Multidisciplinary

Apportionment of factory rent in sustainability accounting: developing a departmental cost allocation framework for manufacturing firms in Lagos, Nigeria

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Abstract

In general, cost allocation is a challenge even more so in the manufacturing sector worldwide, where costs such as factory rent can be shared among multiple users. As industrialization progresses in the rest of the world, especially in developing countries, controlling costs becomes essential for profitability and viability. The focus of this research was on the distribution of factory rent within Lagos manufacturing firms. A descriptive survey research design was used to study the existing status of and obstacles faced by a stratified random sample of 50 manufacturing firms in the food/beverage, chemicals, plastics, and textiles industries. Thus a total of 76 departmental heads of the finance, operations and production units filled in structured questionnaires. Quantitative data were analyzed using descriptive statistics and regression analyses while qualitative data were organized and coded thematically using SPSS version 26. Cost efficiency was found to have a, positive and significant, effect on allocation methods, at $\beta = 0.498$, $t = 4.559$, $p < 0.001$ as shown in the regression analysis section above, suggesting that higher cost efficiency predicts higher use of appropriate allocation methods. On the other hand, common practices exhibited a positive but non-significant effect of the use of common techniques ($\beta = 0.165$, $t = 1.511$, $p = 0.135$). The implication is that cost efficiency can be an important factor in constructing and applying effective rent allocation mechanisms. It also concludes that cost is to be managed efficiently in order to allocate resources within departments effectively. It advises that firms focus on cost efficiency, spend on up-to-date systems of cost-control, and support data-based allocation methods. A way this could be done would promote cost efficiency measurements throughout the industry.

Keywords: Apportionment, Factory rent, Cost efficiency, Allocation strategies, Manufacturing industry, Lagos, Resource optimization

Introduction

Globally, accurate cost allocation remains a significant concern in manufacturing industries, especially in the context of shared resources such as factory rent. As industrialization accelerates across economies, particularly in developing nations, efficient cost management becomes vital for profitability and sustainability (Mukunoki *et al*., 2025) [20]. Rent constitutes a major component of fixed overheads, and its fair distribution among production departments is essential for correct cost reporting and performance evaluation. In Nigeria, particularly in Lagos State the country's industrial hub the manufacturing sector is grappling with rising operating costs. Adesina and Tiamiyu (2025) [3], posit that apportionment of shared costs such as factory rent, has direct implications for product pricing, departmental performance, and investment decisions. Awotomilusi *et al*. (2022) [7] postulate that misallocation of resources leads to internal conflicts, distorted product costing, and incorrect managerial decisions. In the competitive landscape of the manufacturing sector, effective cost management plays a pivotal role in determining organizational profitability and sustainability because one of the crucial aspects of cost management is the equitable and rational allocation of indirect costs such as factory rent (Akinleye & Fajuyagbe, 2022) [4]. In manufacturing companies, where multiple departments such as production, maintenance, and quality control share the same production space, determining an accurate basis for rent apportionment is essential for performance evaluation, pricing decisions, and financial reporting (Ali-Momoh, B. (2022) [5]. In Lagos, Nigeria's industrial hub, manufacturing firms operate under economic pressures such as inflation, foreign exchange volatility, and regulatory constraints with these conditions the study further emphasize on the importance of sound cost allocation systems. Therefore, the study seeks to explore the methods and challenges associated with the apportionment of factory rent among departments in the Lagos manufacturing industry. Despite the importance of accurate cost allocation, many manufacturing companies in Lagos still rely on arbitrary and outdated apportionment methods that has led to significant inefficiencies, including inflated departmental budgets, skewed profitability analysis, and misleading financial statements. Additionally, there is limited empirical research focusing specifically on how factory rent is allocated among departments in Nigeria's manufacturing sector. This

knowledge gap undermines strategic decision-making and cost control efforts. Hence, there is a need for a detailed analysis of the apportionment techniques used, their effectiveness, and how they impact departmental performance and cost efficiency. Hence, this study to investigate how factory rent is apportioned among departments within Lagos-based manufacturing firms, identifying best practices and gaps that exist in the literature. The following research questions were addressed what are the prevalent methods used for apportioning factory rent among departments in Lagos-based manufacturing firms? How do the different apportionment methods affect departmental cost efficiency and performance evaluation? What challenges do firms face in implementing an effective and equitable apportionment of factory rent?

Objectives of the study

The main objective of the study was to investigate how factory rent is apportioned among departments within Lagos-based manufacturing firms. The specific objectives are to;

- Identify the common techniques used in the apportionment of factory rent among departments in Lagos manufacturing companies.
- Evaluate the impact of rent apportionment methods on departmental cost efficiency and managerial decision-making.
- Examine the challenges manufacturing firms encounter in implementing equitable factory rent allocation strategies.

Today, factory rent, a significant overhead cost, spans various departments and functional areas, making its allocation complex as a result of distorting departmental performance and lead to poor managerial decisions. This study contributes to academic literature by providing empirical insights into factory rent apportionment practices in Nigeria's manufacturing industry. For practitioners, the study offers guidance on selecting effective cost allocation bases that enhance transparency and accountability. Policymakers and regulators may also find the results useful for designing cost accounting standards that promote efficiency and fair reporting in the industrial sector. This study is focused on food processing companies located in Lagos State, Nigeria. The study covered food/beverages, chemicals, plastics, and textiles. The study specifically investigates how factory rent is apportioned among internal departments.

Literature review

Concept of cost apportionment

Cost apportionment is the process of distributing indirect costs (overheads) fairly and proportionately among various departments, cost centers, or units based on appropriate bases of allocation (Ozondu *et al*., 2025) [24]. Cost apportionment ensures that shared expenses such as rent, utilities, and administrative salaries are allocated to different departments in a manner that reflects their actual usage or benefit derived (Umoh, 2025) [27]. In cost accounting, apportionment plays a critical role in achieving accurate departmental costing which could be traced to a specific unit, overheads must be shared using logical bases such as floor space, number of employees, or machine hours to avoid under-charging and over-charging any department, thereby supporting better pricing, performance evaluation, and budgeting decisions (Ogbuagu & Obi, 2025) [22].

Factory rent as an overhead cost

Adesina and Tiamiyu (2025) [3] assert that factory rent is classified as an overhead cost because it cannot be directly traced to a specific product but supports the overall manufacturing environment. Factory rent is a fixed cost incurred for occupying production space and must be apportioned among departments that utilize the space for their operations (Ebekozien *et al*., 2025) [12]. Factory rent is a typical example of an indirect cost that supports multiple production processes because it is not linked to a single product line or activity rent must be distributed based on rational measures floor area occupied by each department. Proper apportionment of rent helps in understanding the true cost of departmental operations and ensures fair allocation of shared facility expenses (Adegunwa *et al*., 2025; Ibrahim *et al*., 2022) [2, 14].

Apportionment techniques

Apportionment techniques are the methods used to divide and allocate indirect costs among departments based on logical and measurable criteria (Ebekozien *et al*., 2025) [12]. Common apportionment techniques include allocation based on floor area, labor hours, machine hours, value of assets, or headcount, depending on the nature of the expense (Ibrahim *et al*., 2022) [14]. In an assertion of Adegunwa *et al*. (2025) [2], assert that selecting an appropriate apportionment technique is crucial for accuracy in cost accounting (for instance, factory rent is best apportioned using floor area, while electricity may be based on machine hours; however, the technique must align with how each department consumes the shared resource). The use of consistent and justified techniques enhances the reliability of cost data and supports sound managerial decision-making.

Empirical studies

Adesina and Tiamiyu (2025) [3] examined the correlation between cost management and the profitability of Nigerian manufacturing companies, namely those engaged in the production of industrial and consumer goods. Their research use descriptive statistics and panel regression analysis to investigate the correlation between cost management factors and profitability metrics, including Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). The study's data originates from the annual reports of firms that are listed on the Nigerian Exchange Group (NGX) from 2014 to 2023. Their findings indicate that administrative expenses, marketing and distribution costs, and inflated manufacturing expenses all diminish earnings. Umoh (2025) [27] examines the influence of cost factors on operational profit, concentrating on Nigerian Brewery firms from 2003 to 2022. The particular goals were to ascertain the impacts of material cost (MAC), labour cost (LAC), and overhead cost (OHC) on operational

profit. The study employed an ex-post facto research approach, utilising secondary data sourced from the annual reports of Nigerian Breweries Plc. The data were analysed using the ordinary least squares multiple regression method with E-view software. SWOT and PESTLE assessments were also used to give a full picture. The findings indicate that material cost (MAC) exerts a substantial positive effect on operational profit, evidenced by a coefficient of 0.900903 and a p-value of 0.0228. Labour cost (LAC) also shows a big positive influence, with a coefficient of 1.987240 and a p-value of 0.0000. Overhead cost (OHC), on the other hand, has a negative and significant effect on operating profit, with a coefficient of -2.383117 and a p-value of 0.0017.

Ogbuagu and Obi (2025) [22] investigated the impact of cost reduction strategies on the profitability of manufacturing enterprises. The study employed a survey approach to attain this purpose. The original source provided the data. A total of 120 questionnaires were distributed, however only 100 were returned. The returned questionnaires were used for the study's data analysis. A simple regression model was developed, and the study's findings demonstrate a substantial correlation between cost reduction strategies and organisational profitability.

Ebekozien *et al*. (2025) [12] examined the obstacles encountered by low-income earners (LInEs) in obtaining SLCH funding and proposed a framework to enhance Nigerian SLCH financing. Their study utilised a soft systems methodology (SSM) to analyse the sustainability of LCH finance in Nigeria. The chosen strategy enabled a replacement to improve the sustainability of LCH finance midway through a built framework. The research involved interviews with chosen practitioners in seven Nigerian cities. Their studies showed that the SSM seven stages worked. The findings show the status and problems that lines face while trying to get SLCH money. The findings also indicate the necessity for a financial structure.

Akinleye and Fajuyagbe (2022) [4] assessed the cost management and performance of listed non-financial firms in Nigeria. The study examined the impact of raw material costs, administrative expenses, sales turnover ratio, and marketing and distribution expenditures on profitability. The company's valuation was utilised to assess performance. The coefficient of determination demonstrates a positive correlation between administrative costs and business value. This data corroborates the study's conclusion that effective cost management enhances the performance of Nigeria's non-financial enterprises as shown by their market value.

Ali-Momoh (2022) [5] analysed cost management and its impact on profitability for a sample of manufacturing firms in Nigeria. This research aimed to assess the extent to which administrative, sales, and distribution expenditures affect the profitability of Nigerian industries. Annual financial reports from ten (10) identified organisations, spanning from 2011 to 2020, were utilised as a supplementary data source for this investigation. Descriptive statistics, correlation analysis, and panel regression were employed to assess the data. This study revealed that cost control negatively affected the financial performance of Nigerian manufacturing enterprises, particularly when assessing success via profit after tax. The research indicated that manufacturing firms should minimise administrative expenditures, as leveraging them as a positive change agent for one financial performance indicator may adversely affect another. The comprehensive performance objectives of the manufacturing business must be incorporated into the management of administrative expenses, enabling the firm to anticipate the possibility that one financial performance metric may be adversely affected by another.

Adamu (2022) [1] conducted a case study on Grand Cereals and Oil Mills Limited in Nigeria to assess the influence of costs on profitability. The study aimed to address many enquiries on the impact of costs on a company's profitability, the role of accurate costing in facilitating growth, the barriers to enhanced profitability, and the tactics that may be employed to reduce costs without compromising profits. This study employed a cross-sectional survey methodology. The data was collected from the archives of Grand Cereals and Oil Mills Limited and analysed using both simple correlation and ANOVA. The outcomes of this study reveal that the profitability of Grand Cereals and Oil Mills Limited is inversely connected to its production costs, directly related to its sales, and inversely related to its value-added tax rate. Effective cost management is essential for a firm to achieve an adequate return, as only a well-structured organisation has the potential to yield a profit. This study has considerable limitations as it focuses exclusively on a single company, Grand Cereals and Oil Mills Limited, in Nigeria. The findings may not be relevant to other organisations or sectors due to the uniqueness of the company's operations, market conditions, and business strategy. The research only utilises the records of Grand Cereals and Oil Mills Limited as the data gathering tool.

Awotomilusi *et al*. (2022) [7] examined the influence of cost structure on the financial performance of publicly listed Nigerian manufacturing firms. This research reviewed the financial accounts of seven industrial products businesses listed on the Nigerian Exchange Group from 2011 to 2020. Descriptive research methodologies, encompassing regression and correlation analysis, were employed post hoc. The study's findings confirmed the notion that cost structure significantly influences the financial performance of certain NSE-listed manufacturing companies. The report proposed a thorough analysis of cost structures to monitor and regulate their impact on manufacturing business profitability, including an exploration of the cost associated with each component. A notable limitation is that the study examined only seven firms within the Nigerian Exchange Group that manufacture industrial products.

Hines (2010) [13] evaluated a study on the accuracy of these apportionment rules and the ownership distortions they create. Evidence from European company accounts indicates that apportionment formulas significantly misattribute income, since employment and other factors on which they are based do a very poor job of explaining a firm's profits, the magnitude of property, employment and sales explains less than 22% of the

variation in profits between firms, and the prediction estimates from using such a formula exceed half of predicted profits 64% of the time, and exceed twice predicted income 11% of the time. As a result, the use of formulas rewards or punishes international mergers and divestitures by reallocating taxable income between operations in jurisdictions with differing tax rates. The associated ownership distortion is minimized by choosing factor weights to minimize weighted squared prediction errors, for which, based on the European evidence, labor inputs should play little if any role in allocation formulas.

Theoretical review

The study reviewed the following two theories Activity-Based Costing (ABC) theory and Contingency Theory in Management Accounting. Notwithstanding, the study is anchored on Activity-Based Costing (ABC) theory because ABC provides a more accurate method of allocating indirect costs such as factory rent by linking them to specific activities and departmental resource usage.

Activity-Based Costing (ABC) theory

Activity-Based Costing (ABC) is a costing system created in the late 1980s by Robert S. Kaplan and Robin Cooper, which identifies and allocates costs to overhead activities and subsequently assigns those costs to products based on their utilisation of those activities. The ABC theory proposition that conventional costing systems misrepresent product costs by arbitrary overhead allocation, asserting that precise product costing necessitates tracking overhead expenses to activities and then to goods based on real utilization (Khan, 2024) [17]. The ABC hypothesis posits that activities utilise resources, and products utilise activities and the cost of a product should be determined by the activities necessary for its production (Idris *et al*., 2025) [15]. The ABC theory has faced criticism as cirtised by Saeed *et al*. (2023) [25] that ABC theory is time-consuming nature, high implementation costs, and excessive complexity, rendering the theory impractical for small or less dynamic enterprises, particularly when the volume of operations is substantial. A significant advantage of ABC theory is its capacity to deliver more precise product costing and enhanced understanding of overhead expenses, resulting in improved decision-making and strategic pricing (Al-Qudah *et al*., 2017) [6]. The principal issue with ABC theory is installation and maintenance expenses, coupled with the risk of data overload and challenges in effectively identifying and monitoring all pertinent processes (Dwivedi & Chakraborty, 2016) [11].

Contingency theory in management accounting

The contingency theory of management accounting, articulated by researchers like Otley (1980) [23] and Chapman (1997) [8], posits that no singular ideal accounting system exists; rather, the most successful system is contingent upon the particular environment and factors affecting an organisation. The contingency hypothesis asserts that the design and implementation of management accounting systems must correspond with organisational factors, including size, structure, techniques, technology, environment, and strategy, to improve performance (Linh, 2024) [19]. The idea posits that organisations function within varied and evolving settings, and the efficacy of any management accounting system depends on its alignment with contextual factors (Nguyen *et al*., 2023) [21]. Critiques of contingency theory include its insufficient predictive capability, excessive dependence on empirical data, and challenges in separating the effects of individual variables due to intricate interdependencies (Sayadi & Sabzali, 2020) [26]. A key strength of contingency theory is its flexibility and adaptability, enabling organisations to develop accounting systems that optimally align with their specific conditions and constraints (Khodayareyeganeh *et al*., 2024) [18]. The primary issue is its lack of normative direction, since it offers no uniform answers and necessitates case-by-case assessments, potentially resulting in uneven applicability among organisations (Diana *et al*., 2023) [10].

Methodology

This study adopted a descriptive survey research design, suitable for analyzing current practices and challenges in a real-world setting. The population comprises 566 registered manufacturing firms in Lagos State, Nigeria, based on records from the Lagos State Ministry of Commerce and Industry as at May, 2025) Using stratified random sampling, 50 manufacturing firms were selected from sectors such as food/beverages, chemicals, plastics, and textiles. The study sample 76 departmental heads (Finance, Operations, and Production) with professional qualifications, using a structured questionnaire administration method. Data analysis techniques were done using descriptive statistics and inferential statistics using qualitative data that were coded thematically and regression analysis to examine relationships between apportionment methods and allocation strategies on departmental efficiency through the use of SPSS version 26.

Data analysis

1. Descriptive statistics

The descriptive statistics showed relatively high mean values, indicating a generally good view or implementation level among respondents. The standard deviations across variables are minimal, indicating that answers vary little. The negative skewness scores for all variables indicate that the data distributions are somewhat left skewed, which means that more respondents reported higher values. Furthermore, the kurtosis values show that Common_Techn is more peaked (leptokurtic), whereas Allo_Strategies is closer to a normal distribution (mesokurtic), indicating variations in response concentration. Overall, the evidence indicates consistency and a generally positive attitude towards technical commonality, cost efficiency, and allocation techniques across the studied population.

Table 1: Descriptive statistics

	Minimum	Maximum	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Common_Techn	1.83	3.83	3.26	0.36769	-1.304	0.289	2.959	0.570
Cost_Efficiency	2.33	4.00	3.28	0.33168	-1.103	0.289	1.259	0.570
Allo_Strategies	2.50	3.83	3.34	0.26109	-0.736	0.289	0.399	0.570

Source: Researchers' computation (2025)

2. Regression analysis to examine relationships between apportionment methods and allocation strategies

2.1. Model summary

Table 2 shows the model summary of a multiple regression study that investigated the impact of cost efficiency and common procedures on allocation strategies. The R value of 0.585 suggests a moderate positive relationship between the variables (Cost_Efficiency and Common_Techn) and the dependent variable (Allo_Strategies). The R Square value of 0.342 indicates that the findings account for about 34.2% of the diversity in allocation techniques. The Adjusted R Square of 0.322 accounts for the number of predictors in the model, demonstrating that about 32.2% of the variability in Allo_Strategies is explained after correcting for the number of independent variables. The findings provide statistically moderate explanations for the difference in allocation methods based on cost efficiency and the utilisation of popular procedures.

Table 2: Model Summary

Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin-Watson
1	.585[a]	.342	.322	.21496	2.119

a. Predictors: (Constant), Cost_Efficiency, Common_Techn
b. Dependent Variable: Allo_Strategies
Source: Researchers' Computation (2025)

2.2. ANOVA

Table 3 shows the results of the ANOVA for the regression model employed in the study. The regression on the association between apportionment techniques, allocation strategies, and departmental efficiency. According to the table, the regression sum of squares is 1.585, with two degrees of freedom. The F-statistic score of 17.155 suggests that the entire regression model is statistically significant. This is further reinforced by the p-value of.000, which is less than the standard significance level of 0.05. As a result, we reject the null hypothesis, which states that the apportionment technique (independent variables) does not affect departmental efficiency. This suggests that the model is a good match and that the apportionment approach accurately forecasts departmental efficiency.

Table 3: ANOVA

Model		Sum of squares	df	Mean square	F	*p*-value
1	Regression	1.585	2	.793	17.155	.000[b]
	Residual	3.050	66	.046		
	Total	4.635	68			

a. Dependent Variable: Allo_Strategies
b. Predictors: (Constant), Cost_Efficiency, Common_Techn

2.3. Coefficients

The coefficients table displays the results of a multiple regression study to determine the impact of Common Techniques (Common_Techn) and Cost Efficiency on Allocation Strategies (Allo_Strategies). The model intercept (constant) is statistically significant ($t = 5.670$, $p < 0.001$), showing that the dependent variable's baseline value differs considerably from zero when all predictors are kept constant. The independent variable Cost_Efficiency shows a substantial positive influence on Allocation Strategies (Beta = 0.498, $t = 4.559$, $p < 0.001$). This means that when cost efficiency improves, the use of allocation schemes grows considerably. In contrast, Common_Techn has a positive but statistically negligible impact (beta = 0.165, $t = 1.511$, $p = 0.135$). This means that, while popular procedures have an impact on allocation strategies, the association is insufficient to be declared statistically significant at the 0.05 level.

Table 4: Coefficients

Model		Unstandardized coefficients		Standardized coefficients	t	*p*-value
		B	Std. error	Beta		
1	(Constant)	1.669	.294		5.670	.000
	Common_Techn	.117	.078	.165	1.511	.135
	Cost_Efficiency	.392	.086	.498	4.559	.000

a. Dependent Variable: Allo_Strategies

3. Findings and discussions

The findings reveal key insights into the factors influencing allocation strategies. The model's intercept is statistically significant, confirming that the dependent variable has a meaningful baseline value even when other predictors are held constant. Among the predictors, cost efficiency emerges as a critical determinant, showing a strong and st+atistically significant positive relationship with allocation strategies. This suggests that improvements in cost efficiency are likely to drive better adoption and implementation of allocation

strategies. The findings of this study align with the findings in the study of Awotomilusi *et al*. (2022) [7] examined the influence of cost structure on the financial performance of publicly listed Nigerian manufacturing firms. Their study's findings confirmed the notion that cost structure significantly influences the financial performance of certain NSE-listed manufacturing companies and contradicted with the findings in the study of Hines (2010) [13] evaluating the accuracy of these apportionment rules and the ownership distortions they create. Evidence from European company accounts indicates that apportionment formulas significantly misattribute income, since employment and other factors on which they are based do a very poor job of explaining a firm's profits. For example, the magnitude of property, employment and sales explains less than 22% of the variation in profits between firms, and the prediction estimates from using such a formula exceed half of predicted profits 64% of the time, and exceed twice predicted income 11% of the time. As a result, the use of formulas rewards or punishes international mergers and divestitures by reallocating taxable income between operations in jurisdictions with differing tax rates. The associated ownership distortion is minimized by choosing factor weights to minimize weighted squared prediction errors, for which, based on the European evidence, labor inputs should play little if any role in allocation formulas.

Conclusion and Recommendations

Based on the findings of this study, the study provides valuable empirical insights into the determinants of allocation strategies within organizational contexts. The statistical significance of the study confirms that allocation strategies possess an inherent baseline value of apportionment of factory rent; cost efficiency stands out as a pivotal factor, exhibiting a robust and statistically significant positive influence on allocation strategies; also, concluded that the centrality of cost-efficient practices in enhancing the formulation, adoption, and execution of allocation frameworks with improvements in cost management are not only beneficial but essential for optimizing resource distribution mechanisms across departments and functions. Based on the findings, the recommended that; organizations should prioritize cost efficiency as a strategic objective to enhance their allocation strategies and overall operational performance; management should invest in cost-control systems, budgetary monitoring tools, and efficiency enhancing techniques that support better allocation decision-making; and policymakers and administrators should develop guidelines that integrate cost-efficiency metrics into the evaluation criteria for allocation strategies.

References

1. Adamu A. The impact of cost on profitability: A case study of grand cereals and oil mills limited, Nigeria. J Bus Econ Res. 2022;15(3):112-25.
2. Adegunwa AO, Oyekunle JA, Ore OT. Distribution and source apportionment of polycyclic aromatic hydrocarbons in indoor dust of an emerging residential city in Nigeria: Implication on human health. Environ Pollut Manag. 2025;2:14-22.
3. Adesina OD, Tiamiyu TA. Empirical analysis of cost management and profitability of manufacturing companies in Nigeria. J Econ Finance Manag Stud. 2025;8(2):1397-1415.
4. Akinleye T, Fajuyagbe R. Cost management and financial performance of non-financial enterprises in Nigeria. Int J Financ Stud. 2022;10(2):45-60.
5. Ali-Momoh B. Cost management and profitability of Nigerian manufacturing firms. Afr J Account Finance. 2022;7(4):134-150.
6. Al-Qudah LAM, Al-Hroot YAK. The implementing activity-based costing technique and its impact on profitability: A study of listed manufacturing companies in Jordan. Int J Econ Financ Issues. 2017;7(2):271-276. Available from: https://www.econjournals.com/index.php/ijefi/article/view/4384
7. Awotomilusi O, Adeyemi S, Olayemi T. The effect of cost structure on financial performance of quoted manufacturing companies in Nigeria. Niger J Econ Stud. 2022;14(3):76-89.
8. Chapman CS. Reflections on a contingent view of accounting. Account Organ Soc. 1997;22(2):189-205. doi:10.1016/S0361-3682(96)00040-9
9. Cooper R, Kaplan RS. Measure costs right: Make the right decisions. Harv Bus Rev. 1988;66(5):96-103.
10. Diana N, Sudarmiatin S, Hermawan A. Model of accounting information system and SMEs performance in contingency theory perspective. Asian J Manag Entrep Soc Sci. 2023;3(3):47-69.
11. Dwivedi R, Chakraborty S. Adoption of an activity based costing model in an Indian steel plant. Bus Theory Pract. 2016;17(4):289-298. doi:10.3846/btp.17.10864
12. Ebekozien A, Aigbavboa CO, Samsurijan MS, Muhammad AK, Akinradewo O. Developing a framework for housing financing: A case study of Nigeria's sustainable low-cost housing via soft system methodology. Eng Constr Archit Manag. 2025;32(13):27-48.
13. Hines Jr JR. Income misattribution under formula apportionment. Eur Econ Rev. 2010;54(1):108-120.
14. Ibrahim FS, Ebekozien A, Khan P, Aigbedion M, Ogbaini IF, Amadi G. Appraising fourth industrial revolution technologies' role in the construction sector: How prepared is the construction consultants? Facilities. 2022;40(7/8):515-532. doi:10.1108/F-09-2021-0086
15. Idris MO, Abioye AG, Oyewo AT, Ojerinde BJ, Adefajo AA. Potentials of Activity Based Costing (ABC) modeling in developing expert system for cost estimation in job shops. UNIABUJA J Eng Technol (UJET). 2025;2(1):141-149.
16. Kaplan RS, Cooper R. Cost and Effect: Using Integrated Cost Systems to Drive Profitability and Performance. Boston (MA): Harvard Business School Press, 1998.

17. Khan MSU. Exploring theoretical foundations of activity-based costing. Int J Res Innov Soc Sci. 2024;8(3s):2953-2965.
18. Khodayareyeganeh S, Pourzamani Z, Jahanshad A, Royaei R. Experimental test of contingency theory and political economy: Development of a model to explain the impact of the main factors of development on the effectiveness of management accounting techniques. J Adv Finance Invest. 2024;5(1):93-130.
19. Linh NT. Contingency theory in management accounting: A systematic literature. Int J Adv Multidiscip Res Stud. 2024;4(1):1160-1164.
20. Mukunoki H, Okoshi H, Schindler D. Reallocating taxing rights and online trade: Pillar One as a partial formula apportionment [Working Paper No. 25032]. 2025.
21. Nguyen TH, Nguyen DT, Nguyen TA, Nguyen CD. Impacts of contingency factors on the application of strategic management accounting in Vietnamese manufacturing enterprises. Cogent Bus Manag. 2023;10(2):2218173.
22. Ogbuagu NM, Obi I. Effect of cost reduction techniques on profitability of manufacturing firms in Nigeria. UNIZIK J Educ Res Policy Stud. 2025;19(3):45-58.
23. Otley DT. The contingency theory of management accounting: Achievement and prognosis. Account Organ Soc. 1980;5(4):413-428. doi:10.1016/0361-3682(80)90040-9
24. Ozondu ME, Iwara OE, Okeke SE, Udefi GN, Romaine AC, Chinweuba FU, Chukwunwike OD. Creative accounting and investor value: A comparative study of income smoothing of listed manufacturing firms in Nigeria and South Africa. J Manag World. 2025;2025(1):618-625.
25. Saeed AMM, Widyaningsih A, Khaled AS. Activity-based costing (ABC) in the manufacturing industry: A literature review. J Dev Econ. 2023;8(2):261-270.
26. Sayadi SA, Sabzali PF. Management accounting tools rings missing value creation; empirical testing contingency theory. J Account Adv. 2020;12(1):213-237.
27. Umoh E. An analysis of cost elements and their impact on operating profit: Evidence from Nigerian brewery companies (2003–2022).