



THE EFFICIENCY OF MANAGEMENT CONTROL SYSTEMS: DOES IMPLEMENTING MANAGEMENT CONTROL SYSTEMS AFFECT HOW WELL A COMPANY PERFORMS?

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ABSTRACT: *The research investigated the potential positive correlation between Management Control Systems with profitability and innovation. The research utilizes quantitative methodologies, using survey designs to administer a structured questionnaire to respondents at the headquarters of the Coca-Cola bottling company in Lagos, Nigeria. The location and firm were chosen by judgmental sampling, whereas the questionnaire was distributed through convenience sampling. The sample size of 109 respondents was determined using the Yamane (1967) approach from a population of 150 individuals selected randomly. After examining the collected data using linear regression and multivariate analysis, the study revealed Management Control Systems positively correlates with profitability and innovation. Based on these results, it is advised that businesses prioritize creating and deploying efficient management control systems (MCS) policies that expressly focus on improving profitability and stimulating innovation.*

KEYWORDS: Profitability, Management Control System (MCS), Innovation, Organizational Performance.



INTRODUCTION

Jukka (2023) defines a *management control system* as the systematic approach companies use to ensure the effective and efficient resource acquisition, allocation, and utilization to achieve the organization's goals. As Dharmayanti et al. (2023) described it, MCS is a systematic approach used to optimize the efficiency and productivity of various resources in an organizational context, aiming to accomplish pre-established goals. Notably, it has been contended that management control systems include acknowledging accountability for the effective culmination of collective endeavors within an organization. Therefore, with effective management control, the organization can avoid a chaotic state where workers need clear objectives, direction, and cohesion. Management control involves the analysis and understanding of an organization's objectives, followed by the execution of a practical plan using various approaches. Therefore, the strategies of MCS are to organize the organization's activities into manageable parts, develop an efficient communication channel, and evaluate performance to discover areas for improvement.

Sutrisno et al. (2023) defined *performance* as the outcomes attained by an organization within a specified period; however, performance assessment depends on the organization's particular goals and the mode of achievement. The attainment of organizational performance is intricately tied to efficiently implementing the company's strategy and management control systems (MCS); hence, using quantified repetitive activities allows management to evaluate performance levels and make informed judgments about possible areas for the development by the appropriate application of MCS. Organizations must intentionally structure their Management Control Systems (MCS) to correspond with their strategic goals, create a competitive advantage, and promote exceptional performance. Furthermore, empirical evidence indicates that when an organization's external environment is strategically aligned with its internal structures and activities, it results in a sustained competitive advantage. Therefore, the management control system is a complete framework of measures designed to ensure the accomplishment of goals and tasks by the organization while prioritizing cost-effectiveness.

Problem Statement

In the present business landscape, where organizations face intense competition in a dynamic market and must meet the expectations of several stakeholder groups, it is evident that enterprises require assistance in effectively managing and enhancing their operations across all dimensions. Therefore, adopting and implementing an efficient Management Control System (MCS) is crucial. However, this has been a challenge for many companies as several organizations are yet to acknowledge the potential advantages of MCS, seeing these systems as obstacles to flexibility. Sometimes, small and medium-sized enterprises (SMEs) adopt a management control system (MCS) designed for bigger companies, presenting difficult and demanding obstacles. These problems highlight the urgent need for a fundamental change in companies' mindset to adopt and implement MCS. This change should include shifting the attention from individual performance to a broader view of organizational performance. Therefore, the primary objective of this research is to analyze the influence of management control systems on organizational performance, with a specific emphasis on innovation and profitability.



LITERATURE REVIEW

Theoretical Review

Organizational Control Theory

Organizational control theory is a communication strategy that uses physical and verbal behaviors to handle resistance and influence workers to adhere to company standards. However, to achieve collective goals, management must foster and provide workers autonomy and a conducive environment for collaborative efforts towards a common target. This theory is pertinent to this study as it is essential to understand that the contrasting goals of managers and workers may impede the established organizational control mechanism; managers often want to maximize the organization's efficiency while minimizing the pay for additional work hours. Conversely, workers may deliberately embrace strategies to maximize compensation by extending their working hours and lowering quality. As individuals collaborate to further their interests, they exert influence and alter the established organizational and management control systems in place. Additionally, to evaluate the advantages and disadvantages of various management control systems, the first step is establishing a framework for evaluation from a communication standpoint. In summary, control systems may require physical actions and verbal expressions to establish power and stifle opposition; hence, management maintains control by applying pressure, explicit verbal instructions, and written directives (Pianese et al., 2023).

Learning Orientation Theory

As organizational learning is evolving into a dynamic asset; researchers have been compelled to reevaluate its definition, separating it from the skills and resources that a company acquires over time. Thus, it has been asserted that successful companies depend on regularly updated formal control mechanisms, such as management control systems, to facilitate organizational learning and drive the achievement of goals. In addition, using management control systems (MCS) has greatly improved workers' assessment of their learning ability. Thus, the use of Management Control Systems (MCS) enables a holistic view of strategic processes, which in turn promotes organizational learning. However, determining the source of learning extends beyond the often-considered exceptional abilities that arise from a company's previous assets (Collis, 1994). Therefore, improving a company's operations more quickly than competitors is crucial in achieving a competitive advantage (Baker & Sinkula, 1999). However, providing a continuous and current dissemination of information throughout the company is important.

Management Control System

Management control system (MCS) is a systematic approach that involves the processes put in place to efficiently utilize resources to accomplish organizational goals (Biswas & Akroyd, 2022). Therefore, a Management Control System (MCS) enables the dissemination of relevant information to managers, thus enhancing their ability to carry out their responsibilities and obligations efficiently and make informed decisions. Macintosh & Daft (2019) differentiate a management control system from strategic planning and operational control; the author described a management control system as a set of processes that influence an organization's personnel's actions toward achieving organizational goals. According to Simons (2019), managers implement and establish MCS to ensure workers' actions and decisions align with the organization's goals and objectives. Therefore, a carefully structured management control



system (MCS) should include external advancements, including the crucial role of information technology (IT), in facilitating this effort.

Organizations often need Management Control Systems (MCS) that can be tailored to meet their specific needs and be congruent with their organizational structure and strategic goals; therefore, an effective MCS should foster employee motivation, encourage teamwork, optimize decision-making procedures, and provide necessary feedback, among other aims. According to Rahmati et al. (2022), the Management Control (MC) system can be categorized into two primary groups: the first category pertains to control, whereby certain outcomes are assessed, supervised, and compared to predetermined expectations. This optimizes the implementation of the appropriate protocols as needed, encompassing administrative or operational controls, including documented regulations, standardized procedures, manuals, and monitoring mechanisms to ensure adherence. The second group comprises behavior controls, personnel controls, and contracts. This category includes limitations on values, norms, and collective engagements to guarantee conformity. The two categories above illustrate the potential for synergistically using their respective strengths to mutually support and enhance the effectiveness of a well-operating management control system.

Profitability

Profitability entails the outcomes that originate from variations in management's objectives, plans, decisions, and actions, which are apparent in variances in functional outcomes, such as financial performance. Yang and Liu (2023) asserted that two main groups of factors influence organizational profitability: internal and external. The internal processes of organizational profitability are influenced by the decisions and objectives set by management. Hence, quality management significantly influences organizations' positive profitability and overall performance. However, the assessment of management quality is linked to the level of comprehension and mastery that management shows about the organization's goals. Koleangan et al. (2022) established a notable association between profitability and various metrics, including revenue, asset ratios, profits, and overall organizational success. Fahmi and Saputra (2013) asserted that the profitability of an organization is greatly impacted by the systems implemented to manage its assets and liabilities, regulate its financing, and supervise its non-interest costs. Hence, the efficient management of expenditures can constantly improve the organization's profitability and overall performance. On the other hand, external variables impacting organizational profitability are those outside the organization's control and are impacted by occurrences outside its sphere of influence. Kalbuana et al. (2022) conducted research that examined how profitability affects organizational activities by considering external variables. The study's findings indicate that external factors play a crucial role in determining the financial performance of organizations.

Innovation

Ortigueira-Sánchez et al. (2022) define *organizational innovation* as the procedure by which a company implements or embraces an unprecedented or novel notion or conduct; it is the act of integrating novel components, such as strategies, products, services, technologies, procedures, and concepts into the organizational structure. Numerous academics who have conducted evaluations of innovation have recognized its significance for organizations. Haddad et al. (2022) noted that greater innovation has the potential to effectively tackle challenges at both the individual, organizational and social levels. However, it is imperative to acknowledge that



innovation and invention are separate notions as they are often misused; invention pertains to the development of an entirely novel product, service, method, or process, frequently culminating in the attainment of patents. In contrast, innovation takes the form of gradual adjustments or transformations. Additionally, it is important that employees strive for creativity; personal innovation primarily concerns an employee's creative prowess and inventive conduct in alignment with organizational objectives. It is imperative to acknowledge that adopting novel innovations is not invariably an automatic component of organizational transformation, as numerous organizations encounter structural modifications without inherently incorporating innovative components.

Empirical Review of Related Literature

Jukka (2023) examined the relationship between management control systems and the financial performance of organizations. The author used a survey study design and implemented the convenience sampling technique to determine a sample size of 50 participants. The study used a well-organized questionnaire to collect data, which was then analyzed using regression analysis. The investigation reveals a statistically significant correlation between the management control system and the organization's profitability. The management control system has been shown to have a significant impact on the overall success of a firm, including the performance of staff and the creation of profits. In their study, Valeira et al. (2015) investigated the interactive use of management control systems (IMCS) on the process and organizational innovation. The findings from a structural model using Least Squares regression, which incorporates control factors such as size, research and development, and product innovation, indicate that Interactive Management Control Systems (IMCS) significantly promote process and organizational innovation.

Sebastian and Barbara (2017) investigated the impact of management control systems on the performance of organizations. The research used data from a cross-sectional survey with 295 persons occupying senior management accountant roles. The study's findings indicate a robust correlation between using informal control mechanisms and achieving positive results. The findings provided evidence for the increasing significance of informal control mechanisms compared to conventional formal control techniques inside modern organizations. Felício et al. (2020) also examined the adoption of MCS and its impact on performance. The researchers observed that enterprises have the responsibility to provide services, even in a dynamic and demanding market, while facing constraints in terms of financial resources. The study used a standardized questionnaire to examine the correlation between the factors. The findings indicate a statistically significant positive link between MCS (Management et al.) and organizational effectiveness. Hence, the results have significant practical implications for senior executives aiming to enhance performance using management control systems.

Joanna et al. (2011) investigated the effects of management control systems on efficiency and quality performance. The researchers observed that Management Control Systems (MCS) had been extensively recommended as a fundamental framework for organizations to enhance the likelihood and engagement in activities that align with the organization's goals. The study used a combination of non-parametric data envelopment analysis and parametric stochastic frontier analysis. The study's results indicated a significant technical inefficiency, mostly due to the suboptimal utilization of resources. Moreover, the research demonstrated that organizations that use stringent management control systems (MCS) exhibit superior levels of effectiveness and performance. Similarly, Gomez-Conde et al. (2023) investigated the impact of



management control systems (MCS) on performance measurement systems. The research used contingency theory as a conceptual framework and included the four control levers suggested by Simons as an intermediate factor to elucidate the link. The research found a significant correlation between premenstrual syndrome (PMS) and the four specific MCS selected for examination. Moreover, the study suggests that implementing a performance management system (PMS) impacts overall performance by improving the operational efficiency of the management control system (MCS). Santos et al. (2023) examined the relationship between management control systems and innovation in their study. The regression analysis results indicated a positive link between management control systems (MCS) and performance, particularly regarding exploitative innovation tactics. The study yielded valuable insights into the varied impacts of management control systems (MCS) and innovation methodologies in start-up organizations that get assistance from business owners.

METHODS

Quantitative methodologies, particularly survey designs, constituted the predominant approach for data acquisition in this study. Utilizing a digital platform, a structured questionnaire was utilized to collect the data. The survey instrument was purposefully developed to gather respondents' data using a Likert scale comprising five distinct points. The rationale for selecting this approach is that it facilitates methodical data collection and statistical analysis. Additionally, a random selection technique was employed to choose the study population, which included 150 workers at the headquarters of the Coca-Cola bottling firm in Lagos, Nigeria. The researcher selected the target demographic based on familiarity with the organization. The study used judgmental sampling as the sampling approach to select both the location (Lagos) and the firm; the questionnaire was distributed using convenience sampling. The Yamane (1967) approach was used to calculate the sample size, and it was concluded that a sample size of 109 respondents would adequately represent the research. The data analysis was conducted using SPSS software, selected for its efficacy in aiding accurate analysis.

RESEARCH RESULTS

The completed questionnaires from eligible participants were collected and organized. A coding procedure was conducted, which included the development of a manual grading system to assign numerical values to the responses. The data collected during the coding phase were examined using the regression technique via SPSS. Linear regression is used in research to ascertain the quantifiable influence of one variable on another.

The analysis focused on a particular statistical measurement, encompassing;

- The R coefficient of variation was used to assess the magnitude of the association between the observed and explanatory factors.
- The R², known as the determination coefficient, was used to assess the variability of the dependent variable about the independent components to examine the impact of the management control system on organizational performance.



- An analysis of variance (ANOVA) was used to ascertain a statistically significant relationship between the independent and dependent variables, with a significance level (p-value) of 0.05.
- The correlation coefficient is a quantitative measure that ranges from -1 to 1. A value of -1 signifies a strong negative connection, while a value of +1 indicates a strong positive correlation.

Test of Hypotheses

There is no significant and positive relationship between Management Control system, profitability, and innovation.

Regression Analysis

Model Summary			
Model	R	R Square	Adjusted R Square
1	.820 ^a	.650	.690
a. Predictors: (Constant), Management Control System			
b. Dependent Variable: Innovation, Profitability			

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2443.998	2	561.233	51.405	.000 ^b
	Residual	2245.529	175	8.435		
	Total	3415.727	178			
a. Dependent Variable: Innovation, Profitability						
b. Predictors: (Constant), Management Control System (MCS)						

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.121	1.805		3.213	.000
	Profitability	.414	.216	.325	2.650	.000
	Innovation	.459	.122	.325	6.914	.000
a. Independent Variable: Management Control System (MCS)						

The model summary shows an R-value of 0.820 and an R square value of 0.650; this indicates that about 65 percent of the changes in organizational innovation and profitability are linked to variations in the Management control system. This indicates that 35 percent of the total variation in organizational innovation and profitability cannot be accounted for or is caused by variables not considered in this research. The stochastic error component in the estimated model thus represents this. The results of the ANOVA show that the entire model has a threshold for significance of less than 0.05 (F = 51.405; Sig. = 0.000), demonstrating a significant relationship between the management control system and organizational innovation



and profitability. The coefficients table provides more proof of the correlation between the variables and displays a consistent value of 0.000. The regression model is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

where:

Y = Profitability, Innovation

β_0 = Constant Term

β_1 = Beta coefficients

X₁ = Management Control System.

Therefore, $Y = 0.414 + 0.459X_1$.

Multivariate Tests^a						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.984	4219.138 ^b	2.000	141.000	.000
	Wilks' Lambda	.016	4219.138 ^b	2.000	141.000	.000
	Hotelling's Trace	59.846	4219.138 ^b	2.000	141.000	.000
	Roy's Largest Root	59.846	4219.138 ^b	2.000	141.000	.000
Management Control System	Pillai's Trace	.671	5.122	28.000	284.000	.000
	Wilks' Lambda	.414	5.587 ^b	28.000	282.000	.000
	Hotelling's Trace	1.212	6.061	28.000	280.000	.000
	Roy's Largest Root	1.009	10.234 ^c	14.000	142.000	.000
a. Design: Intercept + Management Control System						
b. Exact statistic						
c. The statistic is an upper bound on F that yields a lower bound on the significance level.						

The multivariate analysis reveals significant values of 0.000 for Pillai's Trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root results. Since this value is lower than the specified p-value of 0.05, it can be inferred that the management control system positively impacts organizational performance.

CONCLUSION AND RECOMMENDATIONS

The study results indicate that implementing Management Control Systems (MCS) improves the performance of an organization, enabling it to achieve industry-leading profitability and innovation. The effectiveness of management control systems is critical to the success of an organization, as managers utilize these technologies to optimize strategic planning and enforce policies within the organization. An essential advantage of MCS is that it synchronizes the aims and objectives of multiple departments with those of the organization. The synchronization of activities guarantees the efficient allocation of resources to those that directly contribute to achieving profitability and innovation. Furthermore, implementing Management Control



Systems (MCS) facilitates identifying opportunities for resource optimization and reduction by monitoring cost centers and deviations from intended objectives. This enables management to obtain current and precise information critical for making well-informed decisions. Therefore, by imparting knowledge and information, MCS enables managers to proactively participate in decision-making processes that positively impact the organization's financial performance. Therefore, it is critical to customize management control systems to individual organizations' specific requirements to ensure sustained productivity growth, and assess and adjust them regularly.

WAY FORWARD

- The study recommends that enhancing organizational performance requires management's attention to basic aspects, such as fully embracing and executing management control systems.
- The study proposes that organizations should prioritize developing and implementing efficient management control systems (MCS) strategies that specifically target goals related to improving profitability and fostering innovation.
- Managers must analyze and grasp the significance of using Management Control Systems (MCS) to comprehend consumer preferences and market intricacies. This understanding facilitates tailoring offerings or services to align with client preferences.
- Organizations are advised to establish Management Control Systems (MCS) since it is crucial for gaining competitive advantage via innovative capabilities and monitoring competitors' activities and performance.

RECOMMENDATIONS FOR FURTHER RESEARCH

The present study examined the influence of management control systems (MCS) on organizational performance, considering organizational attributes such as profitability and innovation. However, future research should investigate the effects of MCS on top management efficiency and product quality. Additionally, the research focused on a manufacturing business; it is suggested to undertake a comprehensive study that includes various sectors, such as logistics, agriculture, and education.



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