Creative Business Research Journal
ISSN 2756-4940 (Paper) 2756-4932 (Online)
Volume 3, Number 1, March 2023

Author:
Amina Muhammad Liman

Affiliation:
Department of Business Administration and Entrepreneurship,
Bayero University, Kano

Correspondence:
Amina Muhammad Liman

e-mail:
meenalim123@gmail.com

Dates:
Received: 22 Nov., 2022
Accepted: 24 Dec., 2022

How to cite this article:
Liman, A. M. (2023). Multilevel Marketing and Distributor's Retention in Nigeria: An Empirical Analysis using PLS-SEM Approach. *Creative Business Research Journal 3(1),* 80-89

Multilevel Marketing and Distributor's Retention in Nigeria: An Empirical Analysis using PLS-SEM Approach

Abstract

This study examined direct relationship between MLM product quality, MLM recognitions, MLM job stress and distributor's retention. Data was generated from MLM distributors in Kano, which was analyzed using PLS-SEM 4.0.8.3. The findings of the direct relationship between product quality, MLM recognitions and distributor's retention were supported, while that of MLM job stress reported an insignificant relationship, hence, rejected. The finding is a wakeup call for upper-level management to develop strategic map on product quality and differentiation with more focus on distributor's recognition with its positive relationship with distributor's retention. MLM businesses need to recognize the substantial opportunities to increase the value on their distributors by integrating the product quality with the market goals and boosting the value provided. In an increasingly competitive climate, MLM firm's ability to recruit and retain high talent and critical-skilled distributors depends on the implementation of a successful retention plan that combines MLM recognition and product quality.

1.0 Introduction

An essential component of human resource management is the retention of critical personnel (Panda & Sahoo, 2021; Marinakou & Giousmpasoglou, 2019; Bibi, Ahmad & Majid, 2018). Thus, recruiting and selecting the people to meet the organization's needs is only first half the battle in the war for talent; the second half is retaining those staff (Rombaut & Guerry, 2020; Fahim, 2018; Schuler & Jackson, 2016). An organisation's survival, growth, and success depend on having qualified, driven, and experienced staff, who are also a great asset to the company. One of the key problems in the modern environment is how to retain such personnel. One of the most difficult issues facing businesses is managing staff retention and keeping turnover rates below the desired level and the average for the industry (Islam, *et al*., 2022; Mo, Liu & Wu, 2021; Rombaut & Guerry, 2020).

It has been demonstrated that staff retention is an important for the growth and achievement of an organization's goals, particularly in establishing a competitive advantage over other organizations (Bharath, 2021). The current state of employee/employer relations is being negatively impacted by changes in technology, global economy, trade agreements, and other factors. This results in high employee turnover rates, which have an impact on staff retention in a business (Aruldoss, Kowalski & Parayitam, 2021; Ketter, 2021). Despite the fact that multilevel marketing (MLM) works with independent distributors rather than employees. To qualify as a distributor for an MLM organization, an individual must first pay a start-up fee.

MLM firms are not pyramid schemes, despite having a hierarchical organizational structure. Multi-level marketing, according to several academics, is "a system of selling products and services through which distributors make revenue from their own sales and from the sales/purchase by others whom they directly or indirectly" recruit (Zheng, Liu, Zheng & Zang, 2022; Dai, Teo & Wang, 2017). Network marketers, who are independent distributors who use, share, market, and sell a company's product to grow their own business, fuel the multilevel marketing (MLM) industry, which is a dynamic business consisting of marketing and distribution channel models and is growing at a rapid pace globally (Mo, Liu & Wu, 2021; Williams, 2018; Lee, Lau & Loi, 2016; Kim, 2017).

Review of the literature revealed that very little empirical study regarding MLM has been explored. The fact that most MLM studies were largely conducted in the Western and Asian countries gives credence for it to be carried out here in Nigeria. Though not much empirical studies have been carried out in Nigeria there are informal works carried out by individual distributors on the benefits of their different MLM Companies. Many studies support the notion that MLM is needed throughout the marketing value chain to achieve broad-based employment opportunity which can raise incomes for low-income households and reduce the level unemployment. The effect of MLM on distributor's retention remains open to question. A number of important issues have not yet been fully examined in the previous literature. Current research focuses on measuring the effect of MLM product quality, recognition and job stress on distributor's retention in the Kano State Nigeria. The current study hypotheses were developed based on the above studies arguments

H1: MLM product quality is significantly and positively related to distributor's retention *H2*: MLM recognition is significantly and positively related to distributor's retention H3: MLM job stress is significantly and positively related to distributor's retention

2. Literature Review and Theoretical Framework

2.1 MLM and Distributors Retention

The goal of retention is to prevent employees from leaving the company by rewarding them for doing their tasks well, fostering positive working relationships between staff and supervisors, and keeping a secure and healthy workplace (Panda & Sahoo, 2021; Bharath, 2021; Marinakou & Giousmpasoglou, 2019). Employee retention describes the hierarchical structures and methods that organizations use to prevent essential staff from leaving the company. Additionally, a company will make efforts to retain talented workers in order to accomplish its objectives in this manner (Khalid & Nawab, 2018; Haider, et al., 2015). Many scholars are of the view that Multi-level marketing is "a way of distributing products and services by which distributors earn income from their own sales and from the sales/purchase by those whom they directly or indirectly" recruit (Lam, DeCarlo & Sharma, 2019; Dai, et al., 2017). Additionally, MLM refers to a marketing method organized by or under the auspices of a company, in which the distributor of the product makes money not just from his/her sales, but also gets commissions from the sales made by other distributors he/she had recruited or sponsored into the MLM organization (Kiew & Run, 2017).

2.2 MLM Product Quality

Lam, DeCarlo and Sharma (2019) argue that product quality is the characteristic of a product or service that bear on its ability to satisfy stated or implied customer needs. Ehsani (2015) states that quality of product is the customer's perception of the overall quality or superiority of the product or service, with respect to its intended purpose, relative to alternatives. Product quality is an effort to meet or exceed customer expectations. A product that has a quality that meets the standards of quality that have been determined, and quality is a continually changing condition as the consumer's taste, or expectation of a product is always changing (Sitanggang, Sinulingga & Fachruddin, 2019; Luu, Rowley & Dinh, 2018).

2.3 MLM Recognition and Job Stress

One of the most basic human needs is appreciations as it shows that their effort is valued by others. An employee responds to gratitude that is shown through praise for their excellent work. Employee satisfaction and productivity increase when their work is valued, and they are inspired to continue performing an excellent work (Chenevert, Hill & Kilroy, 2021; Montani, Boudrias & Pigeon, 2020). The timely, informal or official acknowledgment of a person's or team's behavior, effort, or business result that promotes the organization's aims and values and has obviously beyond conventional expectations is known as recognition (Kim & Park, 2020; Angelopoulou & Panagopoulou, 2020; Zheng, Zhao, Liu & Ning, 2019).

3. Material and Methods

It is essential to mention that this research was descriptive in nature. The study used a primary data collection approach through the use of questionnaires that were developed after conducting an extensive review of similar previous studies. During the survey, over 170,879 distributors residing in Kano State, Nigeria made up the statistical population of the study. The sample size was determined using the Soper (2017) sample size determination criteria. A total of 324 of the 399 survey questionnaires that were sent to the distributors operating in Kano state for a minimum of five years were returned for an analysis. A total of 314 responses were deemed to be valid for analysis. In addition, SPSS 27.0 was used in the current study to evaluate the profiles of the respondents and carry out preliminary analysis, and Smart

PLS 4.0.8.3 was utilized to test the study's hypotheses.

3.1 Measures

Standard measures were employed in this study, measuring responses on a 5-point Likert scale, with 1 denoting "strongly disagree" and 5 indicating "strongly agree". This is in line with the studies of Kamselem, Nuhu and Liman (2020) and Abdullahi, et al., (2020), Nuhu, Salisu, Abubakar and Abdullahi, (2018). The research construct is made up of 28 items in the questionnaire. The 8-item of Droney (2016) scale was used to measure the construct MLM product quality. For this scale, Cronbach's alpha reliability was 0.854. The 5-item scale used to measure MLM recognition and was adapted from a research by Kankanhalli, Tan and Wei (2005). This scale has a Cronbach's a reliability score of 0.745. A 7-item scale with Cronbach's alpha scales of 0.855 were used to measure MLM jib stress. The scales were adapted from Motowidlo, (1986). Distributor's retention (DR) was measured using 8-item scale developed by Kyndt et al. (2009). Cronbach's a reliability value for this scale is 0.754.

4. Result and Discussion

This section provides a summary of the study's findings. Figures 1 and 2 illustrate how the study model was tested using Smart-PLS 4.0.3.8. The current study used bootstrapping of 5000 samples and 314 cases to determine the t-values, the standard error of the estimate, and the significance of the relationship. According to Henseler, et al. (2015), PLS predicts moderator effects more accurately through estimating for the inaccuracy that weakens correlations and improves the theory's validity.

4.1 Measurement Model

First, the convergent validity test, which measures how closely various items measuring the same concept agree with one another. The research subsequently identified the discriminating validity (DV), which is defined by low correlations between the measurement of interest and the measurements of other variables and suggests that the measure does not represent other factors. Evaluating DV was achieved by comparing the squared correlations between the constructs and the extracted variance (Henseler, *et al*., 2015; Hair, *et al*., 2017). In Figure 1 the inter-item consistency of the measurement items was evaluated using the Cronbach's alpha coefficient.

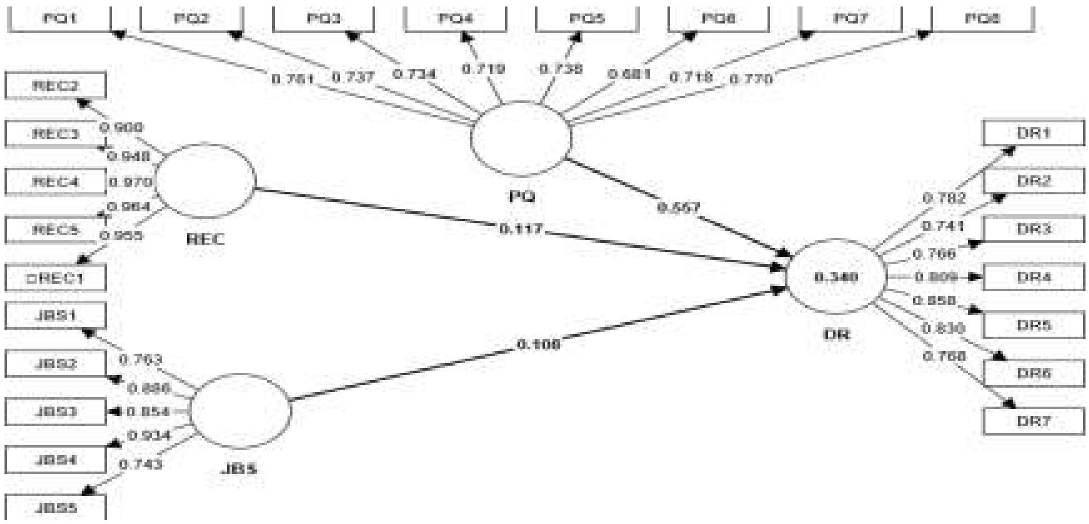

Figure 1: *Measurement Model*

Figure 1 shows that all of the items were above 0.4 and that each construct's indication loaded highly on its primary or parent construct, resulting in achieving CV. The correlation matrix for each variable as displayed in Table 1was compared to the DV of the current study using AVE. Using Fornell and Larcker's (1981) criteria, each value (bold) in their original construct is greater than how it relates to other constructs. Furthermore, Figure 1 shows the results of R^2indicates that PQ, RC and JS explain 34% (R^2 = 0.340) of the variance of DR.

Table 1: *Fornell-Larcker Criterion*

Latent Constructs DR PQ RC JS

Distributor's Retention **0.735**

Product Quality 0.076 **0.875**

Recognition 0.056 0.098 **0.857** Job stress 0.078 0.046 -0.067 **0.779** **Note:** *The diagonals that are bolded signify the squared root of AVE, whereas, the rest of values under the bolded represent the correlations among variables*

4.2 Assessment of Structural Model

The nexus between MLM PQ, RC, JS and DR constructs were assessed on the basis of the research hypothesis. A bootstrapping approach was used to calculate the model's t-values. The results of the direct influence of the constructs included in the model also shows that PQ, RC and DR have a strong positive association (β= 0.557, t= 10.919, p < 0.000) and (β= 0.117, t= 2.046, p < 0.041) (H 1 &2). Thus hypothesis 1 and 2 are supported. Similarly, MLM JS had found to be insignificantly related with DR (β= 0.108, t= 1.299, $p \geq$ 0.05) as shown in Table 2. Thus hypothesis 3 not supported. However, this shows that the results supported the two direct hypotheses developed.

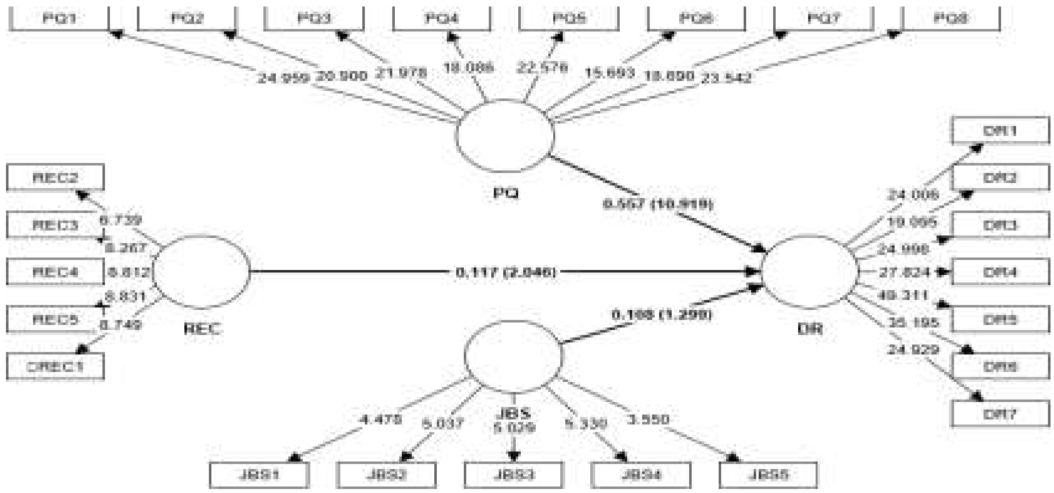

Figure 2: *Structural Path*

Table 2: *Structural path model for direct and indirect effects*

paths Coefficient Standard error *t*-value *p*-value Decision

MLM PQ -> DR 0.557 0.051 10.919 0.000 Supported MLM RC -> DR 0.117 0.057 2.046 0.041 Supported MLM JS -> DR 0.108 0.083 1.299 0.194 Not Supported

Note (s): MLM PQ= MLM Product quality, MLM RC= MLM Recognition, MLM JS= MLM Job stress, DR= Distributors Retention.

4.3 Discussion

Hypothesis 1 predicted that MLM product quality is positively related to distributor's retention. The findings in Figure 2 and Table 2 indicate a positive significant relationship between MLM PQ and distributor's retention. Thus, Hypothesis 1 supported. This finding indicates that MLM product quality does not lead to distributor's retention in MLM. This is consistent with the findings of previous studies that perceived quality has significant impact on distributors' satisfaction (e.g. Lam, et al., 2019; Luu, et al., 2018; Lee, et al., 2016). Hypothesis 2 envisaged that MLM recognition is positively related to distributor's retention. The hypothesis 2 is also adequately supported. Furthermore, the findings are in accordance with many previous studies (e.g. Islam, *et al*., 2022; Chäenevert, et al., 2021; Rombaut & Guerry, 2020; Zheng, et al., 2019). The findings of the current study revealed that MLM job stress had insignificant relationship with distributor's retention. This finding indicates that MLM job stress does not lead to distributor's retention in MLM. This implies that the distributor's' level of stress has insignificantly associated with their retention in MLM.

5. Conclusions and Implications

As a conclusion, the primary objective of this study is to explore the effect of MLM on distributor's retention. The findings in this study have identified two of the proposed MLM dimension, namely: MLM product quality and MLM recognition to be positively and significantly associated with distributor's retention in the context of Nigeria. The study also concludes that MLM distributors consider great value and quality of product produced by the company and recognition given to them promoted their level of retention. Moreover, when these quality products are not produced by the firms and their work are not valued, distributors tend to express displeasure through non-retention to their jobs. Additionally, the study found that the most significant sources of stress for distributors were ”work-related" issues, such as unsafe working conditions, workload, and relationships at work, and were insignificantly associated with MLM distributor’s retention.

This study was theoretically pushed the boundary of distributor’s retention forward by achieving the importance of product quality and recognition in encouraging distributor’s retention. The current composition emphasized the use of SET, Market-based relationship marketing and network based relationship marketing theories in explaining the entire retention process through the direct and indirect relationships between the studied dimensions and distributors retention. The theory posits reciprocated relationship as mostly impersonal (in terms of recognizing the value of the distributors and producing high quality product) to build socialization and internalization relationships by the emerging practices and these relationships were including processes to facilitate the retention of MLM distributors.

A business unit may gain a lot from putting into action a good retention strategy that combines incentives and recognition. Due to urgent company needs including market globalization, fierce competition, and labour relations, it is more crucial than ever to achieve, motivate, develop, deploy, and retain top talent. Since front-line supervisors have the greatest impact on retention, companies must select candidates with the appropriate skills for the new open positions. Employees are less likely to leave the organization when they have positive working relationships and open lines of communication with their immediate manager. By aligning product quality with corporate objectives and enhancing value offered, MLM organizations have a significant opportunity to raise the value placed on its distributors. Success in this process will determine the organization's capacity to attract and keep top performers and critical-skilled distributors in today's environment of increased competition.

References

Ali, R., & Ahmed, M. S. (2017). The Impact of Reward and Recognition Programmes on Employees Motivation and Satisfaction: An Empirical Study, *International Review of Business Research Papers*, *5*(4), 270- 279.

Angelopoulou, P. & Panagopoulou, E. (2020). Is wellbeing at work related to professional recognition: a pilot intervention? *Psychology, Health and Medicine*, *25*(8), 950 957.

Aruldoss, A., Kowalski, K.B & Parayitam, S. (2021). The relationship between quality of work life and work-life balance mediating role of job stress, job satisfaction and job commitment: evidence from India. *Journal of Advances in Management Research*, *18*(1), 36-62

Bhanu, R. & Paramanandam, P. (2017). Job stress and job satisfaction among the managerial personnel of textile industry. *Sumedha Journal of Management*, *6*(3), 65-74.

Bibi, P., Ahmad, A. & Majid, A.H. (2018). HRM practices and employee retention: the moderating effect of work environment. *Tourism and Hospitality Research*, 129-152.

Chäenevert, D., Hill, K. & Kilroy, S. (2021). Employee's perceptions of non-monetary recognition practice and turnover: Does recognition source alignment and contrast matter? *Human Resource Management Journal, 12*(1), 1-18.

Dai, F., Teo, S. T., & Wang, K. Y. (2017). Network Marketing Businesses and Chinese Ethnicity Immigrants in Australia. *Journal of Small Business Management*, *55* (3), 444-459.

De Ruyter, K., Keeling, D.I. & Yu, T. (2020). Service-sales ambidexterity: evidence, practice, and opportunities for future research. *Journal of Service Research, 23*(1), 13-21.

Droney, D. (2016). Networking health: multi-level marketing of health products in Ghana. *Anthropology & medicine*, *23*(1), 1-13.

Ehsani, Z. & Ehsani, M. H. (2015). Effect of Quality and Price on Customer Satisfaction and Commitment in Iran Auto Industry. *International Journal of Service Sciences, Management and Engineering*, *1*(5), 52- 56.

Foy, T., Dwyer, R.J., Nafarrete, R., Hammoud, M.S. & Rockett, P. (2019). Managing job performance, social support and work-life conflict to reduce workplace stress. *International Journal of Productivity and Performance Management, 68* (6), 1018-1041.

Goswami, I. & Dsilva, N.R. (2019). Impact of job satisfaction and job stress on employees' life in Mumbai's hospitality sector: An empirical study using SEM. *Journal of Strategy and Management, 12*(3), 330-346.

Haider, M., Rasli, A., Akhtar, S., Yusoff, R.B.M., Malik, O.M., Aamir, A. & Tariq, F. (2015). The impact of human resource practices on employee retention in the telecom sector, *International Journal of Economics and Financial Issues*, *5*(1), 63-69.

Hair, J.F. Jr, Hult, G.T.M., Ringle, C.M., Sarstedt, M. & Thiele, K.O. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. *Journal of the Academy of Marketing Science, 45*(5), 616-632.

Henseler, J., Ringle, C. M. & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, *43*(1), 115-35.

Islam, A., Hack-Polay, D., Rahman, M. Hosen, M., Hunt, A. & Shafique, S. (2022). Work environment, HR practices and millennial employee retention in hospitality and tourism in Bangladesh. *International Journal of Emerging Markets*, 1-22.

Kankanhalli, R., Tan, M. & Wei, T. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS quarterly*, 113-143.

Ketter, E. (2021). Millennial travel: tourism micro-trends of European Generation Y. *Journal of Tourism Futures*, *7*(2), 192-196.

Khalid, K. & Nawab, S. (2018). Employee participation and employee retention in view of compensation, *SAGE Open, 8*(4), 1-17.

Kiaw, C. O. S. & De Run, E. C. (2017). Why Malaysians join and stay on in a multi-level marketing company. *I CFAI Journal of Services Marketing*, *5*(4), 1-17.

Kim, D.Y. & Park, S. (2020). Rethinking millennials: how are they shaping the tourism industry? *Asia Pacific Journal of Tourism Research, 25*(1), 1-21.

Kim, E. (2017). *Essays on Business Networks in the Multi-level Marketing Industry*. Doctor of Philosophy Thesis University of Michigan.

Lee, K. F., Lau, T. C., & Loi, K. Y. (2016). Driving Distributors' Satisfaction in Multilevel Marketing (MLM) Companies. *International Journal of Academic Research in Business and Social Sciences, 6* (2), 105-122.

Luu, T.T., Rowley, & Dinh, K.C. (2018). Enhancing the effect of frontline public employees' individual ambidexterity on customer value co-creation. *Journal of Business & Industrial Marketing*, *33*(4), 506-522.

Marinakou, E. & Giousmpasoglou, C. (2019).Talent management and retention strategies in luxury hotels: evidence from four countries. *International Journal of Contemporary Hospitality Management*, *31*(10), 3855-3878.

Mo, Z., Liu, M.T. & Wu, P. (2021). Shaping employee green behaviour: a multilevel approach with Pygmalion effect. *Asia Pacific Journal of Marketing and Logistic*, *14*(3), 1-22. Montani, F., Boudrias, J.S. & Pigeon, M. (2020). Employee recognition, meaningfulness and behavioural involvement: test of a moderated mediation model. *The International Journal of Human Resource Management*, *31*(3), 356-384.

Olejniczak, M. & Salmon, D. (2014). Workers in German UB II job centres: stress caused by new public management? *Journal of Workplace Rights, 17*(4), 255-282.

Okeke, R. C., & Nwankpa, L. O. (2017). The accounting fundamentals of multilevel marketing, income security and the poverty challenge in Nigeria. *World Scientific News*, *77*(2), 277-293. Panda, A. & Sahoo, C.K. (2021). Work–life balance, retention of Professionals and psychological empowerment: An empirical validation. *European Journal of Management Studies, 26*(2/3), 103- 123.

Rockett, P., Fan, S.K., Dwyer, R.J. & Foy, T. (2017). A human resource management perspective of workplace bullying. *Journal of Aggression, Conflict and Peace Research, 9* (2), 116-127. Rombaut, E. & Guerry, M. (2020).The effectiveness of employee retention through an uplift modeling approach. *International Journal of Manpower, 41*(8), 1199-1220.

Safaria, T. (2014). Are leadership practices, role stressor, religious coping, and job insecurity Predictors of job stress among university teachers? A moderated-mediated model, *International Journal of Research Studies in Psychology*, *3*(3), 87-99.

Savage, D.A. & Torgler, B. (2012). Nerves of steel? Stress, work performance and elite athletes. *Applied Economics, 44*(19), 2423-2435

Scherbaum, C.A., Naidoo, L.J. & Saunderson, R. (2022). The impact of manager recognition training on performance: a quasi-experimental field study. *Leadership & Organization Development Journal*, *43(*1), 57-70.

Schuler, S. R., & Jackson, S. C. (2016). *Managing Human Resources.*CA: Cengage Learning. Soper, D. (2017). *A-priori sample size calculator for structural equation models* [Software]. Yang, M., Luu, T.T. & Qian, D. (2022). Group diversity and employee service innovative behavior in the hospitality industry: A multilevel model. *International Journal of Contemporary Hospitality Management*, *34* (2), 808-835.

Zheng, X., Zhao, H.H., Liu, X. & Ning, L. (2019). Network reconfiguration: the implications of recognizing top performers in teams. *Journal of Occupational and Organizational Psychology*, *92*(4), 825-847.

Zheng, Y., Liu, D., Zheng, Y. & Zang, Z. (2022). Contingent conditions on the effectiveness of salesperson acquisition-retention ambidexterity: the motivation–opportunity– ability framework. *Journal of Business & Industrial Marketing*, *37* (5) 1111–1126.

Effect of Intellectual Capital on Performance of Listed Industrial Goods Firms in Nigeria

Authors:
Adamu Mohammed Sani[1]
Adamu Mohammed Hudu[2]

Affiliation:
[1] Department of Business Administration,
Faculty of Management Sciences, Federal University of Kashere, Gombe State, Nigeria

[2] Department of Business Administration,
Faculty of Administration, Nasarawa State University, Keffi, Nasarawa State, Nigeria

Correspondence:
Adamu Mohammed Sani

e-mail:
sanietc10@gmail.com

Dates:
Received: 06 Dec., 2022
Accepted: 09 Jan., 2023

How to cite this article:
Adamu, M. S., & Adamu, M. H. (2023**).** Effect of Intellectual Capital on Performance of Listed Industrial Goods in Nigeria. *Creative Business Research Journal 3(1),* 90-98

Abstract

The study investigated the effect of intellectual capital on performance of listed industrial goods firms in Nigeria over the period of 2017-2021. was measured outwardly using Tobin's Q. Intellectual capital was measured using two component of intellectual capital, human capital efficiency and structural capital efficiency. Data were collected through secondary source from sample size of 12 industrial goods firms listed on the Nigeria Stock Group (NSG). In testing the hypotheses formulated, pooled OLS regression was used for the analysis of this study. The findings from the analysis shown that, only human capital efficiency (HCE) has negative and insignificant effect on of industrial goods firms in Nigeria. Also, structural capital efficiency (SCE) shows negative and significant effect on performance of industrial goods firms in Nigeria. This study therefore recommended that, management of industrial good firms in Nigeria should pay more attention to intellectual capital aspect of the firms to enable them increase market share in the Nigeria capital market

Keywords: Intellectual Capital, Human Capital Structural Capital and Performance

1.0 Introduction

In the contemporary corporate world, sources for competitive advantage have shifted from traditional assets to intellectual ones. This situation has arisen due to the globalization process as well as due to increasing breakthroughs in areas such as production technology, computing and telecommunications (Osinski, *et al.*, 2017). All these transformations suggest a new outlook and interpretation on society as a whole (Sharma & Dharni, 2017; Zerenler *et al*., 2008).

The Economics Institute of Washington D.C. (2018) study on human intellectual capital, concluded that, the economic value of the nation's productivity depends more upon employee skills and knowledge and business problem solving aptitude than it does upon the performance of the firm's commercial output. In the new millennium, intellectual capital will be the primary resource and driver of our information economy. Economic wealth is driven more by knowledge and information than the production process, these are the main resources organizations used to create market share and competitive edge.

Human capital is a process that relate to training, education and other professional initiatives in order to increase the levels of knowledge, skills, abilities, values, and social assets of an employee which will lead to the employee's job satisfaction and (Marimuthu 2009). According to Kucharcikova (2011) human capital is combined knowledge, skill, innovativeness, and ability of the organization to meet the task at hand. This study understood human capital as knowledge, experience, skill, ability and contributions of human element in an organization

Structural capital represents the competitive intelligence, formulas, information systems, patents, and policies, processes, which result from the products or systems the firm has created over time. Structural capital also includes all the non-human storehouses of knowledge in organizations, which include the databases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value (Bontis, et al, 2012).

With all the resources and potential as the due of our geographical location and natural resources yet, products from other nation compete and defeat locally made products in our local market. The question now is, why is it that Nigeria manufactured product can't survive in it local market. This indeed calls for research in the Nigeria industrial goods firms to look at intellectual capital activities as tools of gaining competitive advantage. It is against this background that this study set below objectives.

1.1 Objectives of the Study

- To investigate the effect of human capital on performance of listed industrial goods firms in Nigeria;
- To assess the effect of structural capital on performance of listed industrial goods firms in Nigeria;

2.0 Literature Review

2.1 Concept of Intellectual Capital

Bartholomew (2008) viewed intellectual capital as the assets relating to employees' knowledge and expertise, customer confidence in the company and its products, brands, franchises, information systems, administrative procedures, patents, trademarks and the efficiency of company business processes. Also, intellectual capital has been defined as the assets relating to employee knowledge and expertise, customer confidence in the company and its products, brands, franchises, information systems, administrative procedures, patents, trademarks and the efficiency of company business processes (Bozbura & Beskese 2007).

2.1.1 Concept of Human Capital

Zula and Chermack (2007) defined human capital as the knowledge and skills that people acquire through education and training as being a form of capital, and this capital is a product of deliberate investment that yields returns. Another author here defined Human Capital as the combined knowledge, skill, innovativeness and ability of the company's individual employees to meet the task at hand. It also includes the company's values, culture and philosophy. Human capital cannot be owned by the company (Bontis, 2001).

2.1.2 Concept of Structural Capital

Bozbura and Beskese (2007) defined structural capital as the sum of all assets that make the creative ability of the organization possible. Joia, (2007), structural capital components refer to organisational culture, routines and practices, or intellectual property. (Beattie & Thomson, 2007) also states that structural capital is the knowledge that stays within the firm at the end of the working day. Comprises the organizational routines, procedures, systems, cultures, databases, etc. Some may be legally protected and become Intellectual Property Rights, legally owned by the firm under separate title.

2.2 Empirical Review

2.2.1 Human Capital and Performance

Maryam et al (2015) with empirical studied that investigate the relationship between six elements of intellectual capital such as human capital, structural capital, customer capital, social capital, technological capital and spiritual capital with organizational in Malaysia. The study was conducted using a structured questionnaire distributed to higher-level management working in various organizations in Malaysia. Sample size of 187 respondents out of 311 questionnaires distributed and selected randomly based on non-probability convenience sampling. Data collected was analysed using the Multiple Regression Analysis Model. The results revealed that intellectual capital has significant influence on the organizational in Malaysian. The study was carried out in Malaysia investigated six variables of intellectual capital on organizational performance. While, current study was carried out in Nigeria examining effect of three major VAIC components (Human capital, structural capital and capital employed) of intellectual capital on value added.

2.2.2 Structural Capital and performance

Onyekwelue et. al (2017) in their study examined effect of intellectual capital on financial of firms in Nigeria using the banking industry. The research used the Value Added Intellectual Coefficient (VAIC) to ascertain the extent that intellectual capital indices affect financial of three Nigeria banks. Data were collected from the published annual financial statements of the three banks and analyzed using regression tool. The study indicates that IC has a positive and significant effect on banks' financial performances of the banks but some are not significant. The results further showed that the banks are statistically different in both the intellectual capital and its financial indicators. It also shows that the banks with high IC also show high financial performance. The study considered intellectual capital component on financial in the banking industry while the present study will be considering intellectual capital component on performance in industrial goods listed on Nigeria stock exchange.

2.3 Theoretical Review

2.3.1 Human Capital Theory

Origins of human capital (HC) theory, the theory of HC can trace it origins to macroeconomic development theory. In the 1950s, the main factors of production comprised land, labour, physical capital and management (Mincer 2007; Becker 1993). By the 1960s, however, economists had great difficulty in explaining the growth of the US economy based on the aforementioned factors of production Schultz, (1961). It was the empirical work of (Becker, 1964; Schultz, 1961; & Mincer, 1974), that challenged the prevailing assumption that the growth of physical capital is paramount to economic success. The basic premise behind HC theory is that people's learning capacities are of comparable value with other resources involved in the production of goods and services (Lucas, 1990).

2.3.2 Dynamic Capability Theory

Dynamic Capability Theory (DCT) and change management previously we discussed different academic perspectives of HC, the concept of HC acting as an enabler of organisational change was briefly discussed (Schultz 1961; Nelson & Phillips 1966). Evidence suggests that many firms now operate in increasingly dynamic and turbulent environments where disruptive forces such as technological innovation, global competition and entrepreneurship more typically emerge (Schreyögg & Sydow 2010). Moreover, in such environments, firms need to be able to reinvent and transform their constituent resource base, knowledge routines and capabilities in order to remain aligned with, or even ahead of, their external environment

This study adopts Dynamic Capability Theory (DCT) because the view of this theory is the dynamic change in business environments such as technological, innovation, global competition, changes from physical to intellectual activities, and entrepreneurship.

3.0 Methodology

The study used Ex-post factor research design with the population of 19 industrial goods firms listed on the Nigeria Exchange Group (NSG) as at 2021 while the sample size consists of twelve listed industrial goods firms on the (NSG) that had required data for this period of study. In other words, companies that are listed on the (NSG) for the five years' period of study 2017-2021. The study use secondary data sourced from published annual report of the firms. The study also used pooled ordinary least squares (OLS) regression technique to determine the relationships and effect of the research the variables with the aid of the following hypotheses

H_{01} Human capital efficiency has no significant effect on performance of industrial goods firms in Nigeria.

H_{02} Structural capital efficiency has no significant effect on performance of industrial goods firms in Nigeria.

Model specification

TOBIN's $Q_{it} = f(HCE_{it}, \& SCE_{IT},)$

TOBIN's $Q_{it} = \beta_0 + \beta_1 HCE_{it} + \beta$performance

Where:

TOBIN's Q_{it} = Performan (Dependent variable)

HCE_{it} = Human Capital Efficiency (Independent variable)

SCE_{it} = Structural Capital Efficiency (Independent variable)

β_0 = Constant/Intercepts

$\beta_{1,}$ and β_2 = Parameters of determination

μ_t = Stock Variable (Error term)

3.1 Data Analysis

In testing the hypotheses of this study, we used random effect result when they were no problem of heteroscedasticity.

	HCE	SCE	TOBIN
Mean	3.07	0.67	1.88
Std. Dev.	3.00	1.41	1.66
Variance	9.02	1.98	2.77
Min	-1.5	-4.48	0.45
Max	23.96	13.62	10.83
Skewness	4.00	6.14	2.97
Kurtosis	25.99	62.58	13.71
Obs.	120	120	120

Sources: STATA Output, 2021

The above table shows the descriptive statistics of the variables under study. The table revealed that human capital efficiency recorded a minimum of -1.5 and maximum of number value of 23.96 which implies that the human capital efficiency of industrial goods firms under study does not exceed that. However, the average number of human capital recorded was 3.07 with a standard deviation value of 3.00. Although the skewness value of 4006 which is within the range of normality, the kurtosis value 25.99 recorded was far above normality range.

Also, structural capital efficiency recorded a minimum and maximum values of -4.48 and 13.62 respectively with the average value recorded of 0.76 with a standard deviation of 1.42 Although the skewness value of 6.14 falls within normality range, the kurtosis value of 62.58 exceeds the normality range.

Tobin's Q (TOBIN) as index used to measured also recorded a minimum value of 0.45 and a maximum value of 10.83. with average value of Tobin's Q at 1.88 with a standard deviation of 1.66. both the skewness value of 2.97 and the kurtosis value of 13.71 far exceeds the normality range.

Below is the table that shows the correlation analysis based on the sampled data collected from variable in industrial goods firms listed on Nigeria stock exchange;

Correlation Matrix

	TOBIN	HCE	SCE
TOBIN	1.000		
HCE	-0.0684	1.000	
	0.4580		
SCE	-0.0779	0.0134	1.000
	0.3977	0.8844	

Source: STATA Output, 2021

TOBIN recorded a negative and weak relationship with human capital efficiency (HCE) which stood at -0.0684 implying that -6.84% and its statistically insignificant at 5% level of significance. Also, (TOBIN) also recorded a negative and weak relationship with both structural capital efficiency and capital employed efficiency which both stood at -0.0779 and -0.1448 respectively, and both are statistically insignificant at 5% level of significance. HCE recorded a weak but positive relationship with SCE which stood at 0.0134 but is statistically insignificant at 5% level of significance.

Random Effect Regression Output

TOBIN	Coefficient	t-value	p>|t|	R-square
HCE	-0.0048	0.09	0.926	0.1410
SCE	-0.0029	-0.03	0.004	
Constant	1.9192	6.04	0.000	

Source: STATA Output, 2022

The above table revealed that the value of r-square stood at 0.1410 which indicates that 14.1% of the variation in Tobin's Q (TOBIN) could be explained by the combination of human capital efficiency, structural capital efficiency and capital employed efficiency while the remaining 85.9% could be explained by other variables that are not included in the study. The estimate value of r-square appears to be normal which shows that the model is fit for the analysis (Gujarati, 2004).

H_{01} Human capital efficiency has no significant effect on performance of industrial goods firms in Nigeria

The regression line TOBIN = 1.9192 - 0.0048 HCE indicates that a unit increase in HCE will lead to -0.0048 decrease in TOBIN. The t-value stood at 0.09 with the probability of the t-statistic pegging at 0.926, the study therefore, accepts the null hypothesis which states that, human capital efficiency has no significant effect on performance f listed industrial goods firms in Nigeria and ignores the alternative hypothesis.

H_{02} Structural capital efficiency has no significant effect on performance of industrial goods firms in Nigeria

The regression line TOBIN = 1.9192 – 0029 SCE indicates that a unit increase in SCE will lead to -0.0029 decrease in TOBIN. The t-value stood at -0.04 with the probability of the t-statistic pegging at 0.975, the study therefore rejects the null hypothesis which states that structural capital efficiency has no significant effect on performance of listed industrial goods firms in Nigeria and accept the alternative hypothesis.

3.2 Discussion of Finding

The study sought to examine the effect of intellectual capital on performance of listed industrial goods firms in Nigeria. The results from the regression analysis are discussed below.

From the result of hypothesis above the study found that human capital efficiency has negative and insignificant effect on performance proxies by Tobin's Q (TOBIN). This result indicates that an improvement in human capital aspect of intellectual capital would significantly increase firm performance (TOBIN) of listed industrial good firm in Nigeria. The result does not agree with empirical findings of Morteza *et al*, (2011); Mohammad (2019) and Gospel et al, (2019) which show that increase in human capital efficiency of intellectual capital is a major of performance. And specifically the result tally with findings of Mahmoud et al., (2012); Hosein et al, (2013) and Nwaiwu and Aliyu (2017) this means the study accept the null hypothesis which stated that human capital has no significant effect on performance of listed industrial goods firms in Nigeria

Also the second hypothesis result above shows that structural capital efficiency has negative and significant effect on performance proxies by Tobin Q (TOBIN). This result indicates that an improvement in structural capital aspect of intellectual capital would significantly increase performance listed industrial good firm in Nigeria. The result tally with empirical findings of Mohammad (2019); Dimitrios et al (2011) which show that increase in structural capital efficiency of intellectual capital has influence in performance. And the result does not agree with findings of Nwaiwu and Aliyu (2017); Payam (2018); and Neha and Niladri (2018) this means the study accept the null hypothesis which stated that human capital has no significant effect on performance of listed industrial goods firms in Nigeria.

4.0 Conclusions and Recommendations

Looking at the general objective of the study which was to investigate the effect of intellectual capital on performance of listed industrial goods firms in Nigeria, and taking into perspectives the findings of each of the specific objectives, it is clear that one. Human capital of the hypotheses results showed negative and insignificant effects on performance of listed industrial goods firms in Nigeria and as such the study contends paying more attention to human capital component of intellectual capital will create performance. Also, Structural capital showed negative and insignificant effects on performance of listed industrial goods firms in Nigeria meaning improving the system of operation in the Nigeria industrial goods firms will create performance in the industry.

- For industrial goods firms in Nigeria to improve their performance, more attention must be given to human capital of firms, such as knowledge, skills, experiences and off the job training of employee, so as to enable Nigeria industrial goods firms gain performance because it was discovered from the analysis that human capital efficiency had insignificant positive effect on Tobin's Q.
- The study also recommended that, Nigeria industrial goods firms should improve their structural capital aspect of intellectual capital, such as processes and procedures, patents, information system, proprietary databases and the general systems of the firms, so as to support industrial goods firms in Nigeria gain performance and can lead to better performance. Because the regression result revealed that structural capital efficiency had negative and significant effect on performance of the firms.

References

Andriessen, D., (2004). Making Sense of Intellectual Capital: Designing a Method for the valuation of intangibles, *Elsevier Butterworth-Heinemann, Burlington*, 1(3), 55-71

Bontis, N, Keow, W.C.C & Richardson, S. (2012). Intellectual capital and business performance in Malaysian industries, Journal of intellectual capital I (1), 85-100.

Bozbura, F. T., & Beskese, A. (2007). Prioritization of organizational capital measurementindicators using fuzzy AHP. *International Journal of Approximate Reasoning*. 4(4), 124-147.

Chen, S. Y. (2009). Identifying and prioritizing critical intellectual capital for e-learning companies. *European Business Review*. 21(5), 438-452.

Chu, P. Y., Lin, Y. L., Hsiung, H. H., & Liu, T. Y. (2006). Intellectual capital: An empirical study of ITRI. *Technological Forecasting & Social Change*, 73, 886–902.

Chu, S., Chan, K., & Wu, W. (2011). Charting Intellectual Capital performance of The Gateway to China. *Journal of Intellectual Capital, 12*(2), 249-276.

Dimitrios, M., Chatzoudes, D., Charalampos. N., and Georgios, T, N. (2011). The impact of intellectual capital on firms' performance and financial performance. *Journal of Intellectual Capital* January 2011. DOI:10.1108/14691931111097944.

Drury, C. (2004). Management and cost accounting: student's manual. 6th ed. London: Thomson Learning.

Edvison L. and M. S. Malone, (1997) Intellectual capital: realising your company‟s true value by finding its hidden brainpower, *New York, Harper Business*. 1997.

Emadzadeh, Nadia, A., Asiya, B., Mahboobe, R., Fatemeh, E., and Mojgan R. (2013). Effect of Intellectual Capital on Firm Performance *International Journal of Academic Research in Accounting, Finance and Management Sciences* 3(2), 98-103.

European Commission., (2008). *NACE Rev. 2 Statistical classification of economic activities in the European Community, Eurostat Methodologies and Working Papers*. Publications Office of the EU, Luxembourg.

Feimianti E., & Poraghajan S.D.A (2014). Value Creation of Intellectual Capital, *Review of integrated Business and Economic Research. 3(1), 99-113 *

Firer, S., and Williams, S.M., (2003). Intellectual capital and traditional measures of corporate performance", Journal of Intellectual Capital. 4(3), 348.

Gavious, I., & Russ, M. (2009). The valuation implications of human capital in transactions on and outside the exchange. *Advances in Accounting, incorporating Advances in International Accounting*. 25, 165-173.

Gospel, J, C., Chibuike, C, U and Benjamin, C, O (2019) Market Valuation of Human Capital in Nigerian Banks. *International Journal of Academic Research in Accounting, Finance and Management science*. 9(1), 21-29.

Kucharcikova., (2011). Human Capital– Definition and Approaches, *Journal of Human Resources Management and Ergonomics*, 5 (1) 554-567

Lu, Q., & Hwang, P., (2010). The impact of liability of foreignness on international venture capital firms in Singapore. *Asia Pacific Journal of Management* 27(1), 81-97.

Maditinos, D., Chatzoudes, D., Tsairidis, C., & Theriou, G. (2011). The impact of intellectual capital on firms' performance and financial performance. *Journal of Intellectual Capital, 12*(1), 132-151.

Marimuthu, M.L & Eyler, K., (2009). Human resource accounting and international developments: Implications for measurement of human capital. *Journal of International Business andCultural Studies*. 3(1), 30-39.

Martin Clarke, Dyna Seng, Rosalind H. Whiting., (2011). Intellectual capital and firm performance in Australia", *Journal of Intellectual Capital*. 12 (4), 505-530.

Maryam, J, H., Idris, O., and Syed, M, A., (2015). Effect of Intellectual Capital on Organizational Performance. *Social and Behavioral Sciences* 211, 207-214.

Meritum Project., (2002) *Guidelines for managing and reporting on intangibles*. Madrid: Fundación Airtel Móvil.

Ming Chin Chen, et all. (2012). An Empirical investigation of the relationship between Intellectual capital and Firm's performance and

Financial Performance. *Reasearch working paper*. *Department of Accounting, National Chengci University*, Taipei, Taiwan.

Ming-Chin C., Shu-Ju C., and Yuhchang H. (2005), An empirical investigation of the relationship between intellectual capital and firms' performance and financial performance. *Journal of Emerald Research* available at www.emeraldinsight.com/researchregister.

Mohammad A, (2011). The Effect of Intellectual Capital on Firm Performance: An Investigation of Iran Insurance Companies. publication at: https://www.researchgate.net/publication/249313011.

Nwaiwu, J,N., and Aliyu, A,S., (2017). Intellectual Capital Reporting and Measures of Financial Performance of Companies in Nigeria. *International Journal of Advanced Academic Research Financial Management*. 3 (9) 2488-9849.

Osinski, ., Selig, P. M., Matos, F., & Roman, D. J., (2017). Methods of evaluation of intangible assets and intellectual capital. *Journal ofIntellectual Capital*, *18* (3), 470–485.

Poraghajan, & Abbasaly. (2013). Impact of Intellectual Capital on Performance and Firms' Financial Performance: Evidences from Teheran Stock Exchange. *World of Sciences Journal year 2013, Vol 1 issue 12 page 197 208.*

Rudez, H. N., & Mihalic, T., (2007). Intellectual capital in the hotel industry: A case study from Slovenia. *Hospitality Management*, 26, 188–199.

Sirinuch, N., (2015). The relationship between intellectual capital, firms' performance and financial performance: Empirical evidence from the ASEAN. *Journal of Intellectual Capital*. 16(3), 587-618.

Stewart, T.A. (1997), Intellectual Capital: The New Wealth of Nations, Doubleday Dell Publishing Group, New York, NY.

Washington, DC: (1999). Penetrating the book-to-market black-box: The R&D effect. *Journal of Business Finance and Accounting,* 26(34), 419-449.

Wu, M.F., Lee, Y.L., Wang, G.L., (2012). To Verify How Intellectual Capital Affects Organizational Performance - in Listed Taiwan IC Design Companies with considering the moderator of Corporate Governance. *Journal of Global Business Management 8,* 20–32.

Zerenler, M. and Gozlu, S. (2008), "Impact of intellectual capital on exportation performance: research on the Turkish automotive supplier", Journal of Transnational Management, Vol. 13 No. 4, pp. 318-41.

Creative Business Research Journal
ISSN 2756-4940 (Paper) 2756-4932 (Online)
Volume 3, Number 1, March 2023

Determinants of Retained Earnings of Listed Manufacturing Firms in Nigeria

Authors:
Adamu Mohammed Sani [1]
Adigizey J. D. [2]

Affiliation:
[1] Department of Business Administration,
Faculty of Management Sciences, Federal University of Kashere, Gombe State, Nigeria

[2] Department of Business Administration,
Faculty of Administration, Nasarawa State University, Keffi, Nasarawa State, Nigeria

Correspondence:
Adamu Mohammed Sani

e-mail:
sanietc10@gmail.com

Dates:
Received: 07 Dec., 2022
Accepted: 09 Jan., 2023

How to cite this article:
Adamu, M. S., & Adigizey, J. D. (2023). Determinants of Retained Earnings of Listed Manufacturing Firms in Nigeria. *Creative Business Research Journal 3(1),* 99-107

Abstract

This study investigated determinants of retained earnings of listed manufacturing firms in Nigeria over the ten years period of 2011-2020. Firm dividend payout and firm liquidity were measured as the determinant of retained earnings. Data were collected from secondary source with a sample size of 44 listed manufacturing firms in the Nigeria Stock Group. In testing the formulated hypotheses, pooled OLS regression was used for the analysis. The result of the panel data regression analysis revealed that Firm dividend payout (FDP) have positive and insignificant effect on retained earnings (RES); firm liquidity (FLQ) has a negative and insignificant effect on retained earnings (RES) on listed manufacturing firms in Nigeria. This study therefore recommended that management of manufacturing firms in Nigeria should ensure that they have a well-appraised and promising investment opportunity to exploit before deciding to retain the lion share of their earnings and also should always ensure consistency in declaration and payment of dividends to shareholders as it will to a great extent boost the confidence of existing and potential investors.

Keywords: Retained Earnings, Firm Dividend Payout, Firm Liquidity

1.0 Introduction

Business organizations growth tendency and survival can be hindered, if the financing sources are taken for granted. Thus, the importance of retained earnings as a source of funding for businesses to stimulate growth, sustainability, survival and competitiveness cannot be overstressed. However retained earnings can be defined as the portion of the firm's profit after tax that the firm's management retains in other to finance the

Operations of the firm instead of sharing it to the shareholders in form of dividends (Thirumalaisamy 2013). It can be used for various purposes by the firm. Some firms have to use a large part of the retained earnings for maintenance. While some use it as part of cash to fixing equipment and buying new equipment in other to be ready for the challenge post by competitors. They are earnings retained by the firm for investment in its operations and therefore not paid out as dividends. These retained earnings add to shareholders' ownership of the firms' net assets.

According to Thirumalaisamy (2013), retained earnings are a major source of finance for growth of firms. This is so because there is no transaction or bankruptcy cost associated with retained profits. Thus, potential growth opportunities of a firm necessitate a greater demand for internally generated earnings. Furthermore, retained earnings constitute a major source of finance for firms as investors prefer capital gains over dividends, because capital gain taxes can be deferred into the future and are taxed at a minima rates while taxes on dividends must be paid as soon as they are received and are taxed at a relatively higher rate. When there is an increase in personal income tax of the shareholders, firms tend to retain and reinvest more of their earnings. Payment of earnings as dividend is associated with agency cost and an opportunity for existing shareholders is lost to reinvest their earnings for growth of the firm. Investors tend to benefit more from reinvested earnings than dividends in the long period of time than in short period of time.

Determinants of retained earnings refer to those factors that affect the firm's retained earnings to either increase or decrease. The firm characteristics such as firm size, profitability, dividend payout, leverage, and growth opportunities, have been identified by different research works as the determinants of retained earnings. According to Bhole (1980), the saving ratio of companies depends on the type, size and industry of the company. For example, large companies have a higher saving ratio than small companies.

Al-Najjar and Belghitar (2011) also identified variable of Leverage which they refer~~s~~ to the ratio of total debt to total assets, Growth opportunity is measured as sales to total assets ratio and firm size as the natural logarithm of total assets. The firm size can be measured by the natural logarithm of total assets (Ozkan & Ozkan 2004). Lowenstein and Sarig (2000) defined Dividend as the reward that is attributable to the shareholders of corporate entity from their investment in the business through the provision of equity share capital. Dividend pay-out ratio (DPO) is used to proxy for dividend pay-out policy. It is measured by the ratio of dividend paid to profit after tax. This is also the same as dividend per share (Lowenstein & Sarig, 2000). Herbert (2003) defined liquidity as the Convenience with which assets may be converted to cash, with a low risk of principal loss. It measure as ratio of current asset and current liabilities for current ratio method (Herbert, 2003). Most of these variables mentioned and discussed above were used as determinant of retained earnings and showed how they affect various retained earnings in their research works around the world.

1.1 Statement of the Problem

The management of any given firm is always faced with a problem of making the financing decision that will maximize the firm's value. The decision about allocation of profit after tax between dividends and retained earnings can have a critical effect on the value of the firm. (Weston & Brigham, (2019). The management is torn between paying out to shareholders large, small and zero percentage of earnings in form of dividends or to retain them for investment operations. The fact that have triggered this controversy was that, even the management of some firms with no promising investment ideas at hand to exploit still maintains strict earnings retention policy rather than paying out a large sum of the total earnings as dividend. Consequently, this development has disturbed many shareholders who are expecting future capital gains attributable to the sacrifice of their previous dividends. Therefore there is need for all stakeholders to be aware of the determining factors that influence the decision to retain the profit earned by firm for reinvestment in Nigeria. It is against this background that this study sought to investigate the determinants of retained earnings of listed manufacturing firms in Nigeria, with the aid of the hypothesis

$H0_1$: Firm's dividend payo-out has no significant effect on retained earnings of listed manufacturing firms in Nigeria

$H0_2$: Firm's liquidity has no significant effect on retained earnings of listed manufacturing firms in Nigeria

2.0 Literature Review

2.1.1 Concept of Retained Earnings

Keir (2021) defined retained earnings as the profit that a business generates but only after costs have been accounted for, such as salaries or production, and once any dividends have been paid out to owners or shareholders. They are sometimes called retained trading profits or earnings surplus. Turnovsky (1967) opined Retained earnings are determined as remainder of profits after dividends are paid out Rao and Vivekananda (1980) also add that corporate savings will be equal to net profits less dividend payments. Thus, dividend payments would reduce retained profits. A negative association is expected between retained earnings and payment of dividends.

2.1.2 Concept of Dividend Payout

Shaheen and Malik (2012) described size of a firm as the quantity and array of production capability and potential a firm possesses or the quantity and diversity of services a firm can make available concurrently to its clients. The size of a firm is very essential in today's world due to the phenomenon of economies of scale. Bigger firms can manufacture items on much lower costs in contrast to smaller firms. Firms of the modern era look to increase their size so as to get a competitive edge on their competitors by lowering production costs and increasing their market share. Abdurahman, Awad, Erik and Jeffrey (2003) observed that the nature of the relationship that exists between firm size and profitability is an essential matter that may shed some light on the factors that enhance profits. Shin, Kwon, and Kim (2010), asserted that company will pay dividends when it earns a high surplus, but the investment opportunity is low. Likewise, when there is an increase and initiating dividend. The characteristics of companies that pay stock dividends have high asset growths, low profitability and retained to total equity ratio compared to companies that pay cash dividends.

2.1.3 Concept of Firm liquidity

Ismail and Anwarul (2021) refers liquidity to a person's or organization's ability to satisfy immediate and long-term requirements using cash or assets that can be easily transformed into cash. Investors may also define liquidity as the capacity to turn an investment portfolio into cash rapidly and with little or no loss of value. All of these concepts are critical to a company's success since a firm's understanding of liquidity and how to manage it ensures the company's survival, even as a stakeholder. In their research, some scholars have attempted to define the term liquidity and its significance in any corporate organization. Financial liquidity is a complex but critical concept that defines the soundness and stability of the financial system. Because capital is essential at the start of any business, this emphasizes the relevance of liquidity not only to the financial system but to all industries. Liquidity was defined in terms of ‘flows,' that is, unrestricted flows among financial system and market players, as well as the ability to realize these flows. Most business failures in the past have been attributed to business owners' incapacity to properly manage their firms' liquidity, ensuring profitability.

2.2 Empirical Review

2.2.1 Dividend Payout and Retained Earnings

Okoro C.O, Ezeabasili V and Alajekwu U.B. (2018) examined the determinants of dividend payout of consumer goods companies listed on the Nigerian Stock Exchange, with the population of 28 listed consumer goods companies. They used purposive sampling technique and a sample of nine consumer goods companies for duration of ten years from 2006 to 2015 was selected and also Secondary data were collected from audited financial statements of the companies from the websites of the selected companies. Dividend payout ratio was the dependent variable while the independent variables were market value, profitability, financial leverage, company size and previous year dividend payout. Descriptive statistics and multiple regressions were used. Results showed that company market value has significant positive effect on dividend payout; company profitability has positive, but insignificant effect on dividend payout; company leverage has negative and insignificant effect on dividend payout; company size has negative and insignificant effect on dividend payout; and previous year’s dividend has significant positive effect on dividend payout. The study thus concluded that market value and previous year’s dividend are the major determinants of dividend payout in consumer goods sector in Nigeria. The work time frame is 2006 – 2015, looked at determinants of dividend payout and used descriptive statistics and multiple regressions were for their analysis, while the current study will be on firm dividend payout and retained earnings of listed manufacturing firms in Nigeria for the period 2011 – 2020 and used pool OLS regression model for data analysis and hypothesis testing.

2.2.2 Firm Liquidity and Retained earnings

Olugboyega et al (2019) researched on effect of liquidity and leverage on financial performance of Nigerian listed consumer goods firms and examined the effect of leverage and liquidity on financial performance of Nigerian firms using data of seventeen consumer goods firms listed on the Nigerian Stock Exchange during the financial years, 2012 to 2017. They adopted multiple regression method, with pooled Ordinary Least Squares as estimation technique. The finding revealed that leverage proxies-degree of operating leverage and degree of combined leverage have significant effect on financial performance. They could not however provide empirical evidence in support of liquidity proxies- current ratio and quick asset ratio having significant effect on performance of the companies. They recommended that in order to improve profitability level, corporate managers and top decision makers should take advantage of debts' tax shield from the interest in companies' financial structure and develop robust strategies that will monitor and efficiently manage liquidity requirements. Their study was on effect of liquidity and leverage on financial performance of Nigerian listed consumer goods firms for the financial years, 2012 to 2017and they adopted multiple regression method, with pooled Ordinary Least Squares as estimation technique. Meanwhile the new study which will be on firm liquidity and retained earnings of listed manufacturing firms in Nigeria for the period 2011 -2021, will used pool OLS regression method as estimation technique.

2.3 Theoretical Review

2.3.1 Pecking order theory

The pecking order theory of Myers (1984) postulates that firms finance investments first with retained earnings, then with safe debt and risky debt, and finally with equity as a last resort. This order of financing is meant to minimize asymmetric information costs and other financing costs. The theory asserts that firms do not have optimal cash levels, but instead, cash is used as a buffer between retained earnings and investment needs. Therefore, if current operational cash flows are adequate to finance new investments, corporations repay debt and accumulate cash. If retained earnings are inadequate to finance current investments, corporations use the accumulated cash holdings and, if need be, debt is issued.

3.0 Methodology

The study adopted ex post facto research design because of availability of existing data. The study cover the periods of 2011 – 2020. The population of this study are the different sectors of the 44 listed manufacturing firms on the Nigerian Stock Group (NSG) as at 2020. A total of 44 firms from different segments of the manufacturing sector consist of the industrial sector, health sector, consumer sector and resource sector and we considered the entire 44 manufacturing firms listed on the Nigerian Stock Exchange (NSE) as the sample of this study for ten years. Data for the study was sourced from secondary sources and the data was analysed using pooled ordinary least squares (OLS) regression technique to determine the relationships and effect of the independent and the dependent variables with aid of Statistical Package Software (STATA) version 13.

$RES_{it} = \beta_0 + \beta_1 FDP_{it}, + \beta_2 FLQ_{it,} + \mu_t$

RES_{it} = Retained Earnings (Dependent variable)

FDP_{it} = Firm Dividend payout (Independent variable)

FLQ_{it} = Firm liquidity (Independent variable)

3.1 Findings

Ho_1: Firm dividend payout has no significant effect on retained earnings of manufacturing firms in Nigeria.

Decision Rule: Accept Ho_1 if p-value > 0.05, otherwise reject Ho_1

Regression result showing the effect of FDP on RES of manufacturing firms in Nigeria.

Model	R	R Square	Adjusted R Square	Coefficient	Probability
	0.073	0.005	-0.009	0.006	0.548

Source: STATA result, 2022

Table 2 shows the regression result explaining the effect of firm dividend payout (FDP) on retained earnings (RES) of manufacturing firms in Nigeria. The analysis shows an R Square of 0.5%. This means that 0.5% of the variations in RES could be explained by changes in firm dividend payout (FDP). Again, a unit increase in FDP will cause decrease of 0.004 in RES. The result shows a p-value of 0.548. This means that the effect of FDP on RES is positive and insignificant at 5% level of significance. To this extent of the result, Ho_1 is accepted while the alternate is rejected.

Firm dividend payout has a positive and insignificant effect on retained earnings of manufacturing firms in Nigeria. This suggests that manufacturing firms in Nigeria have the potential to grow if they consistently declare and pay dividends. This is because investors are dividend responsive and growth conscious.

Ho_2: Firms liquidity has no significant effect on retained earnings of manufacturing firms in Nigeria.

Decision Rule: Accept Ho_2 if p-value > 0.05, otherwise reject Ho_2

Regression result showing the effect of FLQ on RES of manufacturing firms in Nigeria.

Model	R	R Square	Adjusted R Square	Coefficient	Probability
	0.027	0.001	-0.014	-0.004	0.825

Source: STATA result, 2021

Table 2 above shows the regression result explaining the effect of firm liquidity (FLQ) on retained earnings (RES) of manufacturing firms in Nigeria. The analysis shows an R Square of 0.1%. This means that 0.1% of the variations in (RES) could be explained by changes in earnings retention ratio (FLQ). Again, a unit increase in FLQ will cause a decrease of -0.004 in RES. The result shows a p-value of 0.825. This means that the effect of FLQ on RES is negative and insignificant at 5% level of significance. Based on the result, Ho_2 is accepted.

Firm liquidity has a negative and insignificant effect on retained earnings of manufacturing firms in Nigeria. This suggests that a rise in firm liquidity will bring about increase in retained earnings of manufacturing firms in Nigeria. This indicates that the profits re-invested back into the business are effectively channeled to profitable ventures that would facilitate growth. The implication is that retaining a greater proportion of firms' earnings without an available investment opportunity in view would stunt the growth of the firm and reduce the confidence of both the existing and potential investors as it shows management's inefficiency in maximizing the benefits of retained earnings.

4.0 Conclusion

It is quite obvious from the findings of the study that the expansion and growth of a business will be mirage without adequate funding. However, retained earnings remain a formidable source of financing new projects due to its relative cheap cost. The study affirms that it is highly imperative for firms to consistently retain some portions of their earnings in a bid to experience a continuous and remarkable growth. Thus, it is the submission of this study that retained earnings significantly determines the growth of quoted manufacturing firms in Nigeria.

The management of manufacturing firms in Nigeria should always ensure consistency in declaration and payment of dividends to shareholders as it will to a great extent boost the confidence of existing and potential investors. This development will help secure competitive advantage, expand market share and stimulate growth. Also manufacturing firms in Nigeria should ensure that they have a well-appraised and promising investment opportunity to exploit before deciding to retain the lion share of their earnings. Otherwise, they should declare and pay a larger proportion of their earnings as dividend. Hence, the dividend policy to be considered should be in respect to the worthwhile nature of the potential investment opportunity.

5.0 References

Abdul-Azeez A. A, Joel A. O.,& Wasiu A.S. (2019) Leverage and Liquidity Management: Evidence from Nigerian Consumer Goods Firms. Euro Economic 38 (2) 19-32

Abdurahman A. Awad S. H., Erik V. N. and Jeffrey S. R. ‘Indicator Variables Model of Firm’s Size-Profitability Relationship of Electrical Contractors Using Financial and Economic Data’,. Journal of Construction Engineering and Management. 1(2), 192-197.

Adesina Olufemi Dadepo & Olatise Felix Afolabi (2020) Impact of Liquidity Management on Profitability of Selected Manufacturing Firms in Nigeria European Journal of Business and Management 12(27) 93 -99.

Al-Najjar, B., & Belghitar, Y. (2011). Corporate cash holdings and dividend payment: Evidence from simultaneous analysis. *Managerial and decision Economics*, 32(4),

Baker, H & Powell, G (2000). Determinants of corporate dividend policy: A survey of NYSE

Bhole, L.M.(1980). Retained earnings, dividends, and share prices of India joint stock Companies. (Electronic version). *Economic and political weekly*, 15(35), 93-99.

Copeland TE, Weston JF, Shastri K (2007). Financial Theory and Corporate Policy (4th ed.). In Dividend Policy: Theory and Empirical Evidence. India: Pearson Education Inc & Dorling Kindersley Publishing Inc. (16)2, 667-718.

Ehiedu, v. C. (2014). The impact of liquidity on profitability of some selected companies: the financial statement analysis (fsa) approach. Research journal of finance and accounting, 5(5), 81-90.

Hakeem, Sa'adu Abdul; & Bambale, Abdu Ja'afaru (2016) Mediating Effect of Liquidity on Firm Performance and Dividend Payout of Listed Manufacturing Companies in Nigeria Journal of Economic Development, Management, IT, Finance & Marketing, 8(1),15-35

Harkavy, O. (1953), The Relation Between Retained Earnings and Common Stock Pricesfor Earge Eisted Stock Prices, *The Journal of Finance,* 8(4), 283 -297.

Herbert, B., Mayo, (2003) Investments. Ohio: Thompson South-Western. *The Journal of Finance,* 8(4), 283 -297.

Horkan, L. (2014). Are Retained Earnings Part of a Stockholder's Equity? http://www.zacks.com. Retrieved

Ismail a., & anwarul i. K. M., (2021) liquidity management and financial performance of listed oil and gas companies in nigeria. *International journal of accounting & finance review, 8 (1),* 2576-1285.

Jozef R. PATTIRUHU and Maartje PAAIS (2020) Effect of Liquidity, Profitability, Leverage, and Firm Size on Dividend Policy Journal of Asian Finance, Economics and Business 7 (10) 035–042

Kaushik. K.P. (2007), Determinants of Retained Earnings in Highly Profitable Companies of India: A Comparative Study of Domestic & Multinational Companies. *The ICFAIJournal of Applied Finance*, 13(6), 19-4

Keir T. B. (2021) What are retained earnings in accounting. https://www.sage.com/en-gb/blog.

Kim, B., and Suh, J. (2010). Retained Earnings and Capital Structure, http://media.csmfo.org/wp-content/uploads/2010.

Lease, R. C, John, K, Kalay, A, Lowenstein, U & Sarig, O. H (2000). *Dividend Policy: Its Impact on Firm Value*. Boston, Massachusetts, Harvard Business School Press.

Liargovas &Skandalis, (2008). Liquidation Values and Debt Capacity: A Market *Equilibrium Approach. Journal of Finance*, 47, 1343 – 1365.

Lowenstein, U & Sarig, O. H (2000). *Dividend Policy: ItsImpact on Firm Value*. Boston, Massachusetts, *Harvard Business School Press*.

Mittal, R.K. (1992), Determinants of Corporate Retained Earnings, *Indian Management, 31, 35-38*

Myers, S. C. (1984), "The Capital Structure Puzzle", *Journal of Finance,* 39(3) 575-592.

Nicos K, Spiros H.M & Lenos T. (2017) Corporate liquidity and dividend policy under uncertainty journal of Banking and Finance 8(1) 221-235

Okoro C. O, Ezeabasili V & Alajekwu U. B. (2018). Economy, National Economy, Financial Markets, Editura Fundaţiei România de Mâine**.** 1(1) 141--165

Olugboyega K., Adeniyi A, Wasiu A. S, & Olalekan J. (2019) effect of liquidity and leverage on financial performance of Nigerian Listed consumer goods firms. Revista Economia Contemporana 4(3) 91 – 102

Ozkan, A., & Ozkan, N. (2004). Corporate cash holdings: An empirical investigation Pandey, I. (2005). Financial Management (9th ed). India: Vikas Publishers. Papers, 1-21.

Rao, V.G and M. A Vivekananda, (1980), *'Determinants of Corporate Saving Behaviour',* Margin, 12. 38-50

Shaheen S, Malik QA (2012). The impact of capital intensity, size of firm and profitability on debt financing in textile industry in Pakistan. *Interdisciplinary Journal of Contemporary Research in Business, 3*(10): 1061-1066.

Shin M. S, Kwon J. S. and Kim, S. E., (2010) "Earned Surplus and Dividend Policy: A Test of the Financial Life Cycle Theory in Korean Capital Market," International Research Journal of Finance Economic.59.

Sohaib M. (2017). Determinants of Retained Earnings in Profitable Cement Companies in India. *International Journal of Trend in Research and Development*, 4(5), 2394-9333

Thriumalaisamy, R. (2013). Firm growth and retained earnings behavior: A study on Indian firms. *European journal of business and management*, 5(57), 40-57.

Turnovsky, Stephen J (1967), '*The Allocation of Corporate Profits Between Dividends and Retained Earnings'*,The Review of Economics and Statistics. 1 (49), 583-589.

Wang, M. Ke, M. Liu, D. and Huang, Y. (2011) Dividend policy and the life cycle hypothesis: evidence from Taiwan, International Journal of Business Finance Research. L (5)33-52.

Weston E. & Brigham R. (2019) Financial institute and Corporate Policy. In Dividend Policy: Theory and Empirical Evidence. Malaysia: Pearson Education Inc & Dorling Kindersley Publishing. 2 (1) 334-351

Creative Business Research Journal
ISSN 2756-4940 (Paper) 2756-4932 (Online)
Volume 3, Number 1, March 2023

Effect of Portfolio Investment on the Financial Performance of Deposit Money Banks in Nigeria

Authors:
Bulus Jonah Saidu [1]
Emmanuel Oladele Olaolu [2]
Jamila Shu'ara [3]

Affiliation:
[1] Department of Banking and Finance,
University of Maiduguri, Nigeria

[2&3] Faculty of Management and Social Sciences,
Baze University Abuja, Nigeria

Correspondence:
Bulus Jonah Saidu

e-mail:
bulusjonahsaidu@gmail.com

Dates:
Received: 02 Dec., 2022
Accepted: 09 Jan., 2023

How to cite this article:
Bulus, J. S., Emmanuel, O. O., & Shu'ara, J. (2023). Effect of Portfolio Investment on the Financial Performance of Deposit Money Banks in Nigeria. *Creative Business Research Journal 3(1)*, 108-117

Abstract

This study examined the effect of portfolio investment on the financial performance of deposit money banks in Nigeria. The objective of the study is to examine the effect of term loan investment, bonds investment, shares investment and debenture investment on the financial performance. The study used secondary data from 11 deposit money banks with complete financial report for the period under review and are quoted on the Nigeria exchange limited (NGX) for 11 years 2011 to 2021, where inferential statistics (multiple regression analysis) was used to test the hypotheses at 0.05 level of significance. The findings of the study revealed a significant effect of term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment on returns on assets of deposit money banks in Nigeria. The study recommended that Deposit money banks in Nigeria should encourage to a large extent giving out term loan in order to reduce the bad debt on lending, as the term loan is used for registered businesses to acquire more equipment's which can generate the desired income before the maturity date. Loan is the largest asset of the bank and so, it should be made to generate the largest income.

Keywords:* *Portfolio Investment, Term Loan, Bonds, Shares, Debentures, Financial Performance, Return on Assets

1.0 Introduction

Portfolio management gives a structure to determining and measuring speculation hazard and to create connections amongst risk and expected returns. Its principle essential supposition is that financial investors frequently need to maximize returns from their ventures for a given level of risk. Portfolio investment is a very important tool for global financial management practices, through which capital markets and financial institutions manages shareholders wealth with the aim of maximizing profit and minimizing risk (Salman et al, 2020).

The advent of stock markets and financial institutions in most countries of the world is a clear indication that the combination of different investments classes of financial assets can reduce risk for better returns. This practice arises based on the assumption that an investor is rational in his quest for the best investment option. Kioko and Ochieng (2020) viewed portfolio as a collection of investments which can be owned directly by individuals or managed by professional institutions. The portfolio investment of deposit money banks are loan, shares, bonds, debenture, real estates, treasury bills among others, where term loan and debenture portfolio investments are used for the purpose of this study.

Loan portfolio investment aimed at accomplishing desired performance in commercial banks, which, itself is reflected in loan interest installment, loan reimbursement, realized profitability, and clients objective fulfillment (Nizeyumukiza, 2020). Term loan portfolio investment is the major asset of deposit money banks through which income is primarily generated by interest charges. Nwafor (2020) defined bond as a debt obligation or an I owe you (IOU) that the Investors who buy corporate bonds are lenders of money to the company issuing the bond. In return, the receiving company now makes a legal commitment to pay a fixed interest on the principal until maturity date. Udenwa and Uwaleke (2015) defined shares as a capital market instrument which represents ownership, therefore, a shareholder is entitled to dividend when the company declares profit. Debenture refer to marketable securities issued by listed companies in accordance with legal procedures and agreed to repay principal and interest within a certain period of time (Wang & Chen, 2020). They believe that corporate bonds and corporate bonds are fixed income securities based on corporate or corporate credit Financial performance becomes vital signals in determining investment decisions. Bulus *et al* (2019) defined financial performance as the outcome of judicious use of financial resource, which increases the net worth of an organization. This can be measured through returns on assets (ROA), and returns on assets are calculated by dividing net income with average total assets.

The need for portfolio investment in the Nigerian banking industry cannot be overemphasized as deposit money banks strive to minimizing risk and maximizing returns in order to stay in business. The dynamism of the banking business environment coupled with the failure of some banks in the past and economic recessions witnessed over the last two decades from the year has given rise to recapitalization, merger and acquisition of banks (Madugba, 2020). The changes witnessed by the Nigerian banking industry over the years, is largely influenced by challenges posed by deregulation of the financial sector, globalization of operations, technological innovations as well as the adoption of supervisory and prudential requirements that conform to international standards (Okoye, 2020).

Many studies were conducted on the effect of portfolio investment on financial performance, such as Ndugbu et al (2021), Salman et al (2020), Ngware (2021), Andrew and Oji (2021), Audu and Bulus

(2021). They used Shares, Treasury Bills and Bonds in the Nigerian capital market as specific objectives. Therefore, this study focussed on capital market investment securities in addition to money market investment such as term loan investment, which is the largest asset of commercial banks. The variables for the purpose of this research are term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment where other studies do not have these variables combination in one research.

The main objective of the study is to examine the effect of portfolio investment on the financial performance of deposit money banks (DMBs) in Nigeria. The specific objectives are to assess the effect of term loan portfolio investment on returns on assets of DMBs in Nigeria, to examine the effect of bond portfolio investment on returns on assets of DMBs in Nigeria, to evaluate the effect of shares portfolio investment on returns on assets of DMBs in Nigeria and to determine the effect of debenture portfolio investment on returns on assets of DMBs in Nigeria.

Research Hypotheses

The study was guided by the following hypotheses

H_{01}: Term loan portfolio investment has no significant effect on returns on assets of DMBs in Nigeria.

H_{02}: Bonds portfolio investment has no significant effect on returns on assets of DMBs in Nigeria.

H_{03}: Shares portfolio investment has no significant effect on returns on assets of DMBs in Nigeria.

H_{04}: Debenture portfolio investment has no significant effect on returns on assets of DMBs in Nigeria.

Literature Review

Term Loan

Term loan is a lending arrangement that provides a borrower usually registered businesses with cash to repay with interest over agreed period of time. Mulongo and Otinga (2019) viewed Loan portfolio management as a series of processes encompassing many activities of investment in financial assets and securities. It is a dynamics and flexible concept which involves regular and systematic analysis, judgment and actions. For instance, portfolio management deals with selection of securities from a number of opportunities available with different expected returns and carrying different levels of risk and the selection of securities can be made with a view to provide the investors the maximum yield for a given level of risk or ensure minimum risk for a level of return. Therefore, credit creation involves huge risks to both the lender and the borrower Gabriel and Ameh (2020) opined that loan portfolio management is characterized by growing complexities of large and multifaceted distribution most often with illiquid loans.

Bonds Investment

A bond represents a promise by a borrower to pay a lender their principal and usually interest on the loan at the agreed maturity period. A bond can also be defined as debt instrument, under which the issuer owes the holders depending on the terms of the bond which is obliged to pay interest called coupon rate during the period of the agreement, and to repay the principal at a later date, termed the maturity date (Akani

& Barisua, 2019). In their opinion, (Harelimana & Nizeyumukiza, 2020) asserted that a bond is basically a loan issued by a corporation or government entity. The issuer pays the bondholder a specified amount of interest for a specified time, usually several years, and then repays the bondholder the principal amount at the end of the contract.

Shares Investment

Shares are units of equity in a corporation, and it signifies ownership. More so, Udenwa and Uwaleke (2015) defined shares as a capital market instrument which represents ownership. therefore, a shareholder is entitled to dividend when the company declares profit. Also, Biradawa (2006) looked as shares as ordinary shares and preference shares, where a preference share holder has fixed dividend and most be paid before an ordinary share holder whose dividend do fluctuate. Both authors agreed that a share represents ownership. Nwafor (2020) viewed shares as what the company owns. Equity indicates a claim on the company's assets and earnings, where the more an investor acquires more equity, his ownership stake in the company becomes greater.

Debenture Investment

Debenture is a medium to long-term debt instrument used by large companies to borrow money at a fixed rate of interest. Udenwa and Uwaleke (2015) viewed a debenture as a loan of long term nature apart from issuing of shares, companies also issue debt instrument to raise funds in order to finance their various projects. A debenture is an interest bearing debt instrument issued by corporate bodies which involves a promise to make periodic interest payment to the subscriber and also the payment of the initial amount borrowed at maturity of the debenture. Pandy (2010) asserted that debenture is a long term promissory note for raising loan capital.

Financial Performance

Financial performance is a total measure of how well a bank generates revenues from its capital. It also shows banks overall financial health over time, and it helps to compare different banks across the industry at the same time. The banks financial performance can be widely recognized as its stability, profitability liquidity and solvency (Bulus et al, 2019). They further explained that stability refers to its risk factors while profitability refers to its financial returns. Financial performance of banks is the ability to generate income from a successful business operation, and performance is measured by net income and cash from operations. Similarly, Mohamed and Onyiego (2018) added that financial performance as measuring the results of a firm’s policies and operations in monetary terms. These results are shown in the firms return on investment, return on assets and value added.

Empirical Review

Egberi and Monye (2020) Studied the effect of foreign portfolio investments on the performance of financial sector in Nigeria was investigated by means of the ex-post facto design. Data of foreign portfolio investments and contribution of financial sector to gross domestic product was obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin and World Bank Development Indicators spanning 1981–2016. Data obtained was analysed using stationarity and unit root, co-integration, ordinary least square estimation, error correction model, and variance decomposition tests. Findings of the study showed that foreign portfolio investments significantly affect the performance of financial sector in Nigeria. On the basis of this, it was recommended the government should strengthen the financial sector, specifically the money and capital markets in order to enhance the flow of foreign portfolio investments into this sector in Nigeria. Using the whole of financial sector in Nigeria is too broad, this study could be narrowed to a specific sector in the financial system for better examination.

Salman *et al* (2020) investigated the relationship between the investment portfolio and bank financial performance in Nigeria. The objective of the study is to examine the relationship between bond, Treasury bill and cash reserve on the financial performance measured by return on asset. The study took an ex post factor research design and firm was used as the unit of analysis. A population of the 15 commercial banks was taken but Skye Bank was screened out due to the unavailability of data and 14 banks were used as the sample for this study. Panel data analysis was used to analyze the data with E-views version 9 using the three models; without effect, random effect and fixed effect. The study reveals that investment in bond has a significant but negative effect on return on the asset while cash reserve had a positive but an insignificant effect on financial performance and treasury bills has a negative and an insignificant effect on financial performance. There is also a need for the management of investment companies to have a solid organization structure, as it will influence their investment portfolio choice, to avoid insignificant choices like treasury bills which do not impact on their financial performance. The research, therefore, recommends that the management of commercial banks should decrease their investment in bonds, cash reserve and treasury bills so as to avoid depleting the return on asset and consider investment in other portfolios like insurance, pension, foreign exchange among others. This study only considers bond, Treasury bill and cash reserve as specific objective leaving out loan portfolio which is the greatest asset of deposit money banks.

Khalaf and Alajlani (2021) studied portfolio lending strategy and banks performance in Jordan. This empirical investigation examines the impact of loan diversification; individual lending, mortgage lending, small-medium sized enterprises lending, government lending and corporate lending, in addition to bank size on Jordanian commercial banks performance. Thirteen commercial banks in Jordan used for the time period 2000-2018 applying Seemingly Unrelated Regression (SUR). The data was collected from central bank of Jordan website and the different websites for the relevant banks. The results indicate that loan diversification does impact Jordanian commercial banks performance. In particular, individual lending, corporate lending & mortgage lending have positive impact on banks performance, while the SMEs lending and government lending have negative impact on performance. The study recommends that banks must focus on lending sectors that positively affect its profitability such as mortgage lending, individual lending and corporate lending. Thus, the strategy that Jordanian banks should follow is to concentrate more on mortgage lending, individual lending then corporate lending in order to increase their performance. The study used money market investment portfolio leaving out capital market portfolio investments such as bonds, shares among others.

Adebayo and George (2019) examined exchange rate impact of bond-financed fiscal deficit in Nigeria, The debate on the macroeconomic impact of financing government deficit through debts procured from the bond market has been topical but still unresolved. The objective of this study was to investigate the relationship between government financing of deficit through the bond market and its effects on the exchange rate in Nigeria. The study makes use of secondary annual time series data over the period 1986 to 2016 to examine the relationship between bond financing and the exchange rate. In this regard, empirical models were formulated to explain the relationship between bond financing and the exchange rate, and the formulated models were estimated using the ARDL bounds test and the Johansen cointegration approaches. The result shows that bond financing has a weak positive relationship with the exchange rate in Nigeria. With regard to the components of bond financing, bond financing through the banking system depreciates the exchange rate while financing by the non-bank public leads to exchange rate appreciation. It was thus recommended that effort should be made by the government to further develop the bond market and encourage greater non-banking public participation in the market. This study focuses on capital market financing of deficit which may not be enough using bonds.

Dixon (2021) examined corporate bond liquidity and investor sentiment where firm-level investor sentiment derived from Twitter feed and news stories on a firm's bond liquidity were specifically considered. The study employed an ordinary least squares regression to examine the relationship between firm-level investor sentiment and corporate bond liquidity. The results indicate that a positive relationship exists between firm-level sentiment and corporate bond liquidity. The sources of data for this research are not reliable as data were sourced from twitter and news feeds reports instead of a reliable data generating agencies such as Central banks, World Bank reports among others.

Modern Portfolio Theory (MPT)

Modern Portfolio Theory (MPT) is adopted for this study as it shows how an investor with a high risk aversion value can make up an investment portfolio to maximize return based on existing market risk. Markowitz (1952) developed the modern portfolio theory by developing an Efficient Frontier line which can show the level of return from each level of risk. This MPT is dependent on several kinds of investment instruments which are then compiled by previously measuring the level of correlation, covariance, standard deviation, and the rate of return by using historical statistical methods. Efficient Frontier Analysis can also be traced to the Nobel Prize winner Harry Markowitz and his work related to modern portfolio theory (MPT

Modern Portfolio Theory is a preposition of investment whereby an investor attempts to balance risk with the expected yield for maximum gains from a whole portfolio. Portfolio diversification is a successful method of increasing gains while bringing down risk in a combination of investments. Strategies of portfolio selection have received a substantive review in the literature pertaining finance. MPT introduces an analysis of mean-variance that simplifies problems of selecting a portfolio. Exposure in a portfolio is quantitatively described as the standard deviation of expected yield from a period to the next, and the portfolio acquisition challenge is minimized to composing an 'efficient' portfolio, whereby it heavily brings down the exposure for a particular level of gain in a period.

Methodology

The populations of this study is (11) DMBs quoted on the floor of the Nigeria Exchange Limited (NGX), and the time frame for this research is 11 years (2011 to 2021). Secondary source of data was used to obtain data from the financial reports and annual audits of commercial banks in Nigeria. These data were published on the Nigerian Stock Exchange fact book. The study used inferential statistics (multiple regression) as a tool of analysis with the help of statistical package for social science (SPSS). This study used ordinary least squares model to examine the effect of portfolio investment on the financial performance of DMBs in Nigeria.

Model Specification

$$Y= \beta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + e$$

Where

Y= Financial Performance (FP) proxy by Returns on Assets (ROA)

e = error term

β_0= constant term

$\beta_1 - \beta_4$ = coefficients to be estimated

y= dependent variable

$x_1 - x_4$ = independent variables

x_1 = Loan Portfolio Investment (LPI)

x_2= Bonds Portfolio Investment (BPI)

x_3= Shares Portfolio Investment (SPI)

x_4= Debenture Portfolio Investment (TPI)

$\beta_1 - \beta_4$ = regression coefficient

Table 1.1 Variables Measurement

Variable	Notation	Nature of Data	Measurement
Financial Performance	FP	Dependent Variable	Returns on Assets (ROA)
Term Loan Portfolio Investment	LPI	Independent Variable	Total Returns on Term Loan
Bonds Portfolio Investment	BPI	Independent Variable	Total returns on Bond
Shares Portfolio Investment	SPI	Independent Variable	Total returns on Shares
Debenture Portfolio Investment	TP	Independent Variable	Total returns on Debenture

I.M. Pandy 2009

Result and Discussions

This study on the effect of portfolio investment on financial performance of banks in Nigeria employed inferential statistics (Multiple Regression analysis) to test the hypotheses at 0.05level of significance. The results were presented in tables and discussed according to the hypotheses.

Table 1.2: Summary of Multiple Regression Analysis on the effect of Term Loan Portfolio Investment, Bonds Portfolio Investment, Shares Portfolio Investment and Debenture Portfolio Investment on Returns on Assets of DMBs in Nigeria

Variable	Coefficient	Standard Error	t-value	P-value
(Constant)	0.284	0.053	5.385**	0.000
Term loan portfolio investment	0.132	0.057	2.330*	0.021
Bonds portfolio investment	0.253	0.067	3.792*	0.000
Shares portfolio investment	1.782	0.473	3.770*	0.000
Debenture portfolio investment	0.911	0.146	6.239**	0.000
F-value	0.258			
R^2	0.785	79%		

Dependent variable: Returns on assets of DMBs

Independent variables: Term loan portfolio investment (TLPI), Bonds portfolio investment (BPI), Shares portfolio investment (SPI), Debenture portfolio investment (DPI)

S = Significant

*= significance at 5%, **= significance at 1%

The table above shows a significant effect of term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment on returns on assets of DMBs in Nigeria. This is because the P-value (0.000) of the ANOVA is less than the alpha value (α= 0.05). Hence, the null hypothesis which states that term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment have no significant effect on returns on assets of DMBs in Nigeria is hereby rejected at 0.05 level of significance. Hence, there is a significant effect term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment on returns on assets of DMBs in Nigeria. The R^2 = 79% indicates that the model is suitable for explaining the effect of term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment on returns on assets of DMBs in Nigeria.

Discussions of Findings

Ho_1 – Ho_4: Revealed that the multiple regression among term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment have significant effect on returns on assets of DMBs in Nigeria. This finding supports the findings of Salman et al (2020) investigated the relationship between the investment portfolio and bank financial performance in Nigeria. The objective of the study was to examine the relationship between bond, Treasury bill and cash reserve on the financial performance measured by return on asset. This study only considers bond, Treasury bill and cash reserve as specific objective leaving out loan portfolio which is the greatest asset of deposit money banks and Khalaf and Alajlani (2021) studied portfolio lending strategy and banks performance in Jordan. This empirical investigation examines the impact of loan diversification; individual lending, mortgage lending, small-medium sized enterprises lending, government lending and corporate lending, in addition to bank size on Jordanian commercial banks performance, but contradicts the findings of Egberi and Monye (2020) Studied the effect of foreign portfolio investments on the performance of financial sector in Nigeria and Kusumaningrum, Anggraeni and Andati (2019) who conducted a study on the effect of bond characteristics, financial performance and macro variables on return of corporate bond in the agribusiness sector.

Conclusion and Recommendations

Conclusion

The study concluded that term loan portfolio investment, bonds portfolio investment, shares portfolio investment and debenture portfolio investment have a significant positive impact on the financial performance of deposit money banks performance in Nigeria at 5% level of significance ($P < \alpha$)

Recommendations

Based on the findings of the study, the following recommendations were made:

i. Deposit money banks in Nigeria should encourage to a large extent giving out term loan in order to reduce the bad debt on lending, as the term loan is used for registered businesses to acquire more equipments which can generate the desired income before the maturity date. Loan is the largest asset of the bank and so, it should be made to generate the largest income.

ii. Deposit money banks in Nigeria should expand their bonds investment as a long term strategy for more interest generation from blue chip companies. This will help in reducing the risk on investment while increasing returns.

iii. Deposit money banks in Nigeria should also increase their shares from companies that has strong base within and outside the financial industry quoted on the Nigerian stock exchange.

iv. The management of Quoted Deposit Money Banks in Nigeria should also give more focus on debenture portfolio investment by encouraging more private organizations through interest payment incentives and flexibility.

References

Adebayo A. A., & George O. E. (2019). Exchange Rate Impact of Bond-Financed Fiscal Deficit in Nigeria. *Economic Insights – Trends and Challenges. 8(21), 53-63.*

Andrew N. A., & Oji G. U. (2021) credit administration and performing loans of commercial banks in Nigeria: a panel data analysis. *International Journal of Research in Commerce and Management Studies, 3 (4), 106-129.*

Biradawa, K., (2006) Financial Management for Beginners. Chrome International Press Ltd.

Bulus, *et al* (2019). Effect of Financial Service Delivery on Customer Patronage of United Bank for Africa (UBA) Gombe Branch. *Journal of banking and finance Nasarawa state university keffi.*

Dixon C. D. (2021) examined corporate bond liquidity and investor sentiment. Faculty of the Graduate School of Creighton University.

Egberi K. A., & Monye M. C. (2020). Effect of Foreign Portfolio Investments on the Performance of Financial Sector in Nigeria. *Asian journal of management. 11(2), 201-206.*

Harelimana, J. B. & Nizeyumukiza, E., (2020). Strategic Portfolio Investments and

FinancialPerformanceofEcobankRwanda Ltd.WWW.biogenericpublishers.com

Kamau, P. N., & Maina, K. E., (2019). Influence of Portfolio Diversification on Financial Performance of Mutual Funds in Nakuru County. *Kenya. American Journal of Humanities and Social Sciences Research, 3(5), 207-219.*

Kioko D. M., & Ochieng M. (2020) Effect of Portfolio Diversification on the Financial Performance of Investment Firms Listed in the Nairobi Securities Exchange. *Journal of Finance and Accounting Volume 4(5),pp77-96*

Kolapo, Ayeni, & Oke. (2018). The Evaluation Model of a Commercial Bank Loan Portfolio. *Journal of Business Economics and Management (9), 269–277.*

Markowitz, H. M. (1959). Portfolio Selection: Efficient Diversification of Investments. Cowles Foundation Monograph N0.16, New York: John Wiley & Sons, Inc.

Mulongo, C. K., & Otinga, H. N. (2019). Influence of Working Capital Management and Loan Portfolio Management on Profitability of Micro Finance Institutions in Busia County, Kenya. *The strategic journal of business and change. 6(2), pp 1046 - 1060,*

Ndugbu *et al*. (2021) The Effect of Foreign Portfolio Investment on Economic Growth in Nigeria. South Asian Journal of Social Studies and Economics, 11(3), 43-53.

Ngware S. G. (2021) Banks' Portfolio Diversification on Financial Performance of Commercial Banks in Kenya. Jomo Kenyatta University of Agriculture and Technology.

Nwafor, P. K. (2020) Foreign Portfolio Investment and Human Capital Development. *International Journal of Business & Law Research, 8(3)pp1-11.*

Odenwa, T., & Uwaleke, U. J., (2015). Nigerian Financial System. Pearl Publishers.

Olaolu, D., (2016). Strategic Management, a Practical Approach.Onaivi Printing and Pub. Co. L td, Keffi Nasarawa State.

Wang H. T., & Chen S. T. (2020) Impact of CEO Competence Heterogeneity and Investors Risk Appetite on Corporate Bond Yield in China. *International Journal of Businessand Administrative Studies. 6(4), 183-200.*

Theory of Planned Behavior and the Intention-to-Sell Vote in Nigeria's General Election in 2023: Evidence from Gombe State University Community Members

Authors:
Abdullahi Ibrahim[1]
Umar Ibrahim[2]
Abubakar Bala[3]
Zahiratu A.B. Ibrahim[4]

Affiliation:
[1&3] Department of Business Administration, Faculty of Arts and Social Sciences, Gombe State University, Gombe, Nigeria

[2] Directorate of General Studies, Federal Polytechnic Kaltungo, Gombe State, Nigeria

[3] Yahaya Ahmed Model Schools, Gombe, Nigeria

Correspondence:
Abdullahi Ibrahim

e-mail:
abdullahibabajo@gsu.edu.ng

Dates:
Received: 04 Nov., 2022
Accepted: 14 Jan., 2023

How to cite this article:
Ibrahim, A., Ibrahim, U., Bala, A., & Ibrahim, Z. A. B. (2023). Theory of Planned Behavior and the Intention-to-Sell Vote in Nigeria's General Election in 2023: Evidence from Gombe State University Community Members. *Creative Business Research Journal 3(1),* 118-124

Abstract

The study examines the relevance of theory of planned behavior (TPB measured by attitude, subjective norm, and behavioral control) on the intention to vote (INTSEL) among Gombe State University community members. Convenience sampling was used to send an online structured questionnaire link to different WhatsApp groups of students; non-academic staffs; and academic staffs of Gombe State University, and a total of 1,293 respondents filled in the online questionnaire. The data was analyzed using multiple resgression with the aid of SPSS version 20. The result of the study shows that attitude (AT), subjective norms (SN), and perceived behavioral control (PBC) were found to be positive and statistically significant predictors of intention-to-sell-votes (INTSEL) among Gombe State University community members. The study recommends that the government should correct these anomalies of vote selling and buying by sponsoring campaign awareness programs in communities on the consequences of vote-selling as electoral fraud that produces incapable leaders to steer the affairs of the country, so that they (voters) may retrace their steps by electing credible leaders.

Keywords:* *Attitude, subjective Norm, Perceived Behavioral Control, Intention and Vote-Selling

1.0 Introduction

Vote-Selling and Vote-buying are basically the pre-election transfer of specific tangible benefits from the candidate or party to the voter with the intention of swaying his or her decision to vote (Animashaun & Liadi, 2020). Vote-buying is a trading process in which candidates for public office, political parties, or their agents negotiate to purchase the voters' votes from the sellers. It is the same as exchanging products and services for agreed-upon rates in a public market. The procedure appears to be an auction sale where the voters sell to the highest bidder when there is fierce competition. With an emphasis on its risky nature of vote-buying (cash-and-carry democracy), other electoral misdeeds, ethnic chauvinism, religious extremism, and politically motivated violence and killings, contemporary social science and humanities scholars trace the historical origin of elections and electoral processes in Nigeria (Onuoha & Okafor, 2020; Nwagwu et al., 2022).

A poll-report by the United Nations Office on Drugs and Crime (UNODC) (2019) shows that 21 percent of Nigeria's adult population reported receiving a personal offer of money or a favor in exchange for their vote in the most recent national or state election. More specifically, 17% of poll participants received cash personally, while 4% received favors in exchange for their votes. Another 5% of respondents claimed that while they individually were not offered a bribe in exchange for their vote, a member of their family had received one.

With the preliminary number of registered voters in Nigeria put at 93 million according to Yakubu (2002), a public opinion conducted by NOIPolls (2022) reveals that 26% of registered voters in Nigeria are willing to sell their votes for either monetary or material gains in the forthcoming 2023 general elections in Nigeria. This means that about 24,180,000 voters are willing to sell their votes in the forthcoming general elections. The consequence of these vote selling are enormous including the gradual loosing of voting power by electorates for exchanging it for money. Candidates that can afford to buy the votes, get into power and see the public funds as extension of their personal funds and therefore find alternative ways of to recover funds spent on the electoral process. Vote-selling also serves as the catalyst for the destruction of democracy as well as a major hindrance to the possibilities of good governance in the country.

Some studies that were carried out on vote-buying and selling, including Canare et al. (2018) found that although vote-buying is more frequent among African countries to which Nigeria belongs. Most of the reviewed empirical studies on vote-buying were carried out outside of Nigeria (Akmalia *et al.*, 2022; Halida *et al*., 2022; Hicken *et al.*, 2017); while others that were conducted in Nigeria such as Animashaun and Liadi (2020) focused on elections in Ekiti and Oyo that took place in the year 2014 and 2015 respectively.

It is against this background that the studies examine the influence of Theory of planned behavior variables (attitude, subjective norm, and perceived behavioral control) on vote-selling behavior of Gombe state university community members. The theory of planned behavior is one of the most commonly accepted ideas for forecasting behavioral intentions and behaviors in the social sciences domain. Hence the specific objectives of the study are to: assess the influence of attitude, subjective norm, and perceived behavioral control on the intention to-sell-vote.

2.0 Literature Review

2.1 Concepts

2.1.1 Attitude (AT)

According to TPB's proposal, attitude precedes behavioral intention, which is described as the extent to which a person views an activity as positive or unfavorable. The degree to which a person views the action of interest favorably or unfavorably is indicated by this. It requires taking into account how the activity will influence things (Omran, 2014). A quick assessment of everything based on cognitive, emotional, and behavioral data is known as an attitude. Evaluative comments or conclusions about a thing, person, or event are known as attitudes (Akmalia *et al.*, 2022). Hence, the following hypothesis is postulated.

H1: Attitude (AT) has a strong relationship with vote-selling at Gombe State University, Nigeria

2.1.2 Subjective Norm (SN)

A person's perception of doing or not doing something based on the opinions of the majority of people who are significant to them is known as a subjective norm (Tarhini et al., 2015; Tran et al., 2022). Subjective norm refers to perceived social pressure to participate in or refrain from a particular behavior (Ajzen, 1991). Hence, the following hypothesis is postulated.

H2: Subjective Norm (SN) has a strong relationship with vote-selling in Gombe State University, Nigeria.

2.1.3 Perceived Behavioral Control (PBC)

The term "perceived behavioral control" (PBC) describes how an individual perceives the existence of personal and environmental barriers to the performance of a behavior. These barriers include controllability and self-efficacy (Nchise, 2012). Hence, the following hypothesis is postulated.

H3: Perceived Behavioral Control (PBC) has a strong relationship with vote-selling in Gombe State University, Nigeria

2.1.4 Vote-Selling

Vote-selling is a straightforward economic transaction in which voters sell their votes to political candidates in elections, often to the highest bidder. By being willing to sell their votes to the highest bidder, the electorate is on a mission to make their ballots into commodities. Unfortunately, this resentful conduct breaches human rights and jeopardizes the democratic process of choosing officers (Ojo, 2019).

Conceptual Framework

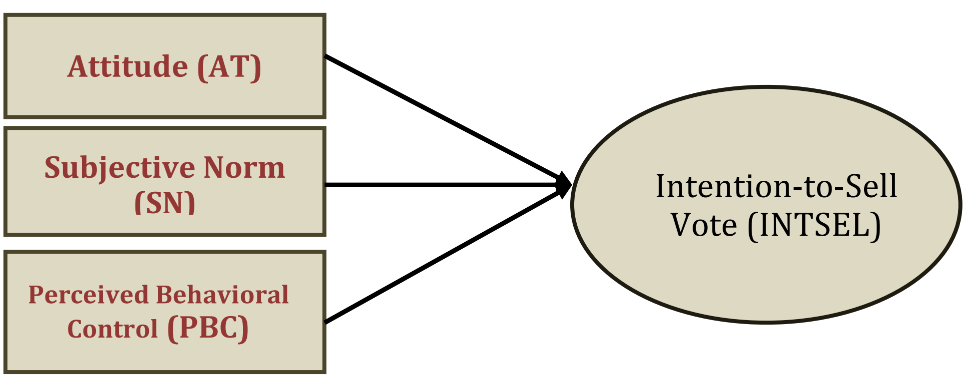

Figure 1: Conceptual Framework

Source: Adapted from Akmalia *et al.* (2022)

2.2 Empirical Reviews

Akmalia *et al.* (2022) investigate the factors affecting the decision to vote using theory of planned behavior using a case study of 2019 presidential election in Indonesia. The result shows that the factors that influence the intention to vote outside of Java are attitudes and subjective norms.

Halida *et al.* (2022) examine the vote-selling (to accept or refuse money) using 1,220 participants of Indonesian voters. The result shows that participants were significantly tempted by larger amount of money.

Hansen and Jensen (2007) assessed the voters' decisions in Denmark using theory of planned behavior. The result suggests that the TPB accounts for 63.2% of variation of voting behaviors.

Cinjel et al. (2019) investigated the relationship between poverty and the prevalence of vote buying in Nigeria. The findings reveal that vote-buying is associated with an increasing level of poverty in the society.

2.3 Theoretical Framework

The TPB, which is an extension of Theory of Reasoned Action (TRA) proposed by Fishbein & Ajzen (1975is predicated on the idea that people rationally and thoughtfully choose to engage in particular behaviors by weighing the information at their disposal. The likelihood that a behavior will be carried out depends on the individual's intention to engage in it (which is influenced by the value the individual places on the behavior, its ease of performance, and the opinions of important others), as well as the belief that the behavior is under his or her control (Lestari, 2021). The theory of planned behavior (TPB) is a cognitive theory that relates beliefs and behavior. According to the theory, an individual's behavioral intentions are shaped by three fundamental factors: attitude, subjective norms, and perceived behavioral control (Madel *et al*., 2023).

To comprehend a person's behavior, the Theory of Planned Behavior (TPB) is frequently applied. Attitude, subjective norm, and perceived behavioral control are its main external variables. These three factors can be used to forecast someone's planned behavior. First, attitude is related to the values and viewpoints of the electorate. Peer pressure from the voters' social networks is referred to as the second subjective norm. Third, perceived behavioral control indicates how easy or challenging it is for voters to carry out the desired activity.

Since the current study focused on voters' intention to sell vote, TPB plays a crucial role in determining the voters' resulting actions. The variables (attitude, subjective norm, and behavioral control) reflect the voters' behavior due to internal observations and external influences.

3.0 Methodology

The data for this study was collected through an online-Google structured questionnaire by sending the structured questionnaire link to different WhatsApp groups of students; non-academic staff, and academic staff of Gombe state university. The measurement scales for the variables of the study (AT, SN and PBC) were adapted from previous studies. Each of the statements on the 5-likert point scale (from strongly disagree to strongly agree) to extract the extent to which respondents disagree or agree with the different statements across the different sections of the questionnaire. This is in line with Nchise (2012) and Akmalia et al. (2022). To that effect, a total of 1,293 respondents filled the online-Google questionnaire and SPSS was used to analyze the data using multiple regression analysis.

4.0 Results

Table 1: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.824[a]	.679	.661	.45534

a. Predictors: (Constant), AT, SN, PBC

Based on the results of model summary in Table 1, it can be inferred that R being the correlation coefficient, a measure of the linear association between the variables, has a high correlation (82.4%) between the dependent (Vote selling Intention) and independent variables (Attitude, subjective norm, and perceived behavioral control). The coefficient of determination (R square) gives an indication of how good a choice of the independent variables in predicting the dependent variable. It describes the amount of variation in the dependent variable, here market price of equity share explained by the regression line. The larger the value the better the regression line describes the data. The regression model shows 67.9% coefficient of determination (R square). This shows that a unit change in the independent variables influence account for a 67.9 variation in vote selling intention.

Table 2: Regression Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.699	2.104		5.560	.000
	AT	.884	.414	.174	2.136	.034
	SN	.351	.171	.157	2.048	.042
	PBC	.537	.105	.505	5.115	.000

a. Dependent Variable: INTSEL

From the regression coefficients in Table 2, if all the variables (AT, SN and PBC) are taken constant at zero, the vote-buying behavior will be **11.699**. The results also shows that if all other independent variables are taken at zero, a unit increase in attitude will lead to 88.40% increase in vote-buying behavior; subjective norm influences vote-buying behavior by 35.10%; and finally perceived behavioral control accounts for 53.70% change in vote-buying behavior.

Discussion and Conclusion

The study found a positive and statistical influence of attitude on intention to sell-vote. This is in line with Akmalia et al. (2022) and Halida et al. (2022). Subjective norm was found to have positive influence on intention to sell-vote. The result of this study conforms to the findings of Hansen and Jensen (2007) and Halida et al. (2022). The result of this study that establishes a positive effect of perceived behavioral control on intention-to-sell vote is consistent with the findings of Akmalia et al. (2022), Halida et al. (2022) and Hansen and Jensen (2007).

The results found in this study contribute and supports the theory of planned behavior

(TPB). This has added to the other empirical studies in strengthening the TPB.

Recommendations

Since attitude explains the extent to which a person views the activity as favorable, voters should be well enlightened on the consequences of selling votes which can make them retrace their steps and elect credible leaders. On subjective norm that explains perceived social pressure from friends and family, mass awareness campaigns on the need to shun vote selling in communities will surely help correct the anomalies of electoral fraud to which vote selling belongs.

Reference

Akmalia, Z., Jono, M.M., & Ma'mun, S. (2022). Factors Affecting the Decision Using Theory of Planned Behavior (Case Study: Election of the 2019 President). *Jurnal Indonesia Sosial Sains 3(8),* 1136-1148

Animashaun, M.A. & Liadi, O.F. (2020). Educational Qualifications, partisanship and Vote-Buying in the 2014 and 2015 Governorship Elections in Ekiti and Oyo States. *Journal of Management and Social Sciences 9(1),* 730-748

Canare, T. A., Mendoza, R. U., & Lapez, M. A. (2018). An Empirical Analysis of Vote Buying Among the Poor: Evidence from Elections in the Philippines. *South East Asia Review, 26(1),* 58–84

Cinjel, N.D., Danjuma, J., & Ugwoke, C.J. (2019). Poverty and the Prevalence of Vote Buying in Nigeria *International Journal of Academic Multidisciplinary Research (IJAMR)3(6),* 72-81.

Fishbein M. & Ajzen A. (1975). Beliefs, Attitudes, Intentions, and Behavior: An Introduction to Theory and Research. Reading, MA: Addison-Wesley

Halida, R., Susianto, H., Mujani, S., & Pratama, A. J. (2022). Vote-Selling as Unethical Behavior: Effects of Voter's Inhibitory Self-Control, Decision Toward Vote-Buying Money, and Candidate's Quality in Indonesia Election. *Journal of Social and Political Psychology*, *10*(2), 570-587

Hansen, T., & Jensen, J.M. (2007). Understanding Voters' Decisions: A Theory of Planned Behavior Approach, Innovative Marketing, 3(4), 87-94

Hicken, A., Leider, S., Ravanilla, N., & Yang, D. (2017). Temptation in Vote-Selling: Evidence from a Field Experiment in the Philippines, *Journal of Development Economics 131*, 1-14

Lestari, T. W. (2021). Technology Ado ption on Online Learning during Covid-19 Pandemic: Implementation of Technology Acceptance Model (TAM), *Diponegoro International Journal of Business 4(1),* 8-19.

Madel, M.L.C., Tri, Y.P., Fadil, S. P., & Nadlifatin, R. (2023). Examining Filipinos' Intention to Revisit Siargao after Super Typhoon Rai 2021 (Odette): An Extension of the Theory of Planned Behavior Approach. *International Journal of Disaster Risk Reduction 84*

Nchise, A. (2012). An Empirical Analysis of the Theory of Planned Behavior. *JeDEM 4(2*), 171-182,

Nwagwu, E.J., Uwaechia, O.G.,Udegbunam, K.C., & Nnamani, R. (2022). Vote Buying During 2015 And 2019 General Elections: Manifestation and

Implications on Democratic Development in Nigeria. *Politics & International Relations Review Article 8*, 1-28

Ojo, A. B. (2019, February 28). Vote-Buying and Selling as Violation of Human Rights: The Nigerian Experience. Catholic Theological Ethics in the World Church. Available at https://catholicethics.com/forum/vote-buying-and-selling-as-violation-of-human-rights-the-nigerian-experience/

Omran, S. M. (2014). The Effect of Educating Environmental Ethics on Behavior and Attitude to Environment Protection. *European Online Journal of Natural and Social Sciences, 3(3),* 141-150

Onuoha, F.C. & Okafor, J.C. (2020). Democracy or Moneyocracy? Perspective on Vote Buying and Electoral Integrity in Nigeria's Recent Elections, *Africa Insight 49 (4)*, 1–14

Tarhini, A., Arachchilage, N. A., Masa'deh, R., & Abbasi, M. S. (2015). A Critical Review of Theories and Models of Technology Adoption and Acceptance in Information System Research. *International Journal of Technology Diffusion*, *6(4)*, 58-77.

Tran, H. T. T., Nguyen, N. T., & Tang, T. T. (2023). Influences of Subjective Norms on Teachers' Intention to Use Social Media in Working. *Contemporary Educational Technology*, *15(1)*, 2-14

Yakubu, M. (2022, October 26). INEC: Preliminary number of registered voters stands at 93.5m Retrieved from https://www.thecable.ng/preliminary-number-of-registered-voters-in-nigeria-now-93-5m-says-inec

Impact of Curriculum Content and Teaching Method on Entrepreneurial Intention among Students of Tertiary Institutions in Bauchi State

Authors:
Haruna Ibrahim [1]
Dr. Muhammad Adamu [2]
Rilwanu Yusuf Badamasi [3]
Ibrahim Yakubu [4]

Affiliation:
[1&2] Dept. of Business Admin., Faculty of Mgt. Science, Bauchi State University Gadau, Bauchi State, Nigeria

[3&4] Dept. of Banking and Finance, Faculty of Management Science, Federal University Dutse, Jigawa State, Nigeria

Correspondence:
Haruna Ibrahim

e-mail:
harunaibrahim@gmail.com

Dates:
Received: 07 Dec., 2022
Accepted: 18 Jan., 2023

How to cite this article:
Haruna, I., Muhammad, A., Rilwanu, Y. B., & Ibrahim, Y. (2023). Impact of Curriculum Content and Teaching Method on Entrepreneurial Intention among Students of Tertiary Institutions in Bauchi State. *Creative Business Research Journal 3(1),* 125-130

Abstract

The objective of this study is to identify the impacts of entrepreneurial education on entrepreneurial intention among final year students from two universities in the Northeast Region of Nigeria. Data was gathered from 259 students from the two institutions. Abubakar Tafawa Balewa University and Bauchi State university Gadau. SPSS was used to analyze the data gathered. Findings from the study reveal that an entrepreneurship education has a significant impact on students' entrepreneurial intentions. Many of the students enjoyed entrepreneurship education. Practical examples of entrepreneurship should be included more in classroom teaching. Many of the students show the intention of starting their own business when they graduate.

Keywords: Curriculum content, Entrepreneurship, Entrepreneurial intention, Entrepreneurship education

1.0 Introduction

The foundation embarking on a successful business is having a good entrepreneurial intention. This makes entrepreneurial intention a key factor in promoting individuals' entrepreneurial abilities muktar &Husna, (2021). Entrepreneurial intention is position to owning a business or becoming self-employed as it is considered as personal orientations that might lead to venture creations (Nguyen, 2021). Olu (2018) view it as a desire to carry out productive activities by effectively, directing people to utilize and implement relevant concepts of new ventures. Bryant (2020) argued that it has the ability to develop students` interests and create a positive perception of entrepreneurship thereby equipping them with the desirable skills to translate their interests into business formation at some stage after the completion of their undergraduate programs.

Entrepreneurial intentions are also considered personal orientations that might lead to venture creations Lame & Yusoff, (2016). That is why several economy stakeholders had device means to enhance the intention of their citizens with emphasis on students who occupied the larger number of the population to tackle economic issues such as unemployment rate, youth joblessness and other social vices through entrepreneurship (Nian *et al*, 2014 in Adejala & minai, 2018). It can be inferred that Entrepreneurial intention is the first step in new business creation.

Unfortunately, the recent economic crisis in Nigeria and other parts of the globe has increased the tremendous need to position social questions in the heart of the economy, and there has been increasing global concern over the various governmental and non-governmental organizations have initiated policies through support agencies such as the National Directorate for Employment (NDE), where the youths have been identified as the most affected groups (Olayinka, 2018). Capacity utilization is to address the problem of unemployment among Nigerian citizens Ahmed, N. (2019).

Still, not much could be achieved from the designed economic structures as a result of poor or bad entrepreneurial intentions. One of the measures found to be effective is the adoption and utilization of effective entrepreneurship education according Sinnema, Nieveen & Priestley, (2020). This is due to the fact that entrepreneurship education has proven to be an effective tools for economic value creation as well as a means of dealing with various social issues, and it appears to be gaining popularity in both theoretical and practical sphere with the rise of new field of entrepreneurship education (Ruslan & Suffian, 2019).

Besides, entrepreneurship education is an integral element of the desired skills and capacities that will enable students in business education to become self-reliant and productive in society (Olawale, 2020). Entrepreneurship education in universities has attracted the attention of researchers all over the world and one main research focus is on students' intentions for an entrepreneurial career. Hence, considering that students in Nigerian universities are hardly able to translate entrepreneurial intentions into the achievement of entrepreneurial goals and pursuit, it implies that the exposure to entrepreneurship education may not favorably motivate students' learning orientation (Samsudin *el-al*,2019). This is consequent upon the fact that intentions provide ample evidence of the outcome of an entrepreneurship education programmed and because intentions are good predictors of future behavior (Kaleem, Khattak, & Abbas 2018). Therefore the development of entrepreneurial intentions by Nigerian university students may not be in doubt.

Globally, it is important to state that researchers such as Ni, & Ye, (2018) have advocated a revision of entrepreneurship education content in universities to bridge the gap between theory and practice with particular emphasis on the development of entrepreneurial intentions. In Nigeria however, the Federal government through the Ministry of Education in conjunction with the National Universities Commission (NUC) approved the establishment of Entrepreneurship Study Centers (ESCs) in all Federal own Universities in the coutry (Bello, & Ibrahim, 2021). The establishment of these centers is to be funded by the Education Trust Fund (ETF) the ministry has also approved the establishment of a project implementation committee to fast track the establishment and development of entrepreneurship education in the Universities.

Moreover, various empirical studies have highlighted the importance of entrepreneurial intentions (Aulia *et al.*, 2018) and the intentions of students in universities to start businesses (Israr & Saleem, 2018). Aliu & Ibe (2018) pointed out that despite the growing debate on entrepreneurial intentions; studies fall short in addressing the impact of entrepreneurship education on entrepreneurial intentions of students among different programmes in institutions of higher education. However, considering the role of students starting their own businesses, another implication for this research is to examine the impact of entrepreneurship education on entrepreneurial intention in two universities in Bauchi state.

2. Research Questions

i. Does curriculum contents influence students` entrepreneurial intention Abubakar Tafawa Balewa University and Bauchi stsate University Gadau?

ii. Does teaching methods influence students` entrepreneurial intention Abubakar Tafawa Balewa University and Bauchi stsate University Gadau?

3. Objective of the Study

i. To determine the influence of curriculum contents on students` entrepreneurial intention Abubakar Tafawa Balewa University and Bauchi state University Gadau.

ii. To determine the influence teaching methods on students’ entrepreneurial intention Abubakar Tafawa Balewa University and Bauchi state University Gadau.

4. Research Method

The sample consists of 2 Tertiary institutions in Bauchi state. The institutions consist of a university, Abubakar Tafawa Balewa University and Bauchi State University Gadau. Data was generated from the questionnaire distributed to 300 respondents, i.e. from both tertiary institutions. The questionnaire was divided into two main sections. Section A covers the basic information about the respondents, while section B covers information relating to the study. 259 students submitted their questionnaires. The SPSS progamme was used to analyze the data gathered. 5 points Likert- Type scale was used.

5. Results

Table1: Respondents' mean ratings on Does curriculum content influences entrepreneurial intention

SN	Items	Mean	SD	Remark
1	I have learned some entrepreneurship experiences through the course.	3.19	1.303	Significant
2	It is interesting to learn by doing in the entrepreneurship course	2.86	1.315	Moderately Significant
3	The entrepreneurship course has made me more creative.	2.91	1.292	Moderately Significant
4	The period for the course is suitable.	3.21	1.328	Moderately Significant
5	The time allocated for attachment is adequate.	3.22	1.319	Significant
6	Assignments and tests given are relevant to entrepreneurship development.	3.01	1.348	Significant
7	The attachment done improved my entrepreneurial knowledge.	3.32	1.387	Significant
8	This entrepreneurial course taught me to be tolerant in a variety of everyday.	3.91	.823	Significant
	Cumulative Mean	3.204	1.264	Adequately Significant

According to the data in table 1, curriculum content has significant impact on student`s entrepreneurial intentions. As indicated all the tables from SPSS output have a mean score > 2.50 (greater). Based on this finding considering the curriculum contents have influence on students` entrepreneurial intention in Bauchi state which is 98% total sample size of the study.

Table 2: Respondents' mean ratings on teaching method influences entrepreneurial intentions

SN	Items	Mean	SD	Remark
1	Lecturers are experienced in teaching entrepreneurship courses.	3.64	1.238	Significant
2	Lecturers bring students to visit the industry to learn more about entrepreneurship.	3.93	.900	Significant
3	Practical training helps a lot in understanding the subject of entrepreneurship.	3.72	1.179	Significant
4	Lecturers have the best way of delivering entrepreneurship courses.	3.56	1.127	Significant
5	Lecturers are good at engaging students in entrepreneurship courses through teaching methods.	3.53	1.211	Significant
6	The story of a successful entrepreneur is shown in a video in the lecture hall to motivate students to get involved in business.	3.42	1.238	Significant
7	Lecturers have successfully applied this entrepreneurial course to real- world situations.	3.31	1.184	Significant
8	I am interested in the subject of entrepreneurship.	3.53	1.214	Significant

Data in Table 2 show that teaching methods influence the entrepreneurial intention of undergraduates in universities in Bauchi State to a great extent. The standard deviations for all the items are within the same range showing that the respondents are far apart in their ratings

6. Conclusion

This study concludes that curriculum content and teaching methods have a significant positive effect and predicts entrepreneurial intentions and outcomes. It also concludes that curriculum content and teaching method enhances the clarity of entrepreneurial intention. The study found that the skills of graduates are a predictor of entrepreneurial status, and entrepreneurial capability facilitates the risk-taking abilities of graduates. This also reveals a direct positive relationship between curriculum content and teaching method outcomes on students' entrepreneurial intention. Therefore, several suggestion have made Similar studies should be carried out in other geographical zones of the country so as to provide a good ground for comparison on modes of operation and studies are needed to investigate environmental factors that influence the effective implementation of entrepreneurship education.

References

Aliu, S. & Ibe, G. (2018). Recent Trends in Entrepreneurship Education in Nigeria:

Prospects and Challenges. Institute for Small Business and Entrepreneurship.

Aliu, S. & Ibe, G. (2018). Recent Trends in Entrepreneurship Education in Nigeria: Prospects and Challenges. Institute for Small Business and Entrepreneurship.

Federal Ministry of Education (1992) National School Curriculum Review. Conference Proceedings. Lagos: NPE.

Federal Ministry of Education (2016). Education Sector Situation Analysis. Abuja :Federal Ministry of Education.

Federal Republic of Nigeria (2017).National Policy on Education (4th Ed.). Lagos:

Nigerian Educational Research and Development Council Press.

Husna, I. A. R. And D. M. (2021). Perception of Students on Entrepreneurship Education Iklima Husna Abdul Rahim Faculty of Business , Economics and Accountancy Universiti Malaysia Sabah 88400 Kota Kinabalu , Sabah Malaysia Dzulkifli Mukhtar Faculty of Entrepreneurship and Business Univers, *12*(1), 94–102. Https://doi.org/10.30845/ijbss.v12n1p13.

Israr, M., & Saleem, M. (2018). Entrepreneurial intentions among university students in Italy. *Journal of Global Entrepreneurship Research*, *8*(1), 1-14.

Krueger N.F (1993). The Impact of Prior Entrepreneurial Exposure on Perceptionsand New Venture Feasibility and Desirability. *Entrepreneurship Theory and Practice* 18: 5–21.

Krueger, N.F. Jr. (2018). What Lies Beneath? The Experiential Essence of Entrepreneurial Thinking. *Entrepreneurship Theory and Practice*, 31(1):123-138.

Khalid, S.A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, K.M.(2018). Entrepreneurial Intention among Malaysian Undergraduates. *International of Business and Management*, 4(10): 54-60.

Olaleye, D., Olabode, F., & Olatunji, D. (2018). Entrepreneurship Education and Self-employment Intentions among Fresh Graduates in Nigeria, *9* (12), 146–158.

Aliu, S. & Ibe, G. (2018). Recent Trends in Entrepreneurship Education in Nigeria: Prospects and Challenges. Institute for Small Business and Entrepreneurship.

Olaleye, D., Olabode, F., & Olatunji, D. (2018). Entrepreneurship Education and Self-employment Intentions among Fresh Graduates in Nigeria, *9*(12), 146–158.

Ejere, E. S. I., & Tende, S. B. A. (2016). Entrepreneurship and New Venture Creation. In E.Chuta (Ed.). Small Enterprises and Entrepreneurship Development Dakar: Amalion Publishing. ISBN: 9782359260144.

Lame, S.M & Yusoff, W.F.W (2016). The perception of students towards entrepreneurship courses: an empirical study of Nigerian polytechnics students. In: 2nd International Conference on Technology Management, Business and Entrepreneurship Mahkota Hotel Melaka Malaysia.

Leong, C.K. (2018). Entrepreneurial Intention: An Empirical Study among Open University Malaysia Students. Dissertation, Open University Malaysia Center for Graduate Studies.

Ahmed, N. (2019). Determinants of Students‟ Entrepreneurial Career Intentions: Evidence Business Graduates. *European Journal of Social Sciences,* 2(1):14-22.

Sinnema, C., Nieveen, N., & Priestley, M. (2020). Successful futures, successful curriculum: What can Wales learn from international curriculum reforms?. *The Curriculum Journal*, *31*(2), 181-201.

Ruslan, I., & Suffian, M. (2019). The Impacts of Entrepreneurial Education and Entrepreneurial Implementation on Entrepreneurial Intention : Pieces of evidence from Public University in the Northern Malaysia, (5), 354–358. Https://doi.org/10.35940/ijeat.E1050.0585C19.

Samsudin, N., Abas, B., Rosdi, S. A., Abidin, A. Z., Razak, A., Samsudin, N., … Rosdi, S. A. (2019). The Suitable Teaching Methods in Entrepreneurship Education from the Perspective of Undergraduate Students The Suitable Teaching Methods in Entrepreneurship Education from the Perspective of Undergraduate Students, *9*(2), 818–825.

Supply Chain Dynamics, the Problems and Prospects of Nigeria's Oil Sector: A Proposed Model

Author:
Ibrahim Garba Muhammad

Affiliation:
Department of Business Administration and Entrepreneurship,
Bayero University Kano,
Nigeria

Correspondence:
Ibrahim Garba Muhammad

e-mail:
ibrahimgeem@gmail.com

Dates:
Received: 17 Dec., 2022
Accepted: 12 Jan., 2023

How to cite this article:
Ibrahim, G. M. (2023**).** Supply Chain Dynamics, the Problems and Prospects of Nigeria's Oil Sector: A Proposed Model. *Creative Business Research Journal 3(1),* 131-136

Abstract

This study proposes a model to assess the supply chain dynamics of oil companies in Nigeria. The study is aimed at developing a model to address the supply chain difficulties encountered by upstream and downstream oil companies in Nigeria; this can be used identify the degree to which, the oil companies in Nigeria are implementing the best distribution practices to cope with the challenges in their supply chain and to ascertain means of promoting effective supply chain in the country. Therefore, theories were reviewed, and model was developed which means that a survey requiring administration questionnaires to targeted respondents can be used for validation of the proposed model

Keywords: Supply Chain, Dynamics, Nigeria, Oil Sector

1.0 Introduction

Nigeria has been a major player in the oil sector throughout Africa and abroad for a number of decades. Organization of Petroleum Exporting Countries (OPEC) produced a report in 2018 stating that the country is the third largest oil producer in Africa and the tenth largest oil producer in the world. More than 645,435,248 barrels of crude oil were exported by Nigeria in 2016 (Ibrahim and Safiya, 2022). Ninety-five percent of the nation's overall foreign exchange earnings come from oil sales. Nigeria's oil sector is comprised of three main subindustries: upstream, midstream, and downstream. The upstream industry is responsible for the exploration of oil reserves, production of crude oil, and sale of crude oil. Midstream activities consist mostly of refining crude oil, shipping crude oil, and importing crude oil. The downstream sector is accountable for retail service provision, distribution, investment, and research and development. To ensure that consumers have reasonable and quick access to petroleum products and the services associated with them, it is required to create a digital network made of oil and gas firms, persons, technology breakthroughs, and financial resources. The petroleum supply chain is another term for this. The distribution network contained each of the streams listed. According to Aminu and Olawore (2014) and Nigeria National Petroleum Corporation (NNPC) 2016, the supply chain for the petroleum industry consists of the upstream, midstream, and downstream sectors. In tank farms and depots, midstream supply chain firms are responsible for the refining and storage of petroleum products. These facilities are centrally situated in the supply chain. The downstream supply chain consists of the marketing, distribution, and transportation of refined petroleum products from refineries or import jetties to retail outlets for client distribution (NNPC, 2016; Osuala, 2013).

It is not new information that Nigeria suffers from a continual lack of petroleum products. Despite the inelastic nature of the country's product demand, the federal government comes perilously near to providing the people's daily needs. Regularly, large lines have formed at retail gas stations in Nigeria due to a lack of petroleum-based products. According to Onigbinde (2014), Nigerians have endured a lack of petroleum products for several decades, necessitating an increase in the government's imports. Participants in the oil industry commonly cite the presence of technological and physical hurdles in the items' supply chain as one of the primary causes of the problem. in accordance with the (Afiqah, Et al., 2014). Due to the significant impact that petroleum products have on the Nigerian economy, disruptions in the supply of these commodities can have a detrimental effect on the growth of production, unemployment rate, inflation rate, interest rate, and overall economic performance. According to Hendricks and Singhal (2005), a disruption has catastrophic effects on a company's economy. These effects include performance in terms of profitability and shareholder value, as well as stock price volatility.

All sorts of businesses face the threat of supply chain interruptions; however, the extent of the effects may be more concerning for smaller businesses. Smaller businesses typically do not recover rapidly from supply chain tension because they lack the internal and adaptive capability, flexibility, and redundancy required to maintain resilience (Azadi Jafarian, Saen, and Mkirhedayatian, 2015) and mitigate supply chain risk as it unfolds (Simba, Niemann, Kotzé, and Agigi, 2017). This is due to the fact that smaller businesses lack internal adaptability, flexibility, and redundancy (Simba, Niemann, Kotz). The great majority of smaller supply networks are infamous for crumbling in the wake of large disruptions, and many of them practically never recover completely. Some businesses may require more than two years to regain the level of performance they had prior to the disruption. In 2013, a catastrophic fire in Lagos, Nigeria, halted Sunflag Textile Manufacturing Company's operations for close to three years. The blaze broke out in the metropolis of Lagos.

When there are interruptions in the supply of petroleum products in Nigeria, both the upstream and downstream businesses are affected. The unsatisfactory performance of the country's four accessible refineries is attributable to a number of challenges, including pipeline vandalism, inadequate transportation networks, logistics, and infrastructure, and an insufficient maintenance culture.

The majority of the challenges plaguing the upstream industry are associated with exploration. These include the availability of exploration technicians, strict adherence to exploration legislation aimed to protect the environment, and the presence of significant impediments (Ibrahim and Safiya, 2022). The highlighted obstacles have an impact on the petroleum product supply chain in connection to the country's economic performance. This is because energy is vital to the country's social, economic, and political development, and any insufficiencies in its supply will not only constrain socioeconomic activities but also limit economic growth, which will have a detrimental impact on the quality of life of the country's population. This study aims to propose a model to address the dynamics of supply chains and Nigeria's economic performance with a view to address the supply chain difficulties encountered by upstream and downstream oil companies in Nigeria. It will also serve as a tool to identify the degree to which, the oil companies in Nigeria are implementing the best distribution practices to cope with the challenges in their supply chain and ascertain means of promoting effective supply chain in the country.

2. Literature Review

Nigeria is the largest oil producing country in Africa and there are three interrelated sectors operating as the main drivers of supply chain which consists of the downstream, mid-stream and upstream sectors (Aminu & Olawore, 2014; NNPC, 2016). The upstream sector mostly consists of maritime firms charged with exploitation, exploration and production of crude oil. The midstream supply chain are in charge of refining and storage of petroleum products. The downstream chain market, distribute and transport refined petroleum products or import refined products to retail outlets for customers consumption (NNPC, 2016; Osuala, 2013). There is various interconnection of petroleum service providers and logistics companies which rely on physical infrastructures and network of information to perform their roles in the downstream supply chain echelon (Fernandes et al. 2013). The interconnectivity implies that careful identification, monitoring and moderation of each activity center and supply chain partners within the downstream oil service chain due to its disruptive potentials.

There are many drivers through which supply chain disruptions occur (Simba et al, 2017). Myriad of studies explains a number of sources of disruptions in petroleum supply chain including: third party logistics (3PL) outsourcing firms. There is an empirical evidence which reveals that Nigeria tops the lists of countries that outsource their oil production and supply process; thereby increasing her vulnerability to disruption risks (Amor and Ghorbel, 2018) . The internal operations, external environmental factors and some elements within the petroleum supply chain increase disruption (Olsen, *et al*., 2003). Global financial crises, political crisis, and Natural events are some of external environmental drivers of supply chain disruption. Additionally, information quality and supply chain process visibility, Internal operations and firm’s capabilities, (Williams, Ponder & Autry, 2009) represent potential sources that exert significant amount of pressure in the petroleum supply chain management. The challenges of supply chain in the Nigerian oil and gas have been widely discussed in previous studies; many scholars approached it from different angles depending on which aspect of integration they consider expedient at the time of their research. Many scholars reported that topic of supply chain and expatriation challenges remain inexhaustible taking into consideration so many factors such as social, economic and political challenges.

3. Theoretical Review

The variability in the supply and demand chain can be explained by using the Bullwhip effect as well as its reverse, the Reverse Bullwhip effect. The effect occurs when there is an increase in the unpredictability of demand in the supply chain, which in turn increases the demand. On the other hand, the Reverse Bullwhip effect is the consequence of supply unpredictability increasing down the supply chain, which in turn leads to supply disruption (Van der Merwe, 2006).

According to Rong, Zuo-Jun, and Snyder (2009), the reverse bullwhip effect is what causes stock-outs and fluctuations in product prices as a result of anxious customers' panicked buying behavior. This behavior causes them to purchase more products than they need immediately in anticipation of future price increases. Rong, Zuo-Jun, and Snyder (2014), state that the reverse bullwhip effect is what causes stock-outs. In the aftermath of Hurricane Katrina, for example, oil producers and refiners worked at nearly full capacity (i.e. minimal variability in the production rates), while panicked consumers hoarded products and drove up the price of gasoline per gallon across the United States from an average of \$2.50 to over \$4.00. This caused oil producers and refiners to work at nearly full capacity, while consumers drove up prices. (Rong *et al*, 2009).

The reverse bullwhip effect is also the reversal of the benefits of adopting contemporary management approaches, such as lean manufacturing, just-in-time attitude, materials need planning, and optimized production technology, to name a few of these management strategies.

4. Research Model

This study's model will be based on the Logistic Optimization model. As refined petroleum products from refineries typically experience large transportation costs along the chain of distribution to final customers, the model captures a substantial percentage of the expenditures incurred in the oil and gas industry. This (transportation costs) typically constitutes a substantial component of the market price of a product.

Graphical illustration of flow of petroleum products

Fig. 1. *flow of petroleum products*

To optimize the identified transportation network, this study adopt linear programming model shown below:

$$minZ = \sum_{i=1}^{a}\sum_{j=1}^{b} c_{ij}x_{ij} + \sum_{j=1}^{a}\sum_{k=1}^{c} c_{jk}x_{jk} + \sum_{k=1}^{c}\sum_{i=1}^{d} c_{ki}x_{ki} + \sum_{i=1}^{d}\sum_{m=1}^{e} c_{tm}x_{tm} \dots\dots\dots (1)$$

$$\sum_{i=1}^{a}\sum_{j=1}^{b} x_{ij} \le \sum_{i=1}^{a} capacity \qquad \sum_{i=1}^{m} x_{ij} \ge D_j \; for\; all\; j = 1 \dots\dots..n. \;\; D_j = Demand$$

$$\sum_{i=1}^{b}\sum_{k=1}^{c} x_{jk} \le \sum_{i=1}^{a}\sum_{j=1}^{b} x_{ij} \quad \sum_{k=1}^{a}\sum_{i=1}^{d} x_{ki} \le \sum_{j=1}^{b}\sum_{k=1}^{c} x_{jk} \quad \sum_{i=1}^{d}\sum_{m=1}^{e} x_{tm} \le \sum_{k=1}^{e}\sum_{i=1}^{d} x_{ki}$$

Where;
i = 1,2........a, = refineries from where products are obtained

j = 1,2........b, = pumping stations to pipe line

k = 1,2........c, = receiving stations from pipe lines

l = 1,2........d, = distribution channels to service channel

m = 1,2.......e, = service channel (fuel stations) for final consumers.

Here, capacity I represents the supply capacity of refinery I cij represents the cost of transporting one unit of petroleum product from I to j, and xij represents the quantity of petroleum product transferred from I to j. Similarly, cjk, ckl, and clm are costs while xjk, xkl, and xlm are amounts; Z is the overall cost of transportation that must be minimized. Here, each of the four specified restrictions is a supply constraint resulting from refinery capacities. Demand is indeterminate. Gathering real-world data for each of the aforementioned channels and utilizing the aforementioned linear programming model to discover an ideal solution can result in lower transportation costs for the oil and gas industry as a whole. This implies that, proper adoption of the model will ease supply chain difficulties in the Nigerian oil sector.

5. Conclusion and Recommendation

The specific areas that this study intends to address are the difficulties encountered upstream and downstream oil companies, the best practices being used by the companies and to ascertain means of promoting effective supply chain. Carrying out this work will help to improve efficiency of the upstream and downstream oil sector. An empirical study will be carried out to address the supply chain challenges in the upstream and downstream oil sector in Nigeria. This means that survey should be conducted to empirically test the model in order to determine the appropriateness of the model in addressing the challenges and how they can be resolved.

References

Adelabu, N. S. (2012). The political economy of oil deregulation in Nigeria's fourth republic: Prospects and challenges. *Journal of Emerging Trends in Educational Research and Policy Studies*, *3*(1); 193-198.

Aminu, S. A., & Olawore, O. P. (2014). Empirical investigation of challenges of distribution of premium motor spirit (PMS) in federal capital territory (FCT), Abuja and environs, Nigeria. *International Journal of Management Sciences and Humanities*, *2*(2); 11-38.

Amor, R. B., & Ghorbel, A., (2018). The risk in Petroleum Supply Chain: A review and typology. *International Journal of Scientific & Engineering Research*, *9*(2); 141- 165.

Afiqah, A. M, Musa, H.. Suraya, A. & Norhidayah, B. (2014). The risk in Petroleum Supply Chain: A review and typology. *Journal of Technology Management and Technopreneurship, 2*(2); 123-141.

Azadi, M.; Jafarian, M. Saen, R. F. Mkirhedayatian, S. M. (2015). A new fuzzy DEA model for evaluation of efficiency and effectiveness of suppliers in sustainable supply chain management context, *Computers & Operations Research*, 54: 274–285

Chopra, S., & Sodhi, M. S. (2004). Managing Risk to Avoid Supply-Chain Breakdown. Sloan *Management Review, 46*, (1); 53-61

Hendricks, K. B., Singhal, V. R. (2005). The effect of supply chain glitches on shareholder wealth. *Journal of Operation Management 21*(5); 501–523.

Ibrahim, G. M. (2022). Integration Challenges of Expatriates in the Nigerian Oil and Gas Sector, *Bayero Business Business,*

Nigerian National Petroleum Corporation. (2016). Profile / products. Retrieved from www.nnpcgroup.com

Onigbinde, I.O. (2014). Evaluation of petroleum products marketing in a globalizing economy: a conceptual evidence from Nigeria. Retrieved from: http://www.ejournal.org/wp-content/uploads/Evaluation-of-petroleum-products-Marketing-in-a-Globalizing -Economy-A-Conceptual-Evidence-from Nigeria pdf

Olsen, B. E., Haugland, S.A., Karlsen, E. and Husøy, G. J., 2005. Governance of complex procurements in the oil and gas industry. *Journal of Purchasing and Supply Management, 11*(1); 1-13.

Osuala, U. S. (2013). The sublimeness of sleaze in the NNPC in the fourth republic, 1999–2007: A historical conspectus. *Journal of Culture, Society and Development*, 2, 52-59.

Paul, S. K.; Sarker, R.; Essam, D. (2017). A quantitative model for disruption mitigation in a supply chain, *European Journal of Operational Research 257*(3): 881–895.

Rong!,Y. Zuo-Jun, M.S. & Snyder, L.V (2008). *The impact of ordering behavior on order-quantity variability;* a study of forward and reverse bullwhip effects.

Simba, S., Niemann, W., Kotzé, T. & Agigi, A., (2017). Supply chain risk management processes for resilience: A study of South African grocery manufacturers, *Journal of Transport and Supply Chain Management 11*(0), 32-61.

Snyder, L. V.; Atan, Z.; Peng, P.; Rong, Y.; Schmitt, A. J.; & Sinsoysal, B. (2014). Or/ms models for supply chain disruptions: *A review, IIE Transactions 48*(2); 89–109

Tang, O.; Musa, S. (2011). Identifying risk issues and research advancements in supply chain risk management, *International Journal of Production Economics* 133: 25–34.

Van Der Merwe.T. (2005*s*) Alignment *of the supply and demand within a supply chain*: Qualitative study (MSc thesis) University of pretoria, pretoria.

Williams, Z., Ponder, N. & Autry, C. W., (2009). Supply chain security culture: measure development and validation. *International Journal of Logistics Management, 20*(5); 243-260

Creative Business Research Journal
ISSN 2756-4940 (Paper) 2756-4932 (Online)
Volume 3, Number 1, March 2023

Bank Specific Attributes and Non-Performing Loans of Listed Deposit Money Banks in Nigeria

Authors:
Hamza Dadum Haruna [1]
Dr. Emmanuel Oladele Olaolu [2]
Dr. Jamila Shu'ara [3]

Affiliation:
[1] Department of Business Administration,
Faculty of Arts & Social Sciences, Gombe State University, Nigeria

[2&3] Department of Management and Social Sciences, Baze University, Abuja, Nigeria

Correspondence:
Hamza Dadum Haruna

e-mail:
harunadhamza1203@gsu.edu.ng

Dates:
Received: 01 Dec., 2022
Accepted: 13 Jan., 2023

How to cite this article:
Hamza, H. D., Oladele, E. O., & Shu'ara, J. (2023**).** Bank Specific Attributes and Non-Performing Loans of Listed Deposit Money Banks in Nigeria. *Creative Business Research Journal 3(1),* 137-149

Abstract

The study examined the effect of bank specific attributes on non-performing loans of listed Deposit Money Banks (DMBs) on the Nigerian exchange (NGX). The population of the study are all the thirteen (13) listed DMBs were used for the purpose of this research. Data from annual reports and accounts of the DMBs for the period 2005-2020 were analysed by way of multiple linear regressions analysis using STATA 12. 0. The results indicated that capital adequacy ratio (CAR) has no significant effect on non-performing loans of listed Deposit Money Banks in Nigeria. Liquidity ratio (LR) has a significant positive effect on non-performing loans of listed Deposit Money Banks in Nigeria. The study recommends that banks should reduce CAR to its barest minimum in order to reduce the NPL; more so, the LR should be reduced but not too-low to deprive them of the profit they stand to gain from loans. This would help in keeping the NPLs as low as possible

Keywords: Non-Performing Loans (NPLs), Capital Adequacy Ratio (CAR), Liquidity Ratio (LR)

1.0 Introduction

The financial services provided by Deposit Money Banks (DMBs) are essential to economic and financial development of a country and their role as financial intermediaries facilitate rapid economic growth. The main function of a bank is to redirect funds from the surplus unit to the deficit units in a profitable and sustainable manner. Funds gotten from the surplus units are given as loans to the deficit units of the economy. Loans represent a significant portion of banks assets. These loans sometimes turn to be non-performing loans when either or both the principal and the interest element are not paid by customers. According to Taiwo et al., (2021), a loan is considered to be non-performing when a bank affirms that a customer (debtor) cannot fulfil his/her obligation in relation to payment of interest and/or principal as at when due. The size/volume of the NPLs should be of special concern because it represents health and profitability. Furthermore, NPLs are burden for both the lender and borrower because it contracts credit supply and distort allocation of credit. The banking sector/industry is extremely sensitive due to the fact that deposit liabilities account for more than 85% of banks obligations. (Yulianti et al., 2018).

Capital adequacy (CAR) as one of the bank-specific attributes measures the balance sheet strength of banks and is used in enhancing the stability and efficiency of financial systems (Bright, 2020). The higher the CAR, the better the banks' ability to minimize credit losses, implying that banks can absorb credit losses with funds reserves determined from comparing capital to risk weight asset. (Jati 2021). Because the interest that banks should receive from debtors is not completely received, operating income from credit provision decreases as the volume of NPLs increases. Banks provide additional funds to accommodate the risk of credit loss through capital adequacy ratio the higher the CAR, the better the banks' ability to minimize credit risk, implying that banks can cover the credit risk with fund reserves determined from comparing capital to risk weight assets. Equally important bank-specific attribute that affect NPLs is liquidity. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. The most common financial ratios that reflect the liquidity position of a bank are customer deposit to total asset and total loan to customer deposits (Ongore et al., 2013).

Nigerian Deposit Money Banks (DMBs) tend to have suffered the plight of Non-Performing Loans (NPLs) in recent times in no small quantum. The NPLs of the DMBs based on CBN selected banking data (2018) shows that it has continued to rise from N286 Billion in the fourth quarter of 2012, to a high N2.245 Trillion in the third quarter of year 2018. These high NPLs are burden to both the lenders as well as the borrowers because of credit crunch by every of contraction in credit supply and distribution of credit that consequently show economic growth of a country. The CBN in 2019, adjusted the minimum LDR upward from 30% to 60%. In the same year (2019), it was further increased to 65%. Although the prescribed maximum CAR of DMBs remained unchanged from 2014-2019, the actual LDR of the DMBs account high to statistical Bulletin of CBN (2019) was 64.24% in 2014 and 60.10% in 2019.

In Nigeria, there is seems to be dearth of literature on the effect of bank specific attributes and Non-performing loans of listed DMBs in Nigeria. Atoi, (2018), in his studies focused only on Nonperforming Loans and its Effects on Banking Stability: Evidence from National and International Licensed Banks in Nigeria. Similarly, Adegboye et al., (2020), focused on corporate governance structure, Bank externalities and sensitivity of non-performing loans in Nigeria. Also, Jibreel et al. (2017), conducted a study on Determinants of Non-Performing Loans in Nigeria's Deposit Money Banks. Similarly, Abdul-Rehman et al., (2017) focused on macroeconomic and bank specific determinants but did not capture liquidity ratio as bank specific variable in their study. Therefore, this study attempts to fill the gap in existing literature by capturing bank specific attributes and non- performing loans. Therefore, this research tends to answer the following questions: What is the effect of capital adequacy ratio on non-performing loans of listed DMBs in Nigeria? and how does bank liquidity ratio affects non-performing loans of listed DMBs in Nigeria?

Objectives of the Study

The main objective of this study is to examine the effect of bank-specific attributes on non-performing loans of listed deposit money banks in Nigeria. Other specific objectives are as follows:

i. To assess the effect of capital adequacy ratio on non-performing loans of listed DMBs in Nigeria.

ii. To examine the effect of liquidity ratio on non-performing loans of listed DMBs in Nigeria.

Statement of the Hypotheses:

The study tested the following hypotheses:

H_{01}: Capital adequacy ratio has no significant effect on non-performing loans of listed DMBs in Nigeria

H_{02}: Liquidity ratio has no significant effect on non-performing loan of listed DMBs in Nigeria.

2.0 Literature Review

Capital Adequacy Ratio

Capital adequacy is a measure of a bank's financial strength, in terms of its ability to withstand operational and abnormal losses. Further considering the regulatory requirement on the minimum capital required to be maintained by banks, capital adequacy also indicates the ability of bank to undertake additional business. The size of capital provides financial flexibility for bank and financial institution. Banks with high capital ratio tend to earn more profit through translating the safety advantage into profit (Ayele, 2012). Capital adequacy ratio determines risk behaviour of banks. It is a measure of banks solvency and ability to absorb risk. The ratio is used to protect depositors and promote stability and efficiency of financial systems.

Hassan and Bashir (2003) stated that the ratio of equity to total assets is one of the basic ratios for capital strength. It shows a banks' ability to absorb losses and handle risk exposure. Kashyap, Rajan and Stein (2002) indicate that, capital adequacy is used to protect depositors and promote the stability and efficiency of financial systems around the world. Two types of capital are measured that is tier one capital, which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

Liquidity Ratio

Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors and they are double as the customers. Dang (2011) noted that liquidity level is positively related with bank profitability. Thus, banks that maintain adequate levels of liquidity tend to be more profitable. The most common financial ratios that reflect the liquidity position of a bank are customer deposit to total asset and total loan to customer deposits (Ongore et al., 2013). Similarly, Makaa (2013) found positive and significant relationship between liquidity and financial performance. Hassan et al. (2003) noted that net loans to total assets ratio is a liquidity ratio measuring the portion of the bank's assets tied up in loans. Higher net loans to assets ratio may be indicative of better bank performance because of increases in interest income

Increase in bank liquidity improves asset quality of the bank (Bonfim, 2009; Bunn et al., 2003). The findings suggest that liquidity of bank increases both credit supply and confidence which increases ability of management to recover loans from customer. The volume of loans detained is used to measure the efficiency of asset portfolio management. In accordance with the prior literature, total loans-to-total assets ratio is considered as a crucial indicator of liquidity. Not to mention that, liquidity is essential in explaining bank profitability, and loans are the main source of income and are estimated to have a positive impact on bank performance (Menicucci et al., 2016). However, banks having high proportion of liquid assets are unlikely to gain higher profits, but are less exposed to liquidity risk (Bourke, 1989). Thus, various literatures found a positive relationship between liquidity and profitability (Bashir, 2003; Sufian et al., 2009). In additions, various prior studies support the positive relationship between loan ratio and bank's profitability. Since loans are the main source of income for the banks, therefore the more the banks will lend, the higher will be the profitability as they earn large amount of interest from its financing in various sectors of the economy.

Non-Performing Loans (NPL)

Non-performing loan generally refers to loans that do not generate income for a relatively long period of time; that is, the principal and/or interest on these loans has been left unpaid for at least 90 days. These loans could negatively affect the level of private investment, increase deposit liabilities and constrain the scope of bank credit to the private sector by reducing the capital of banks, falling savings rates as a result of bank runs, accumulation of losses and, concurrently, increasing provisions to compensate for these losses. Impaired loans also have a potential to reduce private consumption and, in the absence of deposit-guarantee mechanisms to protect small depositors, they can be a source of economic contraction, especially when coupled with declining gross capital formation in the context of a credit crunch caused by the erosion of bank equity and assets (Fofack, 2005).

A bank loan is considered non-performing when more than 90 days pass without the borrower paying the agreed instalments or interest. Non-performing loans are also called "bad debt" (European Central Bank, 2016). The term Non-Performing Loans is used interchangeably with Bad Loans and Impaired Loans as stressed by (Fofack, 2005). Similarly, Berger et al., (1997) also describe these types of loans as "problem loans." In a broad context, loans that have been outstanding for both interest and principal for a period contrary to the terms and conditions set out in the loan agreement are considered to be non-performing loans. (Gorther,2001).

Empirical Review

Hersugondo et al. (2021) The study examines the impact of bank-level factors like non-performing assets, capital adequacy, and insolvency risk on bank performance. This study employs a quantitative method with panel data regression. The data was taken from the annual financial statements of state-owned commercial banks and private commercial banks in Indonesia from 2015 to 2019 using a purposive sampling method with a total sample of 470 observations. The result of the study shows that non-performing assets (NPA) have a significant negative impact on bank performance. Capital adequacy has a significant negative impact on bank performance. Insolvency risk for a bank means it cannot repay its depositors because its liabilities are greater than its assets; therefore, it has a significant impact on bank performance. This study is expected to help banks to understand how to manage the risks they face and to maintain their performance. This study uses 'size' and 'age of bank' as control variables and for credit risk and insolvency risk, *Z*-Score is used. The study does not provide any recommendation based on the findings of the study

Mahyoub et al., (2021) examine the factors influencing non-performing loans (NPLs) ratio for Malaysian commercial banks from the period 2010 to 2018.Bank-specific factors and macroeconomic factors were included in the analysis. Using panel data of fifteen commercial banks in Malaysia. The finding reveals that capital adequacy ratio is a significant factor in influencing the sample banks' level of non-performing loans. All other bank-specific factors employed in the analysis were found to be insignificant. In addition, based on the results provided by real gross domestic products and inflation, we can conclude that economic situation does not impact the non-performing loans level of the sample commercial banks.

It has been concluded that the loan quality of the sample bank is questionable. In order to ensure an effective operating and high performance of banks, banks require a deep concentration on their loan quality that would not only generate income, but also minimize negative and ineffective outcome to the banks. In addition, this study can be valuable to supervisory authorities, governments, and the banking industries in forecasting non-performing loans as this study shows the determinants that shape the level of Non-performing loans. The study combines both Bank-specific and macroeconomic factors while my study will focus on Bank-specific factors only.

Bashir, (2021) investigate the capacity of bank-specific forces like capital adequacy and management quality for explaining the commercial bank's liquidity decision in Pakistan. This empirical research study uses the financial statements of 23 commercial banks with eleven years' frequency; 2008-2018. The study employs the panel-data modelling and estimation method for the analysis of relevant data. Bank's liquidity management decision was used as the outcome variable while the independent variables were capital adequacy ratio and management quality ratio. The funding cost ratio, profitability ratio, deposit ratio, and non-performing loan ratio were used as the control variable. This empirical research finds that the commercial bank's liquidity decision is strongly supported due to increments in capital adequacy ratio as well as in management quality ratio while funding cost ratio and non-performing loans significantly reduce the existing level of liquidity in commercial banks of Pakistan. The study contributes to the understanding of liquidity decisions not only in Pakistan but also in other countries in the Asian-region. The factors used for explaining liquidity decisions of the banking sector in this study are not necessarily the only factors in this domain but may include further industry-based, firm-specific based, and macro-level factors in future research. However, the policymakers in the commercial banking sector of Pakistan are recommended to consider the significant factors of this study while deciding on setting an appropriate level of liquidity in their banks for the proper functioning of their day to day operations. The study used non-performing loan ratio as one of the control variables while in my study is a dependent variable.

Swandewi et al., (2021) looked at capital adequacy ratio to mediate the effect of non-performing loan on returns on assets in public commercial banks. The purpose of this study is to analyse the effect of non-performing loans on return on assets with a capital adequacy ratio as a mediator. This research was conducted at banking companies listed on the Indonesia Stock Exchange, with a total sample of 24 banks. Data was collected from the company's financial statements. The analysis technique used is path analysis. The results show that there is a negative and significant relationship between non-performing loans and capital adequacy ratio. The capital adequacy ratio has a positive and significant relationship with return on assets. Non-performing loan has a negative and significant relationship with return on assets. Based on the research results, it is proven that the Capital Adequacy Ratio mediates the effect of non-performing loans on return on assets. The study recommends that Banks must pay attention to the level of capital adequacy, so that banks can channel more credit and so that banks can finance assets that contain risk, where the ROA of a bank is not affected by the level of non-performing loans. Capital adequacy ratio was used as a mediating variable not as a specific objective.

Jati (2021) conducted a study on the effect of nonperforming loan and capital adequacy ratio on return on assets in bank Victoria international. This study specifically studied capital adequacy ratio and nonperforming loan as specific objective. The population in this study is based on financial reports for 10 years of PT. Bank Victoria International. The sampling technique in this research is a saturated sample, where all members of the population are sampled. Thus the sample in this study was financial statements for 10 years. The analysis technique uses statistical analysis with regression testing, correlation, determination, and hypothesis testing for the period of 2009-2018. The results of this study found out that non-performing loans have a significant effect on return on assets. Capital Adequacy Ratio has a significant effect on Return on Assets, Non-Performing Loan and Capital Adequacy Ratio simultaneously has a significant effect on Return on Assets. The study recommends that to maintain the level of bank capital (CAR), it is better if PT. Bank Victoria International Tbk pays more attention to the amount of capital owned by a company because capital is the most important factor that a bank must-have. To anticipate the development of the credit or loan expansion business scale. Capital adequacy ratio and nonperforming loan are together used as specific objectives for this author, while this study used capital adequacy as specific objective and non-performing loan as independent variable.

Muawanah et al., (2021) analyzed the effect of capital adequacy ratio (CAR), non-performing financing (NPF), and financing to deposit Ratio (FDR) on profitability (case study on Islamic commercial banks in Indonesia). This research used secondary data in the form Islamic Commercial Bank financial statements. The population in this study is Islamic Commercial Banks listed on the Indonesia Stock Exchange in 2016-2018. The sampling technique employed was purposive sampling. A sample of 3 banks was obtained. Multiple linear regression was used. Classical assumption analysis was done prior to data analysis. Hypothesis testing used t-test, F test, and the coefficient of determination (R2).

Gunawan et al., (2021) aimed to examine the effect of Non Performing Financing (NPF), Capital Adequacy Ratio (CAR), and inflation on liquidity (Finance to Deposit Ratio) in Islamic banking. This type of research is quantitative research. The population of this research is all Islamic banking companies registered with the Financial Services Authority (OJK) for the 2015-2019 period, totalling 15. The research sample was selected by purposive sampling method so that 12 banking companies were obtained. The data analysis used multiple linear regression analysis. Data is processed with IBM SPSS Version 22.0 for windows. The results showed that the Non Performing Financing had no effect on the Finance to Deposit Ratio, while the Capital Adequacy Ratio and inflation had an effect on the Finance to Deposit Ratio. In addition, the Finance to Deposit Ratio, Capital Adequacy Ratio, and inflation have a significant effect on the level of the Finance to Deposit Ratio. The value of the determinant coefficient (R2) is 0.185 or 18.5%. This shows that the variable Non Performing Financing, Capital Adequacy Ratio, and Inflation have an effect on Liquidity at Islamic Commercial Banks. Nonperforming loan and capital adequacy ratio were used as dependent variables.

Nguyen et al., (2021) studied the impact of liquidity transformation to vietnamese commercial banks adequacy ratio. The purpose of this research is to find out the impact of liquidity transformation on capital adequacy ratio (CAR) of Vietnamese commercial banks. By using Generalized Least Square regression model for 16 Vietnamese banks in the period 2012-2020 with dependent variable 'capital adequacy ratio CAR', independent variable 'lag liquidity transformation LTG t-1' and some additional control variables (namely: the lag capital adequacy ratio CARt-1, return on equity ROE, credit risk CRSK, gross domestic product GDP, inflation rate INFL), this study finds that liquidity transformation (LTGt-1) has negative effect on capital adequacy ratio (CAR), while the variables lag capital adequacy ratio (CARt-1) and credit risk (CRSK) are positively related to CAR. The study recommends that Banks need to build a large database in order to accurately identify their liquidity convertibility (represented by liquidity transformation gap) to manage their capital adequacy ratio. This study also used limited variables focusing on liquidity and capital adequacy ratio, where bank size and loan to deposit ration can add much quality to the study.

Sikanda et al. (2021) focuses on liquidity creation and testing of financial variables which would lead to the formation of a macro model to be used by Zambian commercial bank regulatory bodies such as Bank of Zambia when coming up with rules or interventions to help manage liquidity in the Banking Sector. The study further focused much on both the market and funding risks banks might face and demonstrated how the macro pressure-testing model would be designed and implemented. The research was done by reviewing the financial statements of all commercial banks in Zambia from 2008 to 2018. All Zambian banks were selected to ensure more accurate finding that represent the entire banking industry as different bank's face unique liquidity challenges. It was thus important to appreciate the unique challenges so that a model is developed that addresses all such liquidity encounters. This was purely a quantitative study as it required the review of a huge quantity of financial data. It was generally found that high capital and deposit base position has a positive impact on liquidity of banks. It was further established that return on assets among the two other reviewed variables namely capital adequacy and customer deposit base did not have a significant impact on the liquidity of banks in Zambia divergent to other studies done in developed countries. This author focused on bank liquidity only, leaving out bank size, loan to deposit ration among others.

Taiwo et al., (2021) examined the effect of non-performing loans on liquidity of Deposit Money Banks (DMBs) in Nigeria. A panel regression analysis was performed on a data of 15 quoted DMBs from 2009 to 2019, in order to examine the correlation between the explained variable (banks' liquidity) and Non-Performing Loans (NPL) while other explanatory variables- Capital Adequacy Ratio (CAR), Bank Size (BS), Loan Growth (LG), Monetary Policy Rate (MPR), Gross Domestic Product (GDP) and Inflation were taken into consideration. Data were extracted from the banks' yearly financial statements and the World Bank Financial Statistics. Based on the empirical findings, the study found only four variables-Non Performing Loans, Capital Adequacy Ratio, Bank Size and Inflation significantly related at 5% significant level with banks' liquidity while the other three; Gross Domestic Product, Loan Growth and Monetary Policy Rate were identified as insignificant. The finding also revealed that NPLs has negative effect on banks' liquidity while CAR, BS and INF showed positive relationship. The study recommends strict compliance of banks with the NPLs tolerable limit set by the Central bank. It also suggests that the CBN take proactive measure to ensure the banks' compliance with the minimum capital requirement. This author mixed the bank specific variables and microeconomic variable.

Theoretical Framework

Institutional Memory Theory

The underpinning theory of this study shall be Berger and Udell theory. The theory was propounded in (2004), it articulated the institutional memory theory linking loan growth to credit standards. The theory explains how a bank loan grows due to easing of credit standards as time lapses since their last credit bust. The capacity of loan departments to evaluate risk and identify potential future problems deteriorates as time passes since their last learning experience with problem loans. Early in a bank's lending cycle, the lessons of the banks last bust are still fresh in the memory of loan officers who witnessed the ex-post realization of their prior loan decisions. As the bank rebounds from its most recent experience with problem loans, the lessons are fresh in the minds of those loans officers who survived the experience.

Foos et al (2010) noted that due to passage of time since the last loan bust, the loan officer skills tend to deteriorate. The officer tends to originate loans without proper screening, analysis and structuring and fails to monitor loans after they are granted. The officer also fails to design and implement work out strategies when these loans become stressed. The result is substantial growth in a banks' loan portfolio without due consideration of inherent credit risk. In the end a bank's loan boom turns to a bust. This prompts loan officers to turn their attention to managing their distressed credits. The process of addressing loan problems helps restore institutional memory as officers re-learn how to make good loans, how to monitor them and how to avoid making bad loans.

The factor causing deterioration in credit standards could be attributed to a number of factors. First, decrease in fraction of experienced loan officers. New loan officers are hired and trained to replace experienced officers who leave the bank or are promoted to senior positions elsewhere in the bank. The new officers lack the experience of loan portfolio bust.

Also, new loan officers may also be hired to service increased loan demand as time passes since the banks last bust, further reducing the average experience of the staff. Another factor driving the deterioration in loan officer ability is the atrophy of lending skills by some individual loan officers who have had the experience of a loan bust, but have begun to forget the lessons of the past. This may affect some experienced officers more than others may. Further, a banks' loan review function is likely to functions less effectively since the banks last bust because there are fewer observed problem loans to use in evaluating loan officers. This worsens the agency problem between loan officers and bank management making loan review process less effective (Berger & Udell, 2004).

3.0 Methodology

Population and Sample Selection

The population of this study is made up of thirteen (13) listed deposit money banks on the floor of the Nigerian Exchange Group from year 2005 to 2020 (Access Bank PLC, Ecobank Nigeria PLC, Fidelity Bank PLC, First City Monument Bank (FCMB) PLC, First Bank of Nigeria (FBN) PLC, Guaranty Trust Bank (GTB) PLC, Union Bank of Nigeria PLC, United Bank for Africa (UBA) PLC, Zenith Bank PLC, Sterling Bank PLC, Unity Bank PLC, Stanbic IBTC Bank PLC, and Wema Bank PLC. This period is considered a post recapitalization period for DMBs. As at December, 2020, 13 Deposit Money Banks were listed on the exchange. In this study the entire population will be studied. This is due to the small size of the population; however, this study applied census method.

Data Source and Analysis Method

Secondary data were collected from annual reports and accounts of the sample banks for a period of sixteen years (16), from from2005 to 2020. To examine the effect of bank specific attributes on non-performing loans of listed Deposit Money Banks in Nigeria, panel data methodology of Ordinary Least Square (OLS), Fixed Effect (FE) and Random Effect (RE) was employed in analysing the data. STATA software version 12.0 was used in data analysis.

Study Variable and their Measurement

Two sets of variables are used in this study, namely, the dependent variable and the independent variables. Consistent with the prior studies of Swandewi and Purnawati (2021), Jati (2021), Gunawan and Manda (2021), Muawanah and Imronudin (2021) among others, this study uses non-performing loans (NPLs) as dependent variable which was measures with the ratio of non-performing loans to total loans (capital adequacy ratio and liquidity ratio) were considered as independent variables. Capital adequacy ratio is measured by the ratio of shareholders' equity to total assets and liquidity ratio is measured by the ratio of total loans to total assets. This is consistent with the measurements of Swandewi & Purnawati (2021) and Gunawan and Manda (2021)

Model Specification

This study adopts with modification the model used by Valipour, Moradi and Farsi (2012). Specifically, the model used in this study is as stated below.

$$NPL_{it} = \partial 0 + \beta_1 CAR_{it} + \beta_2 LR_{it} + \varepsilon_{it}$$

Where;
NPL_{it} = Non-performing Loan of bank i at time t
CAR_{it} = Capital Adequacy Ratio of bank i at time t
LR_{it} = Liquidity Ratio of bank i at time t

ε = Standard error
$\partial 0$ = Intercept
β_1-β_2 = Coefficients of the independent variables

4.0 RESULTS AND DISCUSSION

Descriptive statistics

Table 1 presents the descriptive statistics of the variables used in the study.

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min.	Max.
NPL	208	.1114446	.1241814	.011	.74
CAR	208	.1169063	.1954199	-1.54749	.5033086
LR	208	.3849924	.1108579	.0572371	.6134915

Source: Computed by the Author from Annual Reports of the Sampled Banks (2005-2020) using STATA 12.0

From Table 1, it can be observed that the number of observations for each variable is 208. This is in line with the number of banks which are 13, with the study period of 16 years. The non-performing loans have a mean of .11. This implies that on the average, the banks have N .11 as non-performing loan per every naira value of loan given, with the minimum and maximum values of N .011 and N .74 respectively. Capital adequacy ratio has a mean value of .117, implying that on the average, banks in Nigeria have a capital adequacy ratio of .117 with a maximum value of .503 and minimum value of -1.547. Liquidity has a mean value of .057 which implies that, on the average, banks in Nigeria have .057 as total loan value per every naira of asset. The minimum and the maximum values of liquidity are .057 and .613 respectively.

Correlation Result

Table 2: Correlation Matrix of the Variables

Variables	NPL	CAR	LR
NPL	1.0000		
CAR	-0.3004	1.0000	
LR	-0.3456	0.2080	1.0000

Source: Computed by the Author from Annual Reports of the Sampled Banks (2005-2020) using STATA 12.0

The correlation result in Table 2 shows the correlation coefficients on the relationship between the dependent variables (non-performing loans) and independent variables (capital adequacy ratio and liquidity). The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The correlation coefficients on the main diagonal are 1.0, because each variable has a perfect positive linear relationship with itself. From Table 2, it can be seen that non-performing loans has negative significant relationship with capital adequacy ratio while the relationship between non-performing loans and liquidity is negative significant. Furthermore, the correlation table indicates that correlation between independent variables is generally low. Thus, suggests absence of multicollinearity.

```
. hausman re fe

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |       re           fe         Difference          S.E.
-------------+----------------------------------------------------------------
         car |   -.0418135     .0080927       -.0499063         .007061
         liq |   -.3655776    -.3807386        .015161        .0127535
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(2) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =       50.17
                Prob>chi2 =      0.0000
```

From the result of the Hausman test fixed effect is appropriate to be used because the P value is less 5%.

```
Fixed-effects (within) regression               Number of obs      =       208
Group variable: company                         Number of groups   =        13

R-sq:  within  = 0.1480                         Obs per group: min =        16
       Between16.76 = 0.0612                                    avg =      16.0
       overall = 0.1134                                    max =        16

                                                F(2,193)           =     16.76
corr(u_i, Xb)  = -0.0012                        Prob > F           =    0.0000

------------------------------------------------------------------------------
         npl |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         car |   .0080927   .0379591     0.21   0.831    -.0667752    .0829607
         liq |  -.3807386   .0667132    -5.71   0.000    -.5123191   -.2491581
       _cons |   .2570799   .0259496     9.91   0.000     .2058987    .3082612
-------------+----------------------------------------------------------------
     sigma_u |  .07887558
     sigma_e |  .09205921
         rho |  .42332937   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(12, 193) =     9.84             Prob > F = 0.0000

. estimate store fe
```

From Table 3, it can be observed that the number of observations for each variable is 208. This is in line with the number of banks which are 13, with the study period of 16 years. The F statistics is 16.76 and probability value is very small and is less than 5% which indicate that the model is suitable. However capital adequacy ratio is not significant because is 83.1% which is above 5% and liquidity is significant to explain non-performing loans because is less 5%.

According to the result, capital adequacy ratio has a negative effect on non-performing loans of listed Deposit Money Banks in Nigeria. This suggests that, a decrease in the capital adequacy ratio will lead to decrease in the non-performing loans of the banks. This finding supports the work of (Swandewi & Purnawati2021, Jati 2021) Based on this result, the research hypothesis which states that capital adequacy ratio has no significant effect on non-performing loans of listed Deposit Money Banks in Nigeria is accepted.

According to the result also, liquidity has a significant positive effect on non-performing loans of listed Deposit Money Banks in

Nigeria. This suggests that, an increase in the liquidity level will lead to increase in the non-performing loans of the banks. This finding supports the work of (Taiwo & Mike 2021, Nguyen & Chau 2021) Based on this result, the research hypothesis which states that liquidity has no significant effect on non-performing loans of listed Deposit Money Banks in Nigeria is rejected.

Conclusion

Capital adequacy ratio has no significant effect on non-performing loans of listed Deposit Money Banks in Nigeria. That, a decrease in the capital adequacy ratio will lead to decrease in the non-performing loans of the banks. Based on this result, the research hypothesis which states that capital adequacy ratio has no significant effect on non-performing loans of listed Deposit Money Banks in Nigeria is accepted.

Liquidity has a significant positive effect on non-performing loans of listed Deposit Money Banks in Nigeria. This suggests that, an increase in the liquidity level will lead to increase in the non-performing loans of the banks. Based on this result, the research hypothesis which states that liquidity has no significant effect on non-performing loans of listed Deposit Money Banks in Nigeria is rejected.

Recommendations

The study recommends that banks should reduce CAR to its barest minimum in order to reduce the NPL, more so, the LR hould be reduced but not too-low to deprive them of the profit they stand to gain from loans. This would help in keeping the NPLs as low as possible.

References

Bashir, Z. (2021). Capital Adequacy and Management Quality for Banking Liquidity Management Decision in Pakistan. *Rafique, ZZ, Toor, KN, & Bashir*, (2020), 25-42.

Gujarati, N. D. (2003). *Basic Econometrics* (4th edition). New York: McGraw – Hill.

Hersugondo, H., Anjani, N., & Pamungkas, I. D. (2021). The Role of Non-Performing Asset, Capital, Adequacy and Insolvency Risk on Bank Performance: A Case Study in Indonesia. *The Journal of Asian Finance, Economics and Business*, *8*(3), 319-329.

Ihegboro, I. M., & Egbo, O. P. The Effect of Non-Performing Loans on the Performance of Deposit Money Banks in Nigeria in the Wake of a Global Economic Recession.

Jati, W. (2021). The Effect of Non-Performing Loan and Capital Adequacy Ratio on Return on Assets in Bank Victoria International, Tbk Period 2009-2018. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal) Volume*, *4*.

Mahyoub, M., & Said, R. M. (2021). Factors Influencing Non-Performing Loans: Empirical Evidence from Commercial Banks in Malaysia. *Research Journal of Business and Management*, *8*(3), 160-166.

Muawanah, E., & Imronudin, I. (2021). Analysis of The Effect of Capital Adequacy Ratio, Non Performing Financing, and Financing to Deposit Ratio On Profitability: A Case Study On Islamic Commercial Banks in Indonesia. *Journal of Management and Islamic Finance*, *1*(1), 32-47.

Nguyen, H. Y. L., & Chau, N. M. (2021) Impact of Liquidity Transformation to

Vietnamese Commercial Banks Adequacy Ratio.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International journal of economics and financial issues*, *3*(1), 237.

Taiwo, I., & Mike, M. E. E. (2021). Empirical Analysis of Non-Performing Loans and Liquidity of Deposit Money Banks: Nigeria Experience. *Journal of International Business and Management*, *4*(9), 01-14.

Sathya, V., & Bright, A. O. (2020). CAMELS model analysis for district central co-operative banking enterprises in Andra Pradesh. *International Journal of Enterprise Network Management*, *11*(3), 233-250.

Swandewi, N. K. M., & Purnawati, N. K. (2021). Capital Adequacy Ratio Mediates the Effect of Non-Performing Loan on Returns on Assets in Public Commercial Banks. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, *5*(1), 651-656.

Yulianti, E., Aliamin, A., & Ibrahim, R. (2018). The Effect of Capital Adequacy and Bank Size on Non-Performing Loans in Indonesian Public Banks. *Journal of Accounting Research, Organization and Economics*, *1*(2), 205-214.

Creative Business Research Journal
ISSN 2756-4940 (Paper) 2756-4932 (Online)
Volume 3, Number 1, March 2023
Department of Business Administration
Gombe State University, Nigeria

Impact of Money Supply on Inflation in Nigeria (1975-2021)

Authors:
Adam Abubakar Sulaiman [1]
Abubakar Aliyu Dangana [2]

Affiliation:
[1] Department of Economics, Pen Resource University, Gombe, Nigeria

[2] Department of Business Administration, Pen Resource University, Gombe, Nigeria

Correspondence:
Adam Abubakar Sulaiman

e-mail:
adam.abubakar@pru.edu.ng

Dates:
Received: 09 Dec., 2022
Accepted: 16 Jan., 2023

How to cite this article:
Sulaiman, A. A., & Dangana, A. A. (2023**).** The Impact of Money Supply on Inflation in Nigeria (1975-2021). *Creative Business Research Journal 3(1),* 150-155

Abstract

The study examined the impact of money supply on inflation in Nigeria. Time series data range between 1975-2021 was used. The study employs ordinary least square (OLS) method of estimation and the stationarity properties of the model were also explored. The study carried out by means of secondary data and used Inflation (INF) as the Dependent Variable while Money supply (M2), Gross domestic product (GDP), Government Expenditure (GE) and interest rate (IRR) as independent variables. The results revealed from the empirical analysis showed that money supply has negative impact on inflation in Nigeria. Based on these findings, this study recommends that central bank should regulates the amount of money in circulation and use tools like; influencing interest rates, printing money, and setting bank reserve requirements to control the money supply in order to reduce the incidence of inflation in Nigeria.

Keywords: Inflation rate, Money Supply, Gross Domestic Product, Government Expenditure, interest rate and (OLS).

1.0 Introduction

The impact of money supply on Inflation have been a great issue of concern to policymakers in Nigeria, in recent years given the need to stimulate domestic demand and to meet government’s huge fiscal obligations in a post-recessionary period. Although, Price level in Nigeria has witnessed profound fluctuations since 1970. Inflation has been defined as a persistent and appreciable rise in the general price level of prices (Jhingan, 2010). According to the classical theory, money is a veil and it plays a neutral role in the economy. John Maynard Keynes and his followers emphasized the increase in aggregate demand as the source of demand-pull inflation (D N Dwivedi 2011) Money Supply is the life wire of all economic activities and so has powerful effects on the economic life of any nation (Umeora 2019). Price stability is not necessarily the absence of inflation but a low and stable inflation rate. With rising inflation rate, an economy's purchasing power evaporates, uncertainty covers the economic sphere and economic growth is retarded (Emerenini 2020). The study aims to investigate the relationship between money supply and inflation in Nigeria. To achieve this, some distinct objectives are investigated; ascertain whether inflation is to a large extent a monetary phenomenon in Nigeria, highlight the link between real GDP growth and inflation in Nigeria and to determine whether government deficit financing is a key determinant of inflation Nigeria. The following hypotheses will be addressed: - Ho: Money supply has no significant impact on inflation in Nigeria. Though one cannot categorically state that, an increase in money supply will fuel inflation or not, or will have negative or positive impact on inflation in Nigeria. For example, money supply increases by 11.95 and 15.20 per cent in 1982 and 1983 correspondingly, while inflation during the same period was 7.7 and 23.2 per cent respectively. Still, when money supply falls by 15.40 and 11.93 per cent in 1983 and 1984 correspondingly, inflation rate stood at 23.20 and 39.60 per cent in 1983 and 1984 respectively. The trend of inflationary rate and money supply in Nigeria that had just been analyzed above has brought to question that real impact of money supply on inflation in Nigeria. Henceforth, this research examines the impact of money supply on inflation in Nigeria over the period of 46 years (1975-2021). The study provides an avenue for more critical appraisal of the impact of money supply on inflation in Nigeria by including Gross domestic product, Government Expenditure and interest rate as some of the variables that are missing in all the past studies. Variable such as inflation rate, growth rate of money supply, Gross domestic product, Government Expenditure and interest, will be used in the methodology of this research.

Literature Review

The impact of money supply on inflation is a very common debate in the economic literature. Many economists have analyzed the relationship among these variables over many years. This study provides empirical evidence and contributes to the body of knowledge as regard money supply and inflation in Nigeria. The effect of money supply on inflation in Nigeria has been empirically examined by several authors. Olalere (2019) examined the impact of money supply on inflation in Nigeria between 1980 and 2009, using Vector Error Correction Mode (VECM) The results of the test established a significant long run positive relationship between money supply and inflation in Nigeria. Imimole & Enoma (2018) employed autoregressive distributed lag. The results show that exchange rate appreciation, money supply and real gross domestic product were the main determinants of inflation in Nigeria and naira depreciation has positive and significant long-run effect on inflation in Nigeria. Oladipo and Akinbobola (2017) used pair-wise granger causality test in determining the causal relationship among the variables. The results showed that no causal relationship from inflation to budget deficit was found. Nevertheless, causal link from budget deficit to inflation was established in Nigeria. Once more, Chimobi and Igwe (2015) examine the casualty among budget deficits, money supply growth and inflation, using vector error correction model (VECM) and pair-wise granger casualty test. They discover that, inflation and budget as a proxy for increase in money supply have mutual link. Jaumotte and & Morsy (2017) separated the influence of monetary growth from exchange rate changes on prevailing and predicted rates of inflation. The sample covers ten African countries using the Vector autoregression analysis, they suggest that monetary dynamics dominate inflation levels in four countries, while in three countries; exchange rate depreciations are the dominant factor. Chimobi and Uche (2017) examined the relationship between money, inflation and output in Nigeria covering the period of 1980 to 2015. Using co-integration and granger-causality test analysis, the study revealed no existence of a co-integrating vector in the series used. Bakare (2011) critically examined the dynamic and simultaneous inter-relationship between inflation and its determinants in Nigeria within the period 1970 – 2011. The Augmented Engle-Granger (AEG), cointegration test and error correction model were employed. The estimated result indicates substantial benefits accrued when moving from high or moderate rate to low level of inflation. Asekunowo (2016) identify the traditional and institutional inflation variables responsible for inflation phenomenon and the magnitude of the contribution of the identified variables to the rise in general price level. using the Autoregressive Distributed Lag (ARDL) bounds test. The results showed that there existed a longrun co-movement among the variables. Also, the ordinary least squares estimate showed that Real Effective Exchange Rate, Lagged Consumer Price Index, Real Broad Money and Real Profits were statistically significant in influencing Consumer Price Index. The short-run relationship shows that 60% of disequilibrium errors from the previous year's shock converge back to the long-run equilibrium in the current year.

Methodology

Model Specification

The population of this study consists of Nigerian economy as represented by inflation Growth rate, Money supply, gross domestic product, Government expenditure and Interest rate from 1975-2021. Therefore; the sample period for the research work is 46 years.

In this study, a sample size of Inflation rate is given as:

$$GRINFL = \beta_0 + \beta_1 MS + \beta_2 GDP + \beta_3 GEP + U_t$$

Where:
GRINFL=Inflation Rate (proxy for economic growth)
MS=Money supply
GDP= Gross Domestic product
GEP= Government expenditure
IRR= Interest rate

Sources of Data

National Bureau of Statistics, World Bank, and Central Bank of Nigeria Statistical Bulletin. The data covers the periods from 1975- 2021.

Method of Estimation

In order to achieved the stated objectives this study employed ordinary least square (OLS) method of parameters estimation technique using econometric views 12 (e-views 12) statistical package to run the regression of the data so as to find the level of relationship between the dependent and independent variables. The evaluation will be based on three criteria; economic criteria, statistical criteria and econometrics criteria.

Diagnosis tests: the study test for auto-correlation using the Durbin-Watson test for multi co-linearity, normality and Heteroskedasticity.

Durbin-Watson test: This is determined by the theory of econometrics. It is used to test for the percentage of first auto-correlation. The level of significance used is 5 percent.

Results and Discussions

Unit Root Tests:

Table 1: Augmented Dickey Fuller (ADF)

Variables	t-Statistic	First difference at
Inflation	-3.070020	0.01
Money Supply	-2.926388	0.01
GDP	-5.170002	0.01
Government Expenditure	-6.827025	0.01
Interest Rate	-6.314217	0.01

Estimation of Regression Model

The empirical results based on OLS estimation technique, are presented in the table 2 below

Table 2 Results of OLS Regression

Variable	Coefficient	t-Statistic	Prob.
C	138.0674	0.100894	0.9204
MS	-0.160697	-3.441152	0.0020
GDP	0.385488	17.05609	0.0000
GE	0.180483	2.632629	0.0141
IRR	-0.472654	-45.04701	0.0000
RESID01	0.998565	81.03644	0.0000
AR(1)	1.003217	27.06540	0.0000

From the table above, the interpretation of the result with regards to the coefficient of various regressors is stated as follows:

The estimate coefficients which are -0.160697 for Money supply (MS) shows that a unit changes in Money supply will cause a -0.160697 units decrease in Inflation. which is not true according to the Quantity theory of Money.

So, it can be concluded that, supply of money is the one of the sources of inflation but inflation may not occur at the same proportion at which supply of money changes.

GDP which have estimate coefficients 0.385488 shows that a unit change in GDP will cause a 0.385488 units increase in Inflation, that means GDP has responsible for inflation.

Similarly, Government Expenditure estimate coefficients 0.180483 shows that a unit change in government expenditure will cause a 0.180483 units increase in inflation, which means government expenditure has responsible for inflation too. whereas estimate coefficients -0.472654 for interest rate shows that a unit change in interest rate will cause a -0.472654 units Decrease in inflation, it means interest rate impacting inflation negatively which all of them confirm the theory.

Finally, the study examined the impact of Money Supply on Inflation in Nigeria over the period of 1975 to 2021 by employing ordinary least square (OLS) method of estimation. The finding shows that Money Supply has Negative impact on Inflation in Nigeria. Although from the result of this finding, it is revealed that there is relationship between money supply and Inflation in Nigeria. Money supply has negatively impact on the Inflation in Nigeria over the period under study. Nevertheless, from the result of the findings, it’s been also revealed that there is a negative relationship between interest rate (IRR) and Inflation (GRINF) in Nigeria.

Conclusion and Policy Recommendation

Empirical evidence show that Inflation is always and everywhere a monetary phenomenon Whenever a country’s inflation rate is extremely high for a sustained period of time, its rate of money supply growth is also extremely high.

It remains to be seen whether or not the policy-makers are mindful of the evil effects

of Inflation. Our results strongly support the need for increasing money supply growth in the economy. The findings of the study have shown that much money in circulation is not responsible for the current double digit of inflation in Nigeria.
Under normal circumstances, Money supply has positive impact on inflation, increasing Money creation may increase employments and little raise in price but in long run it has disadvantages since it may cause inflation. Despite neglect of monetary, empirical evidence from this study has shown that there is a negative and significant relationship between money supply and inflation in Nigeria. This so forth, there is an increase in money supply, the rate of inflation decreases in line with the empirical finding of the research work. Hence, to reduce the level of inflation and ensure price stability in Nigeria, the monetary authority needs to adjust the amount of money supply into the Nigerian economy. Therefore, should government intensify the effort to combat inflation by encouraging the monetary authority to put in place policies measures that are gear toward increasing the amount of money in circulation.

References

Akinbobola, J. O. (2017). Budget Deficit and Inflation in Nigeria: A causal Relationship. Journal of Emerging Trends in Economics and Management (JETEMS). 2(1) 1-8.

Asekunowo (2016) The Causes of Persistent Inflation in Nigeria, CBN Journal of Applied Statistics Vol. 7 No. 2 (December, 2016) 49.

Bakare AS (2011). An empirical study of the determinants of money supply growth and its effects on inflation rate in Nigeria. J. Res. Int. Bus. Manage.1(5): (ISSN:2251-0028).

CBN (2022) Statistical Bulletin, Garki, Abuja.

Chimobi,O. P. and Igwe, O. L. (2015). Budget Deficits, Money Supply and Inflation in Nigeria. European Journal of Economics, Finance and Administration Sciences. Pp 52-60

Chimobi,O. P. and Igwe, O. L. (2017). Budget Deficits, Money Supply and Inflation in Nigeria. European Journal of Economics, Finance and Administration Sciences. Pp 52-60.

D N Dwivedi (2011) “Macro Economics theory and Policy.”Tata McGraw Hill Education Private Limited new delhi.

Emereni, B. (2020) Exchange Depreciation and inflation in Nigeria (1980-2019). Business and Economic Journal. 3 (2) Pp 1-12.

Gujarati D.N and Porter D.C (2009), Basic Econometric. McGraw-Hill International. Fifth Edition.

https://data.worldbank.org/&ved=2ahUKEwjAqK-P1YH8AhUVWqQEHeHcDuAQFnoECBAQAQ&usg=AOvVaw1NoaWr-8xIJmHBEorHiFSZ.

https://www.cbn.gov.ng/documents/Statbulletin.asp&ved=2ahUKEwjavPHb1YH8AhXdVKQEHU3hD9YQFnoECA8QAQ&usg=AOvVaw2XIJfxlAxX_jkqYf4CdYau

https://www.nigerianstat.gov.ng/&ved=2ahUKEwjavPHb1YH8AhXdVKQEHU3hD9YQFnoECAgQAQ&usg=AOvVaw3K7b9JjpHuf6nuS-lILLOH.

Immole, B. and Enoma, A. (2018) Exchange Depreciation and inflation in Nigeria (1980-2008). Business and Economic Journal. 3 (2) Pp 1-12

Jaumotte, F & Morsy, H. (2017). "Determinants of Inflation in the Euro Area: The Role of Labour and Product Market Institutions", IMF Working Paper 12/37, http://www.imf.org/external/pubs/ft/wp/2017/wp1237.pdf, Accessed on 25th September, 2018.

Jhingan, M.L. (2010); "Macro Economics theory." Vrinda publications(p)ltd, mayor Vihar, phase-1, Delhi -110091.

National Bureau of Statistics, (2021).

Odiba E.O., Apeh A.S.,and Daniel E.J.(2013), Money Supply and Inflation in Nigeria 1986-2009, J.of Business and Organizational Development,Vol.5, No.1, Pp.35-53

OLALERE, Sunday Shina (2019) The Impact of Money Supply on Inflation in Nigeria (1980 – 2009) International Journal of Development and Economic Sustainability Vol.7, No.5, pp. 31-36, August 2019 Published by European Centre for Research Training and Development UK (www.eajournals.org) 31 ISSN: 2053-2199 (Print), ISSN: 2053-2202(Online).

Oladipo, S. O. and Akinbobola, J. O. (2011). Budget Deficit and Inflation in Nigeria: A casual Relationship. Journal of Emerging Trends in Economics and Management (JETEMS). 2(1) 1-8.

Umoru 1. D. and Oseme A. S. (2019), Inflation Expectations and Interest Rate Variation in Nigeria: an Econometric Assessment of the Evidence. International Journal of Development and Economic Sustainability Vol. 1 No. 2, pp 1-12

.