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RESEARCH ARTICLE

Neuro-Marketing in Understanding Consumer Behavior: Systematic Literature Review

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Abstract
Neuromarketing and its implicit and automated processes influence customer decision-making and expose any concealed understanding of consumer behavior. There is a rising interest in studying how consumers' brain responses affect their decision-making process because one of the most important questions in today's market is what motivates consumers to choose one product over another. Although neuromarketing positions itself as one of the key fields of research targeted at accomplishing this objective, it is still a young and rapidly evolving discipline. The study's research proposal was to examine how advertising influences consumers' purchasing decisions when shopping online. Examining the role of customers' gaze spots, fixation counts, heat maps, and emotions in reaction to stimuli or marketing efforts is another goal. The consumer provides the stimulus, and the advertising effort gauges the response. Authors used the systematic literature review of latest studies. Inclusion and exclusion of scanned literature was conducted with help of PRISMA. For check effect size of used literature authors employed the Forest Plot based on partial correlation. Publication bias of SLR was viewed with the Funnel plot. Bibliometrics analysis and content analysis was conducted to support the reviewed literature strength.

Keywords: Neuromarketing; PRISMA; Forest and Funnel Plot

Introduction

Although there is a lot of research on consumer perception and attitude, it is difficult and extensive to examine neuroscience. The decision-making process's hidden components are better understood thanks to neuroscience (Pereira et. al, 2022). Both consumers and marketers benefit from the expanded use of neuromarketing approaches for the analysis of consumer preferences and decision-making processes (Oikonomou et. al., 2023). The human brain subconsciously processes more than 50% of the information (Ala et. al., 2022, Kant, 2020). Compared to traditional techniques of analysis based on questionnaires and interviews, neuromarketing and consumer neuroscience research more accurately depicts reality (Aldayel, et al., 2020). Ali Gaafar& Al-Romeedy(2022) conducted research on a few domains

where neuroscience helps advance theory-building by offering chances and directions. The work contributed to new empirical tests of prevalent unsupported claims.
This also clarified the differences between consumer groups and the impact of physiological features and biological factors, such as hormones and DNA, on consumer preferences and decisions. Since its inception in 2002, neuromarketing has become increasingly important (Gurguet. Al., 2020). There is a tremendous spread of the same among businesses, marketers, and advertisements (Alsharif et. al, 2021).Traditional methods cannot be replaced by neuromarketing, but cutting-edge instruments like fMRI (functional magnetic resonance imaging) will increase the effectiveness of marketing campaigns (Adula et. al., 2023). Since it has the capacity to identify implicit and automatic processes that influence consumer decision-making and because it will disclose hidden information

about consumer behavior, neuromarketing will have a huge impact on businesses and society. Using conventional techniques would not have enabled this (Bhardwaj et. al., 2023). The retail sector has undergone significant upheaval, and as a result, all online sellers now have a wealth of opportunities. Consumer neuroscience helps online companies understand the changing buying habits (Kant et. al., 2022).

To take advantage of the advantages and disadvantages of the contemporary consumer experience, the function of emotions in online retail environments is examined. The executives of major brands researched the most recent changes in the retail industry (Wakjira& Kant, 2022). The researcher looked at how to alter the purchasing process and human brain problems. With the developing, complex e-commerce and traditional brick and mortar environments, the shops may be able to equip themselves to better fulfill consumer needs (Mansor& Isa, 2020). In response to pricing changes made by competitors, internet shops adjust their prices. Representation, Attention, Predicted Value, Experienced Value, Remembered Importance, and Learning are the steps in the Consumer Neuroscience Model of Branding (Nilashi&Abumalloh, 2023).

Emotional involvement and personal relevance are crucial. Retailers take into account the entire purchasing process and are aware of the finest ways to influence customers as they shop. In order to promote consumer repurchase, it is essential to develop an experience for customers that elicits emotional reactions and facilitates the rewards process (Spence, 2020). The researcher has identified three key stages in the purchasing process. Retailers may engage with customers and elicit an emotional response from them that is then kept for use in the future thanks to marketing

communications and word-of-mouth experiences. In retail, the customer's purchase develops a lasting memory (Paramashivaiahet. Al., 2021). Consumers form an emotional connection to the product during the post-tail phase. Buyers also serve as advocates during the post-tail experience, positioning potential buyers and buyers also play the role of brand ambassadors during the post-tail experience, positioning themselves for future purchases and strengthening their bond with the company, goods, or service.

With the expansion of platforms and information, the digital world has never been more distracting. Every digital environment has its own set of challenges, from website design to product display to adding recommendations and reviews. Emotion is a constant factor. Examining various neuromarketing tactics for online buying is the study's goal.

Objective of the Study

Educating the audience on the subject of neuromarketing is one of the study's objectives. Nonetheless, the main objective is to assess how neuromarketing affects various marketing inputs, including advertising and consumer purchasing behavior. It is anticipated that this novel technique would result in more workable customer enticement strategies thanks to its objective research of the brain.

Meta Analysis of Concept of Neuromarketing

Several publications have provided definitions of neuromarketing, some of which are included here;

Table 1: Meta Analysis of Concept of Neuromarketing

	Study	Concept of Neuromarketing
1	Collins Dictionary	When creating new advertising campaigns and branding strategies, neuromarketing involves analyzing customer brain patterns to see how they react to specific adverts and products
2	Smidts, 2002	Neuromarketing is the study of the brain's mechanisms to comprehend consumer behavior and enhance marketing tactics.
3	Lee et al, 2002	By using "neuroscientific tools to evaluate and comprehend human behavior in connection to markets and marketing exchanges," neuromarketing seeks to understand how consumers think and why they choose the items
4	Kenning & Hubert, 2006	The use of research from neuroscientific consumer studies in the context of managerial practice is known as neuromarketing

5	Zaltman&Zaltman, 2006; Boricean, 2005; Zurawicki, 2010; Dooley, 2010	Most commonly, neuromarketing is described as a recent area of marketing research that examines customers' cognitive and affective reactions to various marketing stimuli
6	Georges &Badoc, 2010	The method of neuromarketing enables knowledge and comprehension of the information-processing mechanisms used by the human brain

Source: Authors own Meta analysis (2023)

Material and Method

Figure 1: PRISMA Construct
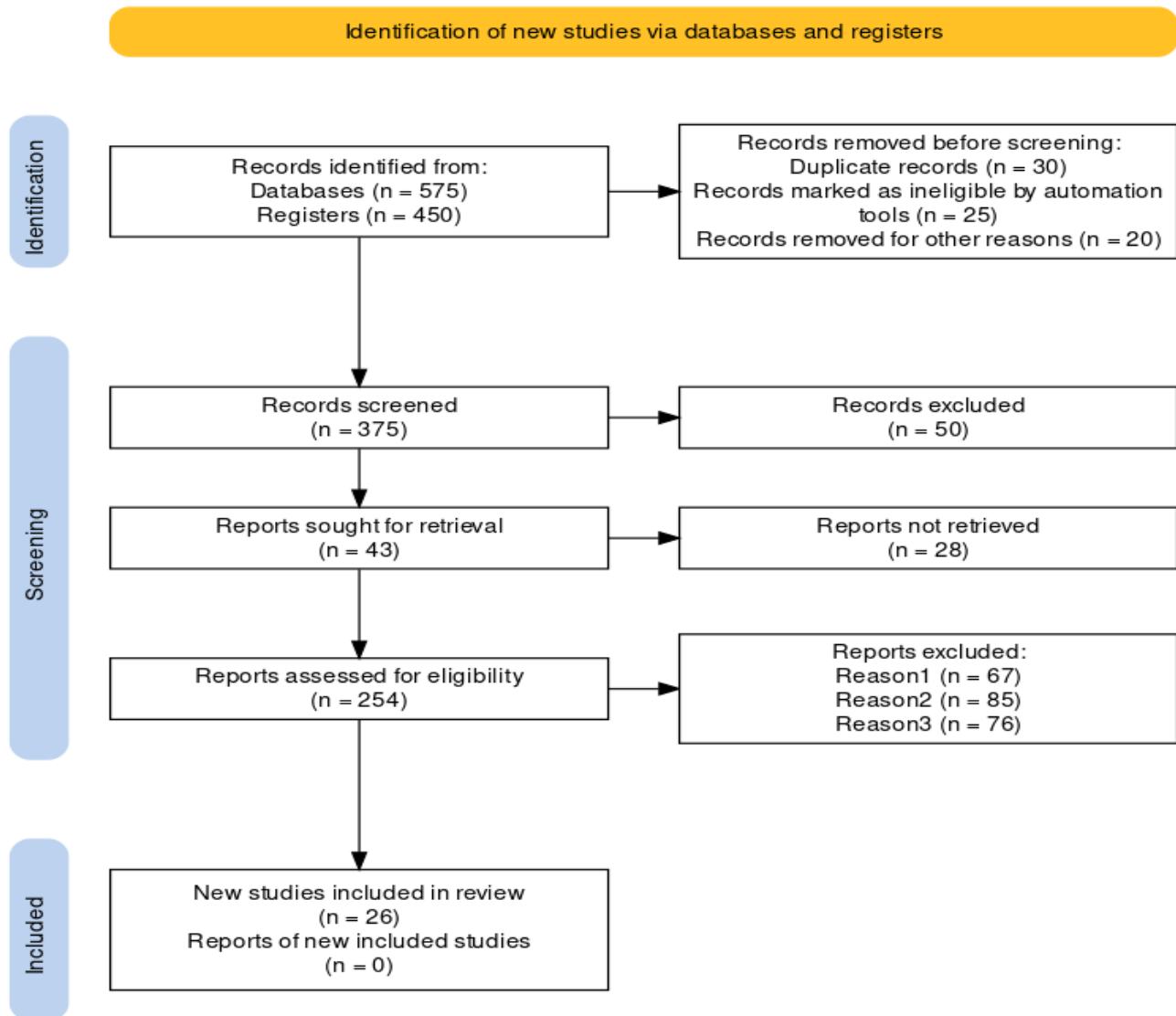
Source: PRISMA (2023)

Systematic Literature Review

From 2006 and 2022, 525 documents were published in total. 26 items in all were chosen. The PRISMA framework, which has four stages, is depicted in Figure 1. These are I identification as records found through database searching, (ii) screening the record publications, (iii) eligibility as determination of the publications that qualify for this review, and (iv) choosing and including studies.

A recent area of marketing research is neuromarketing. The field is built on the investigation of how consumers react to marketing stimuli on a sensory, cognitive, and emotive level. One hundred billion neurons make up the network in the human brain. The study of neuromarketing is becoming increasingly popular in both the academic and corporate worlds. Companies with global aspirations must forecast consumer behavior. They make investments in their research facilities, science people, and academic collaborations.

Table 2: Systematic Literature Review

Nemorin's (2012)	consumers react to stimuli from advertising. At the moment, it lacks a complete understanding of how the brain functions and how a brain's intricate operation results in highly specific human behavior
Donoghue, 2015	A comprehensive authority in comprehending human mental behavior is still being sought after. The convergence of the biological and social sciences is the result of this. Significant advancements in social, behavioral, physiological, and other fields have resulted from the natural and social sciences' joint research efforts.
Shiv & Yoon, 2012)	The measuring of particular regional spectra of the brain is done using electroencephalography and steady-state topography. Responses and sensors are used to track changes in a person's biometrics or physiological status. Additionally, they investigate the heart and respiration rates, the galvanic skin reaction, the reasons behind consumer decisions, and the brain regions involved.
Nyoni and Bonga, 2012	The paper examined the perceptions of a human decision that results in personal decisions (. The researchers used functional
	magnetic resonance imaging to track variations in activity in various brain regions.
Salatiet al., 2016	Consumer researchers undoubtedly need more information on how our senses influence the judgments we make when selecting products. For instance, what is the best perfume to be sprayed in a retail setting that caters to elderly customers? How can the flavor of food being served in an aircraft that is flying at a height of 20,000 feet be processed by the consumer's brain?
Donoghue, 2015	In the developing field of neuromarketing, consumer responses to marketing stimuli are investigated. There is little research on the in-depth understanding of how the brain functions and how a brain's complicated operation results in the highly specific human behavior despite the fact that the human brain is a well-developed network of 100 billion neurons
Shiv & Yoon, 2012	The information caused a convergence of the biological and social sciences. Significant advancements in the social, behavioral, physiological, and managerial sciences have been facilitated by the coordinated research efforts of natural and social scientists. Theoretical advances in neuro-economics and decision neurosciences about human decision making now take into account both individual choices and the neurological mechanisms behind such choices.
Levallois et. al., 2015	Studies in neuro-marketing focus on the emotions that influence human decision-making and apply this information to improve marketing. The culture is used to improve pricing, store design, promotions, advertising, and product design, as well as the overall consumer experience. The actions, functions, and perceptions of the brain cannot be accurately modeled or replicated by standard methodologies.

Source: Authors own SLR (2023)

By watching and analyzing human emotions, neuromarketing seeks to understand marketing stimuli. The theory underlying neuromarketing holds that the bulk of economic theories are out-of-date and that rational decision making is not primarily a conscious activity. Conversely,

there is mounting evidence that purchasing decisions are influenced by emotions and that the brain takes several shortcuts to hasten the decision-making process. Studies on neuromarketing explore how emotions affect human decision-making and apply the knowledge to improve marketing. The principle is put into practice while designing products, enhancing promotions and advertising, pricing, designing stores, and generally enhancing the customer experience.

It is feasible to compress the experiences and discoveries of other researchers and merge newly discovered information from earlier study in order to address the issue. Neuromarketing does not have a study cap because it involves a significant time and financial investment.

Thematic and Content Analysis

Table 3: Thematic and Content Analysis

Study	Method	Viewpoint		Theme
Adeola et. al, (2022)	Quantitative	Cognitive imaging	Neuo-	Neuro-imagingmethodstoitem for consumption
Ala et. al.(2023)	Qualitative	Cognitive coding	Neuo-	Behavioral-organizationaldynamics universal view on neuro-marketing
Alsharif et. al. (2023)	Qualitative	Cognitive imaging	Neuo-	Brainimagesandcustomerbehavior
Alsharifetal.(2023)	Quantitative	Cognitive mapping	Neuo-	Advertising non-invasive techniques
Bhardwajetal.(2023)	Qualitative	Cognitive sensing	Neuo-	Physiologicaldimensioninpsychologicalprocesses
Halkiopoulos et. al., (2022)	Qualitative	Cognitive imaging	Neuo-	Neuro-imaging of consumerneuroscience
Nilashi&Abumalloh (2023)	Qualitative	Cognitive mapping	Neuo-	Primarydialoguein the natives textimplantedinneuro-marketing

Source: Researchers Own TCA (2023)

Reviewed Literature Contribution

Table 4: Effect Size

#	Study name	Partial Correlation	CI Lower limit	CI Upper limit	Weight
1	Adeola et. al, (2022)	0.36	0.16	0.56	6.93%
2	Ala et. al.(2023)	0.78	0.63	0.94	9.66%
3	Alsharif et. al. (2023)	0.64	0.24	1.03	2.07%
4	Bhardwaj et al. (2023)	0.68	0.60	0.75	20.71%
5	Halkiopoulos et. al., (2022)	0.65	0.57	0.73	19.77%
6	Alsharif et al. (2023)	0.65	0.57	0.73	19.81%
7	Nilashi&Abumalloh (2023)	0.69	0.61	0.76	21.05%

Source: Meta Essentials (2023)

The predictive ability of a neuromarketing strategy is represented by a new effect size from a multiple regression model. The semi partial correlation between the predictor and the desired outcome is the index, abbreviated as rsp. This partial effect size in the correlation family of effect sizes was calculated from neuromarketing studies when multiple predictor variables were included in the regression model. The effect magnitude and its variance were provided by the derivations used in neuromarketing studies. For specific numbers, standard errors and confidence intervals can be generated. Moreover, weighted analyses of neuromarketing studies can be utilized to study

heterogeneity and to determine central tendency and variance in the effects. This is how the meta-analysis of the semi partial correlations was conducted.

Figure 2: Forest Plot
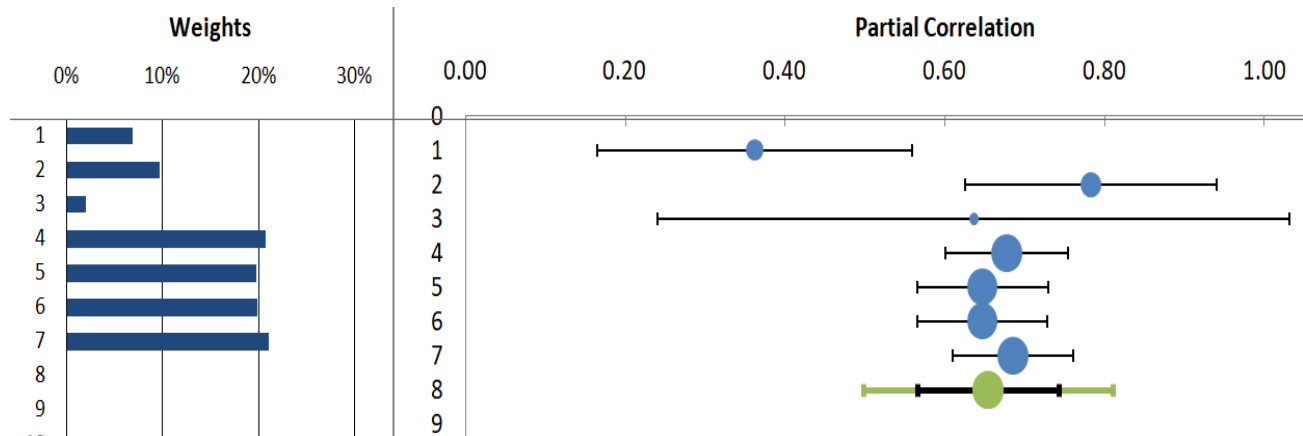
Source: Meta Essentials (2023)

The green circle in the centre of each horizontal line (confidence interval, CI) reflects the point estimate of the effect for a particular study in a forest plot that shows the effect size of neuromarketing research. The size of the box reflects the study's weight in terms of the combined estimate of all neuromarketing studies.

Table 5: Meta-Analysis Model

Model	Random effects model
Combined Effect Size	
Partial Correlation	0.65
Z-value	18.08
One-tailed p-value	0.000
Two-tailed p-value	0.000
Number of incl. studies	7
Heterogeneity	
Q	12.07
p_Q	0.060
I^2	50.31%

Source: Meta Essentials (2023)

Publication Bias:

Figure 3: Funnel Plot
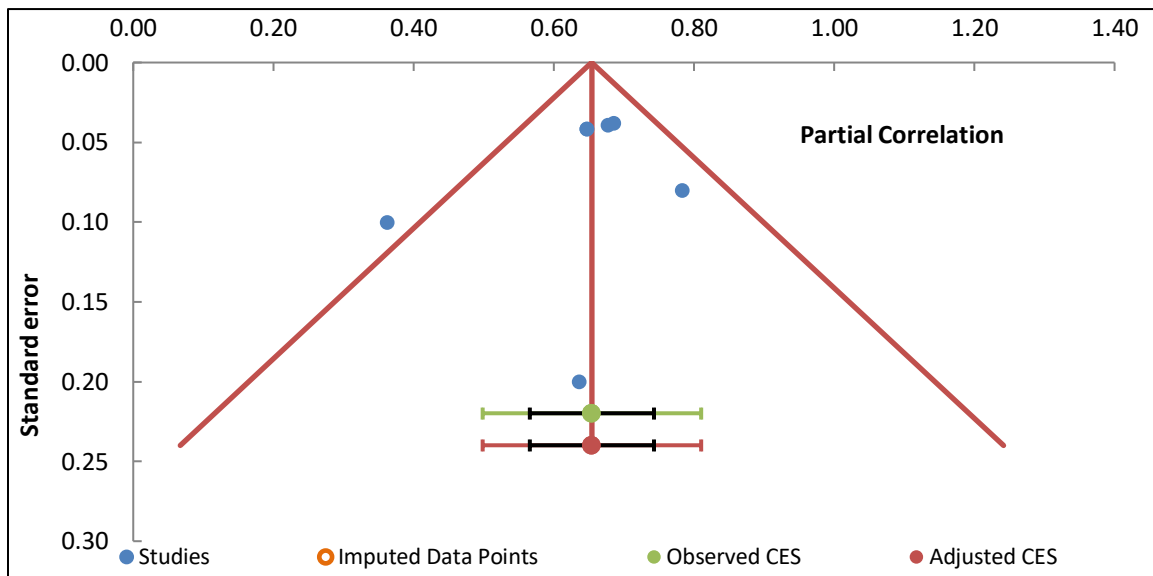
Source: Meta Essentials (2023)

For determining the presence of publication bias, neuromarketing research can be constructed as a funnel plot. Smaller (less precise) studies that failed to demonstrate statistical significance will be less likely to be published if there is publication bias among neuromarketing studies. The funnel plot's asymmetry illustrates this. A visual tool for examining publication and other bias in meta-analysis is the funnel plot. Simple scatterplots of estimated treatment effects from individual studies (horizontal axis) versus a measure of study size are displayed (vertical axis).

Table 6: Heterogeneity

Q		12.07
p_Q		0.060
I^2		50.31%
T^2		0.00
	Trim and Fill	On
Estimator for missing studies		Linear
Search from mean		Left
Number of imputed studies		0

Source: Meta Essentials (2023)

Bibliometric Analysis

This algorithm's first network, which allows for the viewing of the first network-linked density map and the keywords associated with the term "neuromarketing," is shown. The most frequent phrases and SLR object of this

investigation are items known as nodes or vertices, depicted in each circle. The relationships of co-occurrence are represented by the edges that connect these items; their measurement provides an indication of how strong they are among peers or edge weight, and their correlation may be determined by keeping track of publications where two terms co-occur.

Table 7: Apex keywords by the occurrence of their incidence

Keyword	Frequency	TotalLinkStrength
Neuromarketing	26	205
Functional Magnetic Resonance	16	222
ECG	12	266
Decision-making	12	165
Neuro-science	12	155
Memory	10	121
Marketing Reserach	12	125
Neural Corelation	11	122
Eeg signal	10	112
Observation	6	51
Brain Activity	6	25

Source: VOSviewer 2023

Figure 4: Bibliometrics
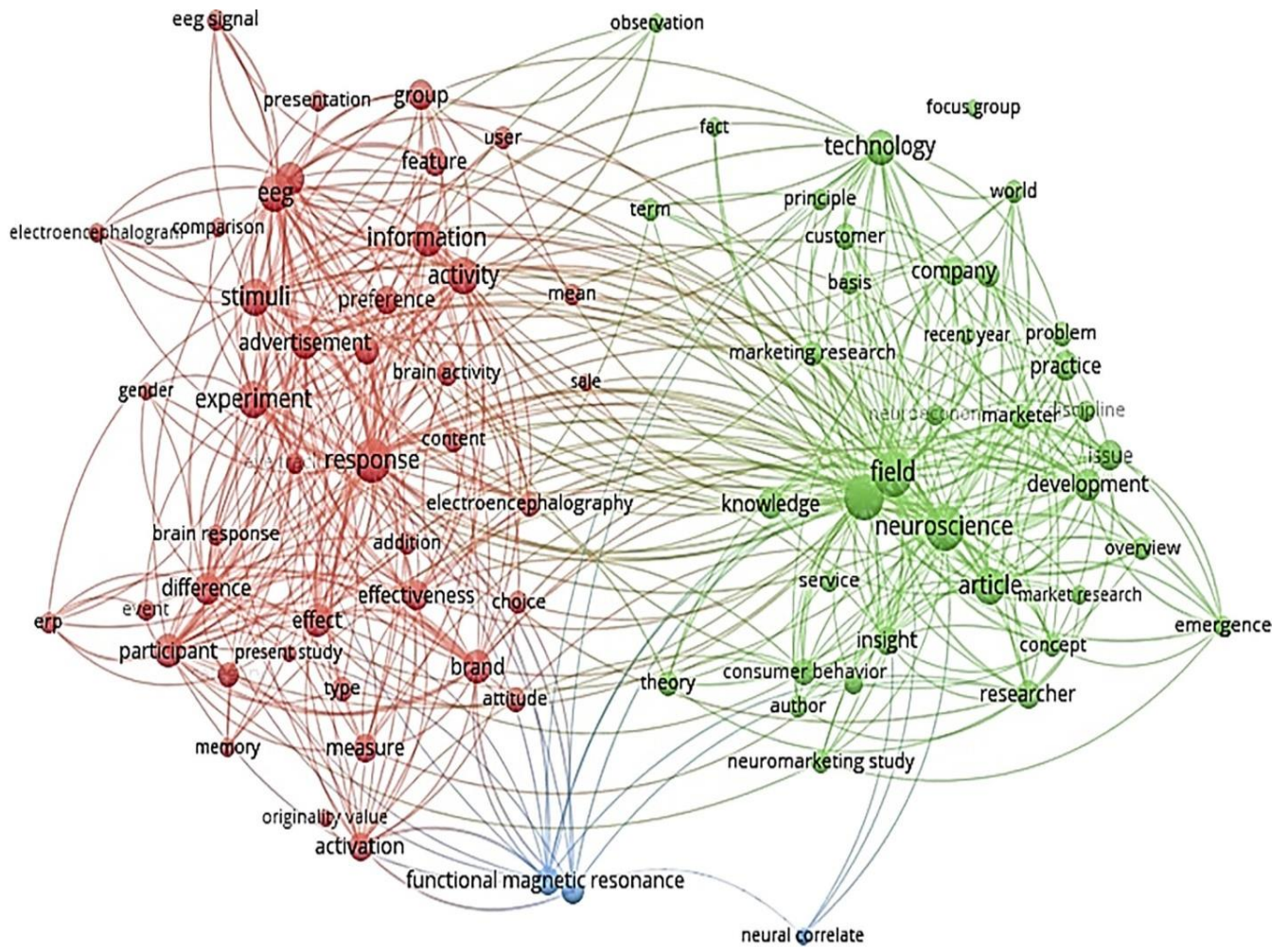
Table 8: Systematic Literature Review

Method	Thought Processes	Whenever it's being utilized?	Functionalism
EEG	Mood and arousal, excitement or boredom, engagement or memory, cognition and recognition, and mental workload.	Testing ads, ads, apps, and social media, as well as website design and usability, packaging design, pricing, sensory studies, print and picture design, and pinpointing an ad's critical moments are all examples of advertising practices.	Temporal precision, cheap cost, non-invasive method, simple data analysis, appropriate for assessing cognitive information processing, ability to compare the left and right hemispheres.
FMRI	Attention, reward, engagement, emotional valence, sensory perception, and memory.	Assessing commercials, brands, pricing, packaging designs, celebrity endorsements, online experiences, product quality, promotion, and attributes, as well as forecasting consumer decisions and determining their requirements.	Capable of detecting modifications to chemical composition or changes in the flow of fluids in the brain, localizing neural activity during consumer choices and purchasing behaviors, and evaluating cognitive processes.
MEG	Vigilance, memory, and perception	Identifying needs and testing commercials, brands, new products, packaging designs, and sensory investigations.	capable of recognizing alterations in active compounds.

Source: Authors own Systematic Literature Review (2023)

Overview of reviewed literature on Neuro Marketing

The study of people's emotional and cognitive reactions to media or marketing stimuli is known as neuromarketing. To learn how people physically react to marketing messages, researchers use technologies that detect brain activity and biometrics (such as heart rate, eye movement, galvanic skin response, facial coding, etc.). It's no secret that neuromarketing has become extremely popular. It's used in various ways by lots of people, businesses, educational organizations, and government agencies. While being used frequently in the marketing industry, the term is not always unambiguous. In essence, the word refers to the use of contemporary brain science to assess the effects of marketing and advertising on customers. This study is crucial for understanding the effects of neuromarketing on consumer purchase decisions as well as the different elements that affect those decisions.

The area resides at the nexus of cognitive psychology, consumer neuroscience, neuroeconomics, and neuroscience. Neuromarketing is a marketing application of behavioral neurosciences. The tools of neuromarketing identify stimuli and cues revealing customer behavior not detected by careful visual observation. Neuromarketing techniques help in product design, brand creation and effective advertisements. They help to understand the overall shopping experience of a customer from the moment they step into a market and until they leave, apart from the neural response at the time of purchase. An interesting application is virtual store that has 3D and 4D retail products that creates a real store shopping experience. Test customers are given real marketing experience and their purchase making decisions analysed effectively.

Moreover, neuromarketing has significant obstacles and constraints. Different processing of the marketing stimuli

can also be caused by the timing and environment in which a person is exposed to them. The idea of emotions and their connection to certain brain regions is up for debate. The difficulty of creating new tests, the high expense, and the time factor are major drawbacks of neuromarketing.

Conclusion

The method of qualitative research According to earlier studies, neuromarketing has a variety of advantages over conventional marketing strategies. The discipline of neuromarketing suggests a value addition to marketing research and encourages businesses to use marketing inputs that are focused on achieving specific business goals. Higher quality and a deeper comprehension of consumers are benefits of the scientific advancement of neuromarketing. The study sheds light on how neuromarketing is used in online retail advertising to target customers. The study might allow the researchers to continue their investigation into how neuromarketing affects customer attitudes. A successful marketer needs to have enhanced consumer perception and a growing brand image, according to the report.In the area of marketing, neuromarketing offers intriguing possibilities and fresh directions to explore. Neuromarketing tactics are still in their infancy but show great promise for the future. Neuromarketing researchers generally agree that the area has to advance and overcome a number of challenges before it can become a well-known instrument in the field of market research. Nonetheless, neuromarketing generates greater interest and is anticipated to be crucial in the fiercely competitive field of international marketing. Neuromarketing is certain to benefit more in the long run as high end technology and gadgets become more widely available.

References

Adeola, O., Evans, O., Ndubuisi Edeh, J., &Adisa, I. (2022). The Future of Marketing: Artificial Intelligence, Virtual Reality, and Neuromarketing. Marketing Communications and Brand Development in Emerging Economies Volume I: Contemporary and Future Perspectives, 253-280.

Adula, M., Kant, S., &Birbirsa, Z. A. (2022). Systematic Literature Review on Human Resource Management Effect on Organization Performance. Annals of Human Resource Management Research, 2(2), 131-146.

Adula, M., Kant, S., &Birbirsa, Z. A. (2023). Qualitative Analysis with MAXQDA: Effect of HRM Practices on Organization Performance with Mediation of Employees' Work Attitude in Textile Industries of Ethiopia.

Ala, M., Nair, S., & Rasul, T. (2022). The power of neuromarketing: Taking luxury fashion marketing in Southeast Asia markets to a whole new level. In Fashion Marketing in Emerging Economies Volume II: South American, Asian and African Perspectives (pp. 73-98). Cham: Springer International Publishing.

Aldayel, M., Ykhlef, M., & Al-Nafjan, A. (2020). Deep learning for EEG-based preference classification in neuromarketing. Applied Sciences, 10(4), 1525.

Ali Gaafar, H., & Al-Romeedy, B. (2022). Neuromarketing as a novel method to tourism destination marketing: Evidence from Egypt. Journal of Association of Arab Universities for Tourism and Hospitality, 22(1), 48-74.

Alsharif, A. H., Salleh, N. Z. M., &Baharun, R. (2021). Neuromarketing: Marketing research in the new

millennium. Neuroscience Research Notes, 4(3), 27-35.

Alsharif, A. H., Salleh, N. Z. M., &Baharun, R. (2021). Neuromarketing: The popularity of the brain-imaging and physiological tools. Neuroscience Research Notes, 3(5), 13-22.

Alsharif, A. H., Salleh, N. Z. M., Abdullah, M., Khraiwish, A., &Ashaari, A. (2023). Neuromarketing Tools Used in the Marketing Mix: A Systematic Literature and Future Research Agenda. SAGE Open, 13(1), 21582440231156563.

Alsharif, A. H., Salleh, N. Z. M., Hashem E, A. R., Khraiwish, A., Putit, L., & Arif, L. S. M. (2023). Exploring Factors Influencing Neuromarketing Implementation in Malaysian Universities: Barriers and Enablers. Sustainability, 15(5), 4603.

Bhardwaj, S., Rana, G. A., Behl, A., & de Caceres, S. J. G. (2023). Exploring the boundaries of Neuromarketing through systematic investigation. Journal of Business Research, 154, 113371.

Bočková, K., Škrabánková, J., &Hanák, M. (2021). Theory and practice of neuromarketing: Analyzing human behavior in relation to markets. Emerging Science Journal, 5(1), 44-56.

Branch, I. R. A. N. (2019). Effects of Neuromarketing On Marketing Performance And Market Share Growth: Case Study of Selected Manufacturing Companies of Bushehr Province, Iran. ItJEMAST 10 (6) 2019, 803.

Dabaso, A., Engida, A., Degefa, T. T., & Kant, S. Contextual Influence of Entrepreneurship Determinants on MSE's Performance in Ethiopia, Horn of Africa. Amber, 12(2), 6.

Gill, R., & Singh, J. (2022). A study of neuromarketing techniques for proposing cost effective information driven framework for decision making. Materials Today: Proceedings, 49, 2969-2981.

Gurgu, E., Gurgu, I. A., &Tonis, R. B. M. (2020). Neuromarketing for a better understanding of consumer needs and emotions. Independent Journal of Management & Production, 11(1), 208-235.

Halkiopoulos, C., Antonopoulou, H., Gkintoni, E., &Aroutzidis, A. (2022, April). Neuromarketing as an Indicator of Cognitive Consumer Behavior in Decision-Making Process of Tourism destination— An Overview. In Transcending Borders in Tourism Through Innovation and Cultural Heritage: 8th International Conference, IACuDiT, Hydra, Greece,

2021 (pp. 679-697). Cham: Springer International Publishing.

Kant, S. (2020). Critical Appraisal of Prevailing Marketing Mix: Applies Particularly to the Digital Marketing Metaphor.

Kant, S., &Adula, M. (2022). Mediation Effect Of Customer Satisfaction Between Promotion Mix Elements And Customer Buying Behavior In Education Sector Of Ethiopia. International Journal of Islamic Business and Management Review, 2(2), 174-181.

Kant, S., Adula, M., Belay, B., &Dabaso, A. (2022). Mediation Effect of Customer Satisfaction in the Relationship Between Promotion Mix Elements and Customer Buying Behavior in Education Sector of Ethiopia. Partners Universal International Research Journal, 1(4), 210-217.

Kant, S., Belay, B., &Dabaso, A. (2023). Coffee Logistics Operation Knowledge Effect on Cooperative Associations Functionalism in Ethiopia with Mediation of Cybernetics and Local People Knowledge Base. Journal of Production, Operations Management and Economics (JPOME) ISSN 2799-1008, 3(01), 21-33.

Mansor, A. A., & Isa, S. M. (2020). Fundamentals of neuromarketing: what is it all about?. Neuroscience Research Notes, 3(4), 22-28.

Nilashi, M., &Abumalloh, R. A. (2023). Neuromarketing and Metaverse. Journal of Soft Computing and Decision Support Systems, 10(1), 1-3.

Nilashi, M., Samad, S., Ahmadi, N., Ahani, A., Abumalloh, R. A., Asadi, S., ... &Yadegaridehkordi, E. (2020). Neuromarketing: a review of research and implications for marketing. Journal of Soft Computing and Decision Support Systems, 7(2), 23-31.

Oikonomou, V. P., Georgiadis, K., Kalaganis, F., Nikolopoulos, S., &Kompatsiaris, I. (2023). A Sparse Representation Classification Scheme for the Recognition of Affective and Cognitive Brain Processes in Neuromarketing. Sensors, 23(5), 2480.

Paramashivaiah, P., Aravind Soudikar, AbasaraDabaso, and Shashi Kant. "Impact of Advertising in Attracting Clients for Digital Money lending in Africa." Amber 12, no. 2: 35.

Pereira, V. C., Membiela-Pollán, M., & Sánchez, E. (2022). Nostalgia, Retro-Marketing, and Neuromarketing: An Exploratory Review. Journal

of Creative Industries and Cultural Studies: JOCIS, (7), 107-126.

Spence, C. (2020). On the ethics of neuromarketing and sensory marketing. Organizational Neuroethics: Reflections on the Contributions of Neuroscience to Management Theories and Business Practices, 9-29.

Wakjira, G. G., & Kant, S. (2022). Assessment of Challenges and Prospects Of Local Milk Supply On Market Performance: A Case Of Ethiopia, Horn Of Africa. JURNAL PETERNAKAN SABANA, 1(2), 102-109.

Wakjira, G. G., & Kant, S. (2022). Significance Of Market Orientation On Business Performance With Mediating Role of Employee And Customer Satisfaction In Ethiopia Banks. Partners Universal International Research Journal, 1(4), 118-125.

RESEARCH ARTICLE

Is Marketing Strategies and Business Sustainability are mediated through Entrepreneurial Innovation in Ethiopia?

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Abstract
In the current study, marketing techniques' effects on the expansion of sustainable enterprises were examined. This was done through the lens of entrepreneurial innovation in a scenario involving a sustainable business in the innovation phase. The researchers developed a number of methodologies, as well as both descriptive and inferential statistics. A simple random sampling mechanism was used by both probability and non-probability sampling techniques. The Ethiopian branch of the Addis Ababa branch of the Digital Banking Sector served as the representative organisation and conducted a survey of 425 Digital Banking Sector clients, those served in sectors, and personnel from current organisations to collect the data for this study. According to the researchers' results, the poor performance of leaders, the workplace, and low employee engagement are primarily to blame for the decline in business sustainability and the application of marketing techniques. The researchers urged the appropriate body to file an application in order to address the problems with the predictor control, give good implementation of the marketing plan, and then give strong company sustainability.

Key word: Marketing strategy; Customers; Strategy Predicators; Organization Sustainability

Introduction

The era of entrepreneurial innovation is one of national growth and brilliance, but it is also a period when the country will play a significant role in defining the direction of the global market. In the "innovation phase" of sustainable company development, entrepreneurial innovation plays a crucial role in mediating the interaction between corporate sustainability and marketing strategies (Chaulia, 2021). Without it, this would not be possible. To improve market share and position in relation to competitors, strategic marketing methods have been employed. This was deemed crucial in the BCG matrix by the Boston Consultancy Group (Garcia, 2022; Jain, 2022). Different marketing activities based on marketing theories are used in marketing strategies in order to practically improve an existing marketing plan and gain a competitive advantage in the form of increased market share and profitability (Islam & Wahab, 2022; Tesfaye et al., 2022; Shane, 2021). The goal of standardising

products is to make it easier for businesses to implement the globalised market strategy, which is centred on a company's own region-specific market strategy, in order to acquire a competitive edge (Kebede et al., 2023). Typically, The Sustainable Company, which is renowned for its ethnocentric methodology, chooses a single more. Businesses that are sustainable take an ethnocentric stance, operating locally, and doing business where they are.

The underlying principle of this worldview is cultural federalism. According to Dubhlela (2013), the objective of sustainable businesses using an ethnocentric strategy is to stay in operation rather than to gain a competitive advantage. Sustainable businesses are therefore increasingly inclined to create global level marketing strategies and global level implementation plans in order to achieve standardization. McCarthy proposed the concept of the marketing mix, which states that a company must combine the four Ps—producer, pricing, place, and promotion—at the same time to enhance the

marketing mix if it wants to gain a competitive edge (Nashwa, 2022; Asefa; and Kant, 2022).

Literature Review

The strategy set up for the market to get a stronger market orientation is essential to express greater client worth by combining the strategies to attract customers to a business sector to influence the competitive forces in the marketing environment (Wakjira, and Kant, 2022; Kalkidan, 2019). According to conventional wisdom and fundamental theories like the resource-based view (RBV) and the market-based view (MBV), businesses must combine their resources after implementing the SWOT analysis by identifying the strengths, weaknesses, opportunities, and threats of their internal and external environments ((Yadete and Kant, 2023, Panigrahi et al. al. 2020; Hashem, 2015). Dixit et al. examined the effects of marketing strategy predictors on business sustainability in a sustainable business environment. The impact of these predictors on the viability of businesses was discovered by (2022).

A key management tool in any complex organization is the marketing strategy (Yadete et al., 2023). These elite organizations use marketing strategy as a multifaceted ideological tool to change the working environment to accommodate the dynamics of the business environment and the need to complete the same task in variously effective ways across various business environments (Oyewobi, 2022). The relationship between an organization's resources and its internal environment— which includes its human resources' skills, adoption of technology, and financial capabilities—and the external environmental constraints—which include threats and opportunities—balances the challenges the firm would face in the event of completion and helps it gain competitive advantages even in a volatile business environment (Bag and Omrane, 2022; Haimanot, 2022).

The main problems with entrepreneurship innovation mediation, according to several studies (Islam & Munir, 2022; Tang Yao, Boadu, & Xie, 2022; Mehralian, 2022; Wang, Mundorf & Salzarulo-McGuigan, 2022), include a lack of marketing strategy implementation and a decline in business sustainability. These problems are primarily connected to poor leaders' capacity, work environments, poor employees' commitment, and poor technology adoption.

The research by Olson et al. (2022) entitled "The application of human resource management policies within the marketing organization: The impact on business and marketing strategy implementation" found an advantageous and significant correlation between Marketing Strategy Predictors and Business Sustainability. Lestari et al. produced similar conclusions. In their investigation founded the causes and effects of innovation and business strategy on sustainability and competitive advantage of SMEs. They also found a positive and significant correlation between predictors of marketing strategy and business sustainability (Tufa et al., 2023).

Papadas et al. (2020) found a similar, favorable, and significant correlation between the marketing strategy predictors and business sustainability in their study titled "The Interplay of Strategic and Internal Green Marketing Orientation on Competitive Advantage".

Kant (2020) also discovered that marketing strategy predictors have a favorable and significant impact on marketing orientation in his study "Critical Appraisal of Prevailing Marketing Mix: Applies Particularly to the Digital Marketing Metaphor.". Studying the Effect of Perceived Customer Relationship Marketing Predictors on Customer Loyalty in Ethiopia's Banking Sector, Tufa, as well as Kant (2020), reached the same conclusions. It follows that the predictors of marketing strategy have a favorable and significant impact on business sustainability based on these studies conducted in various environments. The main issues with entrepreneurship innovation mediation, according to several studies (Islam & Munir, 2022; Tang Yao, Boadu, & Xie, 2022; Mehralian, 2022; Wang, Mundorf & Salzarulo-McGuigan, 2022), include less marketing strategy implementation and the decreasing business sustainability, which are primarily related to poor leaders' capacity, work environments, poor employees' commitment, and poor technology adoption. In contrast to the other studies, "Managing Cooperative Competition: The Missing Link between Strategy and Sustainability" was the topic of a study by Le Roy & Czakon (2022). Industrial Marketing Management found a weak negative correlation between the predictors of marketing strategy and business sustainability.

Similar findings were made by Guillaume (2022), who looked at "Harnessing Demographic Differences in Organizations: What Moderates the Effects of Workplace Diversity?" and discovered that there was a weak and unfavorable correlation between the marketing strategy predictors and business sustainability. In their subsequent study, "Mediating Affect of COVID-19 Panic on Comprehensive Universities Students Entrepreneurial

Behaviour," WataDereso & Kant (2022) also showed an inverse and insignificant correlation between the Strategy Predictors and Business Sustainability. This study was conducted at New Addis Ababa University in Ethiopia and examined the "Education sector structural digital transformations in comprehensive Universities of Ethiopia in post COVID-19 periods." Due to these contradictory evidences, the current study was able to check this evidence gap.

In a manner similar to this, many academics from other countries have investigated a number of variables that affect marketing strategy. The Girma (2022) study evaluated the same predictors that have an impact on the marketing strategy, such as organizational structure and organizational system predictors. However, his work is only meant to draw attention to the knowledge gaps that are still unexplored in the Ethiopian context with regard to elements like employee perception, work environment, technology, and customer attitude that impact the marketing strategy of the banking sector. Due to this, the researchers' discussion of the precise elements that affect marketing strategy and company sustainability was brief. This study set out to discover what predictors influence the marketing strategy in modern organizations and how.

Objectives

1) To determine the key variables that affects the marketing strategy in the research area.
2) To investigate the relationship between marketing strategy and business sustainability.
3) To assess how much the marketing strategy factor affects an organization's sustainability in the research field.

According to organizational regulations, a large company uses a concept marketing strategy, which combines common sense and promotion, to achieve its advertising goals (Varadarajan, 2010). Influencing the behaviors of followers is the practice of leadership. In their study "Assessing the Effect of Endogenous Culture, Local Resources, Eco-Friendly Environment, and Modern Strategy Development on Entrepreneurial Development," Gobena and Kant (2022) discovered an association

between leadership and business sustainability that was both positive and significant. In their review of the impact of leadership styles on leadership outcomes in their epistemological study, Kant and Tufa (2020) found a positive and significant relationship between leadership as a marketing strategy predictor and business sustainability. According to Kant's (2022) Scientific Review on Assessing Effect of Endogenous Culture, Local Resource, Eco-Friendly Environment, and Modern Strategy Development on Entrepreneurial Development, there is a strong and positive correlation between the leadership as a Marketing determinant (Dereso el al., 2023).

Using a multi-level analysis, Mishra and Kasim (2022) found a positive and significant correlation between the sustainability of the organization and employee commitment as a predictor of marketing strategy in their study on Team culture, employee commitment, and job sustainability in public sectors. In order to help an employee achieve organizational goals, commitment is defined as their affective commitment to their job as a psychological engagement (Mulugeta and Pandian, 2020). Employee commitment must be cultivated because a lack of it alienates human resources. Addisalem, 2019; Brisco and Claus; Fugate; 20219; and 20221).

The working environment of nurses in public referral hospitals in West Amhara, Ethiopia, according to a study by Kassahun (2022), is positively and significantly correlated with business sustainability. Work environment is characterized as the evaluation of a company's internal and external business environment that exemplifies employee behavior in terms of organizational culture and work attitude. The sustainability of the organization depends on the employee's commitment to his job and his attitude, values, and beliefs regarding his employment.

H1a: Market strategies and business sustainability are significantly related.
H2A: Market Strategies and Entrepreneurial Innovation are closely related.
H3a: There is a considerable connection between entrepreneurial innovation and business sustainability.
H4A: Market strategies and business sustainability can be significantly mediated by entrepreneurial innovation.

Source –Researchers own framework (2023)

Method

The commercial and cultural centre of Ethiopia is Addis Ababa, the vast capital city located in the hills bordering the Great Rift Valley. Its National Museum features Ethiopian artwork, traditional crafts, and ancient fossils, including replicas of the well-known early hominid "Lucy." The copper-domed Holy Trinity Cathedral, a showpiece of neo-baroque architecture, is where the 20th-century ruler Haile Selassie is buried (Wikipedia, 2023). The paper used a descriptive research design to illustrate the respondent's characteristics in the form of bank management and customers of modern organisations, including: position of respondent, year of experience working for organisation, education level, income group classification, percentage of ownership, and other qualitatively measured characteristics of bank employees.Staff and clients of a contemporary organisation in Addis Abeba city made up the study population and participants. The information has been gathered from bank clients and managers from modern organisations that are located in the Addis Abeba city region. 250 bank customers receive service from the branch, and there are 230 workers working there, per information gathered from the branch.

The sampling approaches have been divided into strata. In this study, purposive sampling was employed to choose consumers and employees from the Addis Ababa branch of a modern organisation, and stratified sampling was utilised to divide heterogeneous groups into homogeneous strata.

By using Yamane's (1967) statistical procedure to calculate sample size, the sampling size has been established. The sample size has been determined using the following formula:

$$n = \frac{N}{1+N(e)2} \quad \frac{480}{1+380(0.03)} 2$$
$$= 425$$

Result and Discussion

Table 1.1: Normality Assessment

Statistics[a] Residuals

	Least	High	Mean	Deviation Std.	N
Value Predicted	2.6376	4.4376	3.7311	.41590	425
Predicted Std. Value	-2.629	1.699	.000	1.000	425
Predicted Error Value	.036	.102	.049	.015	425
Adjusted Predicted Value	2.5980	4.4417	3.7308	.41629	425
Error Term	-2.68760	2.02904	.00000	.73712	425
Residual Std.	-3.642	2.749	.000	.999	425
Residual Stud.	-3.646	2.776	.000	1.002	425
Residual Deleted	-2.69418	2.06866	.00026	.74242	425
Deleted Stud. Residual	-3.702	2.799	-.001	1.006	425
Distance Mahal.	.011	6.912	.998	1.467	425
Distance Cook's	.000	.075	.004	.009	425
Leverage Centered Value	.000	.017	.002	.004	425
a. Dependent Variable: TCoD					

Source: SPSS, 2023 Output

The estimated Mahal Distance is shown in Table 1.1 between and are where. as shown, 011 to 6 point 912 given the distance to the Taj Mahal. lies below the permitted range of 0 to 7 with values between .011 and 6.912. It demonstrated that the collection of data was normal and error-free. Table 1.8 demonstrates that the distance between cooks had an expected value of between. 015 and 000. It became clear that the values were below the allowed range of 0 to 1, as the distance between the cooks was between .000 and .075. It demonstrated that the data were obtained normally and that normality was not an issue.

Table 1.2: Measure of Sampling Adequacy

Bartlett's and KMO Test		
Measure of Sampling Adequacy (Kaiser-Meyer-Olkin)		.762
Sphericity Test of Bartlett's	Chi-Square (Approx.)	695.684
	df	3
	Sig.	.000

Source: SPSS, 2023 Output

As seen in table 1.2, the inclusion of the Kaiser-Meyer-Olkin measure of sampling adequacy led to its manifestation. As the calculated value of the Kaiser-Meyer-Olkin test's measure of sampling adequacy (.762) falls between the range of .7 and 1, it is evident that the test's result indicates sampling adequacy. Additionally, Chi-Square (Approx.) was 695.684 and the significance value was .000, less than .05, indicating an acceptable level of significance according to the accept table.

Table 1.3: Explained Total Variance

Explained Total Variance						
Component	Eigen- values (Initial)			Sums of Squared Extraction Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
dime 1	1.455	72.774	72.774	1.455	72.774	72.774
nsio 2	.545	27.226	100.000			
n						
Extraction Method: Principal Component Analysis (2023)						

Source: SPSS, 2023 Output

As depicted by table 1.3, explained Total Variance with the Eigen- values (Initial) for all components in combined form was more than 1 that is 1.455 with a 72.774% of Variance and 72.774 Cumulative %. The sums of Squared Extraction Loadings Cumulative % was 72.774 that manifested the all components in combined form influence on dependent variable was 72.77% as a result of Principal Component Analysis.

Figure 1: CFA
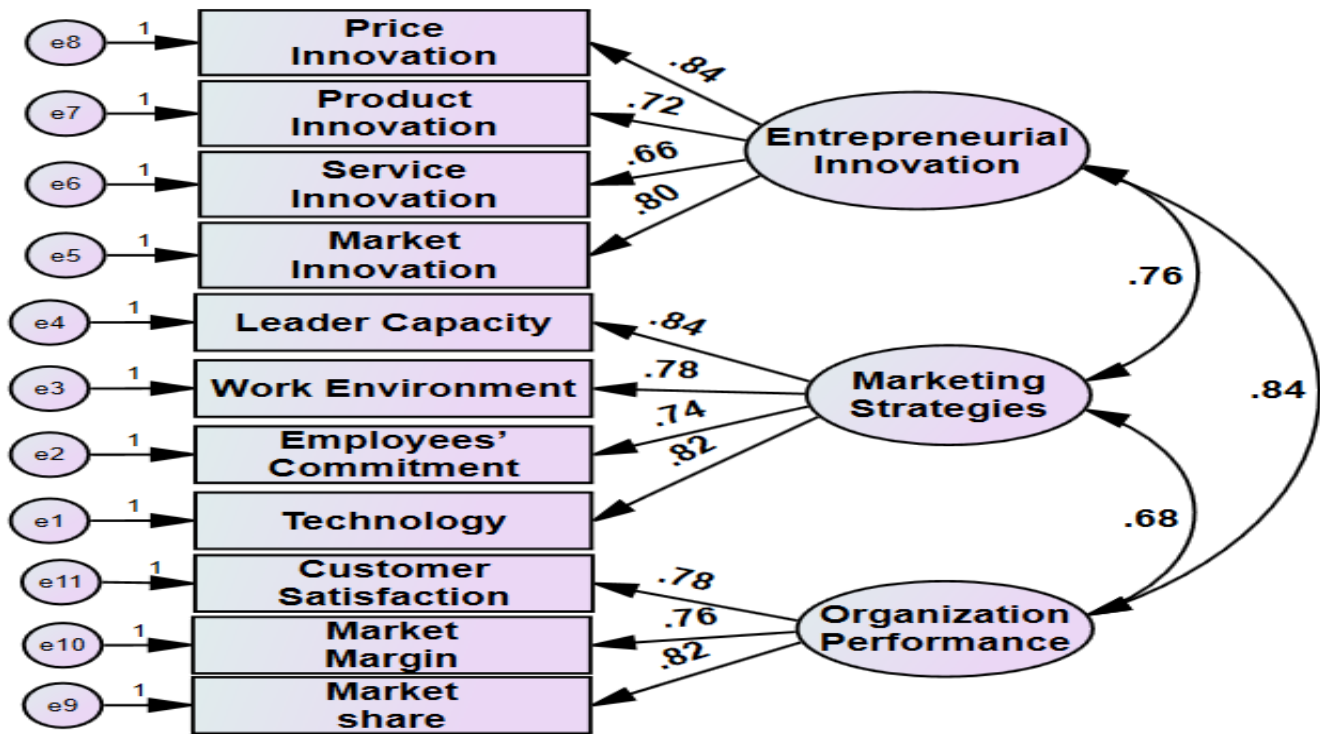
Source: AMOS, 2023 Output

Confirmatory factor analysis showed that all items had factor loadings over 0.5, indicating that all items contain sufficient reflective constructs and can support discriminative validity.

Figure 2: SEM

Source: AMOS output, 2023

Table 1.4: Model Fitness Indices

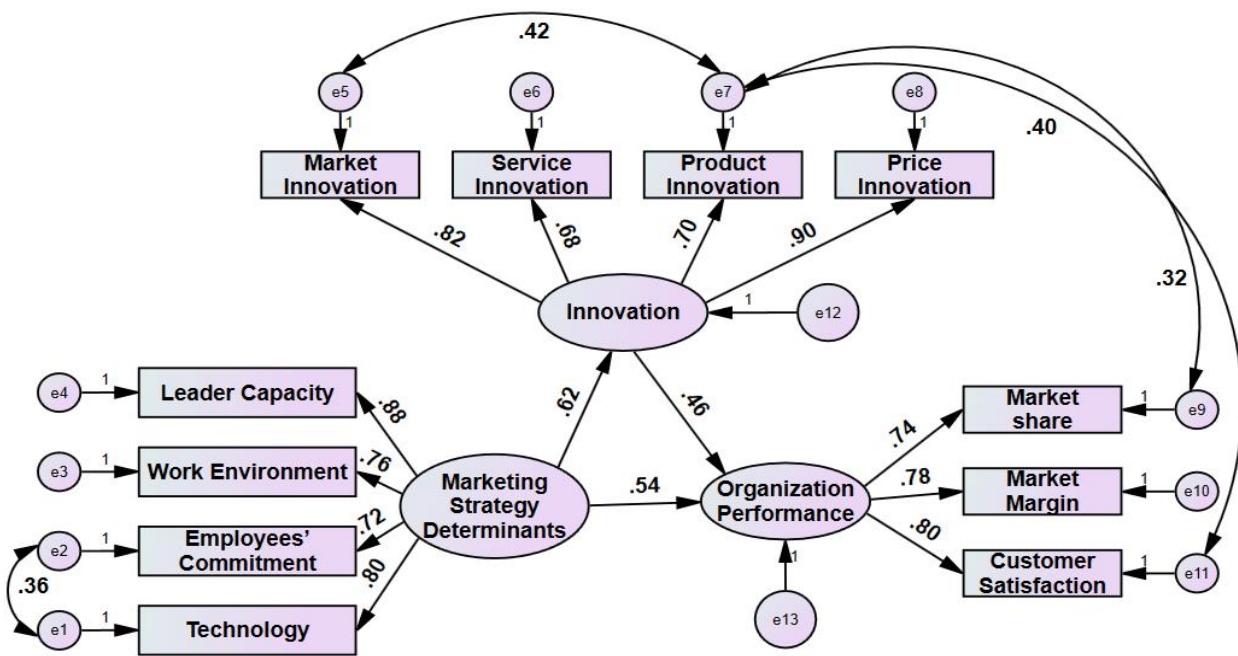| Acronym	Explication	Accepted fit	**Result**
Likelihood Ratio	P-value	**≥ 0.05**	0.07
Relative X2	(X2/df)	**≤ 2** = acceptable fit	1.806
CMIN/DF	Chi-square divided by Degree of Freedom	**≤ 3** = acceptable fit **≤ 5** = reasonable fit	1.908
GFI	Goodness of Fit Index	**1** = perfect fit **≥ 0.95** = excellent fit **≥ 0.9** = acceptable fit	0.91
AGFI	Adjusted Goodness of Fit Index	**≥ 0.90** = acceptable fit	0.92
CFI	Comparative Fit Index	**1** = perfect fit **≥ 0.95** = excellent fit **≥ .90** = acceptable fit	0.94
RMSEA	Root Mean Square Error of Approximation	**≤ 0.05** = reasonable fit	0.034
RMR	Root Mean Squared Residual	**≤ 0.05** = acceptable fit **≤ 0.07** = acceptable fit	0.006
SRMR	Standardized Root Mean Squared Residual	**≤ 0.05** = acceptable fit	0.04
CN	Critical N	**≥ 2021** = acceptable fit	254

Source: AMOS output (2023)

As can be seen in the table 1.4 above, the model fit sheet provides a summary of the SEM model fitness results along with their accepted values. When researchers compared the SEM model fit indices with the standardised values, they found that the model fitness was depicted by Chi-Square (CMIN), Goodness of Fit Index (GFI), Baseline Comparisons in Model Fit, Parsimony-Adjusted Measures, Root Mean Square Error of Approximation (RMSEA), Standardised Root Mean Squared Residual, Comparative Fit Index, and Critical N.As a result, partial mediation with a value of 40.67 was discovered.

Conclusion

The Business Sustainability of the Bank Industry Business Sector is Significantly Affected by Employee Commitment, Work Environments, Leader Capability, and Technology Predicators, as Most Respondents' Responses Were Found Under Strongly Agree Ranges. In addition to the research area, the organization's sustainability in the banking industry business sector was in danger because of constraints in determinants (employee commitment, work conditions, leader capability, and technological predicators). The results of the correlation analysis show that the four study variables—employee commitment, work environments, leader capability, and technology predicators—that determine the business sustainability of the banking industry business sector have a significant and positive relationship with the business sustainability of the implementation of bank marketing strategies, with magnitude ranges of strong overall. Regression analysis wasn't used until the efficiency of the organization and pre-model fitting assumptions, such as the variables' normality, linearity, and multi-co linearity, were confirmed. Furthermore, the study discovered that the value of the regression analysis's (R-square) was 0.882, indicating that the four independent variables—employee commitment, working conditions, leader competency, and technological predictors—can influence the variation in an organization's sustainability in the banking sector. The study's findings indicate that the four variables have a strong, significant relationship with the organizational

sustainability of the banking sector in a modern organization.

Limitation and Further Research

The study's design or methodology flaws or limitations are those that affected or influenced how your research's results were interpreted. The number of knowledge gaps that follow from our findings should be suggested by additional research, which could also be used to expand upon and further test the research. Qualitative research as a methodology Market orientation has a number of benefits over traditional marketing tactics, according to earlier studies. The field of market orientation proposes an improvement to marketing research and encourages companies to use marketing inputs targeted at achieving particular corporate objectives. Benefits of the development of market orientation as a science include higher quality and a better understanding of consumers.

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Conflict of Interest: The authors declare no conflict of interest

References

Amine, L. S., and Cavusgil, S. T. (2021). Export marketing strategies in the British clothing industry. European Journal of Marketing, 20(7), 21-33

Bag, S., & Omrane, A. (2022). Corporate social responsibility and its overall effects on financial sustainability: Empirical evidence from Ethiopia n companies. Journal of Sustainable Business, 23(1), 264-280.

Orientation On Business Sustainability With Mediating Role of Employee And Customer Satisfaction In Ethiopia Banks. Partners Universal International Research Journal, 1(4), 118–125. https://doi.org/10.5281/zenodo.7495221

Garcia, F. T., ten Caten, C. S., de Campos, E. A. R., Callegaro, A. M., & de Jesus Pacheco, D. A. (2022). Mortality Risk Predicators in Micro and Small Businesses: Systematic Literature Review and Research Agenda. Sustainability, 14(5), 2725.

Gobena, A. E., & Kant, S. (2022). Assessing the Effect of Endogenous Culture, Local Resources, Eco-Friendly Environment and Modern Strategy Development on Entrepreneurial Development. Journal of Entrepreneurship, Management, and Innovation, 4(1), 118-135.

Guillaume, Y. R., Dawson, J. F., Otaye-Ebede, L., Woods, S. A., & West, M. A. (2022). Harnessing demographic differences in organizations: What moderates the effects of workplace diversity?. Journal of Organizational Behavior, 38(2), 276-303.

Haimanot, (2022) assessment of strategy implementation and organizational sustainability: the case of bank of Abyssinia, Sustainable Journal of Business Management 3 (3), 70 – 79.

Islam, A., & Abd Wahab, S. (2022). The intervention of strategic innovation practices in among regulations and sustainable business growth: a holistic perspective for Malaysian SMEs. World Journal of Entrepreneurship, Management and Sustainable Development.

Islam, T., & Munir, S. (2022). How important strategic learning capabilities are during COVID-19? A model for innovation ambidexterity. Journal of Workplace Learning, (ahead-of-print).

Jain (2019), employee motivation and organizational sustainability, volume 5, issue 1, 53-62

Kalkidan (2019), Assessment on Marketing Strategy Practice and challenges of Ethio telecom, International Journal of Operations & Production Management, 21(3), 275-301.

Kant, S. (2020). Critical Appraisal of Prevailing Marketing Mix: Applies Particularly to the Digital Marketing Metaphor.IISTE,26 (7), 123-134.

Kant, S. (2022). Scientific Review on Assessing Effect of Endogenous Culture, Local Resource, Eco-Friendly Environment and Modern Strategy Development on Entrepreneurial Development. Local Resource, Eco-Friendly Environment and Modern Strategy Development on Entrepreneurial Development (October 30, 2022).

Kant, S., & Tufa, G. Reviewing Relevance of Leadership Styles on Leadership Outcomes: An Epistemological

Study of New Addis AbabaTown, NCR Addis Ababa State, Ethiopia , Horn of Ethiopia .8 (10), 1899-1908.

Kebede Asefa, & Dr. Shashi Kant. (2022). Transactional Academic Leadership Effect on Employee's Engagement: the Mediating Impact of Extrinsic Motivation. Partners Universal International Research Journal, 1(4), 54–62. https://doi.org/10.5281/zenodo.7422224

Kenesa Kebede, Fisseha Dejene Yadete, & Shashi Kant. (2023). Is Paradigm Shift From Traditional Marketing Mix to Digital Marketing Mix Effects the Organizational Profitability in Ethiopia? A Multivariate Analysis. Partners Universal International Research Journal, 2(1), 122–134. https://doi.org/10.5281/zenodo.7772438

Le Roy, F., & Czakon, W. (2022). Managing coopetition: the missing link between strategy and sustainability. Industrial Marketing Management, 53(1), 3-6.

Lestari, S. D., LEON, F. M., Widyastuti, S., BRABO, N. A., & Putra, A. H. P. K. (2020). Antecedents and consequences of innovation and business strategy on sustainability and competitive advantage of SMEs. The Journal of Asian Finance, Economics and Business, 7(6), 365-378.

Mehralian, M. M. (2022). Effect of Internet of Things on Marketing Sustainability: The Mediating Role of Entrepreneurship Orientation. In 25th Iranian Conference on Business Development and Digital Transformation.

Mishra, S. S., & Kasim, J. J. (2022). Team culture, employee commitment and job sustainability in public sectors: a multi-level analysis. International Journal of Organizational Analysis.

Mulugeta, A., & Pandian, A. V. R. (2020). The relationship between leadership styles and employee commitment in public organizations of Dire Dawa administration, Ethiopia. International Journal of Advanced Science and Technology, 29(8), 2018-2025.

Olson, E. M., Slater, S. F., Hult, G. T. M., & Olson, K. M. (2018). The application of human resource management policies within the marketing organization: The impact on business and marketing strategy implementation. Industrial Marketing Management, 69, 62-73.

Panigrahi, A. K. Nayak, R. Paul, B. Sahu and S. Kant, "CTB-PKI: Clustering and Trust Enabled Blockchain Based PKI System for Efficient Communication in P2P Network," in IEEE Access, vol. 10, pp. 124277-124290, 2022, doi: 10.1109/ACCESS.2022.3222807.

Tesfaye, T., Kant, D. S., & Adula, M. (2022). Consequences of Project Integration Techniques on Project Accomplishment in Ethiopia: AMOS Based Equation Model. Traditional Journal Of Law And Social Sciences, 1(02), 248 –. Retrieved from https://ojs.traditionaljournaloflaw.com/index.php/TJLSS/article/view/54

Tufa, G., & Kant, S. (2020). Investigating the Impact of Customer Relationship Marketing Perceived Predicators on Customer Loyalty in Ethiopia n Banking Sector. Online International Interdisciplinary Research Journal, 10 (7), 43-52.

Wang, C., Mundorf, N., & Salzarulo-McGuigan, A. (2022). Entrepreneurship education enhances entrepreneurial creativity: The mediating role of entrepreneurial inspiration. The International Journal of Management Education, 20(2), 100570.

Wata Dereso, C., & Kant, S. (2022). Education sector structural digital transformations in comprehensive Universities of Ethiopia in post COVID-19 periods. International Journal of Multidisciplinary Research and Growth Evaluation.

Wata Dereso, C., & Kant, S. (2022). Mediating Affect of COVID-19 Panic on Comprehensive Universities Students Entrepreneurial Behavior through Structural Equation Modeling (SEM): A Perspective of Higher Education. Journal of Positive School Psychology, 6(1), 53-61.Journal of Positive School Psychology, 6(1), 53-61.

Gemechu Tufa, & Shashi Kant. (2023). Introductory Qualitative Research in Psychology by Carla Willig: A Book Review. Partners Universal International Innovation Journal, 1(2), 49–54. https://doi.org/10.5281/zenodo.7853394

Fisseha Dejene Yadete, & Shashi Kant. (2023). Neuro-Marketing in Understanding Consumer Behavior: Systematic Literature Review. Partners Universal International Innovation Journal, 1(2), 105–116. https://doi.org/10.5281/zenodo.7856978

Fisseha Dejene Yadete, Shashi Kant, & Chalchissa Amentie Kero. (2023). Meta-Analysis of Marketing Innovation on Firm's Performance of Small & Medium Enterprises With the Moderating Effect of Government Support Program: In Case of Selected Sub-cities of Addis Ababa, Ethiopia. Partners Universal International Innovation Journal, 1(2), 127–140. https://doi.org/10.5281/zenodo.7857128

Dereso, C.W., Kant, S., Muthuraman, M., Tufa, G. (2023). Effect of Point of Service on Health Department Student's Creativity in Comprehensive Universities of Ethiopia: Moderating Role of Public-Private Partnership and Mediating Role of Work Place Learning. In: Jain, S., Groppe, S., Mihindukulasooriya, N. (eds) Proceedings of the International Health Informatics Conference. Lecture Notes in Electrical Engineering, vol 990. Springer, Singapore. https://doi.org/10.1007/978-981-19-9090-8_13

Moderating Effect of Corporate Governance Mechanism on the Relationship between Firm Attributes and Corporate Performance in Emerging Economy

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Abstract
The study examined the moderating effect of corporate governance mechanism on the relationship between firm attributes and corporate performance in emerging economy. Firm attributes was proxy using firm assets tangibility (FAT) and firm foreign listing (FFL); corporate performance was measured using Tobin's Q while the moderating variable of corporate governance mechanism was proxy using board size. The ex post facto design was adopted and the data for the study was collected from the annual reports and accounts of the 66 manufacturing companies listed under consumer goods sector, industrial goods sector oil & gas sector, ICT sector, healthcare sector and conglomerate sector of the Nigeria Exchange Group (NGX) as of December 31, 2022 for the period of 2016-2022. Panel Least squares model was used in the data analysis and the results of the study show a significant and positive association between firm assets tangibility, firm foreign listing and performance of listed manufacturing firms in Nigeria at 1% significant level. Corporate governance mechanism was also found to moderate the relationship between the firm assets tangibility, firm foreign listing and corporate performance at 1%-5% level of significance. The study therefore concludes that firm attributes ensure corporate performance. The study recommends that firms should find a way to ensure an optimal use of their tangible assets and also have a foreign stock listing as it ensures corporate performance. In addition, firms should ensure that they have effective corporate governance mechanism in place as it moderates the relationship between firm attributes and corporate performance.
Keyword: Firm Attributes; Firm Assets Tangibility; Firm Foreign Listing; Board Size; Corporate Governance Mechanism

Introduction

Today's dynamic business environment is characterized by the emergence of increasingly knowledge-based economies that encourage both global competition and innovative business practices. This is at the core of any competitive advantage today. Hence, corporate governance has attracted the attention of many researchers, investors, managers, policy makers and even potential investors as an appropriate governance mechanism needs to be incorporated to ensure that the organization functions well and also meets the needs of its various stakeholders. This is due to the high number of corporate failures in recent years, particularly in Nigerian industry. Many companies have failed because they did not follow or value the concept of corporate governance (Okpala & Omaliko, 2022).

According to Ndidi (2017), many authorities agree that corporate performance will improve significantly when corporate governance is practiced appropirately. Good corporate governance practices have become a global effort to stabilize and strengthen global capital markets and protect investors.

A number of studies have been conducted to examine the relationship between firm attributes and performance in both developed and emerging economies. i.e Lambe, Arumona and Okoli (2023), Efuntade and Akinola (2020), Egbunike and Okerekeoti (2018); Waweru and Riro

(2013), Maleya and Willy (2013), Shehu and Bello (2013), Hassan and Ahmed (2012), Margaritis and Psillaki (2010), etc. Thus, it was observed from the literature that most studies on firm attributes, have a focus on the following measurements; company size, company debt, company age, company liquidity, company growth, company ownership, etc. None of the studies introduced firm foreign listing and firm assets tangibility as a measure for firm attributes. A foreign-listed company seeks to enhance its global reputation and attract international investors by listing its shares on a foreign stock exchange. It also increases company visibility and value and reduces information asymmetry. On the other hand, companies with high asset tangibility ratio have lower financial distress costs than companies with a low asset tangibility ratio. Therefore, there is a need to introduce these variables (firm foreign listing and firm assets tangibility) in order to examine its relationship with company performance.

Also, previous studies show deficiency in the factors that influence company performance. Some of these studies have focused on just one or a few factors, such as capital structure, while others only used accounting measures of company performance. Furthermore, to the best of our knowledge, none of the studies distinguishes between firm attributes and corporate governance mechanisms. In Nigeria, little or very limited research has been conducted to provide evidence of the relationship between firm attributes and corporate performance, using corporate governance as a mediating variable. Hence, the need for the present study to examine the relationship between firm attributes and corporate performance while controlling for corporate governance mechanisms in Nigeria. Consequently, the present study attempts to fill the gap that exists in previous research.

To this end, we formulated the following hypotheses to achieve the objectives of this study.

H_{01}: Firm assets tangibility has no significant relationship with corporate performance

H_{02}: There is no significant relationship between firm foreign listing and corporate performance

H_{03}: Corporate governance mechanism does not moderate the relationship between firm assets tangibility and corporate performance

H_{04}: Corporate governance mechanism does not moderate the relationship between firm foreign listing and corporate performance

Review of Related Literature

Firm Attributes

Company attributes are factors that are largely under the control of management. It includes company size, liquidity, firm age, leverage and revenue growth. On the other hand, the macroeconomic indicators are such factors that are beyond management's control. These include interest rate, GDP and industry size (Sumaira & Amjad, 2013). Ali and Isa (2018) defined firm attributes as the distinctive features that distinguish one firm from another. It is possible to identify the characteristics of the company from the relevant information in the financial statements for a given accounting period (Stainer, 2006). According to Shehu and Bello (2013), firm attributes refer to the characteristics possessed by a particular company that defines its activities. It is composed of those variables that relatively influence company decisions extensively.

Firm Assets Tangibility

According to Salah, Mohamed and Rania (2020), assets tangibility is a physical property that could be touched. The term is most commonly associated with fixed assets such as machinery, vehicles and buildings. It is not used to describe short-term assets such as inventory, as these items are intended for sale or conversion into cash. Tangible assets represent the key competitive advantage of some companies, especially when they use the assets efficiently to generate sales. Tangible assets are physical and measurable assets used in a company's business operations. Assets such as property, plant and equipment are tangible assets. Tangible assets form the backbone of a company's operations by providing the means by which companies produce their goods and services. The physical value of assets is defined as the ratio of total tangible assets to the book value of total assets (Hall, 2012).

Firm Foreign Listing

Sudipa (2007) notes that listing companies abroad provides an increasing opportunity to sell products and services and raise capital in foreign markets. Large, medium and even small companies are weighing the

benefits and costs of listing abroad. Access to foreign capital is a key benefit. A foreign listing is a company's ability to enhance its global reputation and attract international investors by listing its shares on a foreign stock exchange. In theory, foreign listing increases company visibility and value and reduces information asymmetry. The cost of capital of foreign listed companies could decrease due to transaction costs reduction, improving the quality of information available to investors, taking advantage of tax benefits and opening up more markets, which will be reflected in the profitability of the company (Gary & Shahrockh, 1991).

Corporate Governance Mechanism

According to Okpala and Omaliko (2022), corporate governance mechanism is viewed as the delegated responsibility of the board of directors in running the organization and also has the responsibility to ensure that those investing in the company can generate a return on their investment. Therefore, the Board of Directors has a legal mandate to protect the rights of investors and their shareholders. Corporate Governance (CG) in a corporate structure leads to maximizing shareholder value on a legal, ethical and sustainable basis, while ensuring equity and transparency for all stakeholders (the company's customers, employees, investors, supplier partners, and the government). Corporate governance is a key to transparent corporate disclosure and quality accounting practices (Abdullah, 2014).

Ogundele (2005) argues that corporate governance is viewed as the body of small or large organizations or even large society that bears the responsibility for controlling resources of all kinds within its sphere of influence and

also has the power to rule over the human and material resources of the organization or community. According to Donaldson and Davis (2003), corporate governance is a system by which an entity is controlled. It relates to the workings of the company's board of directors and the conduct of business externally and internally.

For the purpose of this study, corporate governance mechanism was used as a moderating variable and proxy using board size.

Corporate Performance

Omaliko, Mordi and Aluoreronye (2022), note that firm performance is a measure of a firm's ability to utilize assets from its core business and generate revenue. The term performance, is used to assess a company's financial health over a period of time and could be used to compare similar companies in the same industry. It is a measure of the monetary results of a company's operations and policies. These are evident in the company's return on assets, return on investments, value added, net assets per share, etc.

Ndidi (2017) notes that financial performance, which assesses the company's achievement of its economic objectives, has long been a topic of interest in management research. The study finds that a company's financial performance is related to various subjective measures of how well a company can use its existing primary operating assets to generate profits.

For the purpose of this study, a market-based measure of Tobin's Q (TQ) was used as a measurement for corporate performance as used in the study of (Omaliko & Okpala, 2022).

Figure 1: The Diagram of Conceptual Model
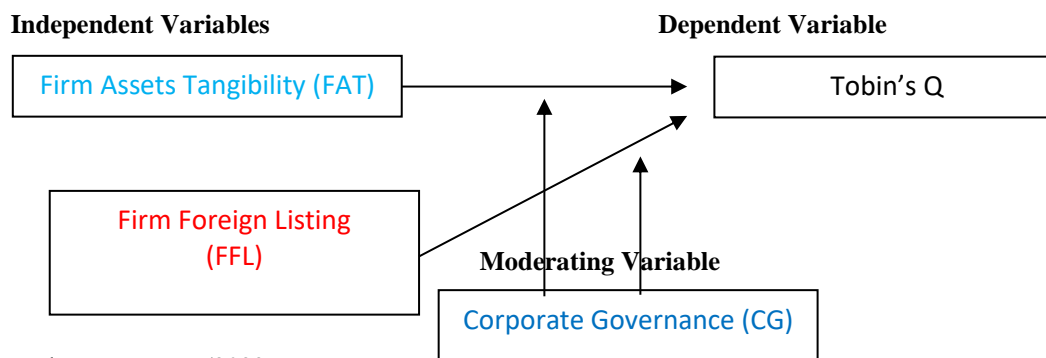
Source: Researcher's Concept (2023)

Theoretical Framework

Stakeholders Theory

Freeman propounded the stewardship theory in 1984. The theory is based on the assumption that shareholders' interests and management's interests are aligned; therefore, management is motivated to make decisions that maximize the organization's performance and overall value. The theory posits that cooperative behavior has greater utility than individualistic behavior and that management's actions would serve to maximize shareholders' wealth while also satisfying their personal needs. Managers protect and maximize shareholder wealth through the organization's performance, as this maximizes its utility functions (Omaliko & Okpala, 2022).

To achieve this goal congruently, shareholders must put in place appropriate, enabling governance structures and mechanisms, as well as information and authority to allow management autonomy to make decisions that maximize their utility in achieving organizational and non-interested goals. Chief Executive Officers (CEOs) who act as administrators are best facilitated in their pro-organizational actions when corporate governance structures allow them high levels of authority and discretion (Davis, Schoorman, & Donaldson, 1997). Therefore, the evidence from stakeholder's theory linking corporate governance mechanism to improved financial performance is very evident. Therefore, the study is anchored on the stakeholder theory.

Empirical Review

Efuuntade and Akinola (2020) examined the influence of company characteristics on the financial performance of listed manufacturing companies in Nigeria. Descriptive and cross-sectional research designs were applied to examine the relationship between company characteristics variables and financial performance of listed manufacturing companies in Nigeria over a 14-year period. Secondary data was obtained from annual reports of five selected publicly traded manufacturing companies. To test the formulated hypothesis, the panel least squares regression model was used. The results showed that all independent variables collectively have a strong impact on the financial performance of manufacturing companies in Nigeria as measured by return on investment. It was concluded that the explanatory variables (firm age, firm size, revenue growth, liquidity and leverage) are significantly related to the dependent variable (return on asset). The study then recommends that the management should find ways to improve and make the best use of their assets while making maximum use of their resources during the production processes and distribution of the finished products, as thus ensures performance.

Lambe, Arumona, and Okoli (2023) examined company characteristics and social sustainability reporting using an ex post facto research design, a non-probable (targeted) sampling technique, and a panel regression estimation, relying on annual reports (secondary data) from companies 112 companies covering the period of 2012 to 2021, from which 82 companies were selected. A Hausman test (random effect) was also performed using E-Views. The results of the study show that company size has a positive but significant impact on the Social Disclosure Index, while company age has a positive and negligible effect on the Social Disclosure Index of non-financial companies in Nigeria. According to the results, the social sustainability reporting of listed non-financial companies in Nigeria is significantly influenced by the performance characteristics of the companies. Therefore, the study recommends that the management of non-financial companies should increase the size of their companies relative to total assets, as this has a positive multiplier effect on the company's social sustainability reporting.

Waweru and Riro (2013) examined revenue management and company characteristics based on 37 listed companies in Kenya for the five-year period 2016 to 2010 and applying the accounting approach to measure revenue management. The study posits that the quality of financial reporting of companies that are not highly aligned and compromised. They therefore concluded that investors are more likely to rely on the financial reports of companies with lower debt-to-equity ratios.

Hassan and Ahmed (2012) examined the corporate characteristics and earnings quality of listed oil and gas companies in Nigeria for the period 2007–2011. The oil and gas companies listed are nine (9), from which a sample of seven (7) was used for the study. Firm attributes as an independent variable were an indicator of firm size, leverage, institutional ownership, profitability, liquidity, and firm growth, while residuals from the modified Jones model were used as an indicator of earnings quality. The study uses multiple panel regression techniques and data was collected from secondary sources through the companies' annual reports and financial

statements. Findings showed that leverage, liquidity and corporate growth have a significant and positive impact on earnings quality, while company size, institutional ownership and profitability have a significant but negative impact on earnings quality for listed oil and gas companies in Nigeria.

Maleya and Willy (2013) examined the factors affecting the financial performance of listed companies on the Nairobi Securities Exchange in Kenya. This was influenced by trade-off and agency theories. The study is based on an explanatory research design and 29 listed companies that regularly traded on the Nairobi Stock Exchange in the period 2006-2012 were surveyed. The analysis of the data from the financial statements was based on a number of basic statistical techniques. Descriptive statistics, Pearson correlation and multiple regression were used to analyze the data. Their results showed that leverage had a significant and negative impact on financial performance, while liquidity, firm size, and age had significant and positive impacts on financial performance.

Methodology

An ex post facto design was used in the study. This was based on the fact that secondary data was used which already exist and cannot be controlled. The study population consists of all 66 manufacturing companies listed under consumer goods sector, industrial goods sector, oil & gas sector, ICT sector, health care sector and conglomerate sector of the Nigeria Exchange Group as of December 31, 2022 covering the period 2016-2022. The use of firms quoted under the selected sectors on NGX Group could be justified by the fact that, to the best of our knowledge, there is no study that had focused on these sectors in assessing the moderating effect of corporate governance mechanism on the relationship between firm attributes and corporate performance. Of the 66 companies that made up the study population, 16 had incomplete financial information required during the reporting period and were removed. On this basis, a total of 50 companies formed our sample size with 350 observations. The data was collected from the annual accounts and annual accounts of the sampled companies. Panel least squares model was used to study the relationship between firm attributes and corporate performance.

Operationalization and Measurement of Variables

Table 1: Measurement for Dependent Variable

Variable	Measurement
Dependent	
Corporate Performance	Tobin's Q = Market Value of Physical Assets/Replacement Value
Independent	
Firm Assets Tangibility	Firm Tangible Assets/Total Assets
Firm Foreign Listing	A dummy variable of 1 for foreign listing otherwise 0
Moderating	
Corporate Governance Mechanism	Board Size = Number of directors in the board

Source: Empirical Survey (2023)

Model Specification and Justification

In line with the previous researches, the researcher designed a model to examine the relationship between firm attributes and corporate performance; moderated by corporate governance mechanism. The functional model for the study is shown below as thus:

TQ = F(FAT, FFL)

The explicit form of the regression designed for the study is expressed as thus:

Model 1: $TQ_{it} = \beta_0 + \beta_1 FAT_{it} + \beta_2 FFL_{it} + \mu$

To examine the moderating effect of corporate governance mechanism on the relationship between firm attributes and corporate performance, the regression model is expressed as thus:

Model 2: $TQ_{it} = \beta_0 + \beta_1 FAT_{it} + \beta_2 FFL_{it} + \beta_3 BS_{it} + \beta_4 BS*FAT_{it} + \beta_5 BS*FFL_{it} + \mu$

Where:

TQ= Tobin's Q
FAT = Firm Assets Tangibility
FFL = Firm Foreign Listing
BS = Board Size
μ = error term

Decision Rule: accept Ho if P-value > 1% or 5% significant level otherwise reject Ho

Data Analysis and Results

Table 2: Descriptive Statistics

	TQ	FAT	FFL	BS
Mean	0.228234	3.263429	2.674571	2.055657
Median	0.074000	3.100000	2.900000	2.120000
Maximum	4.967000	4.500000	4.100000	3.500000
Minimum	-41.98500	1.800000	1.400000	0.800000
Std. Dev.	3.931154	0.678596	0.666221	0.577946
Skewness	-10.28852	0.432456	-0.619862	-0.246264
Kurtosis	109.7756	2.251856	2.095932	2.451261
Jarque-Bera	172439.9	19.07195	34.33285	7.928931
Probability	0.000000*	0.000072*	0.000000*	0.018978**
Sum	-79.88200	1142.200	936.1000	719.4800
Sum Sq. Dev.	5393.436	160.7119	154.9037	116.5734
Observations	350	350	350	350

Note: *1%, **5% Level of Significance
Source: E-View 12 Computational Results (2023)

Table 2 above shows that Tobin's Q (TQ) mean value for the sampled companies was 0.228234. This implies that the financial performance of firms is determined by its attributes. The maximum value for the study was 4.967 and the minimum value was -41.99. The differences in the maximum and minimum TQ values between the sampled companies justify the need for the study as we assume that a firm's attributes is a determinant of its performance. The average value of firm assets tangibility (FAT) for the sampled companies was 3.263429. This means that companies with FAT value of 3.263429 and above are companies with physical assets at a risk level of 0.68%. The maximum and minimum values for the study were 4,500 and 1,800 respectively. The variability in minimum and maximum FAT values between sampled companies justifies the need for this study, as the study assumes that companies with such variability have more physical assets.

The average firm foreign listing (FFL) value for the sampled companies was 2.674571. This means that companies with FFL values of 2.674571 and above are foreign listed companies. Therefore, such a company tries to increase its global reputation and attract international investors by listing its shares on a foreign stock exchange.

The maximum and minimum values for the study were 4,100 and 1,400 respectively. The variability in the minimum and maximum FFL values between the sampled companies justifies the need for this study, as the study assumes that companies with such variability have foreign listed shares.

The mean value of board size (BS) for the sampled companies was 2.055657. This implies that the corporate governance mechanism proxy as a board size (BS) determines corporate performance at a risk of 0.58%. The maximum and minimum values for the study were 3,500 and 0.800 respectively. The variability in maximum and minimum BS scores between sampled companies justifies the need for this study, as the study assumes that companies with such variability have effective corporate governance mechanisms in place.

Finally, in table 2 above, the Jarque-Bera (JB), which checks for normality of data shows that the data are normally distributed at the 1% level of significance but with exception to board size, which was typically distributed at 5% level of significant. Thus implies that the data is free from the presence of an unknown outlier. Therefore, least squares regression estimates can be used to estimate the analysis.

Table 3: Correlation Matrix

Variables	TQ	FAT	FFL	BS
TQ	1.000 000			
FAT	0.061 670	1.000 000		
FFL	0.02050 8	0.548 067	1.000 000	
BS	0.00536 5	0.062 396	0.522 503	1.000

Source: Result Output from E-Views 12 (2023)

Table 3 above shows the relationship between the independent variables and dependent variable used in the model. It shows that all independent variables have a positive relationship with the dependent variable (TQ) and with each other. The values on the diagonal are all 1, indicating that each variable perfectly correlated with itself. When testing for multi-collinearity, we found that no two exogenous variables were perfectly correlated. Thus implies that there is no multi-collinearity in our model.

Test of Hypothesis

The R-squared for the model, shown in Table 4 above was 0.51%, indicating that the variables included in the model accounted for 51% of the change in the dependent variable of corporate performance (TQ), while about 49% remains unaccounted for. The F-statistic value of 6.988 and its P-value of 0.0000 indicates that the panel least-squares model is statistically significant at the 1% level. This implies that the regression model is valid and fitted for the study. Firm asset tangibility (FAT) and foreign firm listings (FFL) were found to have a positive and significant association with firm performance.

Autocorrelation test: The DW statistic is 1.979885, which is approximately 2, which agrees with Durbin Watson's rule of thumb. This means that the data is free from autocorrelation and suitable for the interpretation of the panel least-squares model result. The Schwarz criterion and Akika info criterion of 5.619029 and 5.585961 respectively; further strengthen the reliability of our result as it confirms the goodness of fit of the model.

Table 4: Panel Least Square Result on the Relationship between Firm Attributes and Corporate Performance for Model 1 (Direct Effect)

Dependent Variable: TQ
Method: Panel Least Squares
Date: 05/15/23   Time: 5:59
Sample: 2016 2022
Periods included: 7
Cross-sections included: 50
Total panel (balanced) observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FAT	0.417579	0.037104	11.25429	0.0001
FFL	0.112101	0.037794	2.966106	0.0397
C	1.291153	0.091138	14.16702	0.0000

R-squared	0.508724	Mean dependent var	23.09837
Adjusted R-squared	0.500983	S.D. dependent var	3.931154
S.E. of regression	3.934464	Akaike info criterion	5.585961
Sum squared resid	5371.561	Schwarz criterion	5.619029
Log likelihood	-974.5431	Hannan-Quinn criter.	5.599123
F-statistic	6.987633	Durbin-Watson stat	1.979885
Prob(F-statistic)	0.000000		

Source: Result Output from E-Views 12 (2023)

Table 5: Panel Least Square Result on the Relationship between Firm Attributes and Corporate Performance Moderated by Corporate Governance Mechanism for Model 2 (Moderation Effect)

Dependent Variable: TQ

Method: Panel Least Squares

Date: 05/15/23   Time: 6:02

Sample: 2016 2022

Periods included: 7

Cross-sections included: 50

Total panel (balanced) observations: 350

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FAT	0.497757	0.041121	12.10469	0.0000
FFL	0.242423	0.047409	5.113356	0.0019
BS	0.102829	0.024704	4.140187	0.0480
BS*FAT	0.819094	0.162459	5.041832	0.0049
BS*FFL	0.918800	0.207041	4.437768	0.0294
C	1.761442	0.312156	5.642826	0.0005

R-squared	0.747708	Mean dependent var		22.82347
Adjusted R-squared	0.694987	S.D. dependent var		3.931154
S.E. of regression	3.944789	Akaike info criterion		5.599662
Sum squared resid	5353.108	Schwarz criterion		5.665798
Log likelihood	-973.9409	Hannan-Quinn criter.		5.625987
F-statistic	10.86784	Durbin-Watson stat		1.958230
Prob(F-statistic)	0.000000			

Source: Result Output from E-Views 12 (2023)

The R-squared for the model, as shown in Table 5 above, was 0.75%, indicating that the variables considered in the model accounted for 75% of the change in the dependent variable of firm performance (TQ), while 25 % was not explained in the model. The F-statistic value of 10.87 and its P-value of 0.0000 indicates that the panel least-squares model is statistically significant at 1% level. This shows that the regression model is valid and fitted for the study.

Autocorrelation test: The DW statistic is 1.958230, which is approximately 2, which agrees with Durbin Watson's rule of thumb. This means that our data is free from autocorrelation and suitable for the interpretation of the panel least-squares model result. The Schwarz criterion and Akika info criterion of 5.665798and 5.599662 respectively further strengthen the reliability of our result as it confirms the goodness of fit of the model.

Discussion of Findings

In addition to the above, the specific results for each explanatory variable from the panel least square model as shown in Table 5 are provided below as follows:

H$_{01}$: Firm assets tangibility has no significant relationship with corporate performance corporate performance

This hypothesis was tested and the result of the panel's least squares model, as shown in Table 5, shows that the relationship between firm assets tangibility (FAT) and corporate performance (TQ) is positive and significant, with a P-value of 0.0000 for the model, which is below the assumed 1% significant level. The result of the positive coefficient of 0.498 for the model also implies that increase in firm's tangible assets increases firm performance by 49.8%. We therefore accepted the alternate hypothesis, which states that firm assets tangibility has significant relationship with corporate performance. This finding seems agreeable with the findings of Efuntade and Akinola (2020), Lambe, Arumona, and Okoli (2023) who found that firm assets size determines firm performance. This goes further to confirm that firm assets tangibility increases corporate performance.

H$_{02}$: There is no significant relationship between firm foreign listing and corporate performance

This hypothesis was tested and the result of the panel's least squares model, as shown in Table 5, shows that the relationship between firm foreign listing (FFL) and corporate performance (TQ) is positive and significant, with a P-value of 0.0019 for the model which is less than 1% significant level. In addition, the positive coefficient of 0.242 for the model shows that the firm foreign listing ensures corporate performance by 24.2%. We therefore accepted the alternate hypothesis, which states that there is a significant relationship between firm foreign and corporate performance. This finding is in consonance with the a priori expectations of Sudipa (2007) and Gary and Shahrockh (1991) who found that foreign listing ensures firm performance. This goes further to confirm that firm foreign listing enhance its global reputation and attract international investors.

H$_{03}$: Corporate governance mechanism does not moderate the relationship between firm assets tangibility and corporate performance

This hypothesis was tested and the result of the panel's least squares model, as shown in Table 5, shows that the relationship between firm assets tangibility (FAT) and corporate performance moderated by corporate governance mechanism is positive and significant, with a P- value of 0.0049 for the model, which is below the assumed significance level of 1%. In addition, the positive

coefficient of 0.819 for the model indicates that companies with effective corporate governance practices have higher performance. We therefore rejected the null hypothesis and accepted the alternate hypothesis, which states that corporate governance moderates the relationship between a firm tangible assets and corporate performance. Then finding agrees with the findings of Okpala and Omaliko (2022) and Ndidi (2017) who reported that corporate governance mechanism ensures corporate performance. This goes further to confirm that firms with effective corporate governance practices have higher returns.

H$_{04}$: Corporate governance mechanism does not moderate the relationship between firm foreign listing and corporate performance

This hypothesis was tested and the result of the least squares model, as shown in Table 5, shows that the relationship between firm foreign listing (FFL) and corporate performance (TQ), moderated by corporate governance mechanism, is positive and significant with a P-value of 0.02941 for the model, which is below the assumed 5% level of significance. The result of the positive coefficient of 0.919 for the model also shows that effective corporate governance practices ensure firm foreign listing. We therefore accepted the alternate hypothesis, which states that corporate governance mechanism moderates the relationship between firm foreign listing and corporate performance.

Also, board size when independently tested as a control variable indicates a positive and significant relationship with corporate performance. With a p-value of 0.0480, the test is considered statistically significant at the 5% level.

Conclusion

The study concludes that firms' attributes ensure corporate performance. Hence, corporate performance is a determinant of firm attributes. Also firm's effective corporate governance practice moderates the relationship between firm's attributes and corporate performance.

Recommendation

1. Firms should find a way to ensure optimal use of their tangible assets while making use of their resources during the production processes and also distribution of their

finished products, as this would help them in improving their performance.

2. The study, which found a link between firm foreign listing and corporate performance, suggests that foreign listing should be considered as an option for ensuring corporate performance.

3. Firms should also ensure that they have an effective corporate governance mechanism in place as this moderates the relationship between firm attributes and corporate performance.

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Conflict of Interest

Authors have declared that no competing interests exist.

References

Abdullah, S. N. (2014). Board composition, CEO duality and performance among Malaysian listed Companies. Corporate Governance International Journal of Business in Society 4(1), 47-61.

Ali, S.M., & Isa, M.A. (2018). Firms attributes and corporate social responsibility disclosure: A literature review. International Journal of Academic Research in Business & Social Sciences, 8 (4), 312- 325.

Davis J. H., Schoorman F. D., & Donaldson L. (1997). Towards a stewardship theory of management. Acad. Manage. Rev, 22, 20-47.

Donaldson, L., & Davis, J. H. (2003). Board and companies performance- research challenges and the conventional wisdom, corporate governance: An International Review, 2(3), 60-151

Efuntade, A., & Akintola, A. (2020). Firm characteristics and financial performance in quoted manufacturing companies in Nigeria.

International Journal of Business and Finance Management Research, 7(1), 25-32

Egbunike, C. F., & Okerekeoti, C. U. (2018). Macroeconomic factors, firm characteristics and financial performance: A study of selected quoted manufacturing firms in Nigeria. Asian Journal of Accounting Research, 3(2), 142–168. doi:10.1108/AJAR-09-2018-0029

Freeman R. E. (1984). Strategic management: A stakeholder theory. J. Manage. Stud. 39(1), 1-21.

Gary, C., & Shahrockh, M. (1991). Foreign stock listings: Benefits costs and the accounting policy dilemma. Accounting /Horizons, 1, 70-80

Hall, T. W. (2012). The collateral channel: Evidence on leverage and asset tangibility. Journal of Corporate Finance, 18(3), 570–583. doi:10.1016/j.jcorpfin.2011.12.003

Hassan, S. U., & Ahmed, A. (2012). Corporate governance, earning management and financial performance: A case of Nigerian manufacturing firms. American International Journal of Contemporary Research, 2(7), 214–226.

Lambe, I., Arumona, O., Okoli, T. (2023). Firm performance attributes and social sustainability reporting. A case of listed non financial companies in Nigeria. International Journal of Business Management and economics Review, 6(2), 1-21

Maleya, M., & Willy, M. (2013). Factors affecting the financial performance of listed companies at Nairobi securities exchange commission in Kenya. Research Journal of Finance and Accounting, 4(1)

Margaritis, D., & Psillaki, M. (2010). Capital structure, equity ownership and firm performance. Journal of Banking & Finance, 34(3), 621–632. doi:10.1016/j.jbankfin.2009.08.023

Ndidi, J. (2017). Impact of corporate governance on financial performance of deposit money abnks in Nigeria. A Dissertation presented to the Department of Accounting, Banking and Finance, Faculty of Management Sciences, School of Postgraduate Studies, Delta State University, Asaba Campus

Ogundele, O. (2005). Management and organization: Theory and behaviour, Lagos: Molofin Nominees

Okpala, N., & Omaliko, E. (2022). Corporate governance mechanisms and tax sheltering; Evidence from

quoted tax aggressive firms in Nigeria. Asian Journal of Economics, Business and Accounting, 22(19), 149-158

Omaliko, E., & Okpala, E. (2022). Tax aggressiveness and sustainability of listed oil and gas firms in Nigeria; Does firm size matter? International Journal of Economics and Business Management, 8(2), 48-60

Omaliko, E., & Okpala, N. (2022). Effect of board multiplicity on corporate performance; Evidence from listed consumer goods firms in Nigeria. Academic Journal of Current Research, 9(12), 22-30

Omaliko, E., Mordi, K., & Aluoreronye, O. (2022). Corporate life cycle and financial performance: An empirical evidence on listed industrial goods firms in Nigeria. Journal of Global Economics, Management and Business Research, 14(3-4), 59-68

Salah, A., Mohamed, Y., & Rania, A. (2020). The impact of firm characteristics on corporate performance in emerging markets. International Journal of Customer Relationship Marketing and management, 11(4), 70-89

Shehu, U.., & Bello, A. (2013). Firm characteristics and financial reporting quality of listed manufacturing firms in Nigeria. International Journal of Accounting, Banking and Management, 1(6), 47-63.

Stainer, L. (2006). Performance management and corporate social responsibility: The strategic connection, Strategic Changes, 15(5), 253-264.

Sudipa, M. (2007). A study of international listing by firms of Indian origin. ICRABULLETIN, Money and Finance, 1(1), 57-90

Sumaira, B., & Amjad, T. (2013). Determinants of profitability panel data evidence from insurance sector of Pakistan. Elixir Finance Management, 57, 14377-14382.

Waweru, N., & Riro G. (2013). Corporate governance, firm characteristics and earnings management in an emerging economy. J. Account. Res. 11(1), 43-64.

RESEARCH ARTICLE

Business Intelligence, Corporate Governance and Economic Performance: Evidence from Transcorp Conglomerate for the period 2012 - 2021

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Abstract
Investment in business intelligence keeps soaring as businesses strive to achieve timely data-driven decisions. This empirical study desired to quantitatively establish if the huge investment in business intelligence translates to increased profitability; and if its interaction with corporate governance variables like board emoluments and meetings lead to significant increase in profitability. Anchoring on economic theory with secondary data from Transcorp Conglomerate from 2012 – 2021, the research established that: excessive investment in business intelligence leads to significant decrease in profitability; high board emoluments and increased number of meetings have significant negative effects on profitability; bank size have significant positive effect on profitability; the interactions of business intelligence and board emoluments as well as the interactions of business intelligence and board meetings have significant positive effects on profitability; and the interaction of business intelligence, board emoluments and board meetings has significant negative effect on profitability. The study established the relevance of economic theory on business intelligence and governance study; and recommends that firms in general should optimise their business intelligence investment by linking it to profitability (which is the overall measure of economic performance).

Keywords: Business intelligence; corporate governance; economic performance; hardware and software investments; profitability

Introduction

Businesses invest in business intelligence for numerous reasons which include speedy delivery of services, enhance efficiency, and optimization of profitability. In order to sustain these objectives in the long run, increased market share and customer retention, increased revenue and decreased cost, businesses must be able to derive added value which is more than the cost of deploying and sustaining business intelligence for its operations. (Fink, Yogev & Even, 2016; Popovič, Turk & Jaklič, 2015; Lyke-Ho-Gland, 2017; Rama, Zhangb & Koroniosc, 2016). The demand by Lautenbach, Johnston and Adeniran-Ogundipe

(2017) for the quantification of the cost-benefit analysis of investment in business intelligence spurred academic debate as earlier studies viewed the concept of business intelligence (BI) from the lens of promoting business processes with the core objective of promoting business analytics and data driven decision-making (Livingston (2017). Business intelligence can promote organizational sustainability and can also mar it depending on the match between its economics: the nexus between the cost and returns on BI investment has led to underpinning BI studies with economic theory by finance and business experts (Lebied, 2017; Phocas Software, 2018). Businesses must be able to make positive returns from investments on BI

deployment if their business processes must be sustainable. Again, the need to anchor BI deployment and sustenance on cost-returns matrix is to keep businesses innovative in their objective to respond to the ever-changing market dynamics more swiftly, focused, and objectivity (Roth, 2017).

Governance of businesses has gone scientific as decisions are mostly taken on available data. So, modern corporate governance key stakeholders like members of the boards and top management work mostly work with data. There is need for an empirical study of the interaction between corporate governance and business intelligence investment. The effect of such interaction on the overall efficiency (profitability) of businesses is a forgotten aspect of BI studies. This is the crux of this study. Recent studies on BI investment failed to integrate corporate governance (see: Ahlijah, 2022; Wahua and Ahlijah, 2020). Governance is very critical for both small and large businesses. A conglomerate like Transcorp Group of business makes a good case study for this study: it has seven large subsidiaries (Transcorp Hilton Abuja, Transcorp Hotels Calabar, Aura by Transcorp Hotels, Transcorp Power Delta State, Transafam Power Limited Rivers State, Transcorp OPL 281 Nigeria Limited, and Transcorp Energy Limited); it is listed in the Nigerian Stock Exchange; and it is a home grown Nigerian conglomerate; and its governance structure and investment in business intelligence technology is top-notch (based on reviewed literature).

The objective of this study is to establish the moderating role of business intelligence on the relationship between corporate governance and economic performance of Transcorp Conglomerate using audited secondary data from 2012 to 2021. Specifically, the study aims at establishing if: (i) Business intelligence significantly affects the profitability of Transcorp conglomerate; (ii) Board emoluments significantly affect the profitability of Transcorp conglomerate; (iii) Board meetings significantly affect the profitability of Transcorp conglomerate; (iv) The size of Transcorp Conglomerate significantly affects its profitability; (v) Business intelligence significantly moderates the relationship between board emoluments and profitability of Transcorp Conglomerate when the impact of size is controlled; (vi) Business intelligence significantly moderates the relationship between board meetings and profitability of Transcorp Conglomerate when the impact of size is controlled; and (vii) Business intelligence significantly moderates the relationship between board meetings, board emoluments, and profitability of Transcorp Conglomerate when the impact of size is controlled.

Literature

Theoretical Framework – Economic Theory

Gibson, Arnott and Jagielska (2004) as cited by Wahua and Ahlijah (2020) wondered why recent studies have failed to quantitatively connect the ever-increasing BI cost to firm productivity (the technically called it profitability paradox). BI deployment and sustenance is capital intensive; and the need for all rational investor to carry out cost-benefit analysis of decisions to deploy and sustain BI from time to time in order to empirically establish if it is worth the high cost outlay (Mbawuni & Nimako, 2015). This is the canon of economic theory of BI investment. Wahua and Ahliah (2020) adopted this theory.
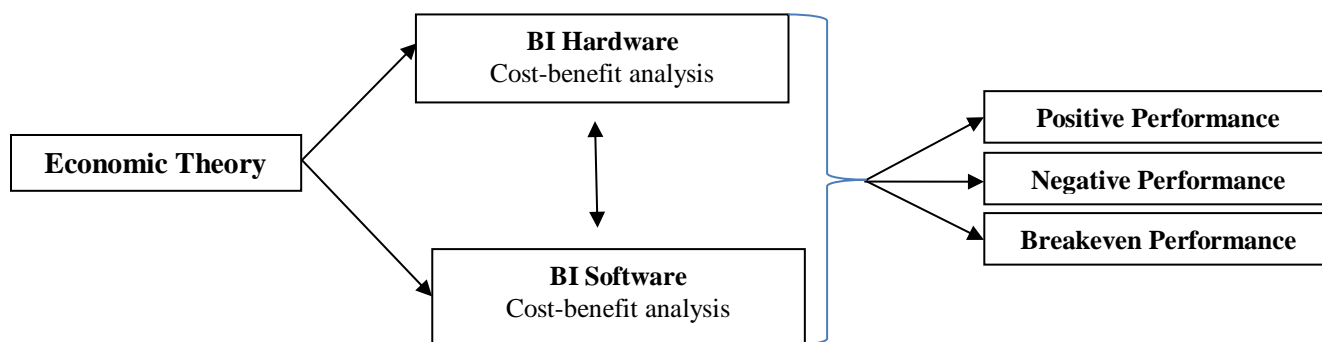

Figure 1: BI-Economic theoretical framework diagram. Source: Authors (2023)

Figure 1 captures the economic theoretical framework of business intelligence investment. The critical elements of BI investment are hardware and software. Technically, investment in BI is the summation of hardware and software costs. According to Wahua and Ahlijah (2020), the economic theory of BI holds that its cost-benefit analysis could result to positive performance (when investment is lesser than returns), negative performance (when investment is higher than returns), and it could be breakeven (when investment is equal to returns). The cost-benefit model of BI is quantitative in nature and predicts and predicts how a unit change in BI investment affects the performance of the firm using variables like profitability, value added, revenue, productivity, etcetera (Lyke-Ho-Gland, 2017; Wahua & Ahlijah, 2020).

Conceptual Framework

The conceptual framework diagram (Figure 2) captures four categories of variables: corporate governance (measured by board emoluments and board meetings) as the independent variable; business intelligence (measured by hardware and software investments) as the moderating variable; company size (measured by total assets) as the control variable; and profitability (measured by total comprehensive income) as the dependent variable.

Board Emoluments and Meetings

Nahar-Abdullah (2006) which observed that board remuneration has significant negative effect on profitability of Malaysian firms. One possible explanation for this is that the emoluments of board members are economically on the high side.

It has also been established that Board meetings negatively affected banks performance (Adhiambo & Lisiolo, 2018).

This is because Board meeting frequency exerts a negative effect on the financial performance of firms. Also, other authorities have also established that high board meeting frequency equates to low returns on asset, equity and sales (Hạnh, Ting, Kweh & Hoanh, 2018). Therefore, there seems to be a consensus to suggest that too much Board meetings is counter-productive to the overall performance of firms.

Business Intelligence

Computer hardware and software are the two integral elements of business intelligence technology; and business intelligence is the combination of the two elements for faster business processes for data-driven business decisions (Fink, Yogev & Even, 2016). According to Chen, Chiang and Storey (2012), the three cardinal aspects of business intelligence infrastructure (when measured from the physical segment of business intelligence assets) are data processing, data delivering, and data storage. The bottom-line of business intelligence investment goes beyond enhanced service delivery to overall efficiency of firms as measured by profitability for sustainable business growth and expansion (Wahua and Ahlijah, 2020).

Company Size

The capacity to deploy BI infrastructure or technology revolves around big firms with fund to invest in it. This is because BI investment is capital intensive. This is a common position by Idowu and Osofisan (2012), Jain and Pandey (2013), Oracle White Paper (2011), and Awa, Ukoha and Emecheta (2012). Therefore, it is right to add that BI investment is directly related to the size of firms. Firm size has significant positive association with profitability (Ahlijah, 2022).
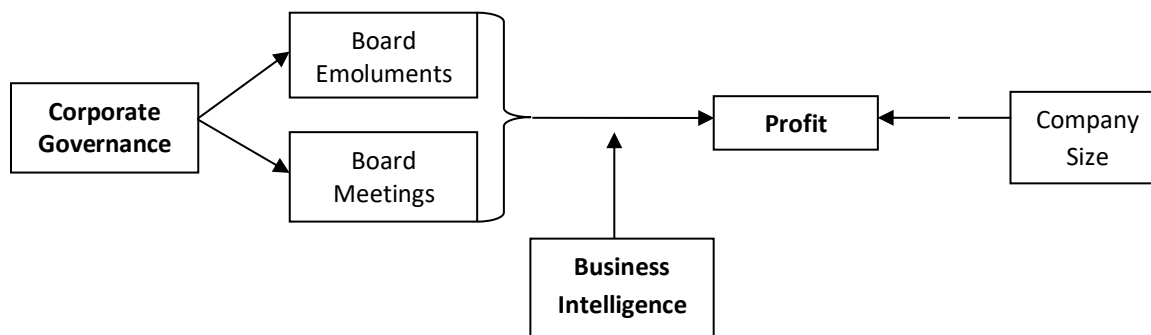

Figure 2: Conceptual framework diagram. Source: Author (2023)

Profitability

Profitability is the end-point of all business processes as well as the overall measure of efficiency of firms. A profitless organisation is non-sustainable; and is tantamount to close shop. The relationship between business intelligence deployment (investment) and profitability has mixed findings when viewed aggregately or specifically from the perspective of BI hardware and BI software (see: Wahua & Ahlija, 2020; Ahlijah, 2022).

Empirical Review

The quantification of the relationship between BI and profitability is receiving attention gradually. This is because of the need to justify the huge investment therein in recent times. Ahlijah (2022) in an original article entitled "Business intelligence and performance of the standard bank of South Africa limited" established that: (i) computer software investment had significant positive association with profitability while computer hardware investment had significant negative association with profitability. This does not agree with Wahua and Ahlijah (2020) which established that computer software cost has significant negative effect on profitability. One possible explanation here is that while Ahlijah (2022) used Pearson correlation, Wahua and Ahlijah (2020) used OLS regression analysis.

Wahua and Ahlijah (2020) established that BI hardware cost did not have significant effect on the profitability of top ECOWAS banks within 2012 – 2016. Conversely, the same study established that computer software cost had significant negative effect on the profitability of same banks within the same period. Finally, the work also found out that business intelligence cost (summation of hardware and software) had significant negative effect on profitability of the sampled banks within the period covered in the study. In summary, Wahua and Ahlijah (2020) stated that BI investment decreased profitability of studied banks by circa 40%. One possible explanation for this is over investment in BI infrastructure.

In Ghana, the deployment of business intelligence by banks have not led to better performance in terms of profitability; but, has made Ghanaian banks to witness improved growth; enhanced learning by staff, and better internal processes with improved service delivery to customers (Owusu, 2017). This goes to buttress that BI is not all about profit maximization; but, that its benefits is holistic to firms' entire well-being.

In an attempt to bridge the gap between business intelligence and value creation, Fink, Yogev and Even (2016) sampled three firms in Israel and established that business intelligence adds values to firms in Israel. The proxies used for business intelligence are computer hardware and computer software (otherwise called business intelligence assets). This quantitative study which anchored on resourced based theory. It collected primary data via questionnaire and interview. It is the recommendation of the study that further works should identify a specific firm and integrate other firm factors. This particular research integrates corporate governance with business intelligence and profitability of Transcorp Conglomerates (a Group of Companies worth more than 416,000,000,000 as at 31 December 2021). This particular study is based on economic theory which is also connected with resources based theory.

It is the position of Lyke-Ho-Gland (2017), Sclater, Webb, and Danson (2017), Roth (2017) and Phocas Software (2018) agree that business intelligence improves the key performance indicators of firms, managerial and organizational efficiency, and value for me. Specifically, Cornerstone Information System (2017) stated that the deployment of BI infrastructure helps firms to maximize profit, cut operating costs, promote project management, and enables firms to inculcate the culture of savings and better implementation of budgets. Firms do also deploy BI technology to outsmart their competitors with ease and smoothened operations using cutting edge technological advancement. This position is shared by Roth (2017) and Phocas Software (2018) who equally agree that BI helps firms to enhance effective, efficient, and economical optimization of firm resources in order to boost profit, reduce operating cost without undermining quality, and promote business sustainability.

Majority of reviewed works established a significant positive relationship between business intelligence deployment and corporate performance (profitability inclusive). Hartl, Jacob, Mbep, Budree and Fourie (2016) measured BI from non-cost point of view using data quality, data mining, data integration, collaborative analytical functions; and they measure corporate performance to include business process and organizational effectiveness and efficiency. It is apt to add that the overall measure of efficiency is profitability. Again, BI implementation has been adjudged to significantly increase business performance (Kakhki & Palvia, 2016; Richards, Yeoh, Chong & Popovič, 2014). Regrettably, this did not also factor in cost of business

intelligence. This particular study measures business intelligence with investment in BI infrastructure; hence, it attempts the bridge the gap observed in literature.

In Malaysia, Teoh, Rajendran and Lim (2014) established that BI investment and related costs statistically decreased BI implementation by manufacturers; and that BI implementation statistically increased the performance of manufacturers in the country. The imports of these findings are: (i) the high cost of deploying and sustaining BI infrastructure discourages firms from investing on it; and (ii) firms that actually deployed BI infrastructure in their operations witnessed improved performance in terms of operations and financials. This position still holds true in the USA where Brynjolfsson (2011) noted that firms that deployed BI technology outperformed their peers by circa 5 – 6% in productivity and output. Also in Slovenia, Popovič, Turk and Jaklič (2010) established that BI investment significantly increased firms' performance (profitability inclusive) by adding values to their operations.

Development of Research Hypotheses

The economics of BI-driven decision-making should be objective in establishing the significance of incremental business values (such as business growth, profitability, value added, productivity, turnover, etcetera) while appraising BI cost-returns nexus (Lyke-Ho-Gland, 2017). The Cornerstone Information System (2017) established that BI does not only improve decision-making; but that it increases the overall profitability of businesses. This is supported by Phocas Software (2018) who also established that BI investment promotes overall effectiveness of entire business processes as well as they overall performances. Such performance indicators include customer retention, profitability, value added, reduced cost, increased revenue, productivity, business size, and business value which included goodwill (Lyke-Ho-Gland, 2017; Rama, Zhangb & Koroniosc, 2016). Also, Adhiambo and Lisiolo (2018), and Hạnh, Ting, Kweh and Hoanh (2018) established that board meetings decreases business profitability. Nahar-Abdullah (2006) also observed that board remuneration has significant negative effect on profitability of Malaysian firms. One possible explanation for this is that the emoluments of board members are economically on the high side. Finally, the capacity to deploy BI infrastructure or technology revolves around big firms with fund to invest in it. This is because BI investment is capital intensive. This is a common position by Idowu and Osofisan (2012),

Jain and Pandey (2013), Oracle White Paper (2011), and Awa, Ukoha and Emecheta (2012). Therefore, it is right to add that BI investment is directly related to the size of firms. Firm has significant positive association with profitability (Ahlijah, 2022).

> **H0$_1$**: Business intelligence does not significantly affect the profitability of Transcorp conglomerate
>
> **H0$_2$**: Board emoluments do not significantly affect the profitability of Transcorp conglomerate
>
> **H0$_3$**: Board meetings do not significantly affect the profitability of Transcorp conglomerate
>
> **H0$_4$**: The size of Transcorp Conglomerate does not significantly affect its profitability

Business intelligence technology aims at quantifying the value added by businesses due to their adoption of BI (Popovič, Turk & Jaklič, 2015). Attempts to establish the contribution of BI investment to firms' bottom-line performance are yet to fully integrate the moderating effect of BI technology (Grover, Teng, Segars & Fiedler, 1998). Hypotheses 5 – 7 attempt to establish the moderating effects of BI in the relationship between corporate governance and profitability of Transcorp Group of Conglomerates.

> **H0$_5$**: Business intelligence does not significantly moderate the relationship between board emoluments and profitability of Transcorp Conglomerate when the impact of size is controlled**.**
>
> **H0$_6$**: Business intelligence does not significantly moderate the relationship between board meetings and profitability of Transcorp Conglomerate when the impact of size is controlled.
>
> **H0$_7$**: Business intelligence does not significantly moderate the relationship between board meetings, board emoluments, and profitability of Transcorp Conglomerate when the impact of size is controlled.

Methods

Research Design, Method and Model

Descriptive research design underpinned this study using quantitative-parametric research method. Quantitative paradigm promotes positivism and leads to the formulation of hypotheses for the purpose of developing empirical knowledge using cause-and-effect approach (Kefas, 2014; USCLibraries, 2018; Wahua et al. 2023; Babbie, 2010). Wahua and Ezeilo (2021) and Wahua (2020) adopted this approach. The model used in this study is:

$$\prod = C + BI + Emo + Meet + (BI * Emo) + (BI * Meet) + (BI * Emo * Meet) + Size$$

Where:

$\prod$	=	Profitability
C	=	Constant
BI	=	Business intelligence
Emo	=	Board emoluments
Meet	=	Board meetings
BI * Emo	=	Interaction of business intelligence and board emoluments
BI * Meet	=	Interaction of business intelligence and board meetings
BI * Emo * Meet =		Interaction of business intelligence board emoluments and board meetings

Population and Sampling Procedures

The population of this study covers all the member companies of Transcorp Group: Transcorp Hilton Abuja,

Transcorp Hotels Calabar, Aura by Transcorp Hotels, Transcorp Power Delta State, Transafam Power Limited Rivers State, Transcorp OPL 281 Nigeria Limited, and Transcorp Energy Limited. The sample size includes all the population of study. Therefore, the census sampling technique was adopted. Ankomah (2020), and Wahua, Mkombo, Okai and Acquah-Yalley (2022) adopted this approach.

Data Collection Process, Description and Analysis Technique

Data were collected from the audited published annual accounts of Transcorp Group of companies from 2012 – 2021. Some other works that adopted this method are Roozitalab and Sayadi (2018), Wahua (2020), Wahua and Ahlijah (2020), Wahua, Tsekpo and Anyamele (2018). Descriptive and inferential statistics were carried out with statistical package for Social Sciences (SPSS). The hypotheses were tested with Univariate General Linear Model (which is an advanced form of OLS multiple regression analysis). Wahua (2015) applied this method too.

Research Variables Operationalization

Table 1 (Operationalization of research variables) captures the variables covered in this study and their individual measurements. Board emoluments and meetings are proxies of corporate governance; summation of yearly net book values of hardware and software measured business intelligence; yearly total assets of the company measured bank size; and yearly total comprehensive income measured profitability.

Table 1: Operationalization of research variables

Variable	Proxies	Measurement	Sources
Independent	Board Emoluments	Yearly board members total emoluments	Nahar-Abdullah (2006)
	Board Meetings	Yearly % of No. of meetings attended by board members	Adhiambo and Lisiolo (2018)
Moderating	Business Intelligence	Yearly NBV of hardware and software	Wehner (2020)
Control	Bank Size	Yearly total assets of the company	Ahlijah (2022)
Dependent	Profitability	Yearly total comprehensive income	Wahua and Ahlijah (2020)

Source: compiled by the Author

Test of Normality Assumption

Table 2: Test of normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Business Intelligence	0.620	10	0.492
Board Emoluments	0.975	10	0.931
Board Meetings	0.857	10	0.471
Company Size	0.988	10	0.993
Profitability	0.845	10	0.451

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Authors (2023)

This is a parametric study; and it is necessary for the data (mostly the dependent variable) to be drawn from a normal distribution (Wahua, 2020). The Shapiro-Wilk test of normality fits this study as the sample size is below 2000 (Garson, 2012). A variable passes normality assumption if its p-value is greater than 0.05 (see: Wahua, Mkombo, Okai, & Acquah-Yalley, 2022; Wahua, Tsekpo & Anyamele, 2018). In line with this position, the data used in this study are normally distributed. Table 2 indicates that all the variables are drawn from normal distributions.

Results and Discussions

Descriptive Statistics

Risk-returns analysis (Table 3) was carried out descriptively to basically ascertain the performance of the company using the following monetary variables: business intelligence investment, hardware investment, software investment, board emoluments, company size, and profitability. The mean serves as the returns while standard deviation serves as the risk. When the standard deviation is greater than the mean, it implies that the variable is too risky (Wahua, 2015; 2018).

The standard deviation of business intelligence is greater than its mean; and this is traced to over investment in computer hardware (which has a standard deviation that is higher than the mean). This also resulted to a profit figure whose standard deviation is higher than the mean (signaling that the profit might not be much sustainable in the long-run). Therefore, the need for the company to critically watch its investment in hardware in particular cannot be ignored.

Table 3: Risk-returns analysis

	N	Maximum	Minimum	Range	Mean	Std. Deviation
Business Intelligence **(Naira '000)**	10	14,477,438	97,744	14,379,694	**4,169,094**	**6,517,416**
Hardware **(Naira '000)**	10	14,350,458	7,057	14,343,401	**4,062,259**	**6,499,420**
Software **(Naira '000)**	10	168,065	56,355	111,710	106,836	39,616
Board Emoluments **(Naira '000)**	10	737,235	308,164	429,071	545,244	119,635
Board Meetings **(Number)**	10	100	77	23	93	7
Company Size **(Naira '000)**	10	416,000,017	75,604,202	340,395,815	248,085,855	101,163,592
Profitability **(Naira '000)**	10	23,543,810	- 579,519	24,123,329	**7,811,550**	**8,167,917**

Source: Authors (2023)

Test of Hypotheses

$H0_1$: Business intelligence does not significantly affect the profitability of Transcorp conglomerate

$H0_2$: Board emoluments do not significantly affect the profitability of Transcorp conglomerate

$H0_3$: Board meetings do not significantly affect the profitability of Transcorp conglomerate

$H0_4$: The size of Transcorp Conglomerate does not significantly affect its profitability

$H0_5$: Business intelligence does not significantly moderate the relationship between board emoluments and profitability of Transcorp Conglomerate when the impact of size is controlled**.**

$H0_6$: Business intelligence does not significantly moderate the relationship between board meetings and profitability of Transcorp Conglomerate when the impact of size is controlled.

$H0_7$: Business intelligence does not significantly moderate the relationship between board meetings, board emoluments, and profitability of Transcorp Conglomerate when the impact of size is controlled.

Table 4 (Results of hypotheses 1 – 7: Parameter estimates) indicates that the model used in the research is a good fit for testing the hypotheses as it significantly accounted for 99.9% of the changes that occurred in the dependent variable, profitability (F = 192.71; Sig = 0.005). One salient finding of this research is that when the independent, moderating and control variables are held constant, Transcorp Group's profit increased significantly by 99.3% (that is, N441,336,718) within the period under study. The major findings of the study are:

i. Business intelligence had 98.8% significant negative effect on the profitability of Transcorp conglomerate within the period studied;

ii. Board emoluments had 98.9% significant negative effect on the profitability of Transcorp conglomerate within the period studied;

iii. Board meetings had 99.4% significant negative effect on the profitability of Transcorp conglomerate within the period studied;

iv. The size of Transcorp Conglomerate had 99.6% significant positive effect on its profitability within the studied period;

v. Business intelligence had 98.8% significant positive moderating effect on the relationship between board emoluments and profitability of Transcorp Conglomerate when the impact of size is controlled; and

vi. Business intelligence had 98.8% significant positive moderating effect on the relationship between board meetings and profitability of Transcorp Conglomerate when the impact of size is controlled;

vii. Business intelligence had 98.8% significant negative moderating effect on the relationship between board meetings, board emoluments, and profitability of Transcorp Conglomerate when the impact of size is controlled.

All the hypotheses (1 – 7) are therefore rejected for stating otherwise.

Table 4: Results of hypotheses 1 – 7: Parameter estimates

Variable	B	t	Sig.	Partial Eta Squared
Intercept	441,336,718	17.383	0.003	0.993
BI	-2247	-12.998	0.006	0.988
Board Emoluments	-90	-13.630	0.005	0.989
Board Meetings	-5,178,874	-18.110	0.003	0.994
BI * Board Emoluments	0	12.838	0.006	0.988
BI * Board Meetings	23	12.977	0.006	0.988
BI * Board Emoluments * Board Meetings	0	-12.828	0.006	0.988
Company Size	0	22.334	0.002	0.996
Corrected Model: F = 192.707 (0.005)			**0.005**	**0.999**
Dependent Variable = Profitability				

Source: Authors (2023)

Discussions of the Hypothetical Findings of the Study

Business intelligence has significant negative effect on the profitability of Transcorp Conglomerate within the period covered in this study. This is in sync with Wahua and Ahlijah (2020) which equally established that business intelligence cost has significant negative effect on profitability of top ECOWAS banks with 2012 – 2016. While Ahlijah (2022) did not measure the aggregate effect of BI on profitability of Standard Chartered Bank, it established mixed findings: hardware investment had significant negative association with profitability while software investment had significant negative association with profitability. Therefore, more works are needed to establish the impact of BI investment on profitability of firms.

This study established that firm size has significant positive effect on profitability; and this is collaborated by Ahlijah (2022). It is therefore apt to tentatively state that the size of a firm has significant positive effect on its profitability. Larger firms make more profit than smaller ones.

Board characteristics (as measured by emoluments and number of meetings attended) witnessed significant negative effects on the profitability of Transcorp Conglomerate. This is supported by Nahar-Abdullah (2006) which observed that board remuneration has significant negative effect on profitability of Malaysian firms. One possible explanation for this is that the emoluments of board members are economically on the high side.

This study also established that Board meetings have significant negative effect on the profitability of Transcorp Conglomerate; and this seems to suggest that the number of meetings attended by board members is somewhat counter-productive (the number of meetings is on the high side). It has also been established that Board meetings negatively affected banks performance (Adhiambo & Lisiolo, 2018). This is because Board meeting frequency exerts a negative effect on the financial performance of firms. Also, other authorities have also established that high board meeting frequency equates to low returns on asset, equity and sales (Hạnh, Ting, Kweh & Hoanh, 2018). Therefore, there seems to be a consensus to suggest that too much Board meetings is counter-productive to the overall performance of firms.

Conclusion

Summary of the Findings of the Research

The salient findings of this study are:

i.   The risk elements in BI, hardware, and profitability are higher than their returns;

ii.   When all the variables are held constant (equal to zero), the company's profit increased positively by circa 99.3%;

iii. The interaction of BI and board emoluments had significant positive effect on the profitability of the company;

iv.   The interaction of BI and board meetings had significant positive effect on the profitability of the company;

v.   The size of the company had significant positive effect on the profitability of the company; and

vi.   The other elements of variables had significant negative effects on the company's profitability.

New Knowledge added by the Research

This study has empirically proved that excessive investment in business intelligence has significant negative effect on the profitability of a conglomerate like Transcorp Group. This extends to both hardware and software investments. Therefore, there is need for large conglomerate to optimise their economy of size over excessive investment in technological advancement.

Again, while the two proxies of corporate governance had significant negative effects on profitability, their interactions with BI had significant positive relationship on profitability. This extends to the fact that business intelligence investment has significant positive moderating effect on the relationship between corporate governance and profitability. This is a key addition to knowledge by this study. One breakthrough in this study is that business intelligence significantly moderated the relationship between corporate governance and profitability positively: (i) the interaction between BI and board emoluments had positive significant effect on profitability; and (ii) the interaction of BI and number of meetings attended by board numbers had significant positive effect on profitability too.

Significance of the Research Findings

Theoretical Significance

The relevance of economic theory is empirically clear in this study: excessive investment in business intelligence translates to decreased profitability. As such, firms should

simulate BI investment level that optimizes their profitability.

Practical Significance

Board emoluments and meetings had significant negative effects on the profitability of the company within the studied period. These calls to order the number of hours spent on meetings. Meetings attendance of 77 – 100% indicates that it is a dis-service to the profitability of the company as so much time/hours is spent on meetings. Therefore, the company should simulate its number of meetings to arrive at optimum profitability.

Policy Significance

The need for top-bottom corporate policy on investment on business intelligence, board emoluments, and board meetings cannot be ignored as this study has shown that these variables have significant negative effects on the profitability of the company.

Recommendations

Based on the empirical results established in this study, the following recommendations are made:

i.   Investment in hardware should be scaled down based on empirical simulation aimed at maximizing profitability;
ii. Board's number of meetings as well as emoluments should also be properly simulated in order to arrive at levels that optimizes profitability of the company; and
iii. The company should continue to expand its size (total assets) as it has shown to be one single variable that shape and reshape the profitability of the company positively.

Conclusions

Investment in business intelligence keeps soaring as businesses strive to achieve timely data-driven (quality) decisions. This empirical study desired to quantitatively establish if the huge investment in business intelligence translates to increased profitability in one hand; and if its interaction with corporate governance variables like board emoluments and meetings lead to significant increase in profitability. Resting on economic theory with secondary data from 2012 – 2021 (10 years), established the following: (1) excessive investment in business

intelligence leads to significant decrease in profitability of conglomerates; (ii) board emoluments and number of meetings have significant negative effects on the profitability of conglomerates; (iii) bank size have significant positive effect on the profitability of conglomerates; (iv) the interactions of BI and board emoluments, and BI and board meetings have significant positive effects on the profitability of conglomerates; and finally (v) the interaction of BI, board emoluments, and board meetings has significant negative effect on the profitability of conglomerates. The study established the relevance of economic theory on BI-Governance study; and recommends that firms in general should optimise their BI intelligence by linking it to profitability (which is the overall measure of economic performance).

Further Research

Further study should cover other conglomerates that are having at least ten years annual reports (both within and outside Nigeria). Such study could also adopt comparative approach. In terms of analytical approach, the hierarchical regression method could also be applied in similar studies.

Conflict of Interests and Ethical Considerations

This study is devoid of any conflict of interest as it is completely carried out and funded by the Authors. It also complied with best ethical research norms as no data or results manipulation was carried out. The findings are true reflections of the actual analyses carried out with the real research data.

References

Adhiambo, M.P. & Lisiolo, J.L. (2018). Relationship between Frequency of Board Meetings and Performance of Commercial Banks in Kenya. *Research Journal of Finance and Accounting*, 9(6), 164-171

Ahlijah, Y. A. (2022). Business intelligence and performance of the standard bank of South Africa limited. *Asian Journal of Advances in Research*, 12(2): 49-63

Ankomah, E. T. (2020). The impact of covid-19 pandemic on the overall performance of fidelity bank (Ghana) in 2020. Being a thesis submitted to Accra Business School in partial fulfillment of the requirements for the award of MBA by Accra Business School, Ghana.

Awa, H. O., Ukoha, O., & Emecheta, B. C. (2012). Integrating TAM and TOE frameworks and expanding their characteristic constructs for e-commerce adoption by SMEs. Informing Science & IT Education Conference (InSITE). Informing Science Institute.

Babbie, E. R. (2010). The Practice of Social Research. 12th ed. Belmont, CA: Wadsworth Cengage, Brians,

Brynjolfsson, E., Hitt, L. M. & Kim, H. H. (2011). Strength in numbers: how does data-driven decision-making affect firm performance? Accessed on 23 July 2022 from SSRN: http://ssrn.com/abstract=1819486

Chen, H., Chiang, R.H.L. & Storey, V.C. (2012). Business intelligence and analytics: From big data to big impact. MIS Q. 36 (4), 1165-1188.

Cornerstone Information System (2017). Quantitative data-driven insights to make better business decisions. Retrieved 25/06/2022 from https://www.ciswired.com/quantitative-data-driven insights-to-make-better-business-decisions/

Fink, L. Yogev, N. & Even, A. (2017). Business intelligence and organizational learning: an empirical investigation of value creation processes. Information and Management 54 (1), 38-56

Garson G. D. (2012). Hierarchical linear modeling: guide and applications. Thousand Oaks, CA: Sage Publications, Inc.

Grover, V., Teng, J. T. C., Segars, A. H., & Fiedler, K. (1998). The influence of information technology diffusion and business process change on perceived productivity: The IS executive's perspective. Information & Management, 34(3), 141-159.

Hạnh, L., Ting, I., Kweh, Q. L. & Hoanh, L.T.H. (2018). Board meeting frequency and financial performance: A case of listed firms in Vietnam. International Journal of Business and Society, 19(1), 464-472

Hartl, K., Jacob, O., Mbep, F.L., Budree A., & Fourie, L. (2016). The impact of business intelligence on corporate performance management. 49th Hawaii International Conference on System Sciences. DOI 10.1109/HICSS.2016.625

Idowu, S. A., & Osofisan, A. O. (2012). Cloud computing and sustainable development in higher education. Journal of Emerging Trends in Computing and Information Sciences, 3 (11), 1466- 1471

Jain, A. & Pandey, U. S. (2013). Role of cloud computing in higher education. International Journal of Advanced Research in Computer Science and Software Engineering, 3(7), 966-972.

Kakhki, M.D. & Palvia, P. (2016). Effect of business intelligence and analytics on business performance. Twenty-second Americas Conference on Information Systems, San Diego, 2016

Kefas, N. N. (2014). An evaluation of corporate governance practices on board member selection and recruitment in Namibian state owned enterprises. A Research Project submitted for the degree of Masters in Leadership and Change Management in the Harold Pupkewitz Graduate School of Business, Polytechnic of Namibia.

Lautenbach, P., Johnston, K. & Adeniran-Ogundipe, T. (2017). Factors influencing business intelligence and analytics usage extent in South African organisations. South African Journal of Business Management, 48(3), 23 – 33

Lebied, M. (2017). Why data driven decision making is your path to business success. Retrieved 25/08/2022 from https://www.datapine.com/blog/data-driven-decision-making-in-businesses/

Livingston, J. (2017). The secret of successful business is data-driven decision-making. Retrieved 25/06/2022 from https://www.cio.com/article/3229853/cio-role/the-secret-of-successful business is-data-driven-decision-making.html

Lyke-Ho-Gland (2017). Three measures for capturing the value of data-driven decisions. Retrieved 25/06/2018 from https://searcherp.techtarget.com/tip/Three-measures-for-capturing-the-value-ofdata driven-decisions

Mbawuni, J. & Nimako, S. G. (2015). Critical factors underlying students' choice of institution for graduate programmes: Empirical evidence from Ghana. International Journal of Higher Education, 4(1), 120 - 135

Nahar-Abdullah, S. (2006), Directors' remuneration, firm's performance and corporate governance in Malaysia among distressed companies. Corporate Governance, 6(2), 162-174 https://doi.org/10.1108/14720700610655169

Oracle White Paper. (2011). Oracle's cloud solutions for the modern campus. A White Paper. Accessed on 22 July 2022 from https://slidelegend.com/oracle-cloud-solutions-for-the-modern-campus white-paper-oracle_59b3e76d1723ddf2725ef8bd.html

Owusu, A. (2017). Business intelligence systems and bank performance in Ghana: The balanced scorecard approach. Cogent OA Journal, https://doi.org/10.1080/23311975.2017.1364056

Phocas Software (2018). What is data-driven decision making? Retrieved July 25, 2022 from https://www.phocassoftware.com/business-intelligence-blog/what-is-data-driven-decision making#

Popovič A, Turk T & Jaklič J. (2015). Conceptual model of business intelligence systems. Management Journal. 15(1):5-30.

Rama J, Zhangb C, Koroniosc A. (2016). The implications of big data analytics on business intelligence: A qualitative study in China. Procedia Computer Science. 86(1):221-226.

Richards, G., Yeoh, W., Chong, A.Y., & Popovič, A. (2014). An empirical study of business intelligence impact on corporate performance management. 2014 Proceedings. Paper 341. http://aisel.aisnet.org/pacis2014/341

Roth, E. (2017). 5 steps to data-driven business decisions. Retrieved June 25, 2022 from https://www.sisense.com/blog/5-steps-to-data-driven-business-decisions/

Roozitalab, M. & Sayadi, M.K. (2018). Investigating the effect of business intelligence on business value creation. Journal of Soft Computing and Decision Support System, 5(5), 43-48.

Sclater, N., Webb, M. & Danson, M. (2017). The future of data-driven decision-making. Retrieved 25/6/2022 from https://www.jisc.ac.uk/reports/the-future-of-data-driven-decision-making

Teoh, A., Rajendran, M. & Lim, K. (2014). Predictors and outcome of business intelligence system implementation: a perspective of manufacturers in Malaysia. Research Journal of Applied Sciences, Engineering and Technology 8(18): 1980-1993, 2014. DOI:10.19026/rjaset.8.1190

USCLibraries (2018).Organizing your social sciences research paper: quantitative methods. The University of Southern Califonia Library. URL: https://libguides.usc.edu/writingguide (Accessed 27 August 2022)

Wahua, L. (2015). Corporate governance, financial soundness and economic development: empirical evidence from Malaysia, Indonesia, and Turkey. Text of paper presented at the 2nd Annual International Conference on Accounting and Finance, ICAF 2015, At Colombo, Sri Lanka

Wahua, L. (2018). The role of institutional structures and corporate governance on banks' capital adequacy in selected D-8 countries with the moderating effect of legal system. Being a dissertation presented to Al-Madinah International University Malaysia in partial fulfillment of the requirements for the award of Doctor of Philosophy (PhD) in Accounting

Wahua L, (2020). Banks' governance, country institutions, and capital adequacy in Nigeria. Asian Journal of Arts, Humanities and Social Studies, 3(1), 1-14.

Wahua L, & Ahlijah, Y. (2020). Business intelligence costs and firm performance: evidence from top selected ECOWAS' banks. Journal of Economics and Trade, 5(1), 1-17

Wahua L, & Ezeilo, F. I. (2021). Effects of environmental, social and governance imperatives on the performance of selected listed mortgage banks in Nigeria. Journal of Global Economics, Management and Business Research, 13(4), 34-48.

Wahua, L., Mkombo, A.L., Okai, E. & Acquah-Yalley, J.N. (2023). Coronavirus pandemic and financial soundness of fidelity bank Ghana limited: Evidence from 2019 and 2020 financials. Asian Journal of Economics, Business and Accounting, 23(8), 81-94.

Wahua, L., Tsekpo, S., & Anyamele, J. (2018). Governance and employee productivity of selected Nigerian banks: does gender diversity matter? Asian Journal of Arts, Humanities and Social Studies, 1(1), 19-39.

Wehner, C. (2020). Accounting for computer software costs; 2020. Accessed 21 July 2022 from https://www.gmacpa.com/blog/accounting-for-computer-software-costs

The Public Procurement System in Pakistan: A Critical Analysis

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Abstract

This research paper aims to provide a comprehensive understanding of the public procurement system in Pakistan and explore contemporary electronic/online procurement methods to enhance transparency. The study employs a two-fold approach: initially showcasing the existing procurement landscape in Pakistan and subsequently proposing modern approaches for implementing a transparent electronic procurement system. A thorough literature review is conducted, incorporating publications, journal articles, government documents, regulations, laws, news articles, webpages, and a dissertation related to public procurement. The analysis extends to incorporate lessons learned from the procurement experiences of other countries, offering valuable insights for potential improvements in Pakistan's public procurement system. Using a conceptual analysis technique, the current tendencies and progress in procurement practices within Pakistan's public sector are extensively elucidated. The findings of this study contribute significantly to the understanding of the public procurement system in Pakistan, highlighting both its strengths and areas requiring improvement. Moreover, the proposed electronic procurement system, informed by international experiences, serves as a practical solution to ensure transparency, efficiency, and compliance within the public sector. This research paves the way for future studies and policy recommendations that can enhance procurement practices and ultimately foster sustainable development in Pakistan.

Introduction

Public procurement is the process of purchasing products or services through an administrative unit to provide public services, such as education, defense, infrastructure, and health (Ambe, 2016). The public procurement process consists of several steps, including assessing needs, awarding contracts, managing contracts, and making payments (Ambe, 2016). Furthermore, the public procurement process involves acquiring resources like building, design, and consultation, which are essential since the primary funding source for public projects is tax revenue (Yoon, 2023).

According to Thai (2001), the government engages in four main economic activities: establishing the legal framework, disbursing revenue, providing public goods and services, and purchasing goods, services, and capital assets. Public procurement is both a strategic tool and a means for implementing policies for socioeconomic development and transformation (Turley & Perera, 2014). With increasing scrutiny and rapid change due to technology, program reviews, and political expectations, public procurement plays a vital role in improving the quality and efficiency of public services (Eyaa & Oluka, 2011; Pirvu & Stanciu-Tolea, 2014).

Given the significant portion of public resources consumed by procurement, the process must be conducted in an accountable, transparent, and well-managed manner to ensure high-quality service delivery and protect the public interest (Frøystad et al., 2010). Public procurement is also used to achieve social policy goals, such as promoting employment, fair labor standards, and preventing discrimination (Uyarra & Flanagan, 2009). For the public

procurement process to be efficient, several guiding principles must be followed, including value for money, economy, transparency, quality of products and services, and fair competition. Pakistan ranks 124th out of 180 countries in terms of corruption, with public contract management and procurement being major areas where corruption is found (Fazekas & Kocsis, 2020). Cartels of vendors may form due to flaws in public procurement regulations, leading to lower prices and facilitating unethical behavior. Increased spending and procurement volume heighten the risk of fraud, misuse of public money, and other transparency-related issues. Transparency and accountability in the public procurement system require a favorable setting, a well-established framework, administrative capacity, and a legal framework (Ali et al., 2021).

The aims of this study are twofold: firstly, to showcase the current public procurement system in Pakistan, and secondly, to propose contemporary approaches for integrating an electronic or online procurement system that enhances transparency.

The current research is structured into some diverse sections with the aim of providing a systematic examination of the public procurement system in Pakistan. The introduction section provides an overview of the nature of the public procurement system, stressing the imperative to incorporate several new guiding principles to strengthen the procurement system in Pakistan. In the methodology section, the employed research design is described, encompassing the scrupulous selection of pertinent literature review documents and lessons learned from other countries. Subsequently, a comprehensive explanation of the public procurement system in Pakistan and its key issues is presented in the ensuing section. The results section entails the presentation of findings derived from rigorous data analysis conducted within the scope of this research study. Lastly, the conclusion section summarizes the key findings and their implications. Furthermore, the study acknowledges its limitations and puts forth recommendations for future research.

Methodology

This research employs a comprehensive literature review, encompassing publications, journal articles, government documents, regulations, laws, news articles, webpages, and a dissertation within the realm of public procurement. A conceptual analysis approach is utilized to extensively elucidate the current tendencies and progress in procurement practices within Pakistan's public sector. Furthermore, the study also incorporates lessons learned from the procurement experiences of other countries, enriching the understanding of diverse international practices and offering valuable insights for potential improvements in Pakistan's public procurement system.

Procurement system in Pakistan

In Pakistan, the Public Procurement Regulatory Authority (PPRA) is responsible for overseeing public procurement (Zaidi et al., 2019). Established under the Public Procurement Regulatory Authority Law 2002, the PPRA has the mandate to formulate rules and procedures for public sector organizations' procurements. The Public Procurement Regulations were introduced and implemented in 2004, with the aim of promoting transparency, fairness to suppliers, and accountability in public sector procurement. Despite having established procurement regulations, the PPRA has not yet formulated regulations for sustainable public purchases (Zaidi et al., 2019).

The PPRA Ordinance serves as the primary law governing public procurement, while the PP Regulations function as subordinate legislation. Provincial PPRAs were subject to the federal government's 2004 PP Rules. Due to Pakistan's diverse provincial government systems, PPRAs (at both federal and provincial levels) possess the authority to modify regulations and develop procurement-related manuals and documents.

Key laws and policies under the PPRA for processing public procurement in Pakistan include the following:

1. Procuring agencies must ensure the procurement process is efficient, financially beneficial, and transparent.
2. All correspondence and documentation related to federal government procurements must be in English, Urdu, or both. Local languages can be used in addition to Urdu or English in certain cases.
3. Procuring agencies may use e-procurement processes according to the Authority's prescribed rules or guidelines.
4. Agencies must develop a mechanism for detailed procurement planning within one year of the rules' commencement.

5. Specifications must not favor any single contractor or supplier and should promote fair competition.

6. Terms and specifications must be generic in nature and avoid references to branded products, model numbers, or countries of origin.
7. Procuring agencies must define their authority and delegate it for each procurement category, initiating procurement processes only after receiving approval from relevant authorities.
8. Advertisements for procurements valued between 500,000 and three million Pakistani Rupees must be posted on the Authority's website, with optional print media advertising.
9. Response times for accepting proposals or bids vary based on procurement complexity, accessibility, and urgency, with minimum response times specified for national and international competitive bidding.
10. Pre-qualification of tenderers may be used for specific types of procurement to ensure only competent and financially capable firms participate.
11. Suppliers or bidders found to have provided false, significantly incorrect, or incomplete information regarding their qualifications may be disqualified.
12. Procuring agencies must develop a comprehensive procedure for blacklisting and barring bidders for specified periods in accordance with the Authority's requirements.
13. Procuring agencies play a vital role in ensuring that the procurement process is conducted efficiently, with financial benefits and transparency. They are responsible for overseeing the acquisition of goods, and services, and work on behalf of the federal government. To achieve these goals, it is crucial for agencies to adhere to certain guidelines and regulations. When it comes to correspondence and documentation related to federal government procurements, it is required that they be in either English, Urdu, or both. In some cases, local languages may also be used in addition to Urdu or English. This allows for effective communication and comprehension among all parties involved.

In today's digital age, procuring agencies are encouraged to embrace e-procurement processes, provided they follow the prescribed rules and guidelines set forth by the relevant authority. This allows for the use of electronic platforms and technologies to streamline the procurement process, making it more efficient and accessible. To ensure proper planning and execution of procurements, agencies must develop a mechanism for detailed procurement planning within one year of the rules' commencement. This enables a structured approach to be followed, ensuring that all necessary steps and considerations are taken into account before initiating the procurement process.

One crucial aspect of the procurement process is the establishment of fair competition. Specifications must be designed in a manner that does not favor any single contractor or supplier. The aim is to promote fair and open competition among qualified entities, encouraging transparency and equal opportunities for all potential bidders. In order to promote fairness and avoid bias, terms and specifications should be generic in nature, avoiding any references to branded products, model numbers, or countries of origin. This helps to level the playing field, ensuring that all suppliers and contractors have an equal chance to participate in the procurement process, regardless of their affiliations or origins.

Procuring agencies must define their authority and delegate it to each procurement category. They are required to initiate procurement processes only after receiving approval from the relevant authorities. This ensures that the procurement process is conducted within the defined boundaries of authority, preventing any potential misuse or unauthorized actions.

To ensure maximum exposure and reach, advertisements for procurements falling within the range of 500,000 to three million Pakistani Rupees must be posted on the Authority's website. There is also the option to include print media advertising. This wider reach allows for increased competition and ensures that potential bidders are aware of the opportunities available. Response times for accepting proposals or bids may vary based on factors such as the complexity of the procurement, accessibility, and urgency. Minimum response times are specified for national and international competitive bidding, ensuring that bidders have adequate time to prepare and submit their proposals. In certain cases, pre-qualification of tenderers may be used to ensure that only competent and financially capable firms participate. This helps to streamline the evaluation process and mitigate risks associated with the selection of unqualified bidders.

Lastly, procuring agencies must establish a comprehensive procedure for blacklisting and barring bidders for specified periods in accordance with the requirements set by the relevant authority. This serves as a deterrent against dishonest practices and ensures that only reputable and trustworthy entities are involved in government procurements.

The Public Procurement Regulatory Authority (PPRA) plays a crucial role in overseeing and regulating public procurement in Pakistan. Established to promote transparency, fairness, and accountability in public sector procurement, the PPRA has introduced various laws and policies to streamline the procurement process. These regulations encompass the need for efficiency, financial benefits, transparent and fair competition, and the utilization of e-procurement methods. Despite these efforts, sustainable public procurement regulations have yet to be formulated. As public procurement accounts for a significant portion of national spending, ensuring a transparent, accountable, and well-managed procurement process is vital for effective public service delivery and safeguarding the public interest. Moving forward, it is essential for Pakistan to further strengthen its public procurement system by addressing existing gaps and learning from best practices in other countries to enhance the overall efficiency and effectiveness of public spending.

Key issues in Public Procurement in Pakistan

Public procurement in Pakistan plays a significant role in the country's economic development and has a considerable impact on government expenditure. However, the procurement system faces various challenges that hinder its efficiency and effectiveness. This comprehensive note highlights some of the key issues in public procurement in Pakistan, with in-text citations for reference.

1. Weak legal and regulatory framework: Pakistan's public procurement system is governed by the Public Procurement Regulatory Authority (PPRA), which was established in 2002 (Zaidi et al., 2019). Although the PPRA has developed procurement regulations for public sector purchases, it has not yet established regulations for sustainable public purchases, which may hinder the country's progress towards sustainable development (Zaidi et al., 2019).

2. Lack of transparency and accountability: Transparency and accountability are essential elements of an effective procurement system. However, the public procurement process in Pakistan has been criticized for its lack of transparency and accountability, which can lead to corruption and misuse of public funds (Ali et al., 2021). This problem can be addressed by strengthening the procurement monitoring mechanisms and implementing e-procurement systems that ensure transparency and prevent corruption.

3. Limited capacity and expertise: Procurement professionals in Pakistan often lack the necessary skills and knowledge to effectively implement procurement rules and regulations (Ali et al., 2021). This can result in inefficient procurement processes and suboptimal contract management. Capacity-building initiatives, such as training programs and workshops, can help address this issue by equipping procurement professionals with the necessary skills and knowledge.

4. Barriers to fair competition: Fair competition is crucial for achieving the best value for money in public procurement. However, the public procurement process in Pakistan has been criticized for creating barriers to entry, particularly for small and medium-sized enterprises (SMEs) (Pickernell et al., 2011). To promote fair competition, procurement specifications should be generic and non-discriminatory, and equal opportunities should be provided for all suppliers.

5. Inefficient procurement processes: The public procurement process in Pakistan is often characterized by lengthy and complex procedures that can result in delays and increased costs (Ali et al., 2021). Streamlining the procurement process and implementing e-procurement systems can help improve efficiency and reduce procurement cycle times.

6. Insufficient monitoring and evaluation: Monitoring and evaluation are essential components of an effective public procurement system. However, Pakistan's public procurement system lacks a comprehensive monitoring and evaluation mechanism, which makes it difficult to assess the performance of the procurement process and identify areas for improvement (Ali et al., 2021). Establishing a robust monitoring and evaluation framework can help address this issue.

Addressing the key issues in public procurement in Pakistan requires a multi-pronged approach that includes strengthening the legal and regulatory framework, enhancing transparency and accountability, building capacity and expertise, promoting fair competition, streamlining procurement processes, and implementing robust monitoring and evaluation mechanisms. By

addressing these challenges, Pakistan can develop a more effective and efficient public procurement system that contributes to the country's overall socioeconomic development.

Lessons Learned from Other Countries

In the quest for improving public procurement practices and ensuring transparency, it is essential to draw upon the experiences of other countries that have successfully implemented innovative approaches and best practices. This section, "Lessons Learned from Other Countries," aims to provide insights into the successes, challenges, and strategies employed by various nations in their public procurement systems. By examining these international experiences, we can identify valuable lessons and potentially adopt or adapt relevant policies and procedures to enhance the effectiveness and efficiency of Pakistan's public procurement system.

United States: Public procurement has historically been a neglected topic of research interest by academicians, despite the fact that government organizations and professional organizations for public procurement have issued several procurement publications and training books. Realizing the value of academic research, NIGP entered into a collaboration arrangement with Florida Atlantic University's Faculty of Architecture, Urban and Public Affairs in 1999, launching a number of academic activities. This agreement led to the establishment of the Public Procurement Research Center in 2000 (Carter & Grimm, 2001), the writing of the texts for fourteen academic books in the field of public procurement, the publication of a special symposium on public procurement in two consecutive issues of the Journal of Public Budgeting, Accounting & Financial Management (Volume 12, Issues 2 and 3, 2000), and most notably, the launch of the first academic journal.

In the United States, laws (existing procurement regulations and policies), as well as authorization and appropriations of programs leading to procurements are the main ways that the legislative branch, whether it be Congress, a state legislature, a local council, or a board of commissioners or directors, influence public procurement systems. Additionally, when dealing with large organizations, the legislative branch might have a "watchdog" agency (like the General Accounting Office (GAO) of the US federal government or the Department of Inspector General of the Central Florida Water Management District) that conducts audits and investigations into the management and operations of the agency, including public procurement. The executive branch, comprising the president, governorship, mayor, or city officials, has wide technical and administrative procurement responsibilities and makes decisions regarding procurement policy (Thai, 2001).

United Kingdom

The maximization of value for money (VFM) is crucial to the procurement policy of the United Kingdom. Moreover, VFM relates to competitiveness and shows that public expenditures are completed economically and efficiently. In the UK, small and medium-sized businesses regularly participate in government procurement, which helps to increase VFM (Murray, 2014).

The focus is on removing the possibility that small and medium-sized enterprises may suffer because, in comparison to large businesses, they lack knowledge on bidding when participating in the industry for public procurement. Public institutions instantly execute participation programs aimed at promoting the involvement of small and medium-sized enterprises. The procurement agreement of the United Kingdom government is an obligatory document that guarantees equal treatment of all suppliers for both small and medium-sized businesses in the community by local governments (Pickernell et al., 2011).

South Africa

In the South African context, preferentially procurement happens in accordance with the Broad-Based Black Economic Empowerment (B-BBEE) score of enterprises, which takes into account the extent to which corporations contract vendors with high B-BBEE ratings. This aims to shift both the demographics and the structural makeup of South Africa's economy through a cascading impact. Beyond furthering social goals, "procurement in Southern Africa is also focused on producing employment opportunities and building local manufacturing capability, among several other green and inclusive growth priorities" (Turley & Perera, 2014). This is clear from the National Department of Commerce and Industry's "local content" policy, which mandates that a certain amount of the cost of public bids must be made up of "local content"(Klaaren & Brunette, 2020).

India

Many reform measures, including the most recent GFRs 2017, have been made to simplify the Indian public procurement process in recent years. The Ministry of

Finance released updated manuals for the purchase of products and services in May 2017 in compliance with the GFRs 2017, and the ministry is preparing to produce an updated handbook for work procurement. These programs demonstrate India's efforts to advance a regime of open, responsible, and competitive public procurement. The Work Bank (2016) analysis also demonstrates that India's public procurement structure has made notable strides in recent years toward a transparent regime. The system has struggled to establish the highest standards necessary to compete with nations like Australia and Singapore. The government must work harder to increase the procurement system's accountability, transparency, and competitiveness (Hazarika & Jena, 2017).

China

In China, initiatives supported by fiscal funds give preference to purchasing energy-efficient and environmentally friendly products while phasing out low-efficiency ones [9]. For items that meet the requirements for energy-saving impacts and performances, mandatory procurement is put in place (Xu et al., 2016). The Views on Implementation of Government Procurement Energy-Saving Goods are one example of a Chinese policy that specifies clear and practical requirements for items that save energy and are environmentally beneficial. Several policies, including those supporting SME consortium subcontracting, equitable rights, reserving shares, reviewing preferences, and educating SMEs, have been developed in China (Grandia, 2015). Moreover, China offers support measures such as credit guarantees, performance bonds, payment due dates, and payment procedures (Cardoza et al., 2015).

Public procurement in China has concentrated on accomplishing the state's policy objectives for growth in the economy and society, particularly the safeguarding of important home industries. The government has established mandatory purchases (in some areas), a minimum procurement share, and prioritized procurement for local items in fiscal funding programs (Bo et al., 2012). China has stopped executing several policy papers that are at odds with the GPA and, in response, has developed some policies that are compliant with it (Liu et al., 2017).

Findings

To ensure that public procurement in Pakistan effectively serves its purpose, it is vital to address the identified challenges and implement reforms that promote accountability, transparency, and competition. By learning

from the experiences of other countries and incorporating best practices, Pakistan can improve its public procurement system, ultimately leading to better utilization of public funds, enhanced service delivery, and increased public trust in government institutions. The path to progress may be arduous, but with concerted efforts from policymakers, procurement professionals, and relevant stakeholders, a more effective and efficient public procurement system can be achieved, ensuring the sustainable development of Pakistan.

It is essential to develop a legal and structured framework that evidently outlines the rules, guidelines, and measures for public procurement. The mentioned framework would be inclusive, transparent, and allied with international standards. By developing a vigorous legal and structured framework it will become easier to certify accountability and avert corruption in the procurement department.

Furthermore, the efficiency of public procurement can be considerably increased and streamlined by using technology. Implementing electronic procurement solutions, such as e-tendering and e-procurement platforms, can automate and simplify several stages of the procurement process, cutting down on paperwork, eradicating manual errors, and improving transparency. Technology can also make it easier to track and assess procurement-related operations by enabling real-time data analysis and performance review.

Conclusion

This research paper has thoroughly examined the current state of public procurement in Pakistan, highlighting the challenges faced in terms of transparency, efficiency, and sustainability. By conducting a comprehensive review of existing literature and analyzing the legal and regulatory frameworks governing public procurement in Pakistan, the study has identified areas that require improvement and reform. Furthermore, the paper has drawn upon the lessons learned from other countries, showcasing successful public procurement practices and strategies that have led to greater transparency, efficiency, and socioeconomic development. These international experiences offer valuable insights that can be adopted or adapted to enhance Pakistan's public procurement system.

Recommendations

Based on the research findings, the following recommendations are proposed to improve the public procurement system in Pakistan:

Strengthening the legal and regulatory framework: The government should review and update the existing legal and regulatory framework to address the identified gaps and challenges. This includes incorporating provisions for sustainable procurement and promoting social policy goals, such as job creation, fair labor standards, and support for minority groups.

Enhancing transparency and accountability: The government should invest in developing mechanisms that promote transparency and accountability throughout the procurement process. This may include establishing a centralized online procurement platform that allows for real-time tracking of procurement activities, accessible to both suppliers and the public.

Building capacity and training: Procurement professionals should be equipped with the necessary skills and knowledge to effectively implement the procurement rules and regulations. The government should invest in capacity-building initiatives, such as training programs, workshops, and seminars, focusing on best practices and lessons learned from other countries.

Encouraging fair competition: The government should adopt measures that promote fair competition among suppliers, such as providing equal opportunities for small and medium-sized enterprises (SMEs) and ensuring that procurement specifications are generic and non-discriminatory.

Implementing e-procurement: The government should invest in developing a robust, user-friendly e-procurement system that streamlines the procurement process, reduces paperwork, and enhances transparency. By enabling online submission of bids, contract management, and payment, the e-procurement system can also help reduce corruption and improve efficiency.

Fostering public-private partnerships (PPPs): The government should encourage PPPs to leverage private sector expertise, innovation, and resources in the delivery of public services. By engaging the private sector in public procurement projects, the government can improve the quality and cost-effectiveness of public services.

Monitoring and evaluation: A comprehensive monitoring and evaluation mechanism should be established to regularly assess the performance of the public procurement system. This mechanism should include periodic audits and performance evaluations, which can help identify areas for improvement and ensure that procurement activities align with national goals and priorities.

Raising public awareness: The government should undertake awareness campaigns to inform citizens about the procurement process, their rights, and the role of public procurement in national development. Increased public awareness can enhance transparency and accountability, as well as foster public trust in government institutions.

By implementing these recommendations, Pakistan can develop a more effective and efficient public procurement system that benefits all stakeholders, promotes sustainable development, and contributes to the country's overall socioeconomic progress.

While the recommendations outlined above can contribute to strengthening public procurement in Pakistan, there are several limitations and challenges that should be considered.

Institutional capacity: For implementation to be successful, institutions and procurement officials must be given more training. However, the availability of sufficient training programs and chances for professional growth may be hampered by a lack of resources, including both financial and human resources.

Technological infrastructure: While employing technology can increase effectiveness and transparency, some areas of Pakistan may struggle to have access to reliable technological infrastructure, such as internet connectivity. This might reduce the efficiency of real-time tracking tools and electronic procurement systems.

Financial constraints: For the execution of reforms, sufficient budgetary funding for public procurement is required. However, a lack of funding may make it difficult to invest in technology adoption, capacity building, and the creation of oversight mechanisms.

References

Ali, A., Audi, M., Nisar, S., & Senturk, I. (2021). Determinants of public procurement efficiency: A comprehensive study of public procurement rules of Punjab, Pakistan.

Ambe, I. M. (2016). Public procurement trends and developments in South Africa. Research Journal of Business and Management-(RJBM), 3(4).

Bo, X., & Chan, A. P. (2012). Investigation of barriers to entry into the design-build market in the People's

Republic of China. Journal of Construction Engineering and Management, 138(1), 120-127.

Cardoza, G., Fornes, G., Li, P., Xu, N., & Xu, S. (2015). China goes global: Public policies' influence on small-and medium-sized enterprises' international expansion. Asia Pacific Business Review, 21(2), 188-210.

Carter, R. Y., & Grimm, R. (2001). Journal of Public Procurement under the FAU-NIGP partnership. Journal of Public Procurement, 1(1), 3-8.

Eyaa, S., & Nagitta Oluka, P. (2011). Explaining non-compliance in public procurement in Uganda.

Fazekas, M., & Kocsis, G. (2020). Uncovering high-level corruption: cross-national objective corruption risk indicators using public procurement data. British Journal of Political Science, 50(1), 155-164.

Frøystad, M., Heggstad, K. K., & Fjeldstad, O. H. (2010). Linking procurement and political economy. UK Department for International Development and the World Bank Institute.

Grandia, J. (2015). The role of change agents in sustainable public procurement projects. Public Money & Management, 35(2), 119-126.

Hazarika, B., & Jena, P. R. (2017). Public procurement in India: Assessment of institutional mechanism, challenges, and reforms. National Institute of Public Finance and Policy, 2(1), 42-57.

Klaaren, J., & Brunette, R. (2020). The Public Procurement Bill Needs Better Enforcement: A Suggested Provision to Empower and Incentivise Whistle-Blowers. African Public Procurement Law Journal, 7(1), 16-25.

Liu, Y., Yan, Z., Cheng, Y. J., & Ye, X. T. (2017). The policy mechanism and empirical study on using government procurement to promote technological innovation: The case of Beijing. China Soft Sci, 31, 9-20.

Murray, J. G. (2014). Debate: UK public procurement 2014. Public Money & Management, 34(4), 244-246.

Pickernell, D., Kay, A., Packham, G., & Miller, C. (2011). Competing agendas in public procurement: An empirical analysis of opportunities and limits in the UK for SMEs. Environment and Planning C: Government and Policy, 29(4), 641-658.

Pirvu, D., & Stanciu-Tolea, C. (2014, October). Features of the public procurement market in Romania. In 2nd GLOBAL CONFERENCE on BUSINESS, ECONOMICS, MANAGEMENT and TOURISM (pp. 30-31).

Thai, K. V. (2001). Public procurement re-examined. Journal of public procurement.

Turley, L., & Perera, O. (2014). Implementing sustainable public procurement in South Africa: Where to start.

Uyarra, E., & Flanagan, K. (2009). Understanding the innovation impacts of public procurement, Manchester Business School (No. 574). Working Paper.

World Bank. (2016). Benchmarking public procurement 2017: Assessing public procurement regulatory systems in 180 economies. World Bank.

Xu, S., Chu, C., Ju, M., & Shao, C. (2016). System establishment and method application for quantitatively evaluating the green degree of the products in green public procurement. Sustainability, 8(9), 941.

Yoon, D. (2023). The Improvement Policy Design of Public Procurement Process for the Public Management Innovation in South Korea. SAGE Open, 13(1), 21582440231158260.

Zaidi, S. A. H., Mirza, F. M., Hou, F., & Ashraf, R. U. (2019). Addressing the sustainable development through sustainable procurement: What factors resist the implementation of sustainable procurement in Pakistan?. Socio-Economic Planning Sciences, 68, 100671.

Impact of performance evaluation system on employee performance in Nigeria local government administration: A Study of Ukwuani local government administration of Delta State Nigeria

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Abstract

The study investigated the impact of performance evaluation system on employee performance in Nigeria Local Government Administration: A study of Ukwuani Local Government Administration (LGA) of Delta State, Nigeria. The research looked at impact of performance evaluation system such as Established Performance Standards (EPS), Communicating Performance Expectation (CPE), Measuring Actual Performance of Employee Based on Established Standards (MAPEBES), Discussion on Evaluation Result and Giving Feedback, (DERGF) and Decision Making(DM) on Employee Performance of LGA in Nigeria. The study used survey research design to collect data from targeted respondents. A total sample size of 195 was determined using Yaro Yamane's formula. The data was analyzed using simple percentages, descriptive statistics and correlation matrix was used to determine relationship that exists between the independent and dependent variables. The hypotheses were tested using multiple regression analysis through SPSS 23. The study discovers that EPS, CPE, MAPEBES, DERGF and DM has significant and positive effect on employee performance in LGA in Nigeria. The study recommended that LGA in Nigeria should uphold and magnify their established standards so as to bring about better employee performance. LG top managers should be able to relate how well their staff is doing on the task assign to them as this would enable them to build on their areas of weakness. Mechanism should be put in place to evaluate if actually the output of LG staff is in line with established standard and to reward accordingly. Also, the outcome of how well LG staff performed should be related to them so as to bridge noticeable gap in performance. Finally, making of decisions in this level of government should be encompassing and accommodative in order not to slow down performance of the employees.

Key words: Performance-Evaluation-System; Local-Government; Employee Performance

Introduction

The essence of administration of any nation among other things is to protect, provide social amenities and lay down policies that lead to an improved standard of living of her citizenries. In most democratic societies, the best strategy of achieving the purpose of government is by devolution of authority to other segment such as the states, local government and other governmental agencies of government.

Nigeria being a democratic state has three layer of government which are central, States and Local Government. Each federating unit derived its power and authority from the constitution. The Local government been a federating unit is very crucial to the attainment of governmental goals because it is the government of the grassroots which is saddled with much responsibilities and derived it authority from the constitution as well.

The main goal of every organization is to exploit employee performance, which is often referred to as organizational performance or employee performance.

Employee performance is are always suitable; supervisory standards, knowledge &skill, commitment, and performance review are all impactive to growth and development. Performance evaluation is described as a systematic process that aids in assessing previous and current workers' output and finding candidates for future development and career advancement within a business (Igbojekwe, & Ugo-Okoro, 2015).

Performance evaluation system has been defined as the process of figuring out how well a person is performing at work, communicating that information to them, and ideally developing plan for enhancement. These definitions show what happens when a performance evaluation system (PES) is successfully implemented in a company staff members will be able to comprehend how well they are performing as well as what is anticipated of them in the future in terms of effort and task direction using a set-up plan for performance improvement. Performance evaluation is frequently used to evaluate and assess employee competency and potential. Performance evaluation can be regarded of as a broad word that encompasses a variety of actions used by firms to assess personnel, develop their competence, improve performance, and award rewards. In a similar vein.

Performance evaluation has increasingly become a part of a more strategic approach to integrating human, Anso in 2014) affirms that performance evaluation has evolved into a tool for promoting organizational growth and professional development. Performance reviews, a continuous process, are used throughout the organization to identify, evaluate, and improve employee performance. This process includes a number of processes, including determining an employee's skills and shortcomings, providing them with regular feedback, and offering them options for career advancement, Discussions and reviews of employees' performance on assigned tasks and duties. It is bent on the outcomes that employee attains in the course of their employment rather than their personality traits.Also, it is thought that performance evaluation is a method for figuring out how each employee's performance can be improved in order to contribute to the overall success of the company (Sajuyigbe, 2017).A regular or systematic examination of an employee's performance on his or her current work as well as in reference to potential future positions is known as a performance evaluation. It assesses and monitors the outcomes of employees' performance, highlighting their shortcoming and prospect so that they can get better over

time. A good assessment system is essential for organizational personnel monitoring. The effectiveness of the company is mostly dependent on an effective evaluation system. The primary goal of performance evaluation in an organization is to increase employee productivity. As a result, Performance Evaluation provides sufficient feedback on how employees are performing by exposing them to knowledge and the results of their work; avenues for participation in task and goal setting; and clear and attainable organizational goals. Abbas & Cross, 2019 also support this view that by carrying out these activities, the organization's productivity will increase as employees' performance improves.

For there to be even development in the world of globalization, authority and function must be devolved or decentralized. This is the case in Nigeria, which has constitutionally decentralized power to Local Government as a tier of government. Public administrators, political scientists, writers, and scholars have all defined local government in different ways. It could been viewed as a political authority, it was specifically established by law so that local communities within a certain region can be organized to handle their own affairs within the parameters of the law that established the authority. Okoli (1983) asserts that it is a process of power devolution to the local government for the provision of local services. Local Government it is a grassroots government created to be a "instrument of rural transformation." In order to serve local or rural interests by fostering democratic integration, economic growth, and social development among local citizens, the Local Government was specifically established and granted legal recognition as a government branch. Local government management as a result became very significant to people and organizations inside a state.

This suggests that local governments are crucial to the delivery of public services and the accomplishment of international development objectives. The principle of democracy can be implemented by offering people the chance to engage in governance and development through devolution of power to local governments, which expands their duties, resources, and capacity. Currently, the local government handles tasks including social administration, public services administration, market oversight, economic coordination, and more.Aroghene and Imene (2022) noted that Government support is related to the

level of awareness given by it to the masses hence local government is so important to the rural populace.

Despite an acclaimed effective performance evaluation system, many government agencies have low productivity. Many Nigerian firms are suffering from poor productivity and performance as a result of inadequate evaluation systems. PE is viewed and practiced solely in terms of its evaluating aspect, ignoring its application in enabling worker growth and development through training, coaching, counseling, and feedback of assessment information. Many government agencies' inability to implement an effective performance evaluation strategy has hampered their ability to gain a competitive advantage. Furthermore, it has been observed that the performance evaluation process at the Local Government Council has a few major flaw, such as a scarcity of employees participation in setting organizational goal that explain the organizational expectations & goal, as well as a lack of feedback to employees regarding performance evaluation results. In Nigeria, there is still debate over whether performance evaluation systems improve or degrade employee performance. The relationship remains contentious, contradictory, and inconclusive. These studies have not yielded definitive and interpretable results as to whether performance evaluation systems create or destroy employee performance; additionally, there have are few recent studies that have examined the impact of performance evaluation systems on employee performance in the Local Government Administration in Nigeria. This means that the impact of the performance evaluation system on the employee performance of the Local Government Administration in Nigeria is still unknown; this is the gap that this study aims to fill.

The work sought to investigate the impact of a performance evaluation system (established performance standards, communicating performance expectations, measuring actual performance of employees based on established standards, discussion of evaluation results and feedback, and decision making on employee performance in Delta State, Nigeria. Sequel to the objectives research questions was raised while the following hypothesis was formulated:

Establishing performance standards in organization has no important impact on employee performance in Local Government Administration in Delta State, Nigeria.

Communicate performance expectation to employee within local government has no important impact on

employee performance in Local Government Administration in Delta State, Nigeria. Measuring actual performance of employee based on APER standards has no important impact on employee performance in Local Government Administration in Delta State, Nigeria. Discussing the evaluation and giving feedback has no important impact on employee performance in Local Government Administration in Delta State, Nigeria. Decision making has no important impact on employee performance in Local Government Administration in Delta State, Nigeria.

Literature Review

Conceptualizing Local Government (LG)

The concept of local government (LG) doesn't really have a "one size fits all" meaning. This definitional minefield has received attention in the investigation. For illustration, Aransi (2017) pushes the notion that different people interpret local governance in different ways. The 1976 LG Reform Guidelines definition of LG in Nigeria is among the best-articulated, notwithstanding the wide range of definitions. The definition of local government given in the recommendations is "government at the local level carried out by representative councils established by law to carry out specific functions within the defined boundaries." (Federal Republic of Nigeria, 1976). LG as "public sector institutions at the lowest sub-national level of government, legally and constitutionally recognized, and required to perform certain functions at the community level." According to Awa, LG is a political organization created to decentralize political power. (1976). Iyoha, Ubhehin, and Aiya (2005) define LG as the power that local citizens have to handle their own problems. Local government, according to Adamolekun (1983), is the bureaucracy in charge of preparation, coordinating, and direct the conduct of limited affairs. According to Awa (1976), the goal of municipal government is to decentralize political power. LG, according to Iyoha, Ubhehin, and Aiya (2005), is management of grassroots issues by the citizens of a certain locality. According to Adamolekun (1983), LG is the bureaucracy responsible for planning, managing, and directing the conduct of local affairs.

LG must have requisite political clout and power to reign over a certain territory. According to Asaju, a LG is managed by democratically elected officials and be a

distinct legal entity from state & federal governments. (2010). LG must have adequate autonomy to carry out a variety of activities as well as specific authority to carry out a number of responsibilities that are given to it by law. Local government, according to Emezi (1984), is a type of local government within settlements that is intended to preserve law and order, offer a limited amount of social facilities, and encourage collaboration and interaction among residents in order to improve living conditions. It provides the community with a official governmental structure so they can efficiently handle their affairs for the good of all. The term, which has some colonial antecedents, is based on Emezi's definitions. Emezi prioritized maintaining law,order and providing a narrow range of services.

In spite of earlier conceptions of LG generally defining local government as a political and administrative institution with suitable governance structures for managing the affairs of people at the grassroots level, not all political structures for the provision of governmental services at the grassroots can be considered to be LG. LG must possess the required political clout and authority in order to reign over a certain area. Asaju contends that a LG must be a separate legal entity from the state and federal governments, be governed by democratically elected officials, and follow its own set of laws. LG required specific skills to carry out a variety of activities that had been entrusted to it. It is permitted by law and has considerable authority to carry out a wide range of responsibilities, including the planning, design, and implementation of programs, initiatives, and rules and regulations based on local needs.

Conceptualizing Performance Evaluation System (PES)

There are many academics and researchers who have defined the idea of performance evaluation(PE) or performance evaluation systems(PES) in different ways. In general, performance evaluation systems involve conscious effort that are performed to appraised, trail, and improve employee effectiveness additionally to boost overall success of the organization (Agyenim-Boateng 2006). It involves evaluating each employee's performance and considering how it may be enhanced to support overall business performance (Grubb 2007). PES are focused on identifying employees' weaknesses and strengths so that improvements can be made to their

abilities and competencies for improved results (Aguinis, 2007).

In general, PES involve is geared towards appraising, track, and improve employee effectiveness as well as to increase the overall success of the organization (Agyenim-Boateng 2006). It is a process of evaluating each employee's performance and considering how it may be enhanced to support overall business performance (Grubb, 2007). PES are focused on identifying employees' weaknesses and strengths to enable improvements to be made on their abilities and competencies for improved results (Aguinis, 2007). Jafari et al. (2009) assert that PE is an essential part of administration as a whole and that it is the process of developing judgments about an employee's performance that serve as the basis for reasonable and unbiased recruiting decisions. Exercises in the PES evaluate employees' feat according to their perceptions and evaluations of their coworkers, superiors, other managers, customers, other stakeholders, and even themselves. (Jackson & Schuler, 2003). It is imperative for all businesses, whether for-profit or charity, to communicate to employees in clear terms what specific tasks they should complete in order to ensure that performance evaluation systems are successful and efficient. (Atiomo, 2000). Aroghene (2022) said that ineffective governance processes and boards of directors' inability to act in the organization's stakeholders' best interests are to blame for the underperformance of many financial organizations.

For this investigation, PE is defined as the process of setting performance goals for employees, tracking their progress toward these goals by evaluating their strengths and weaknesses in order to identify the steps that need to be taken to improve their performance capabilities and, ultimately, meet their performance expectations by helping the government fulfil its duties.

Theoretical Framework

Several theories have been established by academics & LG administrators with the goal of making local government very clear. These theoretical viewpoints have either attempted to justify the existence of local government or have analyzed the nature of local politics. They have also delved into the theoretical field of what functional duties LG are expected to carry out. Overall, it is hoped that the ideas would aid in improving knowledge of local politics. To explain local government,

performance evaluation system on employee performance of LG administration in Delta State, Nigeria, the study used localism theory, goal-setting theory, efficiency theory.

Localism Theory

The localism theory is used in this study to explain why local governments in Nigeria have failed to promote effective grassroots development. Numerous authors have written extensively on localism, with Jenkins, Boyle, Hartwich, Ibietan, and Ndukwe among them. Their beliefs center on the effectiveness of local institutions or governments at subnational levels in advancing grassroots development and governance. Because localism emphasizes the significance of local public participation in decision-making, it is incompatible with centralization. Localism assumes that government at the subnational stage should have the authority to decide local activities and engross in local concerns. Given the current situation's patterns of central/state-local ties, localism turns into a farce. In such a case, the ability of local entities to make independent decisions is likely to be jeopardized. Thus, in political contexts where other levels of government exercise powers that should be delegated to local government. Many writers have explained the importance of LG as the best administrative design for promoting localism's ideals in governance and development. To justify the existence of local government, Ola (1984) presents three schools of thought. This school of thought has been employed as an analytical framework by numerous writers in various studies on LG in Nigeria over the years. The advantages of localism as a system of local government are affected by each of them. According to the first school of thought, LG is required for political reasons. This point of view claims that LG acts as a genuine platform for promoting and increasing chances for citizen engagement in public issues. There is a common idea that local government personnel assist in preparing residents for greater duties at the national level in addition to encouraging public engagement in government, which is essential for accountability and resource mobilization. (Ola, 1984; Ibodje, 2000).
As a result, this theory is critical to the study's examination of the role of LG employee performance in actualizing the purpose of LG administration in Nigeria. Because local government is grass-roots government, the localism theory will examine the impact of discussing

evaluation results and providing feedback on the performance of LG Administration in Nigeria.

Goal-Setting Theory

In 1968, Edwin Locke put forth the goal-setting idea. This notion contends that an employee's personal objectives are a significant factor in what motivates them to work harder. This is a result of the workers' ongoing pursuit of their goals. If these goals are not achieved, they either increase performance or change the goals to make them more achievable. (Salaman, 2005). This highlights the value of a system for evaluating performance. Employee performance goals are established through performance evaluation. When these particular objectives are accomplished, employee performance is impacted, which then has an impact on the organization's overall effectiveness.
This suggests that organizations are more likely to be successful than those who do not use established performance standards for the use of APER in setting specific goals that are also within their attainment, if they use APER to set specific, attainable targets or goals for their employees. As a result, this theory investigated the impact of established performance standards in LG on employee performance in Delta State, Nigeria's LG Administration. According to the goal setting theory, which is brought out in Measuring Actual Performance of Employees Based on Established Standards, the most effective performance is predicted to occur when goals are precise and difficult, when they are used to assess performance, and when they are connected to feedback on results.

Efficiency Theory

William Mackenzie and Sharpe are two of this school of thought's leading proponents. The objectives of local government, as defined by researchers in this line of thought, are to cater to the people and develop local roads, maintain peace, supply water, build community health facilities, and other similar things. They also include providing locally tailored services to the populace at large. The provision of effective services to the general public at the local level is stated to be the essence of local government. This institution emphasized that local

government's obligations should be justified because it is the most accessible to the populace. The local government's resources, power, and time are anticipated to be used up providing services to the local population.

The primary justification offered by this institution is that local governments exist to ensure that inhabitants receive effective services. (Kafle and Karkee, 2003). The notion holds that the purpose of local governments is to represent and bring together the needs and goals of the populace in order to deliver better and effective services. Additionally, it makes the case that the people's primary and important concerns are the recognition and expression of the problems that impact them as well as the discovery of workable solutions. Local government council members are better able to identify the requirements of the populace and provide practical solutions for ensuring their wellbeing because they are locals. To evaluate and assess employee performance in terms of reaching a predetermined goal, the efficiency theory was applied. In light of the efficacy of Local Government administration in Nigeriaa, this theory would enhance the appraisal of LG personnel.

Empirical Review

The topic of "impact of performance evaluation on employee's productivity" was the main concern of Abbas and Cross (2019). As a case study, this study was conducted at Nigeria Breweries Plc to guarantee high productivity of the organization's goods and services. In order to evaluate employee performance within the firm, it also looks into employee adva'cement, motivation, placement, training, and job satisfaction. Chi-Square analysis and percentage distribution are the two methodologies applied in the study. The research study had a deadline, and it was adequately planned for the costs involved in carrying it out and finishing the project's job. A high performance of employees productivity, retraining, and consistent training will be provided to those taking part in the evaluation program, according to the study survey's findings. The conducted study's ultimate finding is that implementing administration by objectives as a mechanism to measure worker efficiency was statistically significant. The study advises firms to boost staff productivity by evaluating employee performance in its findings and conclusions. For measuring performance and evaluating personnel, the

organization ought to incorporate achievements, goals, control of time, organizational goals, and efficiency in order to boost employee productivity.

Mandara, etal. (2019) looked into the effect of performance reviews on staff output in the Federal Ministry of Education's Abuja headquarters. The study's sample size, 400 respondents of Abuja headquarters of the Federal Ministry of Education, was determined using the Taro Yamane method. A standardized survey was utilized to collect the study's data, and descriptive and OLS analyses were performed to look at the findings. The results show that the coefficients of evaluation performance and employee feedback had a favorable and significant impact on staff productivity during the study period. The employee training and compensation coefficients had a positive, albeit minor, impact on staff productivity over the research period. According to the coefficient of multiple determination R^2 value of 0.687 percent, employee compensation, training, and feedback accounted for 68 percent of the total variation in employee productivity. The report recommends utilizing a variety of evaluation techniques to better increase objectivity and eliminate prejudice in the Ministry's evaluation of employees. Aroghene and Ikeora (2022) impact of NPL CAR and Corporate Governance, using internal control messure in stability of banks in Nigeria Considering that internal control improves business equilibrium, regulatory and supervisory agencies should pay special attention to institutions to make sure they adhere to the rules of corporate governance. Agyare, Mensah, Aidoo, and Ansah (2016) Employee motivation to attain organizational goals is largely influenced by performance review. The study looked at how performance reviews affected commitment from employees and job happiness. 200 samples were chosen at random from a Ghanaian microfinance organization for the study, which used descriptive research. Data collection involved using a questionnaire. The study's conclusions show that fair employee assessments by management increase employee happiness. The researcher defines the job of the personnel, as well as the remarks made about their performance, and links favourable ratings with promotions. The research also discovered that improving employee evaluation skills, recognizing training gaps, connecting compensation and salary assessments, including staff in the creation of assessment tools, and linking salary and compensating assessments all have a beneficial effect on job commitment. In order to motivate employees to

accomplish organizational goals and help them understand the value of performance evaluation, the researcher advised organizations to conduct training programs for those who need them. She also advised to improve interaction between management and employees so that workers are aware of their performance.

Study's Conceptual Model

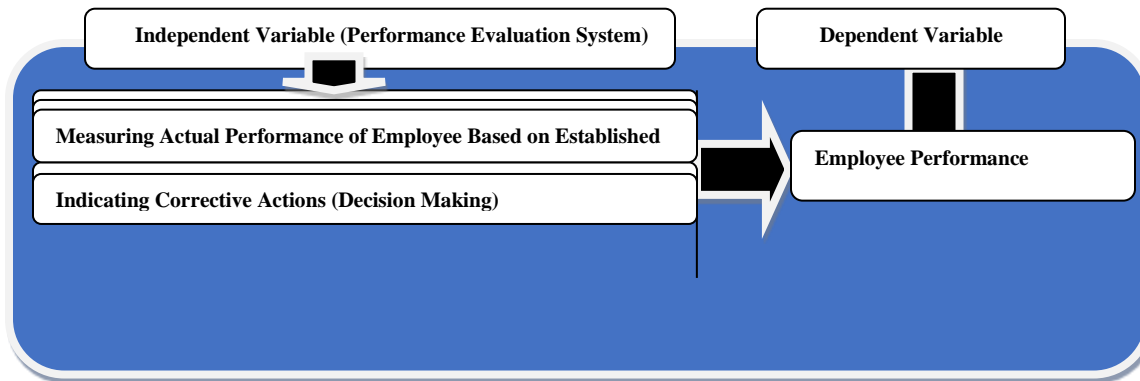Figure 2.1 below, from the conceptual model of the study, shows its independent and dependent variable

Figure 2.2: Source: Authors Conceptual Model, 2023

Methodology

The study used a survey research design for gathering data from the targeted respondents. The study population consists of 381 employee 39 Junior and 342 senior staff. (Senior/Junior Staff Nominal Roll of 30th September, 2022). In determination of sample size through the Yamane formula 195 size arrived which comprises of top level management, middle level management and lower level management employees. Primary data was used through questionnaire administration (172 questionnaires where properly filled and retrieve). Primary data was used through questionnaire administration. Recoding the information from the completed questionnaires, statistical tools for social sciences (SPSS) was used to enter and analyze the data. In order to answer the research question, descriptive statistics like frequencies and percentages were employed. Correlation analysis was then performed to establish the nature of the link between the independent and dependent variables, multiple regressions were used to test this hypothesis.

Model Specification

Consequently, the model is described in the following order:

EMP= f(EPS, CPE, MAPEBES, DERGF,DM)……………(1).

In specific forms;

$CR = \beta_0 + \beta_1(EPS) + \beta_2(CPE) + \beta_3(MAPEBES) + \beta_4(DERGF) + \beta_5(DM) + \acute{\epsilon}$.

Where;

EMP= Employee Performance
β_0 = Constant
EPS= Established Performance Standards
CPE= Communicating Performance Expectation
MAPEBES= Measuring Actual Performance of Employee Based on Established Standards

DERGF= Discussion on Evaluation Result and Giving Feedback
DM = Decision Making
έ= Error term

Results and Discussion

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EPS	172	8	20	16.39	2.530
CPE	172	8	20	15.85	2.745
MAPEBES	172	10	20	17.02	2.241
DERGF	172	10	20	16.09	2.443
DM	172	8	20	15.57	2.779
EMP	172	11	20	16.22	1.993
Valid N (listwise)	172				

Source: SPSS Output, 2023

Established Performance Standards (EPS) in Table 1 above show a mean of 16.39, a standard deviation of 2.530, and a difference between the highest and minimum values of 12. The minimum and highest values for Communicating Performance Expectation (CPE) are 8 and 20, respectively, with a mean value of 15.85 and a standard deviation of 2.745. The difference between the highest and minimum values in the debate on assessment results/giving feedback (DERGF) was 10, with a mean value of 16.09 and a standard deviation of 2.443. Additionally, MAPEBES, which measures actual performance of employees based on defined standards, shows a mean of 17.02, a standard deviation of 2.241, and a difference of 10. Additionally, the discussion of evaluation results shows a mean of 16.09, a standard deviation of 2.443, and a difference of 10.8 between the highest and minimum values. Additionally, Decision Making (DM) shows a mean of 15.57, a standard deviation of 2.779, and a difference of 12.2 between the maximum and minimum values. Employee Performance (EMP) data show a mean of 16.22, a standard deviation of 1.993, and a difference of 9.0 between the maximum and minimum values. With a maximum value of 20 and a mean value between 15 and 17, the descriptive statistics show that decision-making (DM) appears to have the highest level of variability, with a standard deviation of (2.779), followed by performance expectations communication (2.745), performance standards (2.530), discussion of evaluation results and feedback (2.443), and employee performance (1.993).

In Table 2 Established Performance Standards (EPS) has a coefficient of (r= 0.670) which reveals that Established Performance Standards (EPS) has strong positive correlation with Employee Performance (EMP), this implies that an increase in Established Performance Standards (EPS) would have positive effects on Employee Performance (EMP) of Ukwuani Local Government Administration, Delta State, Nigeria.

The Communicating Performance Expectation (CPE) has a coefficient of (r= 0.768) which reveals that Communicating Performance Expectation (CPE) has strong positive correlation with Employee Performance (EMP), this implies that an increase in Communicating Performance Expectation (CPE) would have positive effects on Employee Performance (EMP) of Ukwuani Local Government Administration, Delta State, Nigeria.

MAPEBES has a coefficient of (r= 0.572) which reveals that MAPEBES has a moderate positive correlation with Employee Performance (EMP), this implies that an increase in MAPEBES would have positive effects on Employee Performance (EMP) of Ukwuani Local Government Administration, Delta State, Nigeria.

Discussion on Evaluation Result and Giving Feedback (DERGF) has a coefficient of (r= 0.360) which reveals that Discussion on Evaluation Result and Giving Feedback (DERGF) has weak positive correlation with Employee Performance (EMP), this implies that an increase in Discussion on Evaluation Result and Giving Feedback (DERGF) would have positive effects on Employee Performance (EMP) of Ukwuani Local Government Administration, Delta State, Nigeria.

Decision Making (DM) has a coefficient of (r= 0.264) which make known that Decision Making (DM) has weak positive correlation with Employee Performance (EMP), this implies that an increase in Decision Making (DM) would result in favorable outcomes on Employee Performance (EMP) of Ukwuani Local Government Administration, Delta State, Nigeria.

The findings of the correlation study conducted using all performance evaluation system indicators reported positive correlation which is between weak moderate and strong. There existed no perfect correlation which is an indication of the absence of multi-collinearity. Hence the data set is suitable for regression and would not produce spurious results.

Table 2. Correlations

		EMP	EPS	CPE	MAPEBES	DERGF	DM
Pearson Correlation	EMP	1.000					
	EPS	.670	1.000				
	CPE	.768	.403	1.000			
	MAPEBES	.572	.343	.331	1.000		
	DERGF	.360	.393	.387	.442	1.000	
	DM	.264	.381	.470	.412	.575	1.000

Source: SPSS Output, 2023.

Table 3. ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	183.228	5	45.807	12.417	.000[b]
	Residual	457.132	169	5.442		
	Total	640.360	174			

a. Dependent Variable: EMP

b. Predictors: (Constant), DM, EPS, MAPEBES, CPE, DERGF

Source: SPSS Output, 2023

Test of Hypothesis

The analysis of variance, which is presented in Table 3 was employed to determine the significance of the regression model. The Sig. score of 0.00 (p=0.000<0.05) shows that the model's numerical impact in predicting how DM, EPS, MAPEBES, CPE, and DERGF effects employee performance is more than 95%.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.671[a]	.643	.601	1.633	1.469

a. Predictors: (Constant), DM, EPS, MAPEBES, CPE, DERGF

b. Dependent Variable: EMP

Table 5. Multiple Regression Analysis of Measures of performance evaluation system and Employee Performance of Ukwuani Local Government Administration, Delta State, Nigeria

		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	13.103	2.204		5.945	.000
	EPS	.457	.145	.368	3.152	.020
	CPE	.865	.174	.663	4.971	.002
	MAPEBES	.345	.084	.234	4.107	.021

DERGF	.302	.078	.187	3.872	003
DM	.151	.059	.130	2.559	.037
a. Dependent Variable: EMP					

An overview of the model is shown in table 4. The R square of.643 shows that the determinants of employee performance in this research account for 64.3% of the variability in employee performance, with the error term accounting for the remaining 35.7%. The fact that the Durbin Watson computed value of 1.469 is less than "2" also provides strong support for serial or autocorrelation. According to the model summary, it is appropriate for regression. Table 5.

Discussion Of Findings

Established Performance Standards (EPS) and Employee Performance (EMP)

In table 5, established performance standards has a positive significant effect on employee performance. This is attested to by the unstandardized beta coefficient and standardized beta coefficient of 0.456 and 0.368 , with Sig value of 0.020 lesser than 5% though greater than 95% level of confidence. By implication employee performance (EMP) of Ukwuani Local Government Council of Delta State, Nigeria would increase/decrease by 46% when established performance standards (EPS) increase/decrease. Hence, null hypothesis is overruled while alternate hypothesis is accepted, which state that EPS has a important effect on EMP. This is in line with the findings of Abbas and Cross (2019) and Arwa, Zaid and Monira (2019).

Communicating Performance Expectation(CPE) and Employee Performance(EMP)

In table 5. communicating performance expectation has a positive significant effect on employee performance. This is attested to by the unstandardized and standardized beta coefficient of 0.865 and 0.663 , with Sig value of 0.002 lesser than 5% though greater than 95% level of confidence. By implication, employee performance (EMP) of Ukwuani Local Government Council of Delta State, Nigeria would rise/drop by 87% rise/drop with the introduction of established performance standards (CPE).Hence, null hypothesis is rejected while alternate hypothesis is accepted, which state CPE has a big impact

on EMP. This finding is supported by control theory, which states that in effort to improve employee performance, managers must guarantee that employees have explicit and demanding goal communication channels, which result in better performance than ambiguous goal communication channels. Ambiguous objectives like "do your best" or "try harder" do not give a good comparable standard or immediate feedback. This is line with findings of Arwa, Zaid and Monira (2019).

Measuring Actual Performance of Employee Based on Established Standards (MAPEBES) and Employee Performance (EMP)

In table 5, measuring actual performance of employee based on established standards has a positive significant effect on employee performance. This is attested to by the unstandardized and standardized beta coefficient of 0.345 and 0.234 , with Sig value of 0.021 lesser than 5% though greater than 95% level of confidence. By implication, employee performance (EMP) of Ukwuani Local Government Council of Delta State, Nigeria would intensify/decline by 35% increase/decrease in measuring actual performance of employee based on established standards. Hence, null hypothesis is rejected while alternate hypothesis is accepted, which state that MAPEBES has a significant effect on EMP. This conclusion is backed by goal setting theory, arguing that individuals who are given precise, tough but attainable objectives outperform those who are assigned easy, generic, or no goals at all. At the same time, persons must have adequate skill, accept the goals, and receive performance feedback. This is in line with finding of Mandara, Ibrahim, Zailani, Ali& Badiya (2019).

Decision Making (DM) and Employee Performance (EMP)

In table 5, decision making has a positive significant effect on employee performance. This is attested to by the unstandardized and standardized beta coefficient of 0.151 and 0.059, with Sig value of 0.037 lesser than 5% though greater than 95% level of confidence. By implication, employee performance (EMP) of Ukwuani Local Government Council of Delta State, Nigeria would have

an upturn/downturn by 15% upturn/downturn in decision making. Hence, null hypothesis is rejected while alternate hypothesis is accepted, which state that DM has a significant effect on EMP. This is in line with findings of Abbas and Cross (2019).

Conclusion

A study of the Ukwani Local Government Council in Delta State, Nigeria, was conducted to determine the effects of the performance assessment system on staff performance in local government administration. The study employed primary information culled from administered surveys. The study's conclusions demonstrated that establishing performance standards, communicating performance expectations, gauging an employee's actual performance against those standards, discussing the results of evaluations, providing feedback, and making decisions all have a positive and significant impact on an employee's performance. According to the research's findings, the Delta State Local Government Administration's staff performance is positively and significantly impacted by the use of a performance assessment system.

Conflict of Interest: I have no conflict of interest to declared and all literature from other authors are well cited.

Data availability: Data used will be made available on request.

Authors contribution: The study has no other authors. All the work is done by this author

Reference

Abbas, U. I. & Cross, O. D. (2019). Impact of performance evaluation on employee productivity in Nigeria

Breweries Plc.The International Journal of Business &Management, 7(5), 206-211.

Adamolekun, L. (1983). Public Administration: A Nigerian and ComparativePerspective. London: Longman.

Aguinis, H. (2007). Performance Management. London: Printice Hall.

Agyare, G. Y., Mensah, L., Aidoo, Z., &Ansah, I. O. (2016). Impacts of performance evaluation on employees' job satisfaction and organizational commitment: A Case of Microfinance Institutions in Ghana. International Journal of Business and Management, 11(9), 281-297.

Agyenim-Boateng, E. O. (2006). An exploration into management of evaluation systems: The case of Ghanaian Public Sector Universities. An unpublished master's thesis, BCID, University of Bradford, Bradford.

Anso, H. S. (2014). The Impact of performance evaluationon employee performance. A case study of first bank of NigeriaPlc. Master's Thesis of University of East London.

Aroghene, K. G.(2022). Effect of Board Independence and Audit Independence on Bank Stability in Nigeria.

International Journal of Academic Accounting, Finance & Management Research(IJAAFMR), 6(11), 67-71.

Aroghene, K. G. & Imene, A.(2023). Currency redesign and its compliance in the economy: case study of Nigeria

economy. International Journal of Academic Management Science Research (IJAMSR), 7(2),158-165.

Aroghene, K. G. & Ikeora, J. J.E. (2022). The effect of non performing loans, capital adequacy and corporate

governance on bank stability in Nigeria. Finance and AccountingResearch Journal, 4(4), 180-192.

Asaju, K. (2010). Local Government autonomy in Nigeria: Politics and challenges of the1999 Constitution.

International Journal of Advanced Legal Studies andGovernance, (1)1, 98-113.

Awa, E, O. (1976). Issues in Federalism. Benin: Ethiope Publishing Corporation.

Atiomo, A. C. (2000). HumanResource Management. Lagos: Malthouse Management Science Books.

Emezi, C. (1984).Nigerian local government in historical perspective in NigerianJournal of Public

Administration and Local Government, 2(2).

Igbojekwe, Polycarp A. &Ugo-Okoro, Chigozie P. (2015). Performance evaluation of academic staff in universities and colleges in nigeria: The Missing Criteria. International Journal of Education and Research, 3(3), 1-9.

Jafari, M., Bourouni, A., &Amiri, R. H. (2009). A New Framework for Selection of the Best Performance

Evaluation Method. Eur. J. Soc. Sci., 7(3), 92- 100.

Kafle, S. &Karke, K. (2003). "Towards Ideal Local Government: Strengthening ParticipatoryDevelopment".

Unpublished Memoir.

Mandara, B., Ibrahim, M., Zailani, A., Ali, M. B. &Badiya, M. (2019). Effects of Performance Evaluation on E employee Productivity in Federal Ministry of Education Headquarters Abuja, Nigeria. Asian Journal of

Contemporary Education, 3(2), 121-131.

Okoli, F.C. (2000) Theory and Practice of Local Government: A Nigeria Perspective.Enugu John Jacobs

Classic Publishers Ltd.

Sajuyigbe, A. S. (2017). Impact of Performance Evaluation on Employee Performance in Local Government

Administration (A study of Kano State Nigeria). IIARD International Journal of Economics and Business

Management, 3(1), 80-90.

Salaman, G., Storey, J., Billsberry, J. (2005). Strategic Human Resource Management: Theory and Practice, 2nd

Edition. Sage Publications Ltd.