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BALANCED SCORECARD AND FINANCIAL PERFORMANCE: EVIDENCE FROM LISTED CONSUMER GOODS FIRMS IN NIGERIA

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Abstract

Value-Based Management (VBM), which considers activity costs and their effects on other functions including customer service, asset utilization, productivity, and quality, was born out of the need for more than just financial success metrics. This paper evaluates Balanced Scorecard and Financial Performance from the perspective of Listed Consumer Goods Firms in Nigeria. Ex-post facto research design was adopted. The population of the study comprises of twenty-eight (28) listed consumer goods firms in Nigeria, the study adopted judgmental sampling method to select fourteen (14) firms with complete data needed for the study. Findings reveal that Learning and growth perspective and internal business process perspective has a positive and significant effect on performance while customer perspective has a negatively insignificant effect on performance. The paper therefore recommends that listed consumer goods firms in Nigeria should improve and invest more on learning and growth perspective and internal business process perspective for higher return on asset. Also, they should be prudent from a customer perspective, since it negatively affects return on asset.

Keywords: Value Based Management, Balanced Scorecard, Financial performance, Learning and Growth Perspective, Customer Perspective, Internal Business Process Perspective.

1.0 Introduction

Robert S. Kaplan and David P. Norton in 1992 introduced the concept of the balanced scorecard, a collection of metrics that offer an integrated, comprehensive picture of business performance. The scorecard was developed to include criteria that assessed performance from three different angles to conventional financial measurements: learning and growth, internal business processes, and customers. (Kaplan & Norton, 1996). Kiriri (2022) posits that to constantly improve strategic performance, the BSC provides input on both internal business processes and external outcomes by implementing financial and non-financial measurements and assessing both present performance outcomes and future performance drivers. Through a balanced set of performance indicators, the balanced scorecard monitors important strategic components to make sure that actions are fulfilling strategic goals and proving that the organization is adhering to legal and accountability standards (Kiriri, 2022). Papenhausen and Einstein (2006) stated that to this end, using four viewpoints, the BSC creates measurements, gathers, and evaluates data in relation to each perspective.

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The financial perspective employs typical financial indicators to measure previous performance and looks at how to achieve financially, forecasting how businesses should appear to stakeholders. In addition to focusing on stakeholder satisfaction and value propositions for each stakeholder, the customer perspective looks at how firms should seem to their customers and how to accomplish their mission. The internal process perspective looks at how to maintain the capacity for change and progress while adjusting to ongoing changes that could work against the established vision and goal. – refers to internal organizational processes. Managers can use metrics based on this viewpoint to assess how effectively their company is performing and if its goods and services meet the needs of customers. For both individual and organizational self-improvement, the learning and growth perspective looks at ways to increase growth potential, including intangible assets like employee knowledge and organizational cultural attitudes.

The BSC is a system for strategic planning and management that is used to assess organizational performance in relation to strategic goals and to align business operations with the organization's vision and strategy. From its initial application, the BSC has developed into a comprehensive framework for strategic planning and administration. Kaplan and Norton, 1996). The articulation of strategic aims in support of goals is emphasized by the balanced scorecard system. Furthermore, measurement systems are designed to supply the information required to determine when goals are being met or when performance is unbalanced or adversely impacted.

Hamann and Schiemann (2021) opine that profitability, liquidity, growth, and stock market performance are the four facets of organizational performance. Consequently, a variety of elements that may or may not be interrelated make up the internal structure of the idea of financial performance. Richard et al (2009) claim that to counter the inclination to set aside the issues of concept definition, it is commonly accepted that performance is so important to management research that its definition and structure are rarely given explicit justification.

considering the thoughts of predecessors, also the challenge of defining the concept, Tudose and Avasilcai (2020) acknowledged that performance may be viewed as an artifact that serves as a basis for evaluating an organization's success. From a financial perspective, a company's financial performance over a specified period was used to evaluate its performance. Therefore, a company's monetary returns must exceed the costs associated with its implementation to be considered financially successful. Recent definitions of financial performance considered elements like a company's efficacy and efficiency in allocating its resources. (Egbunike & Okerekeoti, 2018; Mahrani & Soewarno, 2018) also in measuring objectives (Suhadak et al., 2019). Consequently, a company's potential to generate economic value is revealed by its financial performance. (Orozco et al., 2018) and to draw in and produce investment returns (Al-Sa'eed, 2018).

According to Tudose *et al* (2022) It is necessary to reevaluate the effectiveness of the performance metrics due to the dynamic nature of economies and changes at the organizational strategy level; over the past century, concerns over the evolution of performance measurement methodologies have grown more intense. Rajnoha et al (2016) assert that evaluation systems have evolved in two stages, according to research on financial performance evaluation. In the first stage, the emphasis was on productivity and profitability; in the second stage, performance evaluation became more strategic due to changes in the global market, with business flexibility and quality indicators (of goods and services) becoming crucial for gaining and retaining competitive advantage.

Otley (1999) notes that managers and management accounting researchers are particularly interested in the measurement of employee and company performance. However, financial performance has always been the main focus of management accounting. Wilson and Sangster (1992)claim that by enhancing the quality of financial data, IT automation greatly benefits the accounting sector and opens up new avenues for exploration beyond traditional financial bookkeeping. The management accounting profession changed its emphasis from standard accounting data to a value-creating focus with the advent of value-based management (VBM). (Ittner & Larcker, 2001). Performance metrics like Kaplan's Balanced Scorecard (BSC) and Economic Value Added (EVA™) demonstrate this.

Ittner and Larcker (2001)said that the emergence of VBM necessitates the use of metrics beyond financial performance. It has been explained how the traditional cost accounting approach has shifted its focus to consider activity costs and their effects on other functions including customer service, asset utilization, productivity, and quality (Gunasekaran et al, 2001). Neely (1999) asserts that the evolving business environment, organizational responsibilities, and outside demands are to blame for this change. Low and Siesfield (1998) emphasize the importance of performance metrics that are not monetary. These include, for instance, market share, environmental effect, product quality and development, and customer satisfaction. (Anthony et al., 2014)

Concerns with conventional approaches to evaluating organizational success— were thought to be overly centered on financial metrics and so backward-looking—led to the creation of the Balanced Scorecard. This paper aims at a) examining the effect of growth perspective on the return on assets of consumer goods firms; b) evaluating the effect of consumer perspective on the return on assets of consumer goods firms in Nigeria; c) determining the company's business process perspective on return on assets of consumer goods firms in Nigeria. The ultimate goal is to holistically evaluate the effect of Balanced Score Card on the Performance of Listed Consumer Goods Firms in Nigeria; unlike previous studies that examined only one or the other of the four perspectives suggested by the model. In addition, another novelty of this research is the contribution to the advancement of knowledge on the line of interdependencies between the four perspectives.

2.0 Literature Review

2.1 Theoretical Review

According to Parmar et al (2010) Managers' and executives' understanding of their roles is evolving due to modern difficulties. Technological innovation has accelerated change, globalization has increased the diversity of participants in new enterprises, and managers are realizing that their decisions could have an impact on a wider range of individuals worldwide. (Clement, 2005). Additionally, the acts of unexpected groups can readily impede the pursuit of business objectives. These difficulties, which are fueled by interconnection and change, highlight the necessity for managers and scholars to reconsider the conventional approaches to defining the firm's responsibilities.

It's interesting to note that more academics and professionals are experimenting with ideas and models that help us comprehend the intricacies of today's business problems. The problem of comprehending how value is created and traded, the problem of relating ethics and capitalism, and the problem of assisting managers in thinking about management in a way that addresses the first two issues are the three interconnected business problems that "stakeholder theory" has emerged as a new narrative to understand and address.

The word "stakeholder", originated at an internal memorandum at the Stanford Research Institute (now SRI International, Inc.), in 1963 (Parmar et al, 2010). The term was meant to defend the notion that stockholders are the only group to whom management need be responsive.The ethical aspects of business and management had received little attention since Barnard (1938), and management education was enmeshed in a search for theories that allowed for greater certainty, prediction, and behavioral control. As a result, by the late 1970s and early 1980s, scholars and practitioners were working to develop management theories to help explain management problems that involved high levels of uncertainty and change; It was in this context that Freeman (1984) advised that managers adopt a vocabulary based on the “stakeholder” concept.

According to stakeholder theory, we can better address three issues if we use the relationships between a company and the organizations and people that either influence or are impacted by it as a unit of analysis: First, from a stakeholder perspective, a business is a collection of connections between organizations that are interested in the operations that comprise the firm.

(Walsh, 2005; Jones, 1995; Freeman, 1984). To mutually generate and trade value, it concerns the interactions between consumers, suppliers, workers, financiers (banks, investors, bondholders, etc.), communities, and management. Knowing how these interactions function and evolve over time is essential to understanding a business. It is the executive's responsibility to oversee and mold these connections in order to maximize value for stakeholders and control how that value is distributed. (Freeman, 1984). The executive must figure out how to rethink issues when stakeholder interests clash in order to meet the needs of a large number of stakeholders. To the extent that this is accomplished, even more value may be generated for each stakeholder. (Harrison *et al*, 2010). If tradeoffs have to be made, as sometimes happens, then executives must figure out how to make the tradeoffs, and then work on improving the tradeoffs for all sides (Freeman *et al*, 2010).

Second, even while good stakeholder relationship management aids companies in surviving and prospering under capitalist systems, it is also a moral undertaking since it deals with issues of choice, values, and the possible advantages and disadvantages for a wide range of organizations and persons. (Phillips, 2003). Lastly, a management description that emphasizes the development, upkeep, and alignment of stakeholder relationships better prepares practitioners to add value and steer clear of ethical pitfalls. (Post *et al*, 2002; Sisodia *et al*, 2007).

2.2 Empirical Review

The operating environment of businesses has currently clearly changed. It is insufficient for managers to concentrate only on the financial success of organizations in the complicated environment characterized by globalization, heightened competition, and quickly shifting consumer needs.As a comprehensive, multi-perspective, balanced indicator system, the balanced scorecard model aids in the implementation of interdisciplinary corporate management. (Bajnal & Popovics, 2020). Song (2022) examines the inadequacies of the existing enterprise performance evaluation system and the viability and necessity of using BSC in the design of a performance evaluation system. The study designs a performance evaluation model using listed companies (LC). Finally, the study uses the analytic hierarchy process (AHP) to conduct a comprehensive performance evaluation of the enterprise and propose similar safeguards for the perfect implementation of the system according to the obtained results. Choudhary (2019) claims that a balanced scorecard is a performance indicator for strategic management that is used to identify and enhance different internal business activities and the external results that follow.

Balanced scorecards are used to assess and provide feedback to organizations. In order to get quantifiable results, managers and executives must collect, analyze, and apply data to improve organizational decision-making. The balanced scorecard is used to attain objectives, measurements, initiatives, and goals that result from these four primary functions of a business. Companies can quickly pinpoint the issues impeding their operations and describe planned adjustments that will be monitored by scorecards in the future.

Iyibidiren and Karasioglu (2018) assert that Business performance has always been evaluated using conventional performance appraisal techniques focused on financial criteria. However, methodologies of performance evaluation that rely solely on financial factors are insufficient to assess how well businesses are performing today.In order to evaluate organizational performance, multidimensional performance assessment methodologies have emerged as a result of the realization that financial metrics of performance are incomplete. Therefore, while establishing performance rating systems, businesses should take into account various viewpoints in addition to the financial one. One of the multifaceted performance evaluation techniques used to assess corporate performance is the balanced scorecard method. Owolabi *et al* (2020) assessed the level of awareness and implementation of the balanced score card (BSC) in small and medium firms in Nigeria. The study used primary data and a descriptive research design. The Pearson correlation coefficient was used to verify the hypothesis, and the results showed that small and medium-sized businesses in Nigeria have not embraced BSC because they lack the necessary knowledge, resources, and experience. The study recommended that more researches be conducted in this direction and Nigerian small and medium scale associations should partner with researchers on the new concept in training members on this approach.

Tuan (2020) examines how the Balanced Scorecard is used in businesses from four different angles in Vietnamese commercial banks. Data was gathered and analyzed using SPSS 22, based on the answers to 109 questionnaires given to managers and department heads at Vietnamese commercial banks. Results have shown that a successful application of balanced scorecard has improved the business performance of Vietnamese commercial banks. Agyeman (2017) examines how certain Ghanaian banks are using the four perspectives of the balanced scorecard as a tool for performance management. Survey technique (questionnaires) was used to gather data for the research. Twenty eight (28) registered Ghanaian banks were used as the population for the study. A purposive sampling technique was used to arrive at a sample of three (3) banks. Descriptive statistics, such as percentages was used as the technique for data analysis; it was found that balanced scorecard had a great impact on performance.

Bandono and Nugroho (2023) Analyze a company's performance by contrasting its goals and accomplishments to arrive at the ultimate balanced scorecard score. Descriptive research was conducted using both qualitative and quantitative methods. According to the study's findings, (1) 2020's balanced scorecard achievement is 4.15. This figure shows that the company's target achievement was marginally greater than the pre-established goal. (2) In 2020, the following Key Performance Indicators (KPI) were identified: (a) Financial viewpoint, which includes the Profitability Index, Return on Capital Employed, Return on Investment, and Current Ratio, totaling 1,58 on the Balanced Scorecard. (b) Customer Perspective: To attain a BSC cumulative score of 1.00, customer satisfaction—which includes tangible proof, dependability, responsiveness, assurance, and care—is analyzed.(c) The internal business process perspective, which achieved the BSC cumulative score of 0.70 by combining the innovation ratio and the compliance level ratio. Employee satisfaction, the number of employees enrolled in education and training, the expenses associated with education and training, and the implementation time of 0.87 comprise the growth and learning perspective.

Kefe (2019) examined BSC via a case study in a yarn manufacturing company. The BSC approach explains the actions that the organization must take to accomplish its goals and how the right metrics are chosen when assessing how the activities contribute to the goals' accomplishment. The BSC's quick decision-making process has made it easier for a family-owned business to implement and adapt. Goals are outlined in line with the business's strategy, and the strategy map connects the causal relationships between goals and activities.The BSC implementation demonstrates that financial metrics alone are insufficient to assess how each activity affects a company's goals. The company's departments work together more effectively, and meetings run more smoothly. Clarifying the goals and responsibilities of each level has made the discussions more goal-oriented.

Amer *et al* (2022) assess the impact of implementing the BSC on Health Care Workers' (HCW) satisfaction, patient satisfaction, and financial performance; adopted a systematic review according to PRISMA guidelines; the authors customized the search strategy for PubMed, Embase, Cochrane, Google Scholar databases, and Google's search engine. The obtained studies were screened to separate those measuring scores related to HCW satisfaction, patient satisfaction, and financial performance. The Risk of Bias (RoB) in the non-Randomized Intervention Studies (ROBINS-I) tool was used to assess the quality of observational and quasi-experimental studies. However, the Cochrane (RoB 2) technique was utilized for the Randomized Controlled Trials (RCTs). The researchers selected 20 studies from a total of 4031 that assessed how BSC affected one or more of the three factors (financial performance, patient satisfaction, and HCW satisfaction). Twelve of these 20 studies examined the effect of the BSC on financial performance, seven examined the effect on HCW satisfaction, and seventeen examined the effect on patient satisfaction. Implementing BSC showed benefits for both patient satisfaction and HCO financial performance.

Imeokparia and Egboh (2022) examined the effect of balanced scorecard strategy (learning and growth perspective, customers' perspective) on the financial performance of five (5) selected food and beverage industries located in Lagos State. For the study, a survey research design was chosen. In order to gather information from the chosen respondents from the companies, 1,057 copies of structured questionnaires were issued. Using a proportionate stratified sample technique, four hundred and ten (410) employees were chosen for the study. The demographic data was analyzed using descriptive statistics, and the two study hypotheses were tested at the 5% level of significance using simple regression analysis. The result of hypothesis one ($\beta1=0.096$; $R2= .935$; $F = 5843.527$; P-value $=0.000$) demonstrated that the balanced scorecard's learning and growth perspective significantly and favorably affects the financial performance of a subset of the food and beverage industry. Furthermore, the outcome of hypothesis two ($\beta1=0.071$; $R2 = .581$; $F = 567.005$; P-value $=0.000$)showed that the financial performance of a chosen food and beverage industry is positively and significantly impacted by the customers' perspective in the balanced scorecard. The study concluded that the financial performance of the food and beverage industry is significantly impacted by a balanced scorecard, which is measured by the perspectives of customers and learning and growth.

Kiriri (2022) proposes an adoption of the Balanced Scorecard as a management tool in Higher Education Institutions HEIs review the literature on the HEI environment both internationally and in Kenya, pointing out the difficulties faced by Kenyan HEIs and suggesting that the BSC be used to overcome them. The BSC is a tool that helps HEIs mainstream their vision and mission into their operations, transforming them into strategy-focused organizations. The BSC is a system for strategic planning and management that is used to assess organizational performance with strategic goals and to align business operations with the organization's vision and strategy. Lastly, a sample BSC for Kenyan HEIs is suggested. It is believed that HEIs' performance would significantly improve if they concentrated on the difficulties raised and evaluated their performance on the issues found.

Sharaf-Addin and Fazel (2021) developed a balanced scorecard (BSC) model as a performance management system for the University of Bisha, Kingdom of Saudi Arabia; explain how the University can use the aims and objectives outlined in its strategic plan 2017–2022 to transition from mission to vision. An detailed reading of pertinent literature, a thorough examination of the University's strategic plan 2017–2022, a thorough discussion, and in-person interviews with pertinent executives comprised the qualitative research approach that was employed. In order to supplement the University's strategic plan for 2017–2022, a BSC framework was created. On the basis of the BSC model, a strategy map was also created. By converting its strategic goals into action plans, the University's progress toward attaining "Educational and Research Excellence" status was evaluated and tracked using the BSC framework and strategy map.

Ajulor *et al* (2020) examine the impact of balanced scorecard on employees in the public sector. Organizations in the public and private sectors can use this performance measurement technique. Using content analysis of books, journals, the internet, and other pertinent sources, the study is dependent on secondary data. According to the study, implementing a balanced scorecard in public sector organizations enhances public service performance through the following means: offering a strategic management tool; converting the organization's mission and strategy into measurable actionable activities; improving decision-making and accountability; fostering a feedback mechanism; fostering learning; and fostering collaboration among the various public sector segments.

Fatile *et al* (2019) determine the effectiveness of performance measurement using balanced scorecard (BSC) in Lagos Internal Revenue Service (LIRS) with particular reference to how customers' attitudes aid profitability, how internal procedures affect efficiency in service delivery, and how financial perspectives and learning affect productivity. The study used both primary and secondary data, with the former being obtained through copies of a questionnaire given to 300 respondents in 30 selected offices out of 40 tax stations spread across the five divisions in Lagos State using stratified and random sampling techniques. The study was then analyzed using both descriptive statistics and regression analysis to test the stated hypotheses. The results show that the annual revenue generation in Lagos State has increased significantly as a result of using the balanced scorecard to measure performance periodically with stakeholders' reflection in LIRS.

Ladan and Nyikyaa (2019) examine the application of BSC as a key performance measurement tool in assessing the performance of DMBs in Nigeria. To investigate the impact of the balanced scorecard on the financial performance of consumer goods manufacturing companies in Nigeria, Ofunrum et al. (2019) used an ex post facto research design, collected data from annual reports and accounts of consumer goods manufacturing companies in Nigeria, and used simple regression analysis with the help of SPSS version 20.0. A total of 50 sets of questionnaires were distributed across ten (10) sampled Bank's branches in Mararaba and Keffi of Nasarawa State. The results were analyzed using the Chi-square Test. Findings revealed that the learning and growth perspective, customer perspective, and company's business process perspective affected the return on assets of consumer goods manufacturing companies in Nigeria. Meanwhile, there is a statistically significant effect between the dependent (return on assets) and independent variables (learning, customers, and business process perspectives).

Der-Jang and Hsu-Feng (2019) conducted experiments on Taiwan's well-known software industry and used a quasi-experimental and longitudinal design to better control the internal validity of the research. In contrast to earlier studies that concentrated on Western businesses, the study's findings demonstrated a greater level of BSC management generalization. The results showed that the experimental companies that had adopted BSC tended to achieve the objectives or perform better than the control group, which did not use BSC. The findings demonstrated that putting BSC management into practice might significantly improve performance and the achievement of strategic objectives.

Rafiq *et al* (2021) examine the relationship between the balanced scorecard (BSC) and sustainable development involving the mediated effect of political and regulatory influence. The quantitative (positivism) research method was applied. Two hundred and eighty of the 320 questionnaires sent to the various levels of managers were returned. Smart-PLS, a contemporary statistical tool, was used to evaluate the data. Partial Least Squares (PLS) is a highly graphical user interface program that computes Structural Equation Modeling (SEM) through PLS path modeling. To improve regression findings, factor analysis was used to reduce the number of variables and remove those that did not contribute. These methods can assist energy organizations having difficulty addressing sustainable development in achieving their sustainability objectives. Notwithstanding its difficulties, the study concludes that BSC implementation is necessary to guarantee sustainable development.

Vu Thi *et al* (2018) determine the application of BSC to measure the performance suitable for small and medium-sized (SMEs) garment enterprises in Vietnam. With a sample size of 238 clothing SMEs, the research design involved a survey of the target audience of Vietnamese clothing enterprises. Questionnaires were utilized in the study to collect data. In order to evaluate the data, the study conducted exploratory factor analysis to look at the convergence of the observed variables while using BSC to create a grading system for clothing SMEs. It also examined the reliability of the observation variable. According to the report, the traditional financial criteria derived from accounting books are the only indications included in the financial perspective for SMEs in the apparel industry. However, the research also includes the following factors for internal processes: supplier percentage, supplier-to-supplier ratio, and supplier-to-supplier timeliness. supplied to the business on a regular basis.

Saksono and Bernardus (2023) designed the Balanced Scorecard (BSC) as a performance measurement tool at Sekolah XYZ. The research applied a qualitative method with Simple Research Design (SRD) as an analytical model. For data analysis, the research applied the stages of preparation in BSC. Five important informants were interviewed as part of the main data collection process. Five indicators from a financial perspective (weight: 25%), three from a customer perspective (weight: 25%), nine from an internal business process perspective (weight: 30%), and five from a learning and growth perspective (weight: 20%) made up the measurement indicators. To aid in the BSC implementation at Sekolah XYZ, the BSC design was additionally furnished with a validation and assessment system. According to the findings, Sekolah XYZs has established 22 measuring indicators following the organization's vision and goal, and there are 12 objective strategies to be accomplished. Sekolah XYZ's BSC must be built in a way that makes it simple for the administration to track down and identify the reasons behind the school's success or failure.

Fijalkowaska and Oliveira (2018) indicated the BSC as a useful tool for the evaluation of the universities' performance; and adopted the following research methods: descriptive, deductive, and literature review. It highlights California University's innovative approach to BSC adoption and includes case studies that are cited about their real-world BSC application experience. The research claims that BSC offers a framework for performance measurement that enables the improved transparency and accountability of these institutions, based on the literature review on the analysis of the instances of universities implementing BSC.

Olasunkanmi and Asaolu (2019) examined the effects of the Balanced Scorecard (BSC) on the performance evaluation of private universities. The study adopted a descriptive survey design with primary sources of data and 300 structured questionnaires were administered as well as personal interviews conducted. The population of the study is 61 private universities in the country. The study only focused on 3 private universities based on religion faith-based (Christian-faith, Islamic-faith and others).Chi-square and simple percentage were used to examine the data gathered from the questionnaires. The study found that private institutions can adopt the Balance Scorecard

(BSC) approach for performance evaluation and that it is appropriate. The Nigeria University Commission (NUC), as the primary regulatory body, and others should encourage private universities to use the BSC for performance evaluation of both students (from a customer perspective) and staff (from an internal process perspective). It was suggested that university administrators should better explain the BSC process, results, and application to all employees, academic and non-academic.

Nga and Trang (2020) review three combination methods for sustainable development and balanced scorecard – the efficient tool for strategy execution and performance measure. The three strategies involve creating a distinct sustainability balanced scorecard, adding a fifth perspective to the balanced scorecard, and integrating sustainable measures into all four perspectives. Bac Dau Limited Company, a small and medium-sized business in Vietnam, used the case study approach to create an eco-balanced scorecard. The results of this company's first use of an eco-balanced scorecard are used to assess and enhance performance.

Bouchetara *et al* (2021) analyze the presence of noteworthy correlations between a few contingency factors and the extent of balanced scorecard adoption. Based on a survey, 186 people from various Algerian businesses in various industries participated in a quantitative study. Out of the 57 responses that were received, 43 were complete and useful. The study's response rate was 23.12% otherwise. The findings show that the degree of adoption of the balanced scorecard indicators are strongly correlated with only three contingency factors: age, differentiation strategy, and competition intensity. The study concludes that older and more established enterprises are more likely to employ the balanced scorecard and that its adoption rises with market competition and the level of diversity of the firms' goods and services.

3.0 Methodology

Ex- post facto research design was adopted for this study; the population for the study was twenty-seven (27) listed consumer goods firms in Nigeria. The judgmental sampling method was adopted to select fourteen (14) listed firms with complete data required for the study. Data was sourced from the annual financial statements of sampled firms from 2010 to 2019; with the use of stata 13.

3.1 Model specification

The Panel below was adopted for the analysis of the study:

$ROA = f(GP, CUSTP, IBUSP, NINC, TAS)$

$ROA_{it} = \beta_0 + a_i + \beta_1 GP_{it} + \beta_2 CUSTP_{it} + \beta_3 IBUSP_{it} + \beta_4 NINC_{it} + \beta_5 TAS_{it} + \mu_{it}$

Where:

ROA= Return on Assets

LGP = Learning and Growth Perspective

CUSTP = Customer Perspective

IBUSP =Internal business process perspective

NINC is net income

TAS is total assets

et = Error Term

4.0 Findings and Recommendations

4.1 Descriptive Statistics

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. xtsum ROA LGP CUSTP IBUSP LTAS LNINC
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Variable		Mean	Std. Dev.	Min	Max	Observations
ROA	overall	.1249436	.1196559	-.193	.493	N = 140
	between		.0151109	.1005714	.149	n = 10
	within		.1187878	-.2037707	.4822293	T = 14
LGP	overall	16.61097	4.653076	-4.60517	20.24249	N = 138
	between		.7603477	15.91721	17.81449	n = 10
	within		4.596647	-4.183282	20.50684	T-bar = 13.8
CUSTP	overall	.1275971	.2028329	-.348	.827	N = 140
	between		.0927663	.0077143	.2581429	n = 10
	within		.1825937	-.2636886	.7023686	T = 14
IBUSP	overall	.3297786	.2308165	.03	.9	N = 140
	between		.0431622	.2659286	.4007143	n = 10
	within		.2271288	-.0188643	.84885	T = 14
LTAS	overall	17.67954	1.534403	13.88937	20.80209	N = 140
	between		.2872729	17.05605	17.97514	n = 10
	within		1.50983	14.13343	20.50649	T = 14
LNINC	overall	15.38557	2.267291	8.744647	20.2282	N = 129
	between		.6086187	14.40347	16.49381	n = 10
	within		2.19301	8.744352	20.15121	T-bar = 12.9

Source: Stata 13 Output for summary statistic of variables used in the study

Table 1 shows the result of summary statistics of the variables used in the study. It could be observed that all the variables exhibited sufficient variations with varying mean, standard deviation values and their corresponding minima and maxima. The study used 129 observations which consist 10 cross sectional units and 14-time series units

4.2 Unit root test of the variable

The study used Fisher panel unit root test based on Augmented Dicky-Fuller (ADF) to examine the stationarity of the panel data. That is, to test if the panel series contains a unit root. The null hypothesis of the Fisher ADF panel unit root test assumed that all panels contain a unit root. As N tends infinity, the number of panels that do not have a unit root should grow at the same rate as N, under the alternative hypothesis. Table 2 shows the summary results of the Fisher ADF panel unit root test.

Table 2: Result of Augmented Dicky-Fuller (ADF) unit root test of the variables

Variables	*Inverse chi-squared P*	*Inverse Normal Z*	*Inverse logit L**	*Modified Inv. Chi-squared Pm*	*p-values*	*Order of Integration*
ROA	88.4747	-6.0700	-7.6062	10.8268	0.0000	I(0)
LGP	90.5093	-7.0959	-7.9157	11.1485	0.0000	I(0)
LTAS	166.1835	-10.9873	-14.6245	23.1136	0.0000	I(0)
LNINC	107.8660	-7.3223	-9.3797	13.8928	0.0000	I(0)
CUSTP	100.5608	-7.2834	-8.7019	12.7378	0.0000	I(0)
IBUSP	104.9397	-7.8577	-9.2089	13.4301	0.0000	I(0)

Source: Author's compilation from the result of Fisher ADF unit root Test

It could be observed from table 2 that all the four tests of the Fisher ADF panel unit root strongly reject the null hypothesis that all the panels contain unit roots. This is because the inverse logit L^* test typically agrees with the inverse normal Z test. More so, the inverse χ^2 P test also agrees with the modified inverse χ^2 Pm test. The P-values of all the variables indicate that they are all significant at levels and as such, are integrated of order zero (i.e. I (0)).

4.3 Correlation test

Table 3: Correlation matrix

	ROA	LGP	CUSTP	IBUSP	LTAS	LNINC
ROA	1.0000					
LGP	0.0244	1.0000				
CUSTP	-0.0048	-0.1117	1.0000			
IBUSP	0.1640	-0.3457	-0.0425	1.0000		
LTAS	-0.1486	0.4871	-0.1013	-0.0933	1.0000	
LNINC	0.0246	0.3819	-0.0381	-0.2519	0.3673	1.0000

Source: author's compilation from the result of correlation test

Table 3 shows the result of correlation matrix test. It could be observed that none of the variables has pair-wise correlation value greater than the Gujarati threshold value of 0.8. This indicates that there is no perfect linear relationship among the variables in the model

4.4 Hausman test

Table 4: Result of Hausman test

	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
LGP	.0055273	.0050758	.0004515	.000847
CUSTP	-.0228105	-.0259498	.0031393	.0289738
IBUSP	.1425608	.1341414	.0084194	.0150607
LTAS	-.0279615	-.0272982	-.0006633	.0022368
LNINC	.0070049	.0063916	.0006133	.0017079

Prob >chi2 = 0.989

Source: Author's compilation from the result of Hausman test

Table.4 shows the result of Hausman test conducted. It could be observed that the probability Chi-square (0.9819) of Hausman test conducted is greater than 0.05. This implies that the null hypothesis of difference in coefficients not systematic cannot be rejected at 0.05 levels. This therefore means that random effect model is the best model for this study.

Table 5: Result of random effect estimation

ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
LGP	.0050758	.0026513	1.91	0.056	-.0001206	.0102722
CUSTP	-.0259498	.0483748	-0.54	0.592	-.1207627	.0688631
IBUSP	.1341414	.0476631	2.81	0.005	.0407234	.2275594
LTAS	-.0272982	.0079227	-3.45	0.001	-.0428265	-.01177
LNINC	.0063916	.0049298	1.30	0.195	-.0032707	.0160538
_cons	.3944883	.1265672	3.12	0.002	.1464211	.6425555
sigma_u	0					
sigma_e	.11113667					
rho	0	(fraction of variance due to u_i)				

Prob > chi2 = 0.0034

Source: Author's compilation from the result of random effect estimation

Table 5 shows the regression output of the random effect model estimation for objectives one, two and three. It could be observed that most of the variables in the model were found to be statistically significant at 5 percent and 10 percent respectively except customer perspective (*CUSTP*) and log of net income (*LNINC*) which was not significant even at 10 percent. Most of the variables assumed their a priori sign except customers' perspective which were found to exert negative effect on return on assets.

4.5 Evaluation of research hypotheses

Hypothesis 1(H_{01}): The learning and Growth perspective has no significant effect on the return on assets of consumer goods firms in Nigeria.

Looking at the ceteris paribus interpretation of each of the variables in the model, table 5 shows that the effect of learning and growth perspective on return on assets was found to be statistically significant at 10 percent. It therefore means that holding other variables in the model constant, 1 percent increase in growth perspective would lead to about 0.507 (0.00507*100) percent increase in return on assets. This is not surprising as one would expect growth perspective to exert positive effect on return on assets. However, as most businesses grow, their returns on assets would expand but the rate of growth of return on assets may not be the same with the growth of the business.

The result shows that the probability value (prob. = 0.056) of the coefficient of Growth perspective is less than 0.1. This implies rejection of the null hypothesis that Growth perspective does not significantly affect return on assets and accept alternative hypothesis that that Growth perspective determines return on assets. This result is in tandem with the studies of (Bandono and Nugroho 2023; Imeokparia and Egboh 2022; Trans 2020; Ofunrum et al 2019; Agyemen 2017)

Hypothesis 2(H_{01}): Customer perspective has no significant effect on the return on assets of consumer goods firm in Nigeria.

Customer perspective was found to exert negatively insignificant (-0.259) impact on return on assets. The result shows that the probability value (prob. = 0.592) of the coefficient of Customer perspective is greater than 0.05 for 5 percent and 0.1 for 10 percent. This implies that the null hypothesis that Customer perspective does not significantly affect return on assets is accepted that Customer perspective does not significantly affects return on assets. This result disagreed with other studies (Bandono and Nugroho 2023; Imeokparia and Egboh 2022; Amer et al, 2022; Ofunrum et al 2019)

Hypothesis 3(H_{01}): Company's business process perspective has no significant effect on the return on assets of consumer goods firms in Nigeria.

Similarly, an indispensable factor that was found to play a crucial role in the determinants of return on assets is internal business process perspective. The study found internal business process perspective to significantly and positively affect return on assets. It shows that holding other variables n the model constant, 1 percent increase in internal business process perspective would lead to about 13.4(0.1341414*100) percent. The result shows that the probability value (prob. = 0.005) of the coefficient of Company's business process perspective is less than 0.05. This implies rejection of the null hypothesis and accepting alternative hypothesis that Company's business process perspective has significant effect on return on assets. The result is in tandem with the following studies (Bandono and Nugroho 2023; Ofunrum et al 2019; Kefe 2019; Vu Thi et al 2018)

5. Conclusions and Recommendations

Looking at the ceteris paribus interpretation of each of the variables, there is an indication that they all have effect on return on asset. The effect of learning and growth perspective on return on assets was found to be statistically significant at 10 percent; this is not surprising in this era of knowledge management as one would expect learning and growth perspective to exert positive effect on return on assets. However, as most businesses grow, their returns on assets would expand but the rate of growth of return on assets may not be the same with the growth of the business. However, customer perspective was found to exert negative but insignificant effect on return on assets, this could be attributed to the size of the business. It is argued that the higher the size of a business, the lesser the effect of individual customer's perspective towards the return on the assets of the business. Also, in a monopoly business, customers' perspective does not contribute significantly to the returns on the assets of the business. The study found internal business process perspective to significantly and positively affect return on asset; ideally an efficient internal business process invariably reduces cost of operation which results into higher return on asset.

The paper therefore recommends that listed consumer goods firms in Nigeria should improve and invest more on learning and growth perspective and internal business process perspective for higher return on asset. Also, they should be prudent on customer perspective, since it has negatively insignificant effect on return on asset.

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