect on firm performance, value capture innovation, a proxy of BMI had a significant negative effect on performance.

Exploring the effect of another variant of value creation on business performance, Li *et al.* (2023) measured the effect that green value capture has on the performance of manufacturing firms in China. The study collected data from 263 firms using structured questionnaires. The model was empirically tested using multiple regression analysis and findings indicated that green value creation has a positive impact on corporate performance.

**Methodology**

The study adopted a cross-sectional survey research design which involved the administration of questionnaire to research participants to gather information concerning the variables of the study. The population of the study comprised 1,684 staff of 148 CBN-licensed MFBs in the North-Central Geo-political region of Nigeria as at 2023 (CBN, 2023). To determine the sample size for the study, Yamane's (1967) formula for sample size determination was applied. The formula is given as:

$$n = \frac{N}{1+N(e)^2} \quad (1)$$

Where:

n = Required sample size
N = Population of the study
1 = Constant
e = Error terms (0.05)

The application of this formula on the total population yielded a sample size of 323. 20% of this sample size which amounted to 65 was added to provide for cases of non-responses as recommended by Bujang (2021). Therefore, the final sample size increased to 388. To arrive at the proportional distribution of the sample's elements among the seven states that make up the region including Abuja, the researcher further applied Kothari's (2004) formula. The study utilised stratified sampling technique to select elements from the population that make up the study sample. Table 1 shows the distribution of the sample size among the states.

**Table 1: Proportional Distribution of Sample Across the States of Northcentral Nigeria**

| S/N | State | Staff strength | Required sample size | Percentage (%) |
|---|---|---|---|---|
| 1 | Abuja | 622 | 143 | 6.0 |
| 2 | Benue | 151 | 35 | 1.4 |
| 3 | Kogi | 118 | 27 | 2.0 |
| 4 | Kwara | 344 | 79 | 2.2 |
| 5 | Nasarawa | 87 | 20 | 7.0 |
| 6 | Niger | 203 | 47 | 6.3 |
| 7 | Plateau | 159 | 37 | 2.3 |
| | **Total** | **1684** | **388** | **100** |

**Source:** Field Survey (2025)

This study utilised primary data sourced through a structured questionnaire that was designed according to the research objectives and administered to the different respondents for filling. The research instrument consisted of two parts. The first part of the instrument was used to collect demographic data while the second part of the questionnaire was used to generate data on the independent and dependent variables. It used a five-point Likert-type rating scale ranging from 1-5; where 1 = Strongly Disagree (SD), 2= Disagree (D), 3 = Neutral (N), 4 = Agree (A), and 5 = Strongly Agree (SA). All the items on the research instrument were adapted from existing measuring scales (Clauss, 2017).

The method of data analysis applied in this study was Structural Equation Modelling (SEM) through the application of Analysis of Moment Structures (AMOS) IBM version 22.0. SEM-AMOS is a variance – based structural equation modelling developed to serve as an alternative to Covariance-Based structural Equation Modelling (CB – SEM) (Ramayah *et al.*, 2018). The selection of this statistical tool of data analysis is informed by its effectiveness in predicting the relationship between multiple constructs.

This study specified the conceptual framework as SEM using AMOS technique. The specification of the structural model of the study is depicted in Figure 2

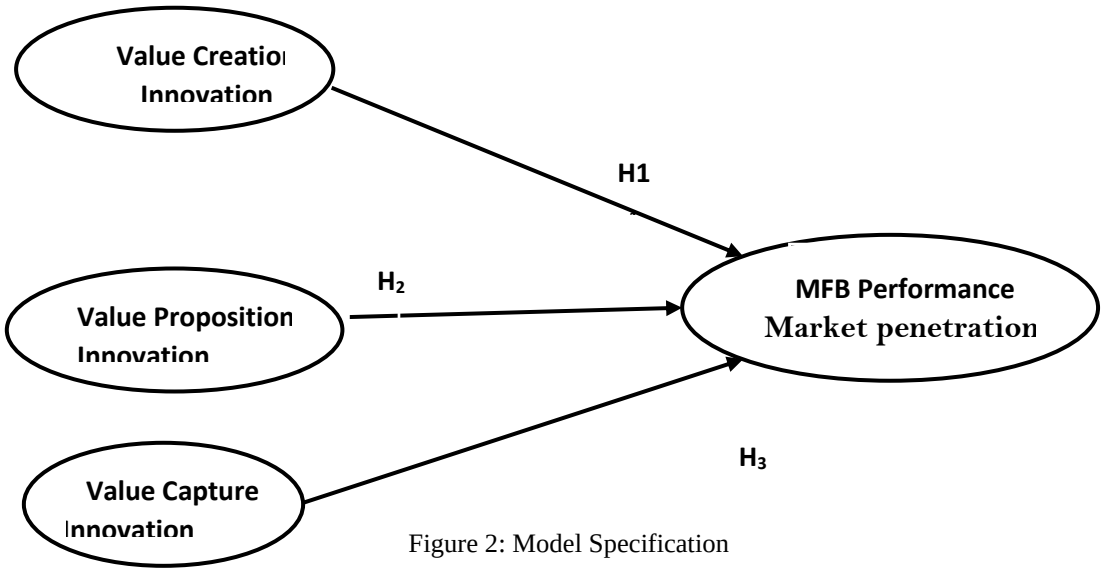


Figure 2: Model Specification

Figure 2 shows the structural specification of the model. It depicts the structural relationship between the three dimensions of BMI (Value creation, value proposition, value capture) and MFB performance.

**Results and Discussion of Findings**

**Rate of responses to the administered research instrument**

The primary data collected analysis was generated through the administration of a structured questionnaire to 388 respondents who participated in the study. Figure 3 presents their responses:

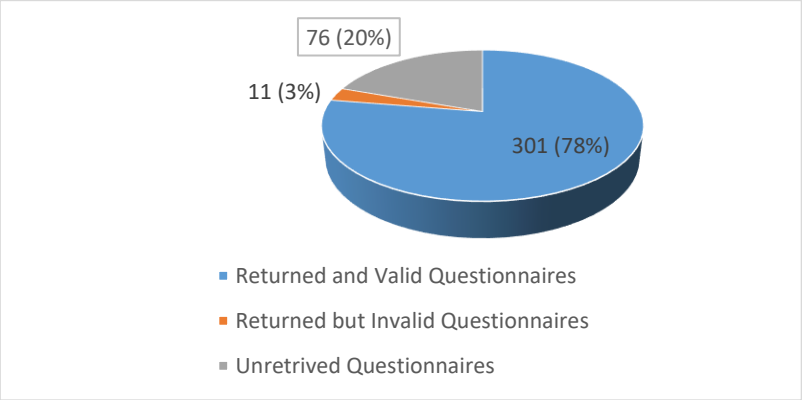


**Figure 3: Rate of Response**
**Source: Field Survey, 2025**

From Figure 3, it is indicated that only 301 (78%) of the 388 administered questionnaires were correctly filled and returned, thus, making them valid for analysis. This response rate is higher than the minimum response rate of 60% recommended by to guarantee validity, reliability and generalisability of findings in any primary research studies (Booker *et al.*, 2021).

**4.2 Demographic profile of respondents**

The demographic characteristics of the respondents are presented in Table 2

**Table 2: Demographic Characteristics**

| S/N | Demography | Characteristics | Number | Percentage (%) |
|---|---|---|---|---|
| 1. | State | Abuja | 113 | 37.5 |
| | | Benue | 24 | 8 |
| | | Kogi | 21 | 7 |
| | | Kwara | 61 | 20.3 |
| | | Nasarawa | 17 | 5.6 |
| | | Niger | 36 | 12 |
| | | Plateau | 29 | 9.6 |
| 2. | Gender | Female | 106 | 35.2 |
| | | Male | 195 | 64.8 |
| 3. | Educational attainment | Secondary | 21 | 7 |
| | | Vocational/Commercial | 22 | 7.3 |
| | | Tertiary | 258 | 85.7 |
| 4. | Marital status | Single | 18 | 6 |
| | | Married | 263 | 87.4 |
| | | Separated | 20 | 6.6 |

**Source: Author's Computation (2025)**

The demographic profiles of the respondents are presented in Table 2 The results reveal that Abuja has the highest number (37.5%) of respondents followed by Kwara (20.3%). The least number of respondents (5.6%) was from Nasarawa State. Another information of interest provided by the analysis is the indication that majority (85.7%) have acquired tertiary education. However, 7.3% and 7% indicated that they have only acquired vocational/commercial education and secondary education respectively. Finally, the analysis shows that 195 (64.8%) of the respondents were male while 106 (35.2%) were female. While 263 (87.4%) indicated that they were married, 20 (6.6%) indicated that they have been separated from their spouses while 18 (6%) lived as singles.

**Model Assessment**

The analysis of SEM is usually done in two stages. These two stages are the measurement model analysis and structural model analysis (Fraihat *et al.,* 2023).

**Measurement Model Assessment**

Table 3 presents the reliability and validity of the measurement model.

**Table 3: Measurement Model's Reliability and Validity**

| Construct | ODC | VCI | VPI | CVI | MFBP |
|---|---|---|---|---|---|
| ODC | **0.854** | | | | |
| VCI | 0.544 | **0.864** | | | |
| VPI | 0.742 | 0.840 | **0.857** | | |
| CVI | 0.529 | 0.562 | 0.652 | **0.802** | |
| MFBP | 0.852 | 0.467 | 0.655 | 0.430 | **0.853** |
| | | | | | |
| Composite Reliability | 0.873 | 0.855 | 0.758 | 0.915 | 0.891 |
| Cronbach's Alpha | 0.861 | 0.854 | 0.805 | 0.919 | 0.900 |
| Average Value Extracted (AVE) | 0.729 | 0.747 | 0.734 | 0.643 | 0.727 |
| Variance Inflation Factor (VIF) | 1.618 | 2.339 | 2.520 | 1.524 | |

Source: Computation using AMOS Version 22 (2025)

The values presented in From Table 3 indicate that the measurement model's reliability and validity are good. Cronbach alpha values and composite reliability values are greater than 0.7 minimum threshold recommended by Hair *et al. (*2022). Further, Table 3 also shows that the value of AVE for each of the constructs is higher than 0.5. Discriminant validity was assessed through Fornell- Larcker criterion that draws comparison between the square root of the AVE values with the latent variable correlations. Table 3 indicates that the AVE's square roots for each of the constructs, represented by diagonal bold values are above the highest correlation value with any other construct. This confirms convergent validity (Basbeth *et al.,* 2018). Further, the VIF indicates that all values are lower than five, confirming the absence of collinearity issues.

Finally, the study also assessed construct validity through model fitness indexes such as, Comparative Fit Index (CFI), Chi-Square to Degrees of Freedom Ratio (Chi-square/df), Tucker- Lewis Fit Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Normed Fit Index (NFI). The values obtained for these various model fit indices are presented in Table 4.

**Table 4: Model Fit Results**

| Fitness indices | CMIN/DF | CFI | TLI | NFI | GFI | RMSEA |
|---|---|---|---|---|---|---|
| **Accepted threshold** | < 3.0 | > 0.90 | > 0.90 | > 0.90 | > 0.90 | 0.08 |
| **Value obtained** | 2.139 | 0.956 | 0.946 | 0.922 | 0.895 | 0.062 |

**Source: Generated using IBM SPSS AMOS version 22 Output (2025)**

A close-up examination of Table 4.3 reveals that all the indices fall within the acceptable threshold which is a good confirmation of the model fitness (Awang, 2015).

**Structural model assessment**

In this study, SEM was performed to assess the hypothesized model. The study tests direct and indirect effects using AMOS Version 22. The significance of the path coefficient was tested using p-values and confidence interval (C.I) with a bootstrapping procedure with 5000 subsamples. The AMOS path diagram for the study is presented in Figure 4

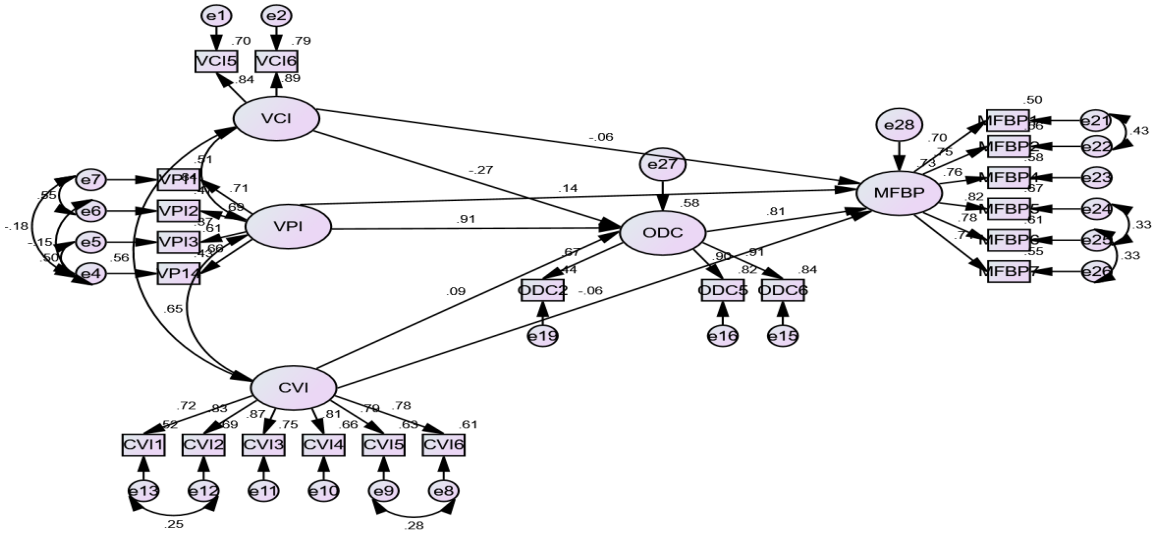


**Figure 4: Path Diagram**

The results obtained from Figure 4 are presented in Table 5

Table 5: **Bootstrapping Results Direct Effect**

| Relationship | β (path coefficient) | Bias corrected 95% CI | P value | Decision |
|---|---|---|---|---|
| VCI→MFBP | -0.061 | [-0.854, 0.508] | 0.738 | Accepted |
| VPI→MFBP | 0.143 | [-0.590, 1.494] | 0.555 | Accepted |
| CVI→MFBP | -0.056 | [-0.275, 0.103] | 0.469 | Accepted |
| | | $R^2 = 0.73$ | | |

The $R^2$ value of 73% obtained in this study as shown in Table 5 is substantial. It indicates that 73% of the variation in the dependent variable was jointly explained by changes in the three dimensions of BMI used as the independent variable. The remaining 27% in Microfinance Bank performance were accounted for by other constructs that were not covered by the scope of this study.

The first null hypothesis proposed that VCI has no significant effect on MFBP in North-central Nigeria. Testing at 0.05 level of significance, the results presented in Table 5 demonstrates that VCI affected MFBP negatively. However, this negative effect is shown not to be significant. As shown by the -0.0061-path coefficient obtained, the implication is that an increase in VCI by one standard deviation is associated with 0.061 standard deviation decrease in MFPB. The Lower limit CI (LLCI) value of -0.854 and upper limit CI(ULCI) of 0.508 straddle 0 which indicates the insignificance of the effect. This is further made obvious by the p value of 0.738 which is higher than 0.05 level of significance. Therefore, the study failed to reject the first null hypothesis of the study.

The AMOS-generated results in Table 5 were also used to test the third hypothesis. The outcome revealed that CVI has a non-significant effect on MFBP (β = -0.056, CI= [-0.275, 0.103], p-value = 0.469) providing support for the third hypothesis. Going by the results, an increase in CVI by 1 standard deviation would decrease MFBP by 0.056 standard deviation. The test of the significance of the path coefficient was done by considering the CIs and p-value which straddle 0 and greater than the 0.05 level of significance respectively. Consequently, the study retained the third hypothesis.

Looking at the results obtained from the test of hypothesis 1, it is clearly seen that the hypothesis of no significant effect was supported. This shows that value creation innovation, apart from having a negative effect, did not have a significant effect on MFBs' performance in North-Central Nigeria. These results are in conflict with previous findings (Kalu and Onuoha, 2023) which had established that value creation innovation affect business performance in a positively significant way.

It can also be seen from the results that VPI has a non-significant positive effect on MFBs' performance in North-Central Nigeria. This implies that value proposition innovation by MFBs in the study area affects performance in a positive direction. However, this effect is shown not to be significant leading to the rejection of the hypothesis 2. This position corresponds with that of Guo *et al.* (2022). However, it is dissimilar to those of (Khaddam *et al.*, 2021; Ilyas and Osiyevskyy, 2022) who discovered had earlier discovered a significant positive effect of value proposition on business performance.

Another proposition that was established by the finding of the study is that which proposed that value capture innovation has no significant effect on MFB performance in North-Central Nigeria. This finding is comparable to the findings of some scholars (Clauss *et al.*, 2019; Menter *et al.*, 2023) who reported a negative effect of value capture on performance. However, the finding differs sharply with the findings of Guo *et al.* (2022).

**Conclusion and Recommendations**

Based on the findings of the study, the researcher infers that BMI has an insignificant effect on MFB performance in the study area. Consequently, the researcher recommends the following as a way to improve the effect of BMI on MFB performance in North-Central Nigeria:

i. Operators of MFBs in North-Central Nigeria should ensure that their value creation has direct bearings on their immediate environment and clients.
ii. MFBs in the study area should continuously innovate their business models with greater focus on customer-oriented value creation.
iii. MFBs in the study area should through creative and innovative approaches open up more income streams, adopt cost minimisation approaches, diversify their investments and ensure that the financial stability of their firms is guaranteed.

**References**

Ambrosini, V. & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, *11*(1), 29-49**.**

Aminu, M. I., & Mahmood, R. (2015). Mediating role of dynamic capabilities on the relationship between intellectual capital and performance: A hierarchical component model perspective in PLS-SEM path modeling. *Research Journal of Business Management 9(3),* 443-456.

Amit, R. & Zott, C. (2021). Business model innovation strategy. *Wiley,* doi:10.1093/oso/9780190090883.003.

Andreini, D., & Bettinelli, C. (2017). Systematic Literature Review. In *Business Model Innovation* (pp. 1-23). Springer, Cham

Anh, N.T.P., Ghi, T.N., Thu, N.T.A., & Ngoc, H.L. (2020). The effect of business model innovation on start-up performance: The case in Vietnam. *International Journal of Innovative Science and Research Technology, 5*(6), 686-692.

Awang, Z . (2015). *SEM made simple: A gentle approach to learning structural equation modelling*. MPWS Rich Publication, Selangor.

Basbeth, F., Razik, M.A.B., & Ibrahim, M.A.H. (2018). *Four hours PLS-SEM: A step by step guide with video clips for students and scholars*. iPRO Publication, Selangor Darul Ehsan, Malaysia.

Bashir, M., Alfalih, A. & Pradhan, S. (2022). Sustainable business model innovation: Scale development, validation and proof of performance. *Journal of Innovation and Knowledge 7* (2022) 100243

Bleady, A., Ali, A.H., & Ibrahim, S.B. (2018). Dynamic capabilities theory: Pinning down a shifting concept. *Academy of Accounting and Financial Studies Journal, 22*(2),1- 16.

Booker, Q.S., Austin, J.D., & Balasubramanian, B.A. (2021). Survey strategies to increase participant response rates in primary care research studies. *Family Practice, 38*(5), 699-702. https://doi.org/10.1093/fampra/cmab070.

Bujang, M.A. (2021). A step-by-step process on sample size determination for medical research. *The Malaysian Journal of Medical Sciences, 28*(2), 15-27. DOI:10.21315/mjms2021.28.2.2.

Central bank of Nigeria Financial Stability Report (2017). Financial Stability Report, December 2015, URL: https://www.cbn.gov.ng/Out/2016/FPRD/FSR%20December%202015.pdf, accessed on 15thSeptember, 2017.

Central Bank of Nigeria (2023). *Deposit and lending rates in the banking industry*. Retrieved on 2nd January, 2024 from www.cbn.gov.ng/Documents/depositandlending.asp?beginrec=201&endrec=220&keyword=&from=&tod=

Chen, P. (2023). The effect of value creation on startups performance in the digital environment: Evidence from Chinese Digital Startups. *Sustainability 2023*, 15, 4116. https:// doi.org/10.3390/su15054116

Clauss, T. (2017). Measuring business model innovation: Conceptualization, scale development, and proof of performance. *Research and Development and innovation management,* 47 (3) 385–403, https://doi.org/10.1111/RADM.12186.

Clauss, T., Abebe, M., Tangpong, C., & Hock, M. (2019). Strategic agility, business model innovation, and firm performance: an empirical investigation. *Institute of Electrical and Electronic Engineering Transactions on Engineering Management, 68* (2019) 767–784, https://doi.org/10.1109/TEM.2019.2910381.

Fraihat, B.A.M., Abozraiq, A.M., Ababneh, A.H., Khraiwish, A., Almasarweh, M.S., & AlGhasawneh, Y.S.S. (2023), The effect of customer relationship management (CRM) on business profitability in Jordanian logistics industries: The mediating role of customer satisfaction. *Decision Science Letters, 12* (2023) 783–794.

Gomide Júnior, S., Gomes, D. F. P., Costa, S. C., & Oliveira, Á. D. F. (2022). Organizational effectiveness: A critical review of the proposals for conceptualization and measurement of the construct. *Assessing Organizational Behaviors: A Critical Analysis of Measuring Instruments*, 243-262.

Guo, H., Guo, A. & Ma, H. (2022). Inside the black box: How business model innovation contributes to performance of entrepreneurial firms in the digital era. *Journal of Innovation and Knowledge.* DOI: 10.1016/J.JIK.2022.100188.

Hair, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2022*). A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage, 2022.

Hendricks, B. (2023). Business model innovation: Definition, and example. Retrieved on September 5 from: https://study.com/academy/lesson/business-model-innovation-definition-example.html.

Ilyas, I.M. & Osiyevskyy, O. (2022). Exploring the impact of sustainable value proposition on firm performance. *European Management Journal, 40* (2022), 729–740.

Kalu, E.O. & Onuoha, B.C. (2023). Business model innovation and competitive advantage of manufacturing firms in Rivers State, Nigeria. *International Journal of Advanced Academic Research, 9*(6), 293-308.

Kao, C., & Liu, S. T. (2014). Measuring performance improvement of Taiwanese commercial banks under uncertainty. *European Journal of Operational Research, 235*(3), 755-764.

Kaur, S., & Gupta, P.K. (2015). Productive efficiency mapping of the Indian banking system using data envelopment analysis. *Procedia Economics and Finance, 25*(1), 227-238.

Khaddam, A.A., Irtaimeh, H.J., Al-Batayneh, A.R.S., & Al-Batayneh, S.R.S. (2021). The effect of business model innovation on organization performance. *Management Science Letters,* 11 (2021), 1481–1488.

Kothari, C.R. (Ed.). (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International (P) Limited Publishers, Daryaganj, New Delhi.

Kraus, S., Palmer, C., Kailer, N., Kallinger, F.L. and Spitzer, J. (2019). Digital entrepreneurship: a research agenda on new business models for the twenty-first century. *International Journal of Entrepreneurial Behavior and Research, 25*(2), 353-375.

Li, B., Meng, F., Yin, S., Wen, X. (2023). Effect of green value capture on the manufacturing firm performance considering green dynamic capabilities and profitability models. *PLoS ONE, 18*(11): e0291773. https://doi.org/10.1371/journal.pone.0291773.

Lin, Y., & Wu, L. Y. (2014). Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *Journal of Business Research, 67*(3), 407–413. doi:10.1016/j.jbusres.2012.12.019.

Menter, M., G¨ocke, L., Zeeb, C., & Clauss, T. (2023). Disentangling the complex longitudinal relationships between business model innovation and firm performance. *Journal of Business Research, 168* (2023), 114229. https://doi.org/10.1016/j.jbusres.2023.114229

Mokuolu, J. O., & Ajayi, F.I. (2023). Banks ownership and firm performance: An empirical assessment of microfinance banks in Nigeria. *Social Science and Humanities Journal, 07*(11), 3257-3267

Najmi, K., Kadir, A. R., & Kadir, M. I. A. (2018). Mediation effect of dynamic capability in the relationship between knowledge management and strategic leadership on organizational performance accountability. *International Journal of Law and Management, 60(2),* 517– 529. doi:10.1108/ijlma-01-2017-0004.

Olufolahan, T.J., Ajisafe, R.A., Akinyele, O.D., Fagbemi, F. (2023). Efficiency of microfinance banks and performance of micro, small and medium enterprises in south-west Nigeria. *Journal of Banking and Finance Management, 4*(1), 22-36, https://doi.org/10.22259/2642-9144.0401004.

Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Memon, M.A. (2018). *Partial least square structural equation modelling (PLS-SEM) using SmartPLS 3.0: An updated practical guide to statistical analysis*, second ed., Pearson.

Ray, S. (2016). Cost efficiency in an Indian bank branch network: a centralized resource allocation model. *Omega, 65(1),*69-81.

Salfore, N., Ensermu, M., & Kinde, Z. (2023). Business model innovation and firm performance: Evidence from manufacturing SMEs. *Heliyon,* 9 (2023), e16384. Available at:

https://doi.org/10.1016/j.heliyon.2023.e16384.

Samsudin, Z.B., & Ismail, M.D. (2019). The concept of theory of dynamic capabilities in changing environment. *International Journal of Academic Research in Business and Social Sciences, 9*(6), 1071-1078.

Schaffer, N., Hermes, S., Weking, J., Hein, A., & Krcmar, H. (2022). Continuous business model innovation and dynamic capabilities: The case of Cewe. *International Journal of Innovation Management, 26*(6), 1-43.

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning, 51* (1), 40–49.

United Nations Capital Development Fund (02 March, 2018). Core performance indicators for microfinance. Available at: https://www.uncdf.org/article/531/core-performance-indicators-for-microfinance-migration .

Upadhyaya, V. (2017). Why value creation is vital to entrepreneurship. Retrieved https://m.dailyhunt.in/news/india/english/business+world-epaper bizworld/why+value+creation+is+vital+to+entrepreneurship-newsid-79745028

Venugopal, M., Ravindar, R.M., & Bhanu, P.S.G. (2019). Shareholders value creation – A review of the theoretical and empirical literature. *Asia-Pacific Journal of Management Research, 14*(3-4), 1-7, https://doi.org/10.1177/2319510x18817189.

Yamane, T. (1967). *Statistics, an introductory analysis*, 2nd Ed., New York: Harper and Row.

Zahra, S.A., Sapienza, H.J. & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies, 43*(4), 917-955.