J-MACC
Journal of Management and Accounting
Vol. 8, No. 2, Oktober 2025

EFFECT OF RESULTS AND ADMINISTRATIVE CONTROLS ON PERFORMANCE OF MANUFACTURING SMALL AND MEDIUM ENTERPRISES (SME's) IN LAGOS STATE, NIGERIA

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Keywords:

Results Control, Administrative Control, Social Control, Performance

Article history:

Received August 2025
Revised October 2025
Accepted October 2025

ABSTRACT

Effective management control is essential to align employee goals with organizational objectives and ensure long-term survival. However, frequent failures due to poor control practices have raised concerns across sectors. This study examines how results and administrative controls influence the performance of manufacturing SMEs in Lagos, Nigeria. Using a cross-sectional design, data were collected from 848 randomly selected managers through structured questionnaires and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Findings reveal that diagnostic and interactive uses of results control positively affect organizational performance (β=0.372, p<0.05; β=0.317, p<0.05). Administrative and social controls also have significant positive effects (β=0.214, p<0.05), while the combined use of results and administrative controls shows no significant impact. The study confirms the importance of employing both accounting-based and non-accounting-based controls to enhance alignment and performance. SMEs are encouraged to integrate diagnostic and interactive controls, variance analysis, and social mechanisms to monitor subordinates effectively with minimal supervision costs.

Introduction

Performance of any organization depends largely on various factors that have been identified both conceptually and empirically in the literature. Factors ranging from leadership style, human resources practices, innovation, Market orientation, competitive environment, economic condition and institutional environments and among others, have been reported (see: Wales *et al*,2020; Liu *et al*,2020; Wang *et al*,2019; Jiang *et al*;2019; Denison *et al*,2020; Aderson *et al*.2019 &Morgan *et al* ,2020) to have direct or indirect influence on organization performance. Although the potency of all these factors cannot be disregarded as performance-enhancing parameters, the important roles of the forms and nature of controls employed by managers to ensure an alignment of subordinate goal with overall organization goals is more critical to organization long term survival. Van der stede *et al* (2019), Bhimani et al (2020), Malmi and Brown (2020); Lord (2017) reported findings on the performance effects of various management control techniques such as: budgetary control, management accounting system, performance measurement, and total quality management among other factors.

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

The relevance of management controls as inevitable resources for organization survival can be more appreciated through the reported cases of its absences or failure. For instances, the declaration of the venerable UK bank baring brothers, founded 1817 as bankrupt was attributed to major weakness in the Baring's control systems, including lack of segregation of duties, lack of position limit and confused line of management responsibility (Bank of England, 1995). Similarly, in 2001 a keystroke error by an employee of Lehman Brothers Holding in London cost the firm 6million dollars in trading losses. Although, it was discovered that the error was unintentional, the company was liable for the damages caused by the errors. Similar cases of management control problems have also been reported in the United States. National Archives and Record Administration reported a case of stealing perpetrated by its employee due to inappropriate control system. A subordinate stole dozen of historical documents between 1996 and 1999 worth 20,000dollars which was discovered in 2002 (The Los Angeles Times, 2002). Although evidences of organization scandals attributed to management control failures are not usually celebrated in newspapers and relevant periodicals in developing countries, Abe (2012) attributed Banking and other industrial sectors failures in Nigeria to inappropriate use of management control system.

As contemporary business activities cannot be carried out by single individual, cooperation of employees or subordinates becomes inevitable. Management is therefore expected to perform management control function using arrays of management control mechanisms. Unfortunately, many efforts have been devoted to other management functions and processes leaving management control system at the mercy of itself. Speckbacher (2008) echoed this trend in this perspective "*Everybody is talking about planning and strategy, but nobody is talking about control*". Even where attentions are being given to this very important function, the complementary use of these various control techniques seems not be attached more importance, especially among small and medium enterprises in developing economies. Accounting controls system such as planning, budget, and other financial measures are mostly used as decision support system instead of complementing them with administrative controls in actualizing goal congruence within the organization. These administrative control mechanisms such as organizational structure, governance structure and, procedures and policies and cultural control in the form of well -defined mission and vision statement, regular meeting, group reward system and socialized recruitment procedures are seemly non-existent given the prevail tensions common among SMEs.

In light of the foregoing, an empirical investigation into the relationship between the complementary use of results and administrative controls and SMEs' performance is both timely and essential, given their significant contribution to

Nigeria's economy. According to the Financial System Strategy (2020), SMEs account for nearly 90% of enterprises in the manufacturing and industrial sectors. Despite this, most studies on management control systems have primarily focused on large organizations (e.g., Merchant, 1990; Chong & Chong, 1997; Moores & Sharman, 1998; Durden, 2008; Klein & Wiesenberger, 2013; Verbeeten & Speckle, 2015; Ilias, Zakana & Abdulatif, 2017; Wald & Gleich, 2018), while limited attention has been given to SMEs, especially regarding accounting control systems and performance (Davila & Foster, 2005, 2007; King, Clarson & Wallace, 2010). A better understanding of management control practices is therefore imperative for fostering the development and growth of this vital sub-sector of the Nigerian economy. Against this backdrop, the present study examines the interactive effect of results and administrative control practices on the performance of manufacturing SMEs in Nigeria.

Literature Review and Hypothesis Development

The common argument about management controls is in its expected function to make subordinate to behavour in a manner that assure goal achievement (Merchant and Van der Stede,2007; Abernethy and Chua,1996; Chenhall ,2003; Malmi &Brown ,2008 and Bedford &Malmi,2015). There are varieties of control instruments usually employed to achieve the function goal alignment. These instruments are classified as accounting controls and non-accounting controls. A broad definition of management controls that reflects the two dimensions (accounting and non-accounting based) is that of Bedford and Malmi (2015). The authors described management controls as a set of processes and mechanisms employed by managers to influence the behaviours of individuals and groups towards more or less predetermined objectives. These process and mechanisms are broadly classified as a package of planning, cybernetics, rewards, administrative and cultural controls. This study reflects all these control elements as results and administrative controls. Accordingly, results controls focused in this study is diagnostic and interactive use of budget, reward and compensation while administrative controls are defined within the scope of administrative control and cultural contro .

Although Concept of organization performance can be viewed from different dimensions of Financial performance, financial & operational performance and organizational effectiveness, Venkatraman & Ramanejarm (1986). Financial and non-financial performance -involves the use of financial indicators such absolute profit, return on investment while, market share, product quality, marketing effectiveness and manufacturing value added are used as an indicator of non-financial or operational aspect of the business. These metrics of firm performance

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

amplify the most widely adopted, Gupta and Govindarajar (1984) measure of performance. Organization performance was operationalized through the dimension of financial and non-financial performance in this study.

Research efforts on MCS have been carried out on individual element of Accounting Controls System such as budgeting, Economic Value Added and Hybrid performance measurements such as Balanced Scored Card and their relationship with organization performance. Previous studies in developed Countries are much available in the literatures. The importance of budget as an instrument of planning with possibilities of facilitating coordination, communication and supporting managerial decisions and control through both forward and feedback information which may ultimately transform to performance both at managerial and organization levels have been empirically confirmed by various studies. Mia (1989) reported a positive relationship between budgetaryparticipation and managerial performance when the level of perceived job difficulty in firms is high among six companies operating in New Zealand. Other studies: Wijewardena& De Zoysa (2001); King, Clarkson and Wallace (2010); Marginson and Ogden (2005) and Silva and Jayamaha (2012) have also reported positive impact of budget on performance.

In developing economies, few studies on the use of accounting controls mechanisms to collect information on subordinate activities and motivate them also available in less developed countries. Siyanbola (2013) reported that budgeting practices or budgetary control practices impact on organization performances. Other research efforts like Mathew (2014); Radiah and Ida (2012); Osama, Mohammed and Abdulhadi (2013); Shield and Young (1993) have also investigated the impact participative budgeting on firm-wide performance, managerial performance and goal commitment and reported significant positive effect.

In Nigeria context, Osundina and Osundina (2012) conducted a survey study on the effect of budgeting process and performance of Food and Beverages listed manufacturing companies,with finding that budget process has significant effect on performance. Joshua and Ahmed (2013) also engaged in research similar to Osundina *et al.,*.In their own study, effectiveness of budget in performance measurement was examined in Nigerian hotel industry. The result of the survey research showed that budget is actually use as a performance measurement tool in the industry but need to be articulated. Similarly, Oluwalope and Sunday (2017) investigated the relationship between budget participation, organization commitment and managerial performance with positive findings being reported.

Empirical evidence on the use and impact of non-accounting controls on organizational performance spans the disciplines of behavioral management accounting and human resource management. Several studies, such as those by

Jaworski, Stathakopoulos, and Krishnan (1993); Snell and Youndt (1995); Liao (2006); and Davila and Foster (2007), have demonstrated that administrative controls positively influence firm performance. Organizations may also implement action or behavioral controls through feedback systems and administrative communication mechanisms, including work rules, policies and procedures, and company codes of conduct (Merchant & Van der Stede, 2007). Furthermore, Munstermann, Eckhardt, and Wetzel (2010) examined the impact of business process standardization on firm performance and found a significant effect, particularly on process time, cost, and quality.

Merchant *et al.,* (2007) argue that personnel controls grounded on employees' natural disposition to motivate or control themselves. They identified three major means of implementing personnel control similar to an aspect of administrative control: selection and placement of employee, training and job design with provision of necessary resources. Recent empirical studies such as: Shonin, Gordon, Dunn, Singh & Griffiths (2014);Kim and Ployhart (2014) and Georgiadis and Pitelis (2016), on personnel control support the thesis that staff selection and training have direct and interactive influence on firm performance. In relation to cultural control, Merchant *et al.,* (2007) asserts that managers struggle to entrench organization culture through code of conduct, mission statement, group rewards, and intra-organizational transfers, physical and social arrangements. Previous research in these areas are that of Marcoulides and Heck (1993); Bart and Baetz (1998); Ogbanna and Harris (2000); Xenikou and Simosi (2006) and Chenhall, Hall and Smith (2008) whose findings revealed the impact of various dimension of cultural controls on firm performance.

In developing economies, few evidences on the use of non-accounting controls to achieve goal congruence and enhance performances are available in the literatures. For Mission and vision statements as a form of cultural control, Denbi (2012) revealed that most of the employees have low level of knowledge about the components/contents of the statements. Similarly, Babnik,Dermol and Sirca (2013) conducted an interview and confirmed mission statement's role in communicating declared organization culture. Research evidence in Nigeria such as Unyimadu and Obi (2011) evaluate the completeness and quality of an organization mission statement. Using nine-item mission statement evaluation scale to obtain quantitative data that was regressed on organization financial performance, the study revealed a significant positive relationship between the completeness and quality of mission statement and organization financial performance. Adegboyega and Olusanya (2016) also examined the effect of mission and vision statement on business performance in Nigerian insurance industry. The study revealed a week

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

positive relationship between bold display of mission statement and organization performance aspect of profit making. The contradictory findings of these studies may be as a result of different research design employed. The former used secondary data while later employed perceived primary data.

The reviewed evidences reflect the potency of MCS to influence the organization performance and similarly agency theory assumption and prediction also offer support to these reported findings. Accordingly, within the focused unit of analysis-SMEs- there exists principal-agent relationship, manager can delegate task to his subordinate. In effect information asymmetry arises since the manager is not in a position to have all information relevant to task being executed by the subordinate. Hence employee is expected to display some kind of opportunistic behaviors, leading to agency problem in the form of moral hazard. However, the theory suggests solution to the moral hazard problems of principal-agent relationship, which in this study related to Manager-subordinate relationship. Monitoring devices, which are accounting controls mechanisms: budget, performance measurements, hybrid measurement and compensation-are expected to address the moral hazard problems as identified and suggested by the theory. Since the manager lack capacity to observe all subordinate actions, these control mechanisms can be used to influence subordinate to pursue organization objectives with little or no interaction by the managers. Consequently, agency theory predicts optimal organization performance through the reduction of overall agency costs.

In addition, administrative control mechanisms, like organization structures and policies and procedures, are also form of monitoring devise, if optimally used may address the agency problem of moral hazard. These administrative controls decrease the information asymmetry between the managers and subordinate. Based on the theory's prediction, the subordinate's cognitive and other limitations in the pursuit of organization objectives may be addressed through a well-designed policies and procedures and consequently, organization performance may be enhanced through the subordinate's ability to effectively implement organization goals.

Based on both the empirical and theoretical premises, the following hypotheses are thus put forward:

$\boldsymbol{H_1}$: There is no significant relationship between diagnostic use of results control and SMEs performance

$\boldsymbol{H_2}$: Interactive use of results controls has no significant impact on SMEs performance

$\boldsymbol{H_3}$: Administrative control has no significant impact on SMEs performance

$\boldsymbol{H_4}$: Social control has no significant impact on SMEs performance

H_5: Combined used of result and administrative controls has no significant influence on SMEs performance

Research method

This study adopted a cross-sectional research design to collect data on the variables specified in the hypotheses. Questionnaires were distributed to managers of manufacturing SMEs in Lagos State, Nigeria, selected for its status as the nation's commercial hub hosting many private enterprises. Only SMEs with 100–200 employees were included, as such firms are likely to employ both formal and informal management control systems. The sampling frame of 450 SMEs was obtained from the Manufacturer Association of Nigeria (MAN) membership database. Four key departments consist of Production, Human Resources, Accounting/Finance, and Marketing/Sale were identified as relevant for management control practices. Hence, managers from these departments served as respondents, resulting in a total study population of 1,800 managers (4 × 450). Using a two-stage sampling process, a final sample of 848 managers was determined. In the first stage, 212 SMEs were randomly selected (Yamani, 1964), followed by the inclusion of four managers from each firm.

Data were collected through a structured questionnaire, designed to ensure clarity and minimize response bias. A clear cover letter, simple wording, and an attractive layout were used to improve response quality. Independent variables were adapted from validated instruments by Malmi and Brown (2008) and Altoe et al. (2018). *Results control* was measured using three sub-constructs: diagnostic use of budget, interactive use of budget, and reward/compensation control. *Administrative control* consisted of administrative and cultural control dimensions. The dependent variable, *performance*, included both perceived financial performance (four items) and non-financial performance (seven items). Average scores were computed to obtain the composite value for each construct.

Instrument validity was tested through content and construct validity assessments, while reliability was evaluated using the test–retest method and Cronbach's alpha. These analyses, along with other preliminary statistical tests, were conducted prior to estimation using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The results are presented in the *Results and Discussion* section of this paper.

Model Specification

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

Drawing on Agency Theory and prior empirical evidence, this study models the relationship between firm performance and the combined use of results and administrative controls as follows:

$$PERF=\beta0+\beta1Diagi+\beta2Inti+\beta3RWCi+\beta4(Diag*ADM)i*SC+\beta5(Int*ADM)i*SC+\beta6(RWC*ADM)i*SC+ei$$

Where:

- PERF = Firm performance
- Diag = Diagnostic use of budget
- Int = Interactive use of budget
- RWC = Reward and compensation
- ADM = Administrative control
- SC = Socio-cultural control
- β_0 = Constant term
- β_1–β_6 = Regression coefficients
- e_i = Error term

The a priori expectation of the model is a positive relationship between management control system variables and firm performance, i.e., $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6 > 0$.

Results and Discussion

Table 1 presents the summary statistics of the sampled manufacturing SMEs in Lagos State based on three major characteristics: firm age, number of employees, and asset value. These indicators provide insights into the level of organizational maturity and capacity that influence the adoption and sophistication of management control systems. The distribution by firm age reveals that 90.5% of the surveyed companies have been in operation for more than six years. This pattern suggests that the majority of these firms have moved beyond the survival stage typical of start-ups and have reached a level of operational stability. Consequently, these firms are more likely to have developed structured management processes, including the implementation of formal and informal control systems to support decision-making, planning, and monitoring. Firms with a longer operational history also tend to accumulate managerial experience and institutional knowledge, both of which enhance their ability to adapt and refine control mechanisms in response to environmental and internal changes.

Similarly, the distribution by number of employees aligns with the observed pattern in firm age. Most of the sampled SMEs employ between 100 and 200 workers, which indicates a moderately complex organizational structure. At this scale, informal supervision alone becomes insufficient to ensure alignment of employee behavior with corporate objectives. Therefore, these firms are expected to

rely more heavily on systematic management control mechanisms such as budgeting, performance appraisal systems, and administrative policies. This reflects a transition from owner-centric management to more decentralized and professionalized control practices.

Regarding asset value, the distribution shows a slightly more diverse pattern, though the majority (approximately 76%) of firms operate with total assets ranging from ₦21 million to ₦81 million or more. This asset base demonstrates that most of these manufacturing SMEs have achieved a significant level of capital investment in machinery, equipment, and production facilities. Effective and efficient utilization of such assets requires well-designed management control systems that ensure accountability, monitor performance, and align resource allocation with strategic priorities. The presence of substantial fixed assets also increases the need for diagnostic and interactive budgeting systems to manage cost efficiency and optimize returns on investment.

Table 1: Company's Profile

S/N	Description	Frequency	Percentage
1	**Age**		
	0 – 5yrs	25	9.5
	6 – 10yrs	64	24.4
	11 – 15yrs	59	22.5
	16 – 20yrs	68	26.0
	21yrs and above	46	17.6
2	**No of Employee**		
	1 – 50 employees	25	9.5
	51 – 100 employees	79	30.3
	101 – 150 employees	64	24.4
	151 – 200 employees	64	24.4
	201 and above employees	30	11.5
3	**Company's Asset**		
	10 – 20m	61	23.3
	21 – 40m	61	23.3
	41 – 60m	55	21.0
	61 – 80m	52	19.8
	81m and above	33	12.6

Author's Computation (2024)

Respondents' Profile

A total of 848 questionnaires were distributed through both online and physical channels to managers of the selected manufacturing SMEs. Out of these, 320 questionnaires were returned, representing a response rate of approximately 37.7%. After data screening for completeness and consistency, 262 valid responses were retained for the final analysis.

The frequency distribution of respondents by academic discipline, as presented in Table 4.3, shows that 43.5% of the managers specialized in business management,

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

25.2% in economics, and 19.8% in accounting and finance. Meanwhile, 6.5% of the respondents have educational backgrounds in arts, and 5% in engineering.

This distribution pattern indicates a relatively diverse academic composition among the respondents. Such diversity suggests that the managers are exposed to various conceptual and analytical perspectives, enabling them to appreciate and apply different forms of management control systems. Managers with backgrounds in business, economics, and accounting are likely to emphasize results-based controls, while those from arts and engineering fields may contribute to the adoption of administrative and behavioral control approaches. This multidisciplinary blend enhances the organizational capacity to integrate multiple control mechanisms effectively within their management processes.

Table 2: Respondents/Managers Profile

S/N	Description	Frequency	Percentage
1	**Discipline**		
	Accounting & Finance	52	19.8
	Bus Admin.	114	43.5
	Economics	66	25.2
	Art	17	6.5
	Science/Engeneering	13	5.0
2	**Qualification**		
	SS	8	3.1
	OND	48	18.3
	HND	5	1.9
	BSc	161	61.5
	1st Degree & Professional Qualification	40	15.3
3	**Department**		
	Accounting & Finance	31	11.8
	Production	73	27.9
	Human Resources	102	38.9
	Sales	39	14.9
	Others	17	6.5
4	**Working Experience with Company**		
	0 – 5yrs	74	28.2
	6 – 10yrs	110	42.0
	11 – 15yrs	45	17.2
	16 – 20yrs	21	8.0
	21yrs and above	12	4.6
5	**Cadre**		
	Managing Director	10	3.8
	General Manager	69	26.3
	Senior Manager	127	48.4
	Manager	56	21.5

Source: Survey Result (2025)

In term of the qualification of the respondent, 78% of the respondents are graduates of University and Polytechnique. This implies that substantial number of

the managers is literate with capacity and ability to comprehend the administered instruments. Frequency distribution in term of working experiences indicates that substantial number of the respondents, nearly 72% have more than five years experiences about companies' operation to provide reliable responses about the operation of management controls in practice.

Multi-Collinearity Test

As shown in table 3, there is no any correlation coefficient between any of independent variables above 0.5% indicating non-existence of multi-collinearity among the independent variables of interests

Table 3: Correlation Matrix

	Adm	Dia	Int	Per	Sc
Adm	1.000				
Dia	0.493	1.000			
Int	0.453	0.461	1.000		
Per	0.450	0.479	0.444	1.000	
Sc	0.451	0.460	0.451	0.441	1.000

Source: Result from SMART-PLS

Validity and reliability test of this study research instruments were carried out through the measurement model of PLS-SEM. The instrument is adjudged valid and reliable if the value of loading factor is more than 0.7 and the Average Variance Extracted value is more than 0.5.The criteria for reliability of the instrument is tested through both cronbach's alpha composite reliability value that must be above 0.7 and 0.5 respectively.

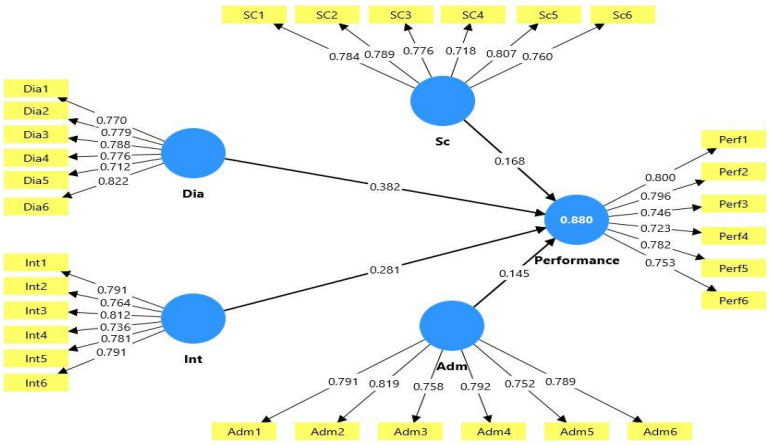

Figure 1: Cross Loading of the Latent Variables

Based on the result presented in table 3 and Figure 1, the research instrument is both valid and reliable. This implies that all the measurement questions

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

(indicators) adequately reflect and measure the latent variables (Diagnostics control, interactive control, administrative control and social control) of this study.

Hypothesis Testing through Structural model of the PLS-SEM

The study's hypotheses were tested using the structural model analysis in SMART PLS. This model was employed to evaluate both the overall goodness of fit through the R-square value and the strength of the relationships between the dependent and independent variables based on the estimated path coefficients and T-statistics. As shown in Table 5, the model's R-square value for firm performance (0.884) indicates a strong explanatory power. This suggests that the combined effects of diagnostic control, interactive control, administrative control, and social control significantly explain variations in the performance of manufacturing SMEs in Lagos, Nigeria (F-statistics = 45.504, $p < 0.05$).

Table 5: Result of the Estimated Path Coefficient

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Adm -> Performance	0.214	0.219	0.082	2.616	0.009
Adm x Dia -> Performance	0.140	0.112	0.195	0.715	0.475
Adm x Int -> Performance	-0.115	-0.093	0.171	0.674	0.501
Dia -> Performance	0.372	0.314	0.145	2.566	0.010
Int -> Performance	0.317	0.339	0.099	3.213	0.001
Sc -> Performance	0.200	0.200	0.072	2.791	0.005
Sc x Dia -> Performance	-0.116	-0.100	0.178	0.651	0.515
Sc x Int -> Performance	0.144	0.121	0.161	0.894	0.372
R – Square	0.884	0.893	0.019	45.504	0.000
Adjusted R – Square	0.881	0.890	0.020	43.938	0.000

The results of the hypothesis testing provide strong evidence of the significant influence of various control mechanisms on the performance of manufacturing SMEs. The findings revealed that the diagnostic use of results control has a positive and significant effect on SME performance ($T = 2.566$, $p < 0.05$; $\beta = 0.372$). This suggests that diagnostic control mechanisms, such as performance monitoring and variance analysis, enable managers to identify deviations from set targets and implement timely corrective actions, thereby enhancing organizational efficiency and effectiveness. Similarly, the interactive use of results control showed a positive and significant relationship with SME performance ($T = 3.213$, $p < 0.05$; $\beta = 0.317$). This implies that fostering open communication, information sharing, and participatory decision-making among managers helps improve responsiveness, innovation, and overall firm performance.

Furthermore, administrative control was found to have a significant impact on SME performance (T = 2.616, p < 0.05; β = 0.214). The result highlights the importance of well-structured procedures, defined roles, and formalized policies in ensuring coordination and accountability within the organization. In addition, social control also exhibited a positive and significant influence on SME performance (T = 2.791, p < 0.05; β = 0.200). This underscores the critical role of shared values, organizational culture, and mutual trust in guiding behavior and promoting commitment toward common goals. Collectively, these findings indicate that both formal (results and administrative) and informal (social) control systems are essential in enhancing the performance and competitiveness of manufacturing SMEs. However, the results for the fifth hypothesis: $\mathbf{H_5}$: Combined used of result and administrative controls has no significant influence on SMEs performance revealed no significant interactive effect among the independent variable on SMEs performance as show both in table 5 and Figure 1.This informed the decision to fail to reject the fifth hypothesis. In summary, the results confirm that both results-based controls (diagnostic and interactive) and non-accounting controls (administrative and social) collectively contribute to superior performance among manufacturing SMEs. This highlights the importance of a balanced management control system that integrates formal and informal mechanisms to align managerial actions with organizational goals.

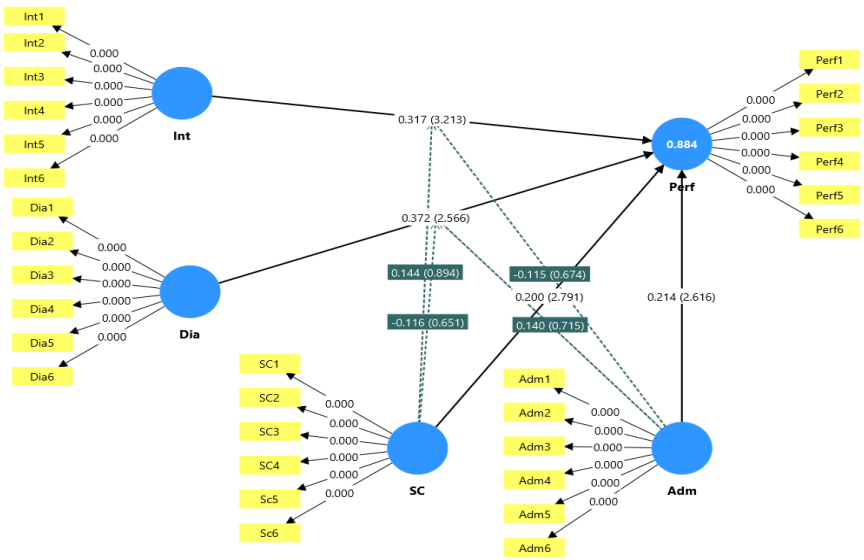

Figure 1: Bootstrapping Report for Hypothesis Testing of the Estimated Path Coefficient

Discussion of Findings

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

The variation in performance of SMEs in this study has been empirically attributed to the consequential effect of using management controls to achieve goal congruence. The way and manner results, administrative and social controls are being deployed to encourage employee to pursue organisation's (SMES organization) goals are largely responsible for the reported findings. The reported significant positive relationship between diagnostic use of results control and performance can be discussed from the logic of the information that can be generated from the diagnostic analysis of the reported performance figure either at individual or organization level. Such generated information would allow management to discover, in timely version, critical performance variables. Finding similar to this study had also been reported by Osundina and Osundina (2012) survey study on the effect of budgeting process and performance of Food and Beverages listed manufacturing companies. The study measures budget from dimension how it is being used for planning, communication participation and control. Siyanbola's (2013) finding on the use of role of budget as a tool that guide firm to evaluate goals and objectives also supports this study's finding on the diagnostic use of result control.

The reported finding on the relationship between interactive use of result control and SMEs performance revealed also significant positive impact. This finding is of essence confirms the role of management controls such as budget in the provision of information on recurring and frequent agenda about both subordinate and management activities. This finding also provides credence to the fact that interactive use of results control encourages continual challenge and debate about assumption and action with subordinates. It is as well direct attention to strategic uncertainties and in effect improved performance. Previous empirical studies on management controls also reported similar findings that support this present study. These studies include: Osama, Mohammed and Abdulhadi (2013) with finding that performance indicator of participating individuals is better than non-participating individuals. Similarly, Oluwalope and Sunday (2017) revealed effect of budget participation, a form of interactive use of budget, on performance.

Findings for both administrative and social controls reflect the critical role of non-accounting-based control instrument in influencing the behavour of employees in an implicit way to align their goal with that organization. Variation in SMEs performance due to administrative control can be attributed to the fact employee with little or no supervision carry out the activities by abiding by extent policies and procedure design embedded in administrative manual guides. It is also a means of communicating risk and activities to be avoided by subordinate. All these will reduce uncertainties about what expected of a subordinate and ultimately enhance performance. This present study's finding aligns with the reported findings of the

following studies: Snell and Youndt (1995) examined the relationship between human resources management (HRM) control and firm financial performance with indication that administrative control impact positively on firm performance. Davila and Foster (2007) in their study of the adoption MCS by 78 early-stage start-up companies found the earlier –stage adopter of administrative control in their life-cycle experienced more success than late adopter, while Munstermann, Eckhardt and Wetzel (2010) examine the impact of business process standardization on firm performance which observed a significant impact on process performance particularly on process time, cost and quality.

The reported significant positive influence of social control on performance can be explained from the lens of its potency to reinforce organization objective, norms and expectations. Communication of organization culture and norms through recruitment orientations, training and social events exert influence on the psyche of subordinates to see organization as their own while discharging their responsibilities. Effectively, employee or subordinates' commitment through this medium provides peaceful atmosphere that in the final analysis leads to improved organization performance. This study's finding provides support to the reported findings of Chenhall, Hall andSmith (2008); Sung and Choi (2014); Atwi, Opoku, Seth and Margret (2016) and Unyimadu and Obi (2011). Specifically, all these studies revealed the influence social control on performance both at individual and organization level.

Overall, this study has empirically confirmed the prediction of agency theory that the best solution to moral hazard problems of manager-subordinate relationship is the deployment of monitoring devices ranging from accounting-based and non-accounting-based control mechanisms, as these control mechanisms will reduce information asymmetry problems.

Conclusions and recommendations

This study has empirically confirmed the critical role of using results control diagnostically and interactively as well as other non-accounting-based controls to align subordinates' objectives with organization goals and in effect improve performance. Therefore, SMEs organizations are encouraged to utilize these various forms of controls in their day-to-day activities to continually monitor their subordinate with minimal supervision costs. It is advisable for SMEs organization to deploy budget preparation beyond setting of targets by conducting variances analysis of the budget with actual report in a manner that critical performance variables that require urgent attentions are identified. They should also see the relevance of both administrative and social control in addressing organization activities that are not amenable to result control devices.

ISSN (Online) 2620-9756 ISSN (Print) 2620-6951

However, there some potential limitations in this study. First, the study focused on one location/state in Nigeria. Therefore, generalization of these findings to SMEs in other state of the country should be done in context of the location. Second, the reported non-significant relationship between the interaction of results, administrative and social controls on performance is an area that limit this study to individual effect of each control device on performance which may require an improved methodology to address this limitation. On this, further study on management control practices among SMEs in more than one states within the country may be carried to have more-than-one state generalization. It is suggested that similar can be carried through the use of mixed method approach to address the observed non-significant results.

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