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The Business Environment and Performance of Manufacturing Firms in South – East, Nigeria

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ABSTRACT: Manufacturing firms operate within external environmental conditions and internal capabilities that influence organizational performance. This study examined the relationship between selected business-environment factors and the performance of manufacturing firms in South-East Nigeria. Specifically, it assessed the economic, technological and political environments, organizational culture, physical resources, and financial resources in relation to firm performance. A quantitative cross-sectional survey design was adopted. The population comprised 2,176 permanent employees of 20 selected manufacturing firms across Abia, Anambra, Ebonyi, Enugu and Imo States. From a sample of 471 respondents, 460 valid questionnaires were retrieved, representing a 97.66% response rate. Data were collected using a five-point Likert-scale questionnaire and analysed using descriptive statistics and simple regression. The findings revealed significant positive relationships between all six business-environment factors and firm performance ($p < .001$). The strongest relationship was observed for the economic environment ($R = .907$, $R^2 = .823$), followed by organizational culture ($R = .821$, $R^2 = .673$). The study concludes that both external environmental conditions and internal organizational capabilities are important correlates of manufacturing firm performance. It recommends continuous environmental scanning, technological adaptation, supportive organizational cultures, effective resource management, and diversification of financial sources.

Keywords: Business environment; manufacturing firms; firm performance; organizational culture; economic environment; technological environment.

INTRODUCTION

The business environment therefore represents the set of internal and external conditions that shape strategic choices, operating decisions and organizational outcomes. The literature reviewed in the source study emphasizes that environmental forces can generate both opportunities and threats, while internal factors provide strengths and weaknesses through which firms respond to those forces (Wheelen and Hunger, 2012; Ofili, 2012). The external environment includes forces that are largely outside the short-run control of management. These include economic conditions, technological change, political and legal conditions, socio-cultural trends, suppliers,

customers, competitors, regulators and other stakeholders. The internal environment, by contrast, includes factors within the organization such as structure, culture, human resources, physical assets, technological capabilities, management practices and financial resources. Effective strategic management requires an understanding of the interaction between these two levels because the capacity of a firm to exploit opportunities or neutralize threats depends partly on the strengths and weaknesses available internally (Wheelen and Hunger, 2012; Duncan, 1972).

Technology is another major environmental force. Technological development affects production methods, communication, distribution, information management, product quality and innovation. The source study argues that technological change can improve speed, quality and efficiency, while failure to anticipate technological developments can expose firms to obsolescence. In developing economies, however, firms may face inadequate financing for technology adoption, weak innovation systems and limited inter-firm linkages. These constraints make technological forecasting and deliberate investment especially important for manufacturing competitiveness.

Political conditions also influence manufacturing through government policies, taxation, import and export rules, investment regulations, consumer-protection measures and the general stability of the policy environment. Changes in regulation can alter production costs, market access and investment incentives. Political uncertainty can increase perceived risk, whereas a predictable policy environment can facilitate long-term planning. For firms in Nigeria, where manufacturing is affected by macroeconomic reforms and regulatory interventions, the ability to monitor and adapt to policy changes is therefore strategically relevant.

Internal factors complement these external conditions. Organizational culture shapes shared values, leadership practices, collaboration, employee involvement and the way decisions are implemented. Physical resources including plant, machinery, equipment, buildings, information systems and other production facilities constitute the material foundation of manufacturing operations. Financial resources provide the means to acquire inputs, maintain assets, adopt technologies, develop products and implement strategy. Resource-based perspectives consequently suggest that the possession and effective management of valuable resources can influence a firm's ability to achieve superior outcomes (Barney, 1991; Ainuddin et al., 2007).

Organizational performance is multidimensional and may include financial and non-financial outcomes such as profitability, productivity, market share, product quality, innovation, operational efficiency, customer satisfaction and organizational effectiveness. Performance is not produced by internal effort alone; rather, it emerges within an environment that creates opportunities and constraints. Managers must therefore achieve an appropriate fit between the firm's internal capabilities and the external environment. Environmental scanning provides information for strategic decisions, while internal resources determine the extent to which those decisions can be implemented.

The Nigerian manufacturing sector has experienced substantial environmental changes over time. The source study points to the effects of economic reforms, deregulation and liberalization and notes that

contemporary manufacturing firms face challenges including recessionary pressures, low productivity, financing constraints and infrastructure-related difficulties. These conditions make business-environment analysis particularly important in South-East Nigeria, a region with significant manufacturing activity and industrial centres such as Aba, Onitsha, Nnewi, Enugu and Owerri. Although previous studies have examined business environment and firm performance, the source thesis identifies a relative shortage of evidence focused specifically on manufacturing firms in South-East Nigeria.

Much of the literature reviewed was generated in other Nigerian regions or outside Africa, where institutional, economic and technological conditions may differ. The present study therefore provides empirical evidence on six environmental and internal factors and their relationships with manufacturing performance in the South-East geopolitical zone.

Statement of Problem

Manufacturing firms are exposed simultaneously to external pressures and internal constraints. Unstable economic conditions can increase input costs and reduce demand; rapid technological change can make existing processes obsolete; political and regulatory changes can alter the operating environment; weak organizational cultures can reduce coordination and implementation capacity; inadequate physical resources can restrict production; and limited or poorly managed finance can constrain investment. When firms cannot align their internal capabilities with environmental requirements, performance may deteriorate and organizational survival may become more difficult. The literature cited in the source thesis indicates that unfavourable business environments have been associated with poor performance and business failure, while alignment between strategy and environmental conditions is associated with stronger outcomes. However, evidence specific to manufacturing firms across the five South-East states remains limited. This creates a contextual gap concerning which environmental and internal factors are most strongly associated with observed performance. Addressing this gap is important for managers, policymakers and researchers seeking to strengthen manufacturing competitiveness in the region.

Objective of the Study

The main objective was to investigate the relationship between business environment and performance of manufacturing firms in South-East Nigeria. The specific objectives are:

1. examine the extent the economic environment influence performance of manufacturing firms in the South East of Nigeria.
2. evaluate the nature of the relationship between technological environment and performance of manufacturing firms in the South East of Nigeria.
3. determine the extent the political environment influence performance of manufacturing firms in the South East of Nigeria.
4. examine the extent to which organizational culture influences performance of manufacturing firms in the South East of Nigeria.
5. assess how physical resources influence performance of manufacturing firms in the South East of Nigeria.
6. determine how and to what extent financial resources influence performance of manufacturing firms in the South East of Nigeria.

Research Questions

Given the objectives of the study, the following research questions guided the conduct of the study:

1. To what extent does the economic environment influence performance of manufacturing firms in the South East of Nigeria?
2. What is the nature of the relationship between technological environment and performance of manufacturing firms in the South East of Nigeria?
3. To what extent does political environment influence performance of manufacturing firms in the South East of Nigeria?
4. To what extent does organizational culture influence performance of manufacturing firms in the South East of Nigeria?
5. How does physical resources influence performance of manufacturing firms in the South East of Nigeria?
6. How and to what extent does financial resources influence performance of manufacturing firms in the South East of Nigeria?

LITERATURE REVIEW

Business environment

The word environment is derived from the French word, "Environ" which means "Surrounding". It is the surroundings or conditions in which a person, organization, animal, or plant lives or operates. It is the surroundings of a physical system that may interact with the system by exchanging mass, energy or other properties. Thus, environment refers to anything that immediately surrounds an object and exerting a direct influence on it. It is the sum total of conditions that surround us at a given point of time and space (UGC Net Tutor Commerce, 2008). It consists of the interacting systems of business, biological, physical and cultural elements which are interlinked both individually and collectively. Business environment refers broadly to the conditions and forces surrounding an organization that affect its operations, decisions, strategic options and performance. The source study distinguishes internal and external environments. The internal environment contains organizational factors such as culture, structure and resources, while the external environment contains forces beyond the short-run control of management. Environmental analysis is intended to identify opportunities and threats externally and strengths and weaknesses internally, thereby improving strategic decision-making (Wheelen and Hunger, 2012).

The external environment can be considered at macro and micro levels. Macro-level forces include economic, technological, political, legal, socio-cultural and environmental conditions. Micro-level forces include customers, suppliers, competitors, distributors, creditors and regulators. Duncan (1972) emphasized complexity and dynamism in understanding organizational environments, while Dess and Beard (1984) considered dimensions of task environments in relation to uncertainty.

The practical implication is that managers need information about environmental changes and must interpret those changes in relation to their particular industry and organizational capabilities. There are two types of business environment, external environment and internal environment (Ogundele, 2005). Wheelen and Hunger (2012) are also of the view that the business environment consists of the external and internal environments. A firm's internal and external environments consist of all the

conditions and forces that affect its strategic options and define its competitive situation. A firm must analyze/scan the external environment to identify possible opportunities and threats and its internal environment for strengths and weaknesses. The purpose of scanning/analyzing the business environment is to identify strategic factors – those external and internal elements that will determine the future of the corporation (Wheelen and Hunger, 2012). The internal environment of a corporation consists of variables (strengths and weaknesses) that are within the organization itself and are not usually within the short-run control of top management (Wheelen and Hunger, 2012). These variables form the context in which work is done. They include the corporation's structure, culture and resources (Wheelen and Hunger, 2012).

Key strengths form a set of core competencies that the corporation can use to gain competitive advantage, while key weaknesses are things the corporation does poorly or doesn't have the capacity to do although its competitors have the capacity. The external environment consists of variables (opportunities and threats) that are outside the organization and not typically within the short run control of top management (Wheelen and Hunger, 2012). These variables form the context within which the corporation exists. They may be the forces and trends within the overall societal/general environment or specific factors that operate within an organization's task/industry environment.

Organizational Performance

Performance is the ability of an organization to achieve objectives such as high profits, quality products, large market share, improve innovation, good financial outcomes and survival at pre-determined time using relevant strategy for action. Thus, performance can also be employed to consider how an organization is performing in terms of market share, volume of products, customers demand, loyalty and investment (Obiwuru, et al., 2011).

Business enterprises performance according to Oghojafor, Olamitunji and Sulaimon (2011) is how a manager effectively and efficiently utilizes the organization's resources so as to achieve the organizational goals and satisfy the stakeholders. However, Neringa and Justina (2014) view the performance of an enterprise as service quality that denotes the discrepancy among customers anticipations and opinions about quality of services provided. Furthermore, enterprise performance means how the growth potential exhibited by the firms or small and medium scale enterprises (SMEs) contributed substantially to job creation, thereby improving the economic status of the business enterprise (Adesanya, 2014). Some other organizational performance measures are operational performance and nonfinancial performance including organizational effectiveness; which means how well an organization achieve its purpose or goals.

Organizational performance does not take place in a vacuum, but within certain environment which has challenges and opportunities (Walter, et al., 2008).Environmental forces create challenges and opportunities for the organization (Pearce and Robinson, 2007). Nevertheless, managers/owners must respond and adjust to alterations in their surroundings so as to be able to recognize the challenges and opportunities that lies ahead of them in their business environment in order to perform efficiently.

Manufacturing Firm's Performance Measures

Manufacturing firms' performance is a measure of the manufacturing firm's success in achieving its goals. Performance of the manufacturing firms is defined as the firms' capacity to make activity and worthy results (Pfeffer and Salancik, 1978). For this study, performance measurement indicators (dependent variable) of measuring manufacturing firms performance is measured by financial, non-financial and operational performance measures such as; increase in sales/sales growth, profitability, innovation performance, effectiveness, efficiency, job satisfaction, competitiveness/competitive profile, and operational performance.

Manufacturing firms, the economic environment is particularly important because inflation, interest rates, exchange rates, employment conditions and general economic growth influence input costs, purchasing power, investment decisions and demand. During periods of inflation, firms face rising costs for raw materials and other production inputs and may have to adjust prices. High interest rates can simultaneously increase the cost of borrowed capital and reduce the willingness of customers to finance purchases. Consequently, managers need to monitor economic trends and assess their strategic implications rather than respond only after adverse conditions have materialized and the operational performance as well.

Operational performance concerns the internal operations of the organizations. It includes such things as cost reduction, productivity, and especially product quality, quality performance, waste reduction, reduction of lead times at all stages of the production process, and improved people development, whereas non-financial performance includes elements such as competitiveness (competitive profile), customer satisfaction, innovation performance, creativity, improved employee morale/job satisfaction, social responsibility and successful product development. Thus, operational performance refers to how well a business performs its core activities, measured by efficiency, effectiveness, and quality, using key performance indicators (KPIs) to monitor and evaluate its day-to-day operations.

Key performance indicators (KPIs) are quantifiable measures of a process, process step, or programme that are used to monitor and evaluate operational performance. Examples of KPIs are: productivity, throughput, cycle time, error rate, customer satisfaction, and revenue. Improving operational performance entails: streamlining processes by identifying and eliminating inefficiencies, optimizing resource allocation by ensuring resources are used effectively, continuous improvement by making ongoing efforts to improve processes and systems, and employee engagement by empowering employees to contribute to operational performance.

Thus, manufacturing firms do not operate in isolation. Their activities are embedded in an environment consisting of economic conditions, technological developments, political and regulatory conditions, industry forces, organizational culture and firm-specific resources.

Economic environment and Organizational Performance

Economic conditions influence the cost and availability of production inputs, customer demand, investment and financing. Inflation can increase the price of raw materials and operating expenses. Interest rates affect borrowing costs and investment decisions, while exchange-rate movements influence imported inputs, machinery and other

internationally traded resources. Economic growth and employment influence household income and market demand. The source thesis cites evidence that economic-environment indices have significant effects on business performance and reports earlier Nigerian findings that economic conditions influence organizational performance (Nwekpa and Ewans, 2015; Adeoye and Elegunde, 2012). For manufacturing firms, economic monitoring is therefore not simply an accounting exercise. It is a strategic process through which managers anticipate changes in demand, input prices, financing conditions and competitive intensity. Firms that identify economic changes early can adjust production, sourcing, pricing, inventory and investment decisions. Conversely, firms that fail to anticipate changes may experience declining margins and weaker competitiveness. The present study tests this proposition empirically in the South-East Nigerian manufacturing context.

Technological environment and Organizational Performance

Technology encompasses knowledge, methods, materials, tools and systems used to achieve practical outcomes. In manufacturing, technological conditions affect production processes, automation, information management, product development, communication and distribution. Technological change can create opportunities for productivity and innovation but can also generate costs where firms must replace obsolete equipment or acquire new skills. The source study notes that technological forecasting is important because early adoption may improve market position, while failure to adapt can produce obsolescence.

The empirical literature reviewed in the thesis includes evidence that technological assets and activities can enhance firm performance and that technological environmental factors can affect strategic choices among Nigerian manufacturing firms. This supports the expectation that manufacturing firms with stronger exposure to and capacity for technological adaptation may report better performance. The second hypothesis therefore proposes a positive relationship between technological environment and performance. Olatunji (2015) investigated the impact of information communication technology (ICT) on small and medium scale enterprise productivity in Nigeria. A survey research approach was used and data was collected from 80 respondents. The study revealed that stakeholders in the Small and Medium Scale Enterprise industry agree that the introduction of ICT in its operations changes its processes and productivity which in turn boost profitability. The study also revealed that the use of ICT by small and medium scale enterprises opens new opportunities, reduces inventories as well as makes their services more tradable.

Political environment and performance and Organizational Performance

Political environment comprises government-business relations, policy stability, taxation, investment rules, import and export policies, competition policy and consumer protection. Manufacturing firms are especially sensitive to policy because regulation can influence input availability, market access, production costs and investment. A predictable regulatory environment may reduce uncertainty, whereas frequent policy changes can increase risk and complicate strategic planning. Nigerian studies reporting significant effects of political and broader external environmental factors on organizational performance. Political conditions therefore constitute a strategic variable rather than merely a background

issue. Managers need to monitor government policies and anticipate how changes could affect their operations. The third hypothesis consequently predicts a positive relationship between political environment and manufacturing performance. A number of studies have examined the relationship between the economic environment and performance of business organizations. Adeoye (2015) examined the impact of external factors on corporate governance system of firms: Empirical Evidence from Sub-Saharan Africa Anglophone Countries (SSAA). The study explored the impact of external factors on corporate governance system using survey questionnaire based on International Corporate governance norms. Data were collected from listed firms in Ghana, Nigeria and South Africa. The study found amongst others that in all the selected countries in the sub-region (SSAA),the political environment positively affect the corporate governance system.

Organizational culture and Organizational Performance

Organizational culture consists of shared values, beliefs, norms and practices that influence how employees interpret situations and behave at work. In manufacturing organizations, culture can affect teamwork, communication, leadership, innovation, discipline, problem-solving and commitment to organizational objectives. A culture that encourages collaboration and employee involvement may facilitate strategy implementation, while a fragmented culture may hinder coordination. Evidence linking organizational culture with organizational performance and notes that culture can strengthen the way organizations respond to external environmental demands. This suggests that environmental opportunities do not automatically produce better performance; firms also require internal cultural mechanisms that support adaptation. The fourth hypothesis therefore examines whether stronger organizational culture is positively associated with manufacturing performance. A study conducted by Nazarian and Atkison (2007) established a relationship between balanced organizational culture and organizational performance. The study was consistent with the study conducted by Gregory, Harris, Armenakis and Shook (2009) which suggested that an organization requires not only a strong organizational culture but one that has a balance of all different types of culture which will enhance flexibility in thinking.

Physical resources and Organizational Performance

Physical resources include raw-material systems, plant and equipment, buildings, production facilities, computer hardware and software and other tangible assets used in production. Their availability, adequacy, quality and effective utilization can influence production capacity, cost, quality and competitiveness. In manufacturing, inadequate equipment or unreliable infrastructure can constrain output even when demand exists. Reports that respondents generally recognized the importance of physical resources and cites prior evidence that organizational resources have significant relationships with performance. The resource-based view similarly suggests that valuable resources can contribute to competitive advantage when they are effectively controlled and deployed (Barney, 1991). The fifth hypothesis therefore predicts a positive relationship between physical resources and firm performance. However, Barney (1997) argued that physical resources can only confer competitive advantage if they are obtained in sufficient extents, while Clarke (1988) observed that physical resources could be a source of competitive advantage if they yield economics of scale. Studies

have revealed that the status and conditions of physical resources in many public health institutions are questionable raising concerns over delivery of healthcare (Lalude, 2006). To Parloe (2003), the acquisition of physical resources in health institutions should be done in accordance with the laid down legal procedures failure to which it may lead to the acquisition of inappropriate, perhaps excessively complex and substandard equipment leading to poor performance of the health facility

Financial resources and Organizational Performance

Financial resources provide firms with the capacity to purchase inputs, maintain facilities, invest in technology, undertake expansion, manage working capital and respond to environmental shocks. Access to adequate finance alone, however, may not be sufficient; prudent utilization and diversification of funding sources are also important. The source study considered equity, bonds, financial institutions, entrepreneurial funds and retained earnings as possible sources of financial support.

Financial constraints can limit the implementation of otherwise sound strategies. Firms with diversified and adequately managed sources of finance may have greater flexibility to invest and respond to market changes. The source thesis cites previous research reporting positive relationships between financial resources and organizational performance. The sixth hypothesis therefore predicts a positive relationship between financial resources and manufacturing performance.

Filser, Eggers, Kraus and Malovics (2014) examined the impact of financial resource availability on entrepreneurial orientation (EO),customer orientation (CO) and on growth in small and medium-sized enterprises (SMEs) in Australia and Hungary using structural equation modeling to test the hypotheses. Findings revealed that financial resource availability is attributed to entrepreneurial orientation (EO) and, subsequently to firm growth/ performance.

Theoretical perspective

The study is principally consistent with the Contingency Theory perspective as presented in the source thesis. Contingency thinking emphasizes that organizational effectiveness depends on the fit between organizational characteristics and environmental conditions rather than on one universally appropriate management arrangement. In a dynamic manufacturing environment, the effectiveness of a strategy, structure, technology or resource configuration may depend on the external context in which the organization operates.

The study also draws conceptually from the Resource-Based View, which emphasizes firm-specific resources and capabilities as sources of competitive advantage. Physical resources, financial resources, technology and organizational culture can therefore be considered internal capabilities that shape how firms respond to external conditions. Combining these perspectives provides a useful explanation for why both environmental variables and internal resources were examined in the same research problem.

Empirical gap

The literature reviewed in the source thesis demonstrates considerable interest in business environment and organizational performance, but the evidence is dispersed across countries, industries and Nigerian regions. The thesis identifies a relative shortage of studies concentrating on manufacturing firms in South-East Nigeria. This study addresses that contextual gap by examining six variables within a common

empirical setting covering the five states of the South-East geopolitical zone.

METHODOLOGY

Research design

The study adopted a quantitative cross-sectional descriptive survey design. The design enabled the researcher to collect standardized information from employees of selected manufacturing firms and to test the stated hypotheses statistically. The research instrument was a structured questionnaire calibrated on a five-point Likert-type scale. Primary data were complemented by secondary information obtained from journals, strategic periodicals, company handbooks, textbooks and online sources, as reported in the source thesis.

3.2 Study area

The study covered Nigeria's South-East geopolitical zone comprising Abia, Anambra, Ebonyi, Enugu and Imo States. The region contains important industrial and commercial centres including Aba, Onitsha, Nnewi, Enugu, Owerri, Awka, Umuahia and Abakaliki. The source study describes the region as having a substantial industrial sector and an important role in Nigeria's economy. The geographical coverage was selected to provide evidence across the five states rather than restricting the analysis to a single industrial centre.

3.3 Population and sampling

The source study reports a population of 250 manufacturing firms in the South-East, from which 20 firms from each state were purposively selected. The population for the survey consequently comprised 2,176 permanent senior and junior employees of those 20 firms. The firms included pharmaceutical, paint, chemical, cable, aluminium, fertilizer and other manufacturing operations distributed across the five states.

State	Selected firms	Staff population
Abia	4	330
Anambra	4	726
Ebonyi	4	320
Enugu	4	430
Imo	4	370
Total	20	2,176

Godden's finite-population procedure was used to obtain a sample size of 471 respondents. The sampling procedure subsequently used stratification by organizational position and random selection within the identified employee categories, covering top, middle, supervisory and junior personnel. This approach was intended to provide representation across different organizational levels.

3.4 Instrument validity and reliability

Content validity was established through expert review, including the research supervisors. Questionnaire items were examined for relevance, clarity, ambiguity and consistency before administration. For reliability, a pilot exercise involving 20 randomly selected respondents was undertaken. The source thesis reports use of test-retest procedures and Cronbach's alpha coefficients, with coefficients above the study's stated threshold considered acceptable.

3.5 Data collection and analysis

Of the 471 questionnaires distributed, 460 were properly completed and returned,

producing a response rate of 97.66%. Descriptive analysis used frequencies and percentages. Simple regression analysis was employed to determine the relationship between each independent variable and performance, using SPSS Version 23. The decision rule was based on statistical significance at the 5% level; p-values below 0.05 were interpreted as evidence against the corresponding null hypothesis.

RESULTS AND DISCUSSION

Response rate

Measure	Number	Percentage
Questionnaires distributed	471	100.00
Questionnaires returned and usable	460	97.66
Not returned/unusable	11	2.34

The 460 usable questionnaires formed the analytical sample. The high response rate provided a substantial empirical basis for the regression analyses. The source thesis reports that all six hypotheses were tested with simple regression and that each relationship was statistically significant and positive.

4.2 Descriptive evidence

Responses concerning the internal resource variables generally indicated favourable assessments. For financial resources, for example, 350 respondents (76.09%) agreed or strongly agreed that their organizations had adequate and ready sources of finance, while 90 (19.56%) disagreed or strongly disagreed and 20 (4.35%) were neutral. A total of 380 respondents (82.61%) agreed or strongly agreed that manager's ensured prudent utilization of funds budgeted for projects and strategy implementation. These responses provide descriptive support for the role of financial management in organizational capability.

For physical resources, the source thesis reports that 320 respondents (69.57%) agreed or strongly agreed that raw materials, plant and equipment, manuals, blueprints and computer hardware and software support production. Similarly, 300 respondents (65.22%) supported the view that adequate physical resources can generate economies of scale and competitive advantage. These descriptive patterns are consistent with the regression evidence reported below.

4.3 Regression results

Predictor	R	R^2	F	t	p	Interpretation
Economic environment	0.907	0.823	2123.411	46.080	<0.001	Significant positive
Technological environment	0.758	0.574	617.559	24.851	<0.001	Significant positive
Political environment	0.760	0.578	628.182	25.064	<0.001	Significant positive
Organizational culture	0.821	0.673	944.177	30.727	<0.001	Significant positive
Physical resources	0.736	0.541	540.703	23.253	<0.001	Significant positive

Financial resources	0.752	0.566	597.065	24.435	<0.001	Significant positive

Economic environment produced the strongest reported association among the six predictors. The correlation coefficient was 0.907 and the coefficient of determination was 0.823, indicating that 82.3% of the variation in the performance measure was explained by the simple regression model. The model was statistically significant ($F = 2123.411$, $p < 0.001$), and the standardized coefficient was positive and significant ($\beta = 0.907$; $t = 46.080$; $p < 0.001$).

Technological environment was also positively associated with performance ($R = 0.758$; $R^2 = 0.574$). The regression model was significant ($F = 617.559$, $p < 0.001$), while the standardized coefficient was positive and significant ($\beta = 0.758$; $t = 24.851$; $p < 0.001$). Thus, the model attributed 57.4% of observed performance variation to technological environment in the bivariate regression.

Political environment showed a positive relationship with performance ($R = 0.760$; $R^2 = 0.578$). The model was significant ($F = 628.182$, $p < 0.001$), and the standardized coefficient was positive ($\beta = 0.760$; $t = 25.064$; $p < 0.001$). The result indicates that variation in the political environment was strongly associated with variation in reported manufacturing performance.

Organizational culture produced a strong positive relationship with performance ($R = 0.821$; $R^2 = 0.673$). The model was statistically significant ($F = 944.177$, $p < 0.001$), with a positive standardized coefficient ($\beta = 0.821$; $t = 30.727$; $p < 0.001$). The model therefore explained 67.3% of the observed variation in performance.

Physical resources were positively associated with performance ($R = 0.736$; $R^2 = 0.541$). The regression model was significant ($F = 540.703$, $p < 0.001$), with a positive standardized coefficient ($\beta = 0.736$; $t = 23.253$; $p < 0.001$). The model explained 54.1% of the variation in performance.

Financial resources also showed a strong positive relationship with performance ($R = 0.752$; $R^2 = 0.566$). The regression model was significant ($F = 597.065$, $p < 0.001$), and the standardized coefficient was positive and significant ($\beta = 0.752$; $t = 24.435$; $p < 0.001$). Financial resources therefore explained 56.6% of the observed variation in performance in the simple regression model.

5. Discussion

The results indicate that business environment and internal organizational conditions are closely associated with manufacturing performance in South-East Nigeria. The economic environment generated the largest correlation coefficient and R^2 among the six individual models. This suggests that economic conditions may be especially consequential for firms whose input costs, financing and market demand are sensitive to inflation, interest rates, exchange-rate movements and broader economic activity. The result is consistent with the source thesis's discussion of Nwekpa and Ewans (2015) and Adeoye and Elegunde (2012), both of which reported positive effects of economic conditions on business or organizational performance.

The strength of the economic-environment result also highlights the strategic importance of environmental scanning. Manufacturing managers cannot directly control national inflation or exchange-rate conditions, but they can monitor trends and

modify sourcing, pricing, inventory, financing and investment decisions. In this sense, the positive relationship observed in the data does not imply that adverse economic conditions are inherently beneficial. Rather, it indicates that variation in the economic environment is strongly associated with variation in the performance measure used in the study. The practical task for managers is therefore to build adaptive capabilities around changing economic conditions.

The positive technological-environment finding is consistent with the argument that technological capabilities can improve productivity, quality, speed, information flow and innovation. The source thesis relates this result to earlier evidence from Nigeria and other settings showing significant effects of technological factors on firm performance. For South-East manufacturing firms, the result implies that technological forecasting, modernization of equipment, digital information systems and employee capability development may be important components of competitive strategy.

The political-environment finding indicates that government-business conditions matter to manufacturing outcomes. The result is consistent with the Nigerian studies cited in the source thesis, including Kowo et al. (2018) and Adeola (2016), which reported significant effects of political and external environmental factors. Policy monitoring should therefore be treated as part of strategic management. Changes in taxation, trade rules, investment policy, consumer protection and other regulatory instruments can alter the cost and feasibility of manufacturing operations.

The organizational-culture result is particularly important because it connects external adaptation with internal organizational behaviour. A positive culture can support collaboration, employee involvement, shared goals, fairness, teamwork and implementation discipline. The source thesis links the finding to research by Lee and Yu and Kemp and Dwyer showing relationships between organizational culture and performance. The result suggests that managers should not treat culture as an abstract human-resources issue; rather, it is an organizational capability that can affect how strategies and responses to environmental change are executed.

The positive relationship between physical resources and performance is consistent with resource-based reasoning. Manufacturing depends materially on plant, equipment, production facilities, information systems and related assets. The source thesis reports that respondents generally recognized the role of physical resources and links the finding to previous evidence from Kenya and other settings. In practical terms, firms need to maintain productive assets, reduce avoidable downtime and ensure that facilities and equipment are adequate for the scale and nature of production.

Financial resources also showed a strong positive relationship with performance. The result is consistent with the source thesis's discussion of prior studies linking financial resources to organizational outcomes. Finance supports working capital, asset acquisition, maintenance, innovation and expansion. The finding further reinforces the recommendation that firms should diversify funding sources and manage available resources prudently. Access to capital without effective financial management may not translate automatically into stronger performance.

Taken together, the findings support the proposition that manufacturing performance emerges from an interaction between environmental conditions and internal capabilities. The six variables were each significant in separate simple regressions, but the results should not be interpreted as evidence that any single factor independently determines performance. Because the models were estimated separately, the reported R^2 values describe the explanatory power of each individual predictor rather than the combined contribution of all six variables. Future research could therefore examine the variables simultaneously using multiple regression or structural equation modelling to determine their relative effects and possible interaction mechanisms.

7. CONCLUSIONS

The study concludes that the business environment and internal organizational conditions are significantly related to the performance of manufacturing firms in South-East Nigeria. Economic environment recorded the strongest relationship in the individual models, followed by organizational culture, political environment, technological environment, financial resources and physical resources. All six hypotheses were supported at the 5% significance level. The findings reinforce the importance of strategic fit: firms must monitor external conditions while simultaneously strengthening the internal resources and organizational capabilities required to respond effectively.

The evidence also indicates that manufacturing performance should not be viewed exclusively through the lens of finance. Economic and political conditions shape the external operating context; technology affects production and innovation; culture shapes organizational behaviour; physical resources support production; and finance enables investment and implementation. A balanced managerial response therefore requires coordinated attention to all six dimensions rather than reliance on a single intervention.

7. Managerial and Policy Implications

First, manufacturing managers should institutionalize economic-environment scanning. Regular monitoring of inflation, interest rates, exchange rates, demand and other economic indicators can support timely adjustments to sourcing, pricing, inventory and investment decisions. Second, firms should strengthen technological forecasting and invest selectively in technologies that improve productivity, quality, information management and innovation. Third, managers should monitor regulatory and policy developments and maintain compliance systems capable of responding quickly to changes in government policy.

Fourth, firms should deliberately cultivate organizational cultures that encourage teamwork, fairness, collaboration, employee involvement and shared responsibility for performance. Fifth, physical-resource management should include preventive maintenance, asset planning, capacity assessment and investment in productive facilities. Sixth, financial management should emphasize adequate working capital, prudent expenditure, diversification of financing sources and effective allocation of funds to strategic priorities.

For policymakers, the findings reinforce the need for a predictable and supportive manufacturing environment. Policies that reduce unnecessary uncertainty, strengthen infrastructure, improve access to productive finance, support technology adoption and

maintain transparent regulation can help firms convert internal capabilities into stronger performance. Because the study covers the five South-East states, coordinated regional initiatives may also be useful in addressing shared infrastructure, technology and industrial-development constraints.

8. Limitations and Directions for Future Research

The study has several limitations. First, it used a cross-sectional survey design, which limits strong causal interpretation. Second, the analysis relied on employee responses and therefore may be influenced by common-method or perceptual biases. Third, the six predictors were examined through separate simple regressions, so the models do not establish their relative importance when all variables are considered simultaneously. Fourth, the sample was drawn from 20 purposively selected firms, limiting the generalizability of findings to all manufacturing firms in Nigeria.

Future studies should use longitudinal designs to examine how environmental changes affect performance over time. Researchers could also employ multiple regression, structural equation modelling or panel-data methods to examine the combined and relative effects of economic, technological, political, cultural, physical and financial factors. Further research could compare manufacturing subsectors, firm sizes and individual South-East states and could incorporate objective performance indicators such as productivity, sales growth, profitability, market share and capacity utilization alongside perceptual measures.

9. Declarations

Ethics approval: The source thesis reports questionnaire-based academic research; no separate ethics approval statement was provided in the supplied material. The final submission should insert the institution's applicable ethics approval information if required.

Consent to participate: To be confirmed in the final submission according to the study's approved research procedures.

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