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Internal Control System and Organisational Performance: An Evaluation of Capacity Utilisation and Profitabilty in Selected Nigerian Manufacturing Companies

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ABSTRACT

The importance of Internal Control (IC) system as a process established by entity's board or management cannot be underplayed, particularly in a volatile business environment characterised by high cost of manufacturing induced by inflationary pressure and currency instability. This study examined the impact of internal control systems on capacity utilisation and financial performance of listed Nigerian industrial goods manufacturing companies. The study used a survey research design. The population of study comprised of the 278 Management staff of the 4 selected listed industrial goods manufacturing companies as of 31 December 2023. Using purposive sampling technique, 163 respondents were circularized electronically. From this number 104 (64%) returned the questionnaire. Purposive sampling was adopted based on the availability and willingness of the individuals to respond to the questionnaire. Inferential statistics using multiple regression model was adopted in analysing the data collected. The results of the analysis revealed that internal control system has significant effect on capacity utilisation with Adjusted R^2 = 0.333, F-statistics= 13.843 and P-value = 0.000. It also shown significant effect on the profitability of the listed manufacturing firms with Adjusted R^2 = 0.576, F-statistics =35.926, P-value =0.000. The study concluded that internal control system significantly impacts on capacity utilisation and profitability of listed Nigeria industrial goods manufacturing firms. Hence, management of the listed Nigeria industrial goods manufacturing firms should continually review internal control system to ensure optimum capacity utilisation, such that will place them on the path of profitability and growth in consideration of the volatility of business environment.

Keywords: Internal control, Capacity Utilisation, Profitability, Manufacturing, Industrial Good

INTRODUCTION

The importance of effective internal control system in organisations cannot be over emphasized particularly in volatile and unstable business environment. Every organisation, including the manufacturing ones is expected to develop a robust internal control framework that could help to safeguard or protect its resources in order to minimize financial losses. According to the French Institute of Chartered Accountants (2020), internal control systems refer to the set of safety efforts that contributes to a company's control systems with the objective of ensuring that assets are secured, safeguarded and the information are of good quality. They continued by stating that effective and efficient internal control system established by companies has helped in safeguarding their organisation's resources both "tangible and intangible" assets as well as preventing and detecting fraud.

Also, Millichamp (2002) defined internal control as the complete set of controls including financial and non-financial controls, that management has put in place to make sure that a business is run effectively and efficiently, that assets are protected, that management policies are followed, and that records are as accurate and comprehensive as possible. The control environment, control activities, risk assessment, information and communication, and monitoring activities are all included in an organisation's internal control system. These activities are essential to a company's performance, especially in manufacturing firms.

Performance could be regarded as the combined impact of financial and operational factors on the success of the entire organisation which reflects how well organisations are able to execute their strategy and deliver value to stakeholders. In a similar way, Alan (2023), citing Abu-Jarad et al, described performance as achieving the objectives set by organisations for themselves, such objectives could be financial objective like profitability or nonfinancial objective like job satisfaction, organisation commitment and so on. These definitions suggest that for organisations, in particular the manufacturing ones to achieve their target for performance, their internal processes must be deliberately designed and tailored towards achieving the set organisation objectives for performance.

The manufacturing sector is considered to be the central hub of economic growth and development of nations economy. (Ogundipe 2022, Afolabi et al., 2019, and Sola et al., 2013). Loto (2012), noted that investing in manufacturing sector particularly for developing country such as Nigeria, would result in significant economic transformation such as increased productivity, export expansion, creation of foreign exchange earnings, increased employment opportunity, enhancement of per capital income, that results in unique consumption patterns and creating investing capital which is much faster than any other sector. However, the manufacturing companies had continued to fail in contributing significantly to national development, for instance, Abdul and Isiaka (2015) pointed out that Nigeria's manufacturing industry growth has been stagnant over the years due to institutional obstacles brought about by lapses in the control framework, operational shortcomings, fraudulent conduct and notable corporate accounting corruption. Ogundipe (2022) also confirmed that Nigeria's manufacturing sector's performance has fallen short of expectations. He did, however, point to massive imports of finished goods and insufficient financial support as the causes of poor performance, which resulted in a decrease in the nation's industry's capacity utilisation. For manufacturing sector to contribute meaningfully to national economic development

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particularly in Nigeria, it would be expected that the sector is placed on strong internal pedestal so as to contribute to the good of the nation's development.

Given the current volatility of the economic environment of the Nigerian Manufacturing firms, as a result hyperinflation and uncontrollable exchange rate, it would be imperative that manufacturing companies establish and strengthen their internal control processes. This could help in guiding their operations and protect their earnings in such a way that would ensure sustainability and enhance their contribution to the nation's economic development and growth. Considering the foregoing, this study examined the connection between internal control systems and the performance of quoted manufacturing companies in Nigeria. Many studies had been conducted on the effect of internal control system and organisations' performance in terms of financial performance of organisation, such studies include: Ejoh and Ejom (2014) on the Effect of internal control activities on financial performance of tertiary institutions in Nigeria; Nyakundi et.al (2014). Effect of Internal control system on financial performance of small and medium scale business enterprise; Mahadeen et.al (2016). Examining the effect of internal control on the organisational effectiveness; Etengu and Amony (2016). Internal control and financial performance in non-governmental organisations; Williams (2017) Effect of internal control on financial performance of firms; Abdulkadir (2022). Internal control and financial performance of selected commercil banks; Nguyen (2023). Impact of internal control on the performance of non-financial listed firms in an emeging country and Gitau (2024). The control and risk assessment of internal control system on financial performance among listed commercial banks to mention a few. However, the researcher observed a dearth of study on internal control and capacity utilisation which is the gap this study intends to fill with the following objectives:

1. To evaluate the impact of internal control systems on manufacturing companies' capacity utilisation as a performance metric.
2. To assess how internal control systems, affect manufacturing companies' financial performance measured by profitability.

We posed the following research questions in order to achieve stated objectives.

1. How does internal control system impact capacity utilisation of Nigerian manufacturing firms in terms of capacity utilisation?
2. What impact does the internal control system have on Nigerian manufacturing companies' profitability?

In order to respond to the research questions, we developed and tested the following research hypothesis:

1. H_0: Internal control systems do not significantly impact capacity utilisation in Nigerian manufacturing firms.
2. H_0: Internal control systems do not significantly impact the profitability of Nigerian

LITERATURE REVIEW

Conceptual Review

Internal Control System:

The rules, regulations, and procedures set forth by management and expected to be followed at various levels of an organisation's operations in order to ensure the achievement of its goals

and the safeguarding of its resources are referred to as internal control systems. The International Standard on Audit (ISA) 400 defines internal control as all policies and practices that an entity's management implements to help them fulfil their mission of making sure that, to the greatest extent feasible, their business is conducted in an orderly and efficient manner. This covers following management guidelines, safeguarding assets, preventing and identifying fraud and mistakes, maintaining accurate and comprehensive accounting records, and promptly preparing reliable financial data or reports.

According to the Institute of Chartered Accountants in England and Wales (ICAEW) 2019, running a business of any size necessitates the implementation of a system of internal control. They further stated that the purpose of a system of internal control is to help assures that an organisation meets its stated goals and objectives. Controls, for example, are intended to ensure that information, including financial information, is timely and necessary for decision-making purposes. Controls over the quality of goods and services ensure that sales are delivered to customer satisfaction, whereas controls intended to ensure adherence to regulatory requirements help to ensure that the company's right to operate is preserved. Also, a system of internal control could be considered as procedure implemented by an organisation's management, board, and other staff members that is intended to offer a reasonable level of assurance regarding the accomplishment of goals pertaining to reporting, operations, and compliance (The Committee of Sponsoring Organisation (COSO) of the Treadway Commission 2013.

COSO identified five elements of an internal control system, including the control environment, which determines how successful the other four elements are. The control environment includes employee behaviour and morals, as well as professionalism, participation, organisational structures, management styles, authorisation, and human resource policies. Another internal control element is risk analysis or risk assessments, which involve the examination of factors that may prevent the organisation from meeting its goals. It contains information for identifying the risk of material misstatement, risk analysis and evaluation, procedures for measuring performance for both financial and nonfinancial data, observation and inspection methods, and documentation. COSO identified three additional elements of internal controls: control activities, information communication, and a systematic review of internal control elements.

Control activities are guidelines and methods that ensure management initiatives to mitigate risks associated with achieving organisational objectives are carried out. Control activities include operational and financial information controls. Separation of duties, proper duty specification for handling transactions, documentation, and records, property control, and performance supervision are examples of operational controls. The use of information and communication as control elements ensures that information flows throughout the organisation. The flow of information should be sufficient and detailed. As part of a routine management information system, this information should be explicit, accurate, and up to date. The exchange of information enables personnel to perform activities in a coordinated manner. The fifth element is a systematic review of internal control elements, which serves as a monitoring control. Monitoring is accomplished through periodic independent checks, observations of customer complaint responses, and periodic audits performed by internal

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auditors. Thus, monitoring is a vital activity in an organisation, ensuring the efficacy of all other internal control components. Akinyemi et al. (2021).

Components of Internal Control:

The assessment of the effectiveness and dependability of an enterprise system of internal control depends on whether or not the five components of system of internal control are there and are operating as intended, to meet the goals of the organisation Nyakundi et al. (2014). The five integrated components of the system of internal controls include: information and communication, monitoring activities, risk assessment, control activities, and the control environment. COSO (2013).

Control Environment:

This forms the basis for the structure of all subsequent internal controls and is the initial part of the internal control system. In other words, other components of internal control are built upon the control environment. It is made up of different structures, procedures, and standards that form the basis for putting internal control in place in all kinds of organisations (COSO 2013, Houdini 2013). It is the responsibility of the top management and boards of directors to create a trustworthy control environment by establishing and dictating the tone at the top about the value of internal control and the expected standard of behaviour at all organisational levels. The control environment, according to COSO (2013), consists of the organisation's moral principles and integrity; the constraints that permit the board of directors to perform its governance oversight role; the organisational structures and delegations of power and responsibility; the recruitment, training, and retention of qualified personnel; and the strictness surrounding performance measures, incentives, and rewards to promote accountability for performance.

Risk Assessment:

According to the Risk Management Society's (2020) definition of risk assessment, risk assessment is the act of identifying the risks that may arise on an organisation's path to achieving its objectives, analysing the potential events while taking into account their likelihood of occurrence and the impact they will have on achieving the organisation's objectives, and finally making decisions on how to respond to the identified risks. Thus, top management should be aware of areas that are likely to have high risks and look for high risks where there has been a history of fraud, errors, or waste, where changes have occurred in the organisation's system, and where controls have not been reviewed for an extended period of time.

Control Activities:

According to the University of California, control activities are actions or activities that are appropriately carried out or conducted on time, in accordance with the policies and procedures that organisations have established to manage or reduce risks. Nyakundi et al. (2014) also define control activities as procedures and policies designed to guarantee that management directives are carried out as intended. The two main categories of control activities are detective controls and preventive controls. The detective controls try to identify the occurrence of undesirable events. It includes audits, physical inventories, reconciliations, reviews, analysis,

and variance analysis while preventive controls include physical control of other assets, appropriate authorisation, separation of duties, and adequate documentation.

Both preventive and detective control activities are necessary in organisations' operations. The quality aspect considers preventive controls as highly essential because they are proactive in nature and emphasis the quality of process and procedure. The detective control however, is to affirm that the preventive controls are functioning and preventing losses as desired. (University of Califonia Nyanded etals.2014; Kenton et.al 2024; Rim 2025)

Information and Communication:

To fulfil its internal control obligations and help an entity accomplish its goals, there is need for information. Information could be obtained through internal or external communication in order to provide the information needed by the organisation or entity to perform daily internal control tasks. Communication enables staff to comprehend or understand internal control obligations and their significance in accomplishing an organisation's objectives. The success of business operations and the establishment of efficient internal controls depend on providing managers with the appropriate information at the appropriate time, especially as organisations grow and become complex with global operations relying heavily on technology.

The three information and communication principles are as follows: collection of relevant information that is of quality type to support internal control functions; communicate information, such as goals and obligations for internal control, that is necessary to support the function internal control; and communicate with external parties regarding issues that impact internal control. The fourth internal control standard states that an agency can only conduct and oversee its operations if it has access to pertinent, trustworthy information (both financial and non-financial information) about internal and external events. The data must be recorded and shared with executives and other company personnel in a way that is helpful to them, and especially within a time frame that is helpful for carrying out internal control and functional responsibilities.

Monitoring Activities:

According to RIMS (2025), these are the activities that assess an organisation's internal controls' effectiveness and how well they are designed to ensure that they continue to function in the near future. Monitoring is only considered effective when control flaws are found and fixed before they significantly impact the achievement of the organisation's goals (RIMS, 2025). The process of evaluating the performance of internal controls over time, including timely evaluation of control effectiveness and implementation of preventive measures, is known as monitoring activities, according to International Standard Auditing (2019). Evaluating whether controls are effectively implemented, appropriately designed, and executed is the primary goal of monitoring.

Limitations of Internal Controls

Despite the necessity for organisations to set up an efficient and effective internal control system to direct their processes in accomplishing their goals, internal controls will only offer a reasonable level of assurance regarding the accomplishment of those goals, not complete assurance, due to the following limitations noted in COSO 2013: The appropriateness of the

goals set as a prerequisite for internal control; the fact that human judgement in decision-making may be flawed and biased; the occurrence of breakdowns resulting from human errors, such as simple mistakes; the possibility that management, other staff, or third parties may override internal controls through collusion; and external factors that are out of an organisation's control.

The Concept of Capacity Utilisation:

According to Alugbuo (2023) capacity utilisation as a concept has no universal accepted meaning because different disciplines like political, economy and organisational development have different perspective on capacity utilisation. In contrast, Kenton (November 20, 2024) described capacity utilisation as the manufacturing and production capacity that a country or business is using at any given time. He went on to define it as the potential output that could be generated if capacity was fully utilised in relation to the output that was produced using the resources that were available. It is also employed to gauge the rate at which the output's potential level is being reached or utilised. Capacity utilisation was also considered by Li (2025) as the ratio of the company's actual output to its theoretical maximum output. It shows if an organisation has excess capacity. Every organisation particularly the manufacturing ones, will usually want to achieve optimum capacity utilisation as one of their goals in order to eliminate the possibility of carrying idle capacity that could result into losses. Establishing effective and efficient internal control system by management over processes and procedures at various levels organisations is expected to help in reducing wastages by identifying areas of idle capacities and eventual losses. Capacity utilisation could be computed systematically as: Actual level of output/ Maximum level of output

Organisational Performance:

Divergent view and perspectives concerning the definition and conceptualization of organisations performance have resulted in so much confusion and argument. While the traditional approach focused on the ability of the organisation to achieve its economic goals by using its available economic resources in an efficient way which could be measured using profitability, return on assets or equity, market share, and sales growth, the current emphasis on sustainability considered the inclusion of nonfinancial factors as well as stakeholders' other than investors' expectation a matter of necessity in measuring organisations performance (Alan 2023). ION and Criveana (2016) concluded that the process of defining knowledge, assessing, and interpreting the concept of organisational performance is a difficult and complex one.

However, Alan (2023) citing Abu-jarad et al (2010). noted that performance is actually about achieving the objectives set by organisations for themselves. These objectives were classified into financial objectives and non-financial objectives. Hence, organisation performance is classified into financial performance and nonfinancial performance. He went on to explain organisational performance in terms of financial performance, as a measure of how an organisation's financial state has changed or the financial results that come from management decisions and their execution on one hand, while on the other hand, he identified non-financial performance as perceived success that is thought to have contributed to the organisation's overall profitability and reputation, as well as to goal achievement and satisfaction with organisational performance.

Organisational performance refers to the degree or the extent at which an organisation is able to achieve its set objectives and goals. It involves assessing how effectively and efficiently an organisation utilizes its resources to fulfil its mission and meet stakeholder expectations (Armstrong and Baron, 2005). For organisations to find areas for improvement, make wise decisions, and guarantee long-term sustainability, performance evaluation is therefore crucial. The establishment of strong and effective internal control at various levels of operations is expected to reduce leakages and enhance organisation performance.

Theoretical Framework

This empirical study is entrenched within the Resource Dependency Theory of Jeffery Pfeffer and Gerald R. Salaucik of (1978). According to this theory no organisation is self-sufficient rather, all organisations rely on external resources for survival and growth. Narayana (2015) explaining Resource Dependency Theory noted that organisation is regarded as a social system which would relate with the environment to source for resources needed for its operations. Such relationship usually, could be fraught with uncertainties. Thus, the need for management of organisations' environment. The Theory proposed direction of organisations' actions or efforts towards managing the dependencies arising from sourcing for critical resources required for output from environment. The effective management of such dependencies determines the survival and growth of organisations. This theory was applied by Ogbebor et al. (2020) in their investigation of how internal control affects manufacturing companies' return on assets. According to them, the theory assumes that firm should have control of critical resources in order not depend on other parties. Control, oversight, and provision of resources are the responsibilities of the Board of Directors. Hence, to reduce uncertainties, firm must secure resources from the environment.

The relevance of the Resource Dependency Theory to this study remains in the fact that, manufacturing companies depend on their environment for resources either in terms of intellectual resources, financial resources or physical resources. The establishment of effective and robust internal control system by management would help to monitor and manage the inflow of such resources from environment into organisations. It would also at the same time, help to monitor and manage the use or discharge of such critical resources by manufacturing firm in such a way that ensures optimum capacity utilisation and profitability.

Empirical Studies

Numerous studies were observed to have been done on the relationship between internal control systems and financial performance, but few have examined the systematic effects of internal control systems on capacity utilisation. However, Li (2025), who investigated how internal control affected capacity utilisation and total factor productivity, found that an efficient internal control system enhanced both of these metrics. He went on to say that the influence of the internal control system on total factor productivity was mediated by adequate capacity utilisation.

In his study on the factors influencing capacity utilisation in the Nigerian manufacturing sector, Alugbuo (2023) came to the conclusion that the following factors have a significant impact on capacity utilisation in Nigerian manufacturing firms: bank credits to the manufacturing sector, lending rates, goods importation, electricity power consumption per capita, and gross fixed

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capital formation. Thus, the implication of the study is that, internal control system of manufacturing organisations must be strengthened around these strong determinants of capacity utilisation so as to enhance organisations performance in relation to capacity utilisation.

However, Danjuma's (2020) study on the connection between the Internal Control System and financial performance concluded that the control environment, risk assessment, control activities, and information and communication all of which are components or determinants of the internal control system, have a significant impact on the financial performance of federal parastatals as organisations.

This conclusion is supported by Okharedia et al.'s (2023) study on construction companies, which found that internal control significantly improved financial performance. The impact of risk assessment and the control environment as determinants of the internal control system, however, were found to be statistically insignificant. Danjuma (2020), who found that every factor influencing the Internal Control System had a significant and favourable impact on financial performance, did not entirely concur with this. Additionally, Eniola et al. (2016) added credence to the findings of Danjuma (2020) and Okharedia et al. (2023) by determining that internal control significantly affects manufacturing firms' financial performance by lowering the incidence of fraud or irregularities. William (2017) also supports the findings of other researchers by showing that the financial performance of companies listed on the Nairobi Securities Exchange is positively correlated with the control environment, risk assessment, control activities, information and communication, monitoring, leverage, liquidity, and firm size.

Nguyen et al. (2023) discovered that each of the five internal control system components: monitoring, information and communication, risk assessment, control activities, and the control environment had a significant effect on the financial performance of non-listed companies. Furthermore, a strong correlation between control activities and financial performance was discovered by Etengu and Amony (2016).

METHODOLOGY

A survey research design was used for this empirical investigation because the researcher relied on primary data for the study. All management employees of four industrial goods manufacturing companies that the researcher could access and that were listed on the Nigeria Exchange Group as of December 31, 2023 made up the study's population. These were 278 Management staff of the 4 companies, selected based on the time frame available for the study and the availability of contacts. Using purposive sampling technique, the researcher circulated 163 copies of questionnaires electronically to the targeted management staff of these 4 companies. The purposive sampling technique was adopted based on the availability and willingness of the staff to respond to the questionnaire. The research instruments were structured questionnaires designed on five steps Likert Scale, ranging from strongly agree, agree, undecided, disagree and strongly disagree. The questionnaire also contains list of positive statements relating to research variables under study. All the statements or items contained in the instrument were adopted from previous studies where they have been used and considered reliable and consistent. Out of the 163 copies of questionnaire that were

circularised electronically to the respondents in the four selected listed companies, only 104 copies (64%) were properly completed and returned within the time frame available for this study. Hence, these 104 copies were regarded as the effective sample size for the study. Cronbach Alpha statistical test of reliability was applied by the researcher, using the companies that were not part of the 4 selected ones to test the dependability and the internal consistency of the items contained in the instrument. The Cronbach Alpha coefficient for profitability was 0.938 while that of capacity utilisation was 0.780 indicating that the research instrument was reliable. With the use of statistical package for social scientists (SPSS) software, the researcher analysed the data using an inferential statistic and a multiple regression model in order to accomplish the study's goal.

Table1: Population Distribution for the Study

Companies	Management Staff
Berger paints plc	48
Beta Glass	77
BUA cement plc	28
CAP plc	125
Total	**278**

Source: Annual Financial Report as 31, December 2023

Model Specification

The dependent variables of this study is the performance which is measured by Product quality, customer satisfaction, capacity utilisation and profitability while the independent variables is the internal control system which is defined as, risk assessment, control activities, information and communication and monitoring activities.

The regression model:

- $CU = \beta_0 + \beta_1 CA_{it} + \beta_2 RA_{it} + \beta_3 IC_{it} + \beta_4 MA_{it} + \varepsilon_{it}$ ..... Model 1
- $PFT = \beta_0 + \beta_1 CA_{it} + \beta_2 RA_{it} + \beta_3 IC_{it} + \beta_4 MA_{it} + \varepsilon_{it}$ ..... Model 2

Where;

- CU= Capacity Utilisation
- PFT= Profitability
- RA = Risk Assessment
- CA = Control Activities
- IC = Information and Communication
- MA = Monitoring Activities
- ε = Error factor
- B_0 = Regression intercept which is constant
- B_1- β_4 = Represent the coefficient of explanatory variables.

RESULTS AND DISCUSSIONS

Inferential Statistical Analysis

Test of Hypotheses One:

- **Objective of the study One:** To assess the effect of internal control system on the Capacity utilisation of Nigeria manufacturing firms.

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- **Research Question One:** How does internal control system impacts the capacity utilisation of Nigerian manufacturing firms?
- **Research Hypothesis One:** Internal control system does not significantly impact the capacity utilisation of Nigerian manufacturing firms.

Table 2: Inferential statistical Analysis showing the effect of internal control system on capacity utilisation

	Coefficients	Std.Error	T-stat	Prob
(Constant)	1.376	0.438	3.140	0.002
CA	0.013	0.137	0.091	0.927
IC	0.283	0.130	2.187	0.031
RA	0.048	0.154	0.310	0.757
MA	0.337	0.111	3.029	0 .003
Adj R^2	**0.333**			
F stats	**13.843**			
Prob	**0.000**			

Interpretation of Result

Table 2. presents the regression analysis investigating the effect of internal control system (ICS) on the performance of Nigeria manufacturing firms in terms of capacity utilisation (CU). The result presented in the table shown that internal control system in terms of control activities, risk assessment, information and communication and monitoring activities when pulled together, all have significant effect on capacity utilisation of manufacturing firms with F-statistics = 13.843, P-value = 0.000 and Adjusted R^2 of 0.333. The Adjusted R^2 of 0.333 revealed that the composition of internal control system within the model context are responsible for 33.3% variations in performance of Nigeria manufacturing firms in terms of their capacity utilisation while the remaining 66.7% is explained by other factors that can hence effect the dependent variable (CU) but which are not considered in this model or study. Hence, manufacturing companies have to ensure strong and effective internal control system to enhance their capacity utilisation.

Decision

At a significance level of 5%, the F-statistic is 35.926 and the P-value is below the chosen level of significance of 0.05. The study consequently disproved the null hypotheses. For this reason, internal control has a big influence on profitability.

Parameter for Estimating the Relative Contribution of Internal Control System Variables

From the same table 2, the β values which are coefficient of control activities, risk assessment, information and communication and monitoring activities were presented. It revealed that coefficient of Control Activities (CA) is 0.013 which implies that a change of 1% in control activities will result into 0.013 increase in capacity utilisation. This is not so significant at P-value of 0.002 and T-statistics of 0.091. The coefficient Information and Communication (IC) from the table is 0.283 which shows that 1% change in information and communication would result in a increase of 0.283 in customer satisfaction which according to P-value of 0.031 is less significant. Also, the coefficient of Risk Assessment (RA) from the table is 0.048 which revealed that a change of 1% in risk assessment will result in 0.048 increase in capacity utilisation which

is not significant at P-value of 0.757and T-statistics of 0.310. However, the coefficient of Monitoring Activities (MA) from the table is 0.337 which reveal that a change of 1% in monitoring activities would result in 0.337 increase in capacity utilisation. This was highly significant at P-value of 0.003 and T-statistics of 3.029.

Hence, the regression model can be restated as follow by substituting CU = Constant + 0.013CA + 0.283IC + 0.0048RA + 0.337MA.

This finding is consistent with that of Li (2025) who concluded that effective Internal Control improves total Factor Productivity and Capacity Utilisation of manufacturing companies. It is also by implication, consistent with the findings of Alugbuo (2025) who noted that all identified determinants of capacity utilisation have strong influence on capacity utilisation of manufacturing companies in Nigeria. This suggests that manufacturing companies needs to build strong internal control systems around these determinants in order maintain desired level of capacity utilisation at minimum cost. Having noted earlier that, there exist a dearth of studies on internal control and capacity utilisation which created a gap in knowledge in this area, it is expected that these findings serve as major contributions to knowledge on how internal control affects capacity utilisation.

Test of Hypotheses Two:

- **Objective of the study Two:** assess the effect of internal control system on the performance of manufacturing firms in terms of profitability
- **Research Question Two:** How does internal control system affect the performance of Nigerian manufacturing firms in terms of profitability?
- **Research Hypothesis Two:** Internal control system does not have significant effect on the performance of Nigerian manufacturing firms in terms of profitability.

Table 3: Inferential statistical Analysis showing the effect of internal control system on profitability

	Coefficients	**Std.Error**	**T-stat**	**Prob**
(Constant)	0.689	0.322	2.143	0.035
CA	0.095	0.101	0.940	0.350
IC	0.159	0.095	1.669	0.098
RA	0.346	0.113	3.062	0.003
MA	0.248	0.082	3.040	0.003
Adj R^2	**0.576**			
F stats	**35.926**			
Prob	**0.000**			

Source: Researcher's Result (2024)

Interpretation of Result

Table 3 presents the regression analysis investigating the effect of internal control system (ICS) on the performance of Nigeria manufacturing firms in terms of Profitability (PFT). The result presented in the table shown that internal control system in terms of control activities, risk assessment, information and communication and monitoring activities when pulled together, all have significant effect on capacity utilisation of manufacturing firms with F-statistics =

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35.926, P-value = 0.000 and Adjusted R^2 of 0.576. The Adjusted R^2 of 0.576 revealed that the composition of internal control system within the model context are responsible for 57.6% variations in performance of Nigeria manufacturing firms in terms of their profitability while the remaining 42.4% is explained by other factors that can hence effect the dependent variable (PFT) but which are not considered in this model or study. Hence, manufacturing companies have to ensure strong and effective internal control system to enhance their profitability.

Decision

The F-statistic is 35.926 at the adopted level of significance of 5%, and the P-value is less than 0.05. Thus, the null hypotheses were rejected by the study. This indicates that profitability is significantly impacted by internal control.

Parameter for Estimating the Relative Contribution of Internal Control System Variables

From the same table 3, the β values which are coefficient of control activities, risk assessment, information and communication and monitoring activities were presented. It revealed that coefficient of Control Activities (CA) is 0.095 which implies that a change of 1% in control activities will result into 0.095 increase in profitability. This is not so significant at P-value of 0.350 and T-statistics of 0.940. The coefficient Information and Communication (IC) from the table is 0.159 which shows that 1% change in information and communication would result in a increase of 0.159 in profitability which according to P-value of 0.098 is less significant. Also the coefficient of Risk Assessment (RA) from the table is 0.346 which revealed that a change of 1% in risk assessment will result in 0.346 increase in profitability which is not significant at P-value of 0.003 and T-statistics of 3.062. However, the coefficient of Monitoring Activities (MA) from the table is 0.248 which reveal that a change of 1% in monitoring activities would result in 0.248 increase in profitability. This was highly significant at P-value of 0.003 and T-statistics of 3.040.

Hence, the regression model can be restated as follow by substituting PFT = Constant + 0.095CA + 0.159IC + 0.346RA + 0.248MA.

This study was in tandem with the study Ogbebor et al. (2020) who concluded that manufacturing companies that endeavor to investment in effective internal control system would have better financial performance in comparison to those with weak internal controls. They specifically mentioned in their findings that internal control affects return on assets of manufacturing firms. Return on Assets is one of the important variables that measures financial performance particularly in manufacturing firms. Eniola (2016) further supported the position of this study by concluding in their study that internal control has significant effect on financial performance of manufacturing firms by reducing perpetration of fraud or irregularities. Also, Nguyen et al. (2023) study of non-listed firms supported the finds of this study. They observed that all the five components of internal control system in terms of control environment, risk assessment, control activities, information and communication and monitoring significantly affected financial performance. Additionally, Bett et al. (2017) though were particular about three out of the five components of internal controls in their study of Menengai Companies in Kenya, they found that control environment, risk assessment and information and communication significantly affect financial performance of this company. A position that is also in tandem with the findings of this study. Furthermore, the findings of other researchers

like Danjuma (2020), Okhaderia (2023), Williams (2017) all corroborated and supported the researchers' finds in this study. Nevertheless, to support this study, Okhaderia et al. (2023) confirmed that internal control has strong and positive effect on financial performance. They however, observed that control environment and risk assessment have low effect as part of determinant of internal control system which is at variance with the findings of the current study.

CONCLUSION AND RECOMMENDATIONS

This study investigated the effect of Internal Control system on the performance of Nigeria manufacturing firms, in terms of capacity utilisation and profitability of the firms. Based on the results obtained from the tested hypotheses and subsequent discussion of the findings, the study came to the conclusion that Internal control system has significant effect on capacity utilisation and profitability as measures of performance of manufacturing firms. The study therefore recommends that the management of the Nigeria industrial goods manufacturing companies should continually review and strengthen their existing internal control system in order to ensure that the assets and all other resources of the organisations are efficiently utilized in ways that will put these organisations on the path of profitability and growth particularly in the current inflationary and volatile Nigeria economic environment.

The policy implications of this investigation is that, the policy makers and the industry regulators should also design policies that will aid evaluation or assessment of internal control system in manufacturing organisations. Such policies should be help in determining the strength of companies internal control system in providing reasonable assurance of achieving organisations' objectives concerning operations, reporting and compliance. The study was however, limited as a result of dearth of relevant literatures on how internal control has affected capacity utilisation particularly in manufacturing firms. A lot of literature existed on the effect of internal control and financial performance but the ones on capacity utilisation were very limited at the time of conducting this study. Hence, this study has been able to expand academic discourse and also bridge the gaps in literature particularly in the area of the possible effect of internal control system on capacity utilisation of industrial goods manufacturing firms in Nigeria. Future researchers may conduct further study in this area by covering larger number of manufacturing companies than the ones covered in this study.

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