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Organisational Process Assets Management and Sustainable Growth of Manufacturing Companies in the South-South Geo-Political Zone of Nigeria.

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Abstract

Purpose: This study examined organisational process assets management and sustainable growth of manufacturing companies in the South-South Geopolitical Zone of Nigeria. The study focused on the relationship between defect management process, financial management process, organisational policy, and sustainable growth of manufacturing companies.

Methodology: The study adopted a descriptive survey with a sample size of 395 SME owners. A questionnaire was used as the instrument. The Pearson Product Moment Correlation (PPMC) was used to test the hypotheses.

Findings: The findings revealed that there is a positive significant relationship between defect management processes and sustainable growth of manufacturing companies (r=0.132, p=0.000); there is a positive significant relationship between financial management processes and sustainable growth of manufacturing firms (r=0.110, p=0.000); and there is a positive significant relationship between organisational policy and sustainable growth of manufacturing firms (r=0.110, p=0.000).

Unique Contribution to Theory, Practice, and Policy: It was recommended, among others, that manufacturing firms should incorporate defect management processes, financial management processes, and organisational policy into their strategic management processes.

Keywords*: Organisational Process Assets, Defect Management Process, Financial Management Process, Organistional Policy, Sustainable Growth.*

JEL Classificaton: *M12, M14*

INTRODUCTION

In an era of rapid technological advancement and cutthroat competition, industrial enterprises face unprecedented challenges in optimizing their operations and maximizing profitability. Amidst these complexities, efficient management of tangible and intangible assets has emerged as a pivotal factor in driving productivity, reducing downtime, and achieving sustainable growth (Jamwal, Agrawal, Sharma, Kumar, Luthra, & Pongsakornrungsilp, 2022). Every facet of manufacturing process (from production plants to assembly lines), relies on multitude of assets. These assets are "machinery, equipment, tools, and even software systems" that collectively form backbone of any successful firm. Jamwal et al (2022) posit that, "the significance of these assets extends beyond their mere presence on the factory floor; their effective management directly impacts a company's ability to meet production targets, maintain quality standards, meet regulatory compliance as well as ensure sustainability of firm's growth pattern". Thus, "organisational process assets management has come to occupy prime place in today's business environment both at the industrial and manufacturing sector". Alhuraish, Robledo and Kobi (2017) submit that, "organisational process assets are aspects, both physical and knowledge-based, that can be beneficial". They further argued that "project managers rely on organisation process assets to enhance efficiency, uniformity and compliance with regulations".

Asset management is a laborious and resource-intensive task, often plagued by manual record-keeping, outdated maintenance practices, and limited insights into asset performance. The advent of advanced asset management software solutions has transformed the way enterprises approach their businesses since it plays a pivotal role in driving operational excellence and long-term success in the manufacturing industry. Hariyani and Mishra (2022b) argue that, "manufacturing processes heavily rely on a wide range of assets, including machinery, equipment, tools, and digital resources, each contributing to the overall efficiency and productivity of the production line". Asset management utilise resources optimally, minimizing downtime, "reducing maintenance costs, and extending their lifespan". Kalpande and Toke (2020) opine that, "asset management ensures high-quality standards, compliance, make data-driven decisions for strategic planning and with the rapid advancements in technology, embracing Asset Management Software has become imperative, offering real-time insights, automation capabilities, and predictive maintenance, all of which empower manufacturing enterprises to streamline their operations, boost profitability, and gain a competitive edge in the market". This way there can be a drive towards organisational process assets management in manufacturing firms in Nigeria especially in the South-South, Nigeria (Oburota & Okoi, 2017).

The South-South of Nigeria is a rich region with many mineral resources that can aid manufacturing companies to thrive. This is why there is the presence of many

manufacturing firms operating in the region that are given to the fabrication of different products. Some of the small and medium manufacturing firms in the South-South of Nigeria have been faced with the problem of sustainable growth, resulting to ineffective management of assets in the firm. Again, there has not been a well-organized system that sees to the appropriate "management of tangible and intangible assets by project managers that makes for sustainable growth". This could be due to poor policy design, low financial control procedures, knowledge base, low risk template and work breakdown structure (Okafor, Ohachosim, & Oji, 2022).

Creation of sustainable growth is pre-occupation of small manufacturing business owners as well as that of big corporate executives (Ibrahim, Diibuzie, & Abubakari, 2017). They argued that achieving this goal is not an easy task, in the face of rapidly changing political, economic, competitive and consumer trend. Each of these tendencies presents unparalleled difficult tasks to business leaders looking for the ways of maintaining sustainable growth rate and this is because customer expectations have changed considerably over the last few generations. Similarly, competition is keen in nearly all industries, which have seen unprecedented breakdowns in the barriers that formerly separated them.

Production environments are currently undergoing transformation induced by industrial revolution, which adds complexity but also opportunities for sustainable manufacturing. In fact, production systems are transitioning to Cyber-Physical Production Systems (CPPS), where the virtual (nontangible assets such as software) and physical worlds converge (Monostori, 2014) and the value of data is harnessed to achieve desired goals.

Manufacturing firms have been identified as the engine of industrial growth as they contribute to the bulk of production within the society. This is why the operational process must be aligned with effective utilization of the assets which could be "tangible and intangible". Effective management of "organisational process assets" not only affects the sustainability aspect but also position the firm to compete favourably with contenders (competition). Most manufacturing firms in Nigeria particularly those within the South-South region especially those within the small and medium scale sector have the challenge of defects management process with the aim of profit maximization. Goods are produced without much recourse to accounting for the defects in production and this affects customer loyalty.

This, most times, arises from the policy of the firms which are geared towards profit making against enduring vision or programmes that are designed to have a brand name that is tested and approved by consumers. This has led to the death of many manufacturing firms and staggering growth of many others in the face of competition from both local and foreign manufacturing enterprises. Onyokoko and Onuoha (2021) argue that, "only organisations with resilience ability are most likely to survive in a highly competitive industry".

Finance is a crucial factor behind organisation growth and thus its effective management becomes very important. To grow the capital base of a firm, financial management process must be in place to see that resources are directed towards getting the best assets both human and material. When this is not in place, the resources stand the chance of dwindling and this has effect on the growth of manufacturing firms that rely on resources for production. When organisational process assets such as defect management processes, policy design and financial management are effectively utilized amongst other factors, they can result in sustainable growth of manufacturing firms which this study is out to examine.

Arising from the aboe, the following objectives have been raised to examine the relationship between:

(i) defect management process and sustainable growth, (ii) financial management process and sustainable growth, (iii) organisational policy and sustainable growth.

Review of related literature

Concept of Organisational Process Asset Management

Organisational "process assets" are tangible resources used by an organisation. These include: "templates, contracts, processes, reports and financial statements" (Mwaniki & Omagwa, 2017). In the view of Ocak and Findik (2019), "to illustrate the breadth of activities within the scope of asset management, the interrelationships between activities and need to integrate them and the critical role for asset management to align with and deliver the goals of an organisation's strategic plan, asset management activities can be described, at a high-level overview, through a suite of subject groups". Each group encompasses several subjects with complex inter-relationships between most of them. The importance of individual subject depends on its specific sector, organisational purpose and context. Central to "an effective asset management system is the alignment of the organisation's asset management activities and the resulting outputs from these assets with its overarching objectives". The alignment ensures that, "those involved in day-to-day asset management can trace their activities back to the broader organisational goals". These activities include integrating the asset management policy, strategy, objectives, and planning.

The core objective of organisation is to maximize the value derived throughout an asset's lifecycle. Oliver, Ugbor and Chukwuani (2017) avert that, "the type of asset procured affects its performance, associated risks, maintenance requirements during its operational phase, and eventual decommissioning cost and procedures". They further report that, "operational and maintenance strategies further determine an asset's performance, useful life, and end-of-life complexities and cost lifecycle". Mwaniki and Omagwa (2017) submit that, "with industrial advancements, the decision-making process regarding these factors is increasingly shifting towards data-driven paradigms;

effective implementation of asset management plans hinges on meticulous control of activities and the associated risks throughout an asset's lifecycle".

Concept of Organisational Sustainable Growth

Organisational sustainable growth is one of the very essential elements for the survival of organisations. Dylick and Hockets (2013) argue that, "sustainability has become a sound that is repeated again and again during this 21st century that involves promising of societal changes for better in relation to a more justifiable and wealthy generation by paying and focusing on national environment and where our cultural achievements are protected and kept for future generations". Rockström, Steffen, Noone, Persson, Chapin, Lambin, Lenton, Scheffer, Folke, Schellnhuber, Nykvist, De Wit, Hughes, Rodhe, Sorlin, Snyder, Costanza, Svedin, Falkenmark, Karlberg, Corell, Fabry, Hansen, Walker, Liverman, Richardson, Crutzen and Foley (2009) postulate that, "sustainable production can only be achieved when manufacturing processes account for future needs of society and work within the planetary boundaries".

Accordingly, "sustainable manufacturing strategy" is defined as "business strategy that embeds the above principles of sustainable manufacturing; however, in a corporate context, a sustainable manufacturing strategy can be defined as any strategy that realizes the manufacturing company's sustainability goals". There are two foundational concepts for "beyond world-class manufacturing" namely: organisational capabilities and learning organisations. They noted "that consistent performance improvement does not necessarily come from the adoption of specific improvement programs but from management's effort in identifying and building manufacturing capabilities that are relevant for the company's competitiveness"; e.g. a capability for a manufacturing line would be "process flexibility as the ability to" change between products quickly.

Defects "Management Processes and Sustainable Growth"

Complex environment of manufacturing, many things can go wrong, leading to mistakes that result in defective products (Choi, Battulga, Nasridinov, & Yoo, 2017). To become and remain competitive in the current and future business landscape, companies must follow the practices and philosophy of producing high-quality products with less waste (Powell, Magnanini, Colledani, & Myklebust, 2022). Poor product affect firm's performance and efficiency. There can be both direct and indirect costs caused by poor quality such as repair costs, transportation costs, product returns, and loss of sales due to customer dissatisfaction (Taidi & Mbarki, 2016); (Psarommatis & Kiritsis, 2021). Defects in manufacturing can be caused by process variations due to machines, worn tooling, non-conforming material, and human mistakes, among other factors (Ferguson, Ak, Lee, & Law, 2018). These variations can be predicted, using "Industry 4.0 technologies, methods, and tools to implement corrective actions to eliminate the root

causes of the defects; except for human mistakes". Thus, this is called e approach is constitutes Zero Defect Manufacturing (ZDM) (Psarommatis, Gharaei, & Kiritsis, 2020); Psarommatis, Sousa, Mendonça and Kiritsis (2022). In this, Psarommatis et al. (2020) postulated that, "there are two different approaches for ZDM implementation: (i) product-oriented ZDM and (ii) process-oriented ZDM". Hoang, Hildebrandt and Fay (2018) state that, "literature of the last decade shows a movement towards product-oriented approaches, but without proof that they are superior to the process-oriented approaches" (Zheng, Psarommatis, Petrali, Turrin, Lu, & Kiritsis, 2020); (Psarommatis, 2021); (Psarommatis, Martiriggiano, Zheng, & Kiritsis, 2021); (Psarommatis, & Kiritsis, 2023).

Zero Defect Manufacturing, according to Psarommatis et al. (2020), is "a viable alternative over traditional quality improvement methods". Eleftheriadis and Myklebust (2016) postulate that, "a recent review article analyzed the critical success and failure factors of traditional quality improvement methods and at the same time depicted potential disadvantages of traditional improvement methods over ZDM". Psarommatis et al. (2020), reveal that, "ZDM can significantly increase the sustainability levels of manufacturing systems". Mourtzis, Vlachou and Milas (2016) reveal that, " ZDM has numerous advantages compared to the quality improvement methods that are being used currently by manufacturing companies, such as six sigma or lean that are not capable of coping with modern quality and market needs". Psarommatis et al. (2022) submit that, "traditional quality improvement methods are characterized as corrective approaches, meaning that there must first be a problem to address; they do not take full advantage of Industry 4.0 technologies, and to an extent, they lack the notion of predicting events". Additionally, "they do not learn well from the defects since they are specifically designed to simply remove the identified defects from production. Most traditional techniques for quality improvement are used only at the process level" (Siva Rama Krishna & Srikanth, 2021). ZDM, however, can be used for both product and process levels.

Furthermore, Psarommatis et al. (2022) avert that, " it is important to underline the implicationss of ZDM on sustainability, a critical dimension in today's manufacturing landscape - as the push the boundaries of efficiency and quality in manufacturing through practices like ZDM is pushed, it addresses key aspects of sustainability. Striving for zero defects, minimize waste, making better use of resources, and reducing expended energy on rework and corrections, alignment with the principles of sustainable manufacturing. Successful ZDM implementation result to extended life cycled producting, reduce demand for new products and conserve resources. ZDM does represents technological advancement and sustainable practices.

In a study, Christou, Kefalakis, Soldatos and Despotopoulou, 2022) postulate that, "ZDM is an industry 4.0 paradigm that goes beyond conventional quality management approaches by utilizing new technologies, methods, and tools in manufacturing

environments". Contemporary ZDM is "highly relevant to industry 4.0 in the sense that the success of prediction algorithms and associated prevention mechanisms rely on modern technologies such as Artificial Intelegent (AI), Internet of Things (IoT), and digital twins". Psarommatis et al. (2022) further reveal that, "increased computing power, advancements in data analytics methods and tools, decreased cost of sensors, and more affordable storage opportunities provided by the Fourth Industrial Revolution foster ZDM capabilities and applications". Myklebust (2013) defines ZDM as "having an extended lifecycle-oriented process focus and suggests an integrated view on the product and factory lifecycle models. May and Kiritsis (2019) propose ZDM strategies and platforms for successful implementation in smart Industry 4.0 factories". Psarommatis et al. (2020) describe "four strategies, namely: detect, predict, repair, and prevent, for successful ZDM implementation".

Hypothesis 1: The relationship between defect management processes and sustainable growth of manufacturing companies is not significant.

Financial Management Processes and Sustainable Growth

Over the years, the success of manufacturing industries has attracted the attention of academicians, managers and other professionals. Agbaje and Dare (2018) posit that, "this is cardinal because identifying the key success factors of manufacturing firms' profitability will allow for designing of tailored policies and strategies that will significantly improve the overall performance of the sector". Adebayo and Onyeiwu (2018) argue that, "in spite of the seeming increased attention in the running of the manufacturing sector in Nigeria, together with the institutional support to sustain this sector, performance in some have appeared to be below expectations". They further argue that, "profitability is a concept that has received serious attention all over the globe, this is because the growth and development of any profit-oriented business enterprise depend on its ability to remain profitable at all times, even in the period of the visible current financial crunch of the world economy".

Also, Ikrama and Ahmed (2018) submit that, "emphasized profitability as one of the primary objectives of financial management and control which is to maximize the owners' wealth". Hence, profitability is cardinal determinants of performance for wealth maximization. Adebayo and Onyeiwu (2018) argue that, "the current intensity of competition in the business environment has made running a successful business a function of its ability to be profitable and survive – thus, the ultimate goal of a business is to earn enough profit to ensure sustainability in prevailing market conditions". Organisational effectiveness in rsources management can be measured by its profitability. They also opine that, "this is because the more profit reflects a more effective and efficient utilization of resources and vice versa". Low profitability slow the rate of firm's progresses and obligations. Harley and Emery (2016) posit that "a detailed control over a number of parameters is required to access the financial

condition and situation of the business in detail". They also recommended that to organise an effective system of financial control, management should delegate their power to the subordinate who is conversant with facts in cost management.

The application of these financial control mechanisms has generated a lot of argument (with some scholars arguing in favor of while others against). Maiga, Nilsson and Jacobs (2018) argue that, "this is because, while financial control has been adopted by the world of management as a tool for achieving organisational performance". They viewed the effect as a hindrance to free workflow process. The high rate of corporate failure and low contribution to GDP could be attributed to the poor performance of the manufacturing sector due to lack of adequate financial planning and control. It has been mentioned that some manufacturing firms do not have a financial plan talk less of a financial control framework. This absence has resulted in reckless spending, wastages and fraud culminating into poor performance (Ibrahim et al., 2017).

After the comprehensive strategies and plans, it is there for systematically reviewed, evaluated and controlled. Controls are the task to ensure that strategies and plans are executed as agreed and/or adjustments are effected where it becomes necessary. Control has, therefore, become "a vital function of management". Control could be seen as a 'system' as viewed by the system theorist which is likened to a system where feedback information is obtained, possible adjustment made to the system to attain its goal. Control could be "a management function" which plan and take corrective action where necessary or a process that ensures that anticipated results are achieved (Harley & Emery, 2016). The framework for control according to Osadchy and Akhmetshin (2015), "consists of four distinct parts namely: the setting of standards, measuring performance, comparing the performance against standards and taking appropriate corrective action when and where necessary". However, some researchers have viewed control as influence exercised on the subordinates to induce compliance with organisational goals (Osadchy & Akhmetshin, 2015).

Financial control has been construed as the analysis of a firm's actual results, compared to its short, medium and long-term objectives and business plans (Itiveh & Omoye, 2023). These analyses require adjustment processes to ensure that business plans are being adhered to and that they are also amended in the event of any anomalies, irregularities or unpredicted circumstances. The need for control is necessary as organisations operate in an imperfect world where strategies do not always work as planned, hence control becomes inevitable because of the dynamism in the environment and behavioral factors associated with employees' motivation. Also it therefore, becomes essential that control measures are incorporated in business strategies to accomplish planned performance. Financial control is a management tool that allows for quick identification and elimination of factors that are not conducive for efficient attainment of goals. These tools could be budgetary control, improved financial

reporting, reducing administrative cost and improving efficiency, eliminating or managing unnecessary business risk. (McCrindell, 2015).

The concept of profitability has also been a source of concern to managers of firms, this is because of present performance and the uncertainty that lies with the future (Agbaje & Dare, 2018; Itiveh & Omoye, 2023). Sometimes the two terms; profit and profitability could be used interchangeably. However, in a real sense, there are differences between the two words. Whereas the word Profit is an absolute concept, profitability is a comparative term. Profit refers to the total income/sales earned net of total expenses incurred by the firm during a specified period of time while profitability is a term that relates to how efficient the operations of the firm is. It enhance profit on sales, which is to get a sufficient return on the capital, land and labor used in the business operations. There are three widely known determinants of profitability: Return on Investment (ROI), ROA and ROE. However, there are divergent opinions among scholars on the supremacy of one measure "over the other" as a good measurement of profitability.

The capability to manage "working capital" is related to "sustainable growth". A well managed sales policies produces "sufficient cash flows and increases profits". Increased profitability enhances sustainable growth. Studies, such as Manoharan and Singal (2019) and Mwaniki and Omagwa (2017) support this argument by demonstrating the effect of profitability on firms' sustainable growth. It then can be predicted, "working capital management affects sustainable growth through firms' profitability". Thus, the "role of firms' profitability as a mediating variable between working capital management and sustainable growth is an interesting research avenue".

Hypothesis 2: The relationship between financial management processes and sustainable growth of manufacturing firms is not significant.

Organisational Policy and Sustainable Growth

To achieve company's goals while using the least amount of energy, time, money, and human and material resources is one definition of organisational effectiveness and it is underlain by a good policy guide. Put differently, in business, effectiveness is the amount of quality and efficiency with which a job or process is done. Lee and Brahmasrene (2020) ask that, "is it doing what it is supposed to be doing? Value-creating tasks are defined as those that can be accomplished by a company's personnel and divisions, as well as how effectively those divisions operate together". The success of a company's operations may be assessed in a variety of ways. Gochhayat, Giri and Suar (2017) claim that, "an organisation's ability to meet its goals may be viewed as an indicator of its organisational effectiveness powered by the policy framework". Once the organisation has problems with the policy design and plan, it stands the chance of having problems with achieving success as success cannot be pursued outside of good

plan that give rise to strategies (Priya, Krishnan, Rameshkumaar, Premkumar, & Jyothi, 2024).

Good policy design enhance employee performs (Sharma & Singh, 2019). Organisation's goals (making a profit through manufacturing and promoting a product), influence intended impact. Customers benefit from waste-free and pollution-free product. If the company is able to produce and sell a high-quality product, it will be able to meet its aim of making money. Effective policy can be assessed in four ways: "achievement of organisational objectives, quality and integration of physical and human resources, performance of business processes" (Lucianetti, Battista, & Koufteros, 2019).

Firms have to show superior performance through their policy programmes, which flows from the strategies designed by management and implemented by the workers to achieve set organisation's goals (Dziadkowiec & Daszynska-Zygadlo, 2021). The performance of the firms is based on organisational effectiveness and organisational effectiveness is "the extent to which the" firm, with management and employees, carry all the business processes from procurement, administration, production, supervising, and marketing of the products and services to meet the customers' requirements Manoharan and Singal (2019). This means to carry the business in such a way that there are minimum wastages, risks, maximum productivity, and large profits. Kryshtanovych, Bilyk, Hanushchyn, Sheremet and Vasylenko (2021) postulate that, "to be successful, organisations must take into account aspects such as their investment plans and long-term growth objectives as well as their internal environment - this is why a blueprint laid out and spelt out to all staff through the set objectives is very important". When workers are aware and informed of organisational policies, working in line only become "a matter of outlining rules and regulations that are tailored towards implementation of the policies that are in effect drawn from the goals or tied to them". Thus, sustainable development objectives, efficient methods for putting money to work, and the creation and maintenance of a positive work environment all contribute to an organisation's success Shet, Patil and Chandawarkar (2019). Policies give birth to different strategies "that can be employed to achieve success and investing methods and sustainable development objectives are some of such strategies".

In a study, Van Zanten and Van Tulder (2018) investigate, "the role of sustainable development goals in business effectiveness for multinational enterprises (MNEs)". They collected data through a survey, "from 81 European and North American Financial Times Global 500 companies". They ascertain that, "when organisations formulate their policies to achieve sustainable business development, they design their strategies in such a way as to improve environmental and social performance". To execute these strategies, the organisation develop effective information and communication system Ziolo, Bak and Cheba (2020). This system provides up-to-date information about the technology or techniques to reduce the pollution spreading and

improves the social well-being of the stakeholders. Thus, "the work performance of the employees can be improved, pollution-free, waste-free, and full of utility products can be manufactured, and marketing can be increased".

Avrampou, Skouloudis, Iliopoulos and Khan (2019) examine "how the sustainability development goals ensure organisational effectiveness". A sample of 5 European banks was used. This study posits that the sustainability ensure economic welfare, social cohesion, environmental quality, and prosperity. Thus, organisations' departmental functioning should be kept right as explained by Lin and Lin (2020).

Vor € osmarty, Rodr € ıguez Osuna, Cak, Bhaduri, Bunn, Corsi, Gastelumendi, Green, Harrison, Lawford, Marcotullio, McClain, McDonald, McIntyre, Palmer, Robarts, Sz€ollosi-Nagy, Tessler, & € Uhlenbrook (2018) conducted a research on ecologically friendly practices, sustainable business development goals, and business effectiveness. The study examines that environmental protection is one of the sustainable development goals for which ecological friendly practices like waste management, sanitation administration, and applying energy-efficient technology are executed. Thus, the harmful wastes are reduced, the work environment is improved, and production with minimum costs is endeared. So, "sustainable development goals" lead to business effectiveness. Basten and Haamann (2018), in their study, integrate the relationship between "sustainable development goals and business effectiveness". Organisation that offers clean environment ensure that, its technology, raw materials, logistics and other resources contribute to unpolluted environment". Improved environmental quality improves the reputation of the businesses, promotes the marketing of the products, improves the working environment, generates organisational dedication and the workers do their jobs well as they should. If an organisation's "sustainability goals include ensuring peace, justice, and employee support, it can improve the efficiency of business processes as well as strategy implementation and goal achievement because employees will work to the best of their abilities to produce the most high-quality products in the shortest period of time and resources" (Mitra, 2020; Baseweti & Muturi, 2018).

Hypothesis 3: The relationship between organisational policy and sustainable growth of manufacturing firms is not significant.

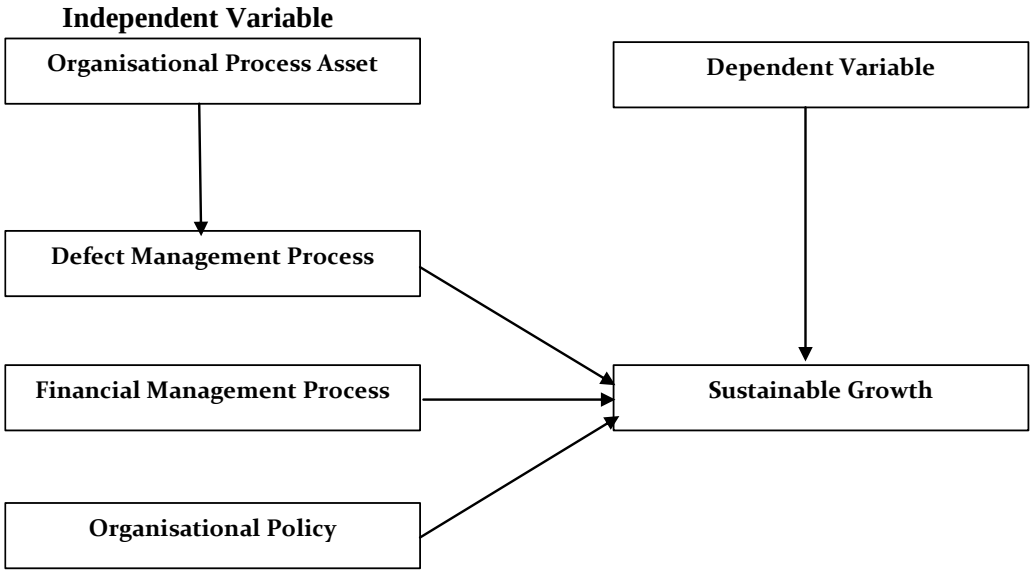

Fig. 1: Conceptual Framework

Theoretical Framework

The current study is anchored on the Resource-based theory by Barney (1991). The resource-based theory holds that the strategy adopted by an entity depends on the resource. The theory believes that internal resources like assets, capabilities, and competencies if identified and utilized effectively would give firm competitive advantages and creates firm's sustainablility. Saleh (2018) posits that, "to achieve competitive edge, companies must identify those "unique, valuable, rare, imperfectly imitable resources (assets), exploit them and adopt strategies that can ensure effective and efficient utilization of those unique, rare, firm-specific, and not substitutable internal resources to gain competitive advantage, maximize profit and firm value". The resource-based theory provides the theoretical framework which evaluates the nexus that exist between organisational process assets management and "firms' sustainable growth" especially manufacturing companies.

Empirical Reviw

Smyth, Anvuur and Kusuma (2017) evaluated the value of business process management to understand complex asset management processes in London, United Kingdom. A mixed method approach was used. A questionnaire survey and semi-structured interviews were employed. The result shows that, "there is a lack of engagement between Design and Construction and Operation and Management". The trend is a moving counter to integration.

Ziolo, Fidanoski, Simeonovski, Filipovski and Jovanovska (2017) provided an introduction to and pointed "out the role of sustainable finance as a toll supporting

sustainable economic development" in Poland. Their empirical research and literature reviewed examined "the Organisation for Economic Co-operation and Development (OECD) countries after the crisis of 2008". They found that, "soundness of banks, quality of educational system and burdeon of government system have a positive impact to the nominal Gross Domestic Product (GDP) per capita". On The misery index and ease of access to loans negatively affected nominal GDP per capita in the period of our observation. Hence, as a policy recommendation, it is very important to construct a model which will reflect these and other similar results in order to accelerate the economic development. That is the main challenge for people, governments, financial organisations and companies worldwide.

Oyebanji (2018) in his study materials management and its effect on the performance of manufacturing Sector, "concluded that the approach of organizing the system of financial control influences not only the safety of material and financial resources but all its financial and economic activities". A "properly organized system of financial control allows not only for early detection of flaws but to take timely action to address them". Descriptive research design was used and questionnaire was used to collect data from a sample made up of 153 respondents. Pearson Product Moment Correlation (PPMC) was used.

Simiyu and Mainin (2018) examined "risk and financial planning practices" and have established that sound financial management practices and control are components that have significant yet moderating relationship with the performances of the firm. The study utilized mixed method research and used interview and questionnaire to collect data from the respondents consisting of 230. Thematic analysis and PPMC were the statistical tools.

Maletic, Maletic, Al-Najjar and Gomiscek (2018) explore "the relationship between physical asset management (PAM) practices and sustainability performance in Slovenia". A "framework of interrelated constructs was developed based on the existing literature and consequently tested through empirical study". Survey data were collected from organizations operating in six European countries (i.e., Greece, Poland, Slovakia, Slovenia, Sweden, and Turkey) and analyzed using Partial Least Squares Path Modeling (PLS-PM). The results offer support for the proposed hypotheses, showing that PAM practices positively influence the sustainability performance outcomes, namely economic, environmental, and employee-related social performance. Overall, this study demonstrates that a PAM framework can be conceptualized by four sub-constructs, namely physical asset risk management, physical asset performance assessment, physical asset lifecycle management, and physical asset policy and strategy. Finally, this study brings to light some "theoretical and managerial implications as well as directions for future research". The findings of the study underscore PAM areas in which managers should focus on in order to optimize costs, performance, and risk exposures concerning the physical assets, and therefore enhance sustainability performance.

Similarly, Mwanik and Job (2018) evaluated "the effect of asset structure on value of firms quoted under the manufacturing sector of Nairobi securities exchange, Kenya". Asset structure was proxied using Property, Plants and Equipment "to total assets, current assets to total assets while firm value was measured using market to book value". Data collected from 11 manufacturing firms between 2012 to 2016 were analysed using ordinary least square regression analysis. They found that asset structure has positive significant effect on value of firm. Property, Plants and Equipment, and long-term investments have significant effect on firm value, while current assets and intangible assets have insignificance effect on firm value.

There was a similar study by "Irungu, Muturi, Nasieku and Ngumi (2018) on asset tangibility and performance of quoted companies in the Nairobi Securities Exchange, Kenya". Data were collected from financial statements and were analysed using dynamic regression model with analysis of variance. The finding shows positive significant relationship existing between "asset tangibility and financial performance". Also, tangible assets have positive and significant impact on performance, while intangible assets have negative insignificant impact on the performance of quoted companies in the Nairobi Securities Exchange, Kenya.

Glova and Mrázková (2018) evaluated "the impact of intangibles assets on the value of firm". Descriptive design, ordinary least square regression was adopted, and data collected from a sample of 1520 between 2011 and 2015 fiscal years. Intangible assets were proxy using research and development. The finding shows that research and development has positive significant impact on the value of firms. The finding reveals that "research and development is a driver of firm's market value".

The study of Murat and Derya (2019) on "the impact of intangible assets, sustainable growth on value of quoted Turkey firm". Using Ordinary least square in analyzing the panel data of innovative property and economic competence from sample of 1,353 between 2005 and 2013. The study finds that, "the cumulative value of intangible assets has positive impact on the growth rates and that computerized database, and economic competence impact on the growth rates and value of firms".

Zaher (2019) evaluates "the relationship between firm size, asset structure, and firm value". That is, the impact firm size, and asset structure on firms'value. Descriptive research design was used and adopted the ordinary least square regression in analyzing the data collected from mining and extraction firms between 2010 and 2018. The finding shows that the combination firm size and asset structure has positive significant impact on value of mining and extraction industry.

Gautam, Kishore, Khanna and Jaggi (2019) investigated "Strategic defect management for a sustainable green supply chain in India". The researchers developed two models, the first "model discussed the integrated problem-solving approach and the second used the Stackelberg policy". The total profit is maximized by jointly optimizing the number

of shipments, order quantity and back-ordering quantity. Numerical analysis and sensitivity analysis were performed to establish the validity and robustness of the developed study. The "findings suggest better performance of the integrated model over the Stackelberg game model - moreover, the study highlights the significance of defect management so as to achieve sustainability goals without compromising financial objectives".

Al-Ahbabi and Nobanee (2019) examined "Sustainable Financial Management & Sustainable Financial Growth in Abu Dhabi University, United Arab Emirates". The study aims at utilizing recent research papers that elaborate further on the subject matter. The researchers "incorporated the use of peer-reviewed journals". These researchers show that, "financial executives need to incorporate financial management to sustainability issues, address risks that impact on corporate sustainability, and understand the mutual relationship between sustainability practices and sustainable financial growth predicting corporate financial risks, and corporate sustainability reporting disclosure". This allows financial management practices promotes development.

Al-Breiki and Nobanee (2019) explored "the role of financial management in promoting sustainable business practices and development in Liverpool, United Kingdom". Based on thematic analysis of resources from varied scholars, it confirmed that "appropriate financial management models are necessary to enhance productivity while mitigating issues of financial risks". The findings also indicated that "allocating capital budgeting for sustainable issues enhances the competitive advantage of the business, and utilization of western and the Islamic financial are efficient sustainability measures". The study concludes that financial management plays a vital role in promoting sustainable business practices and development.

Maletic, Maletic, Al-Najjar and Gomiscek (2020) examined "the physical asset management core practices and the performance implications of integrating these practices into business in Dubai, United Arab Emirates, in particular by assessing their impact on operational performance". Survey data were collected from managers in 138 international and local organisations. The data was analyzed using Partial Least Squares Path Modeling (PLS-PM). The "second-order construct consisting of PAM latent variables, namely Strategy and Planning, Risk management, Lifecycle Delivery, Asset Information, and Asset Review was evaluated". The results show that, "PAM core practices directly influence operational performance".

Lima, McMahon and Costa (2021) established "the relationship between asset management and business performance (AMBP) in Brazil". The study "presents a theoretical model, AMBP Model, which offers enablers supporting the organisations to make better decisions in infrastructure investments, through the construction of a relationship map between AM key-processes, asset performance indicators (API) and

business key performance indicators (KPI)". The association among these elements is a result of the analysis of case studies in different sectors of an economy, "publicly available on AM specialized sites or AM conference proceedings".

Ziolo, Bak, and Cheba, (2021) examined "the link between sustainable finance and SDGs based on European Union countries belonging to the OECD in Poland". They presented a new and the original research approach. They "assumed that the sustainable finance model plays a fundamental role in implementing SDGs (all SDGs were analyzed using Schoenmaker (2017) approach except for SDG 6 and SDG14, due to lack of statistics were not analyzed) and ensuring that social and environmental sustainability are reflected in SDGs". The results show that, "the more sustainable the finance model, the zetter the achievement of SDGs in the group of analyzed countries". They found a strong link between sustainable finance model and social sustainability "(SDG 1, 3, 4, 5, 10, 16); environmental sustainability (SDG 11, 12, 13, 15) and economic sustainability (SDG 8, 9, 17)".

Wegwu (2022) investigated "the relationship between employee relations policies and organisational sustainability in Nigeria". 3 research questions hypotheses formulated, with a sample size of 100 from a population of 120. A cross sectional survey method was used and in addition, structured questionnaires administered in gathering information. Data collected was analyzed using Pearson Product Moment Correlation Coefficient statistical tool. The "findings revealed a positive and significant relationship between employee relations policies and organizational sustainability". It was therefore concluded that employee relations policies have a positive and significant relationship with organizational sustainability. It was recommended that "employee relations policies should be accorded adequate priority in order to achieve organizational sustainability and performance".

Goel, Cholette, Wynn, Manli and Meyers (2022) presented "a case study that explores the application of Business Process Management (BPM) to power transmission assets in Malaysia". BPM principles were applied for decision modelling and to capture the lifecycle of power transmission assets. The case study demonstrates how BPM application to Asset Management (AM) processes can result in greater clarity of processes, increased collaboration, a better understanding of data, external rules, and regulations, and serve as an internal point of audit. The result showed that Asset Management (AM) processes play a significant role in organisations' profitability. Clearly documented and managed AM processes improve the delivery potential of assets and minimized the costs and risks involved. Business Process Management (BPM) is a discipline that uses various methods, tools, and techniques to discover, model, analyze, measure, improve, optimize, and automate business processes.

Albloushi, Jabeen, Mehmood and Farouk (2022) examined the role of total quality management (TQM) and its effect on corporate SD (CSD) in Abu Dhabi, United Arab

Emirates. Also, this study focused on the mediating role of green innovation (GI). The study "used data from a time-lagged design with two waves that strengthened the hypothesized framework and used structural equation modeling to test the hypotheses". The results showed "a significant influence of TQM on CSD and GI. Also, GI positively affects CSD and fully mediates TQM and CSD" relationships.

Psarommatis et al., (2022), "in a study of the traditional quality improvement and Zero Defect Management (ZDM), a direct comparison between traditional quality improvement methods with ZDM revealed that ZDM can significantly increase the sustainability levels of manufacturing systems".

Ozilli and Lorember (2023) investigated the effect of financial stability on sustainable development in Nigeria. They used a unique financial stability index, sustainable development index and four SDG indicators. They analyses 26 countries from 2011 to 2018 using the system GMM method. The findings showed that, "financial stability has a significant effect on the level of sustainable development and the effect is negative in Asian countries"; "European and Asian countries have a high sustainable development index compared to African countries". The results "of the individual SDG analyses showed that financial stability has a significant effect on SDG 3". "Financial stability has a negative effect on SDG 10 in Asian countries and a negative effect on SDG 3 during periods of economic prosperity". "Financial stability has a positive effect on SDG 3 and SDG 7 in countries where the banking system have high capital buffer. The results showed that the effect of financial stability on sustainable development depends on how sustainable development is measured".

Wijethilake, Upadhaya and Lama (2023) explored the competing role of organisational culture (policy) in organisational change towards sustainability in Colchester, UK. Drawing on the competing values framework, data was collected by interviewing senior executives and sustainability managers of a leading multinational garment manufacturing organisation based in Sri Lanka. The study finds out that organizational culture tends to play a proactive role by going beyond the compliances and regulatory requirements in organisational change towards sustainability. Four competing cultural values appear to shape their corporate sustainability approach, namely (i) people-oriented changes (e.g. empowerment, training, development, team orientation, leadership), (ii) growth-oriented changes (e.g. sustainability innovations, continuous improvements, community engagement), (iii) productivity- and efficiency-oriented changes (e.g. use of professional recommendations, open communication), and (iv) stability- and control-oriented changes (e.g. sustainability budgeting, investment appraisal, life-cycle assessment). The case organisation is more likely to be driven by an integrated approach of the four competing cultural values rather than by one dominant approach. The study contributed to the organizational culture and sustainability literature by highlighting the importance of aligning competing cultural values as a means of addressing sustainability challenges, in the much-debated garment

manufacturing industry in the South Asian context. Finally, a framework for sustainability organizational culture was proposed.

METHODS

Descriptive survey design was adopted to survey the opinion of "manufacturing firms in the South-South Nigeria". From the study's population of 34,567 SME owners (SMEDAN, 2022) consisting of manufacturing firms, a sample of 395 was taken using Taro Yamani's sample size formula. The respondents who took part in the survey were selected using multi-stage sampling method. Data was collected via a structured questionnaire from a sample of 395 SME owners out of which 354 of them were retrieved from the respondents. A questionnaire expressed by the Likert scale on a four point continuum ranging from strongly agree to strongly disagree was used to elicit information from respondents. The face and content validities were used to validate the instrument while the test-retest reliability method was adopted to examine the consistency of the instrument in measuring the constructs. Cronbach Alpha value of 0.87 was obtained and considered reliable. Hypotheses were tested using the Pearson Product Moment Correlation (PPMC).

DATA ANALYSIS AND DISCUSSION OF RESULT

This section deals mainly with the presentation and analysis of the data obtained from the respondents as well as the analysis of the results from the hypotheses tested.

Table 1: The Respondents' Socio-Demographic Profiles

Characteristics		Frequency	%
Sex	Male	270	76.3%
	Female	84	23.7%
	Total	**354**	**100.0**
Age	18-28	123	35.0%
	29-39	148	42.0%
	40 years and above	19	5.0%
	Total	**354**	**100.0**
Education	Secondary education	196	55.0%
	Higher education	158	45.0%
	Total	**354**	**100.0**
Manufacturing firm type	Small Enterprises (SEs)	309	87.0%
	Medium Enterprises (MEs)	45	13.0%
	Total	**354**	**100.0**
Average Incomel (₦)	100,000-999,999	294	83.0%
	1,000,000 and above	60	17.0%
	Total	**354**	**100.0**

Fieldwork 2025

The survey respondents' socio-demographic data is shown in Table 1 above. There were 23.7 percent female respondents and 76.3 percent male respondents. Ages of survey respondents are spread as follows: 5.0% are over 40 years of age; 42.0% are between 29 and 39 years while 35.0% are between 18 and 28. 55.0% had completed secondary school, 45.0% percent had completed higher education. The manufacturing firm type analysis showed that 87% of them are small scale businesses, while the remaining 13% are medium scale businesses oe enterprises. The average income finally revealed that those making between ₦100,000 and ₦999,999 had an 83% share, while those making one million or more had a 17% share. This demonstrated that most companies in South-South region of Nigeria are owned and operated by business owners with secondary education certificates between the ages of 28 and 39. These categories own small scale manufacturing companies with an average capital of ₦100,000 to ₦999,999. Inferentially, the three main variables that impact the South-South region's SME manufacturing sector's capacity to grow sustainably are sex, education, and finances.

Table 2: Descriptive Statistics:

Parameters	N	Min.	Max.	Mean	Std	Skewness	Kurtosis
SG	354	3.00	4.60	3.9966	0.41908	-0.641	-0.159
DM	354	2.60	4.60	3.8006	0.46412	0.073	-0.531
FM	354	3.20	4.40	3.8486	0.32829	-0.313	-0.915
OP	354	2.60	4.80	4.1090	0.63351	-0.871	0.142

Researchers'compilation, 2025

Table 1.1 above show the descriptive statistic of the of the respondents responses in respect to the variables under study. From the table above, the mean value of the variables: Sustainable Growth (SG), Defect Management Process (DM), Financial Management Process (FM) and Organisational Policy (OP) are 3.9966, 3.8006, 3.8486 and 4.1090 receptively. The number of respondents is N = 354. For each of the variables (SG, DM, FM and OP), the minimum, maximum, mean, standard deviation, skewness and kurtosis statistics are indicated accordingly in Table 1.1 above.

Test of Hypotheses:

Hypothesis One

The relationship between defect management processes and sustainable growth of manufacturing companies in the South-South of Nigeria is not significant.

The result of the test of this hypothesis is presented in Table 2

Table 2: Pearson correlation test for hypothesis 1

	Statistics	Defect management processes	Sustainable growth of manufacturing companies
Defect management processes	Pearson Correlation	1	0.132*
	Sig. (2-tailed)		0.000
	N	354	354
Sustainable growth of manufacturing companies	Pearson Correlation	0.132*	1
	Sig. (2-tailed)	0.000	
	N	354	354

*. *Correlation is significant at the 0.05 level (2-tailed).*

As seen in Table 2, r ("the Pearson correlation coefficient") is 0.132 and its Pvalue is 0.000 (p = 0.000). This indicates that the null hypothesis is rejected. In conclusion, there is a positive significant relationship between defect management processes and sustainable growth of selected firms in the South-South of Nigeria.

Hypothesis Two

The relationship between financial management processes and sustainable growth of manufacturing firms in the South-South of Nigeria is not significant.

The result of this hypothesis is presented in Table 3

Table 3: Pearson correlation test for hypothesis 2

	Statistics	Financial management processes	Sustainable growth of manufacturing firms
Financial management processes	Pearson Correlation	1	0.110*
	Sig. (2-tailed)		0.000
	N	354	354
Sustainable growth of manufacturing firms	Pearson Correlation	0.110*	1
	Sig. (2-tailed)	0.000	
	N	354	354

*. *Correlation is significant at the 0.05 level*

As seen in Table 3, r ("the Pearson correlation coefficient") is 0.110 and significant at (p = 0.000). This indicates that, the null hypothesis is rejected. This implies that the relationship between financial management processes and sustainable growth of the selected firms in the South-South of Nigeria is positively significant.

Hypothesis Three

The relationship between organisational policy and sustainable growth of manufacturing firms in the South-South of Nigeria is not significant.

The result of this hypothesis in presented in Table 4.

Table 4: Pearson correlation test for hypothesis 3

	Statistics	Organisational policy	Sustainable growth of manufacturing firms
Organisational policy	Pearson Correlation	1	0.110*
	Sig. (2-tailed)		0.000
	N	354	354
Sustainable growth of manufacturing firms	Pearson Correlation	0.110*	1
	Sig. (2-tailed)	0.000	
	N	354	354

**. Correlation is significant at the 0.05 level*

As seen in table 4, r ("the Pearson correlation coefficient" is 0.118 and significant at (p = 0.000). This indicates that the null hypothesis is rejected. This implies that the relationship between organisational policy and sustainable growth of the selected firms in the South-South of Nigeria is positively significant.

DISCUSSION OF RESULT:

According to the study's findings, ther relationship between defect management processes and sustainable growth of manufacturing companies in the South-South of Nigeria is significant. This is in line with the works of (Choi et al., 2017); (Powell et al., 2022); (Taidi & Mbarki, 2016); (Psarommatis & Kiritsis, 2021) who noted that to avoidance of defects in the manufacturing process helps to make firms remain competitive today and tomorrow. Also, scholars such as Psarommatis et al. (2022) and Mourtzis, Vlachou and Milas (2016) stated that zero defect manufacturing has a lot of merits when compared to improvement s methods employed by contemporary firms. Psarommatis et al. (2022) study aligns with the study finding as they stated that defect management reduce energy and resources waste, as it results in production of quality goods and services. These findings give support to the study finding which shows a correlation between defect management processes and sustainable growth of manufacturing companies in the South-South of Nigeria.

The second hypothesis shows that the relationship between financial management processes and sustainable growth of manufacturing firms in the South-South of Nigeria is positively significant. This finding corroborates with the work of Ibrahim et al. (2017) who argued that some manufacturing firms are without financial plan talk less of a financial control framework. The sfinding is in consonance with the result of the

research as opined that the imperfect nature of the market makes financial planning important so that manufacturing firms can strategically maneuver through with profit at the end. These literature lend credence to the study finding that stated that financial management processes influences sustainable growth.

The third hypothesis indicated that the relationship between organisational policy and sustainable growth of manufacturing firms in the South-South of Nigeria is significant. The work of Manoharan and Singal (2019) is in line with this finding as they stressed that performance is based on organisational effectiveness and organisational effectiveness is the extent to which firm, with management and employees, carry all the business processes from procurement, administration, production, supervising, and marketing of the products and services to meet the customers' requirements. Kryshtanovych et al. (2021) state that, "to be successful, organisations must take into account aspects such as their investment plans and long-term growth objectives as well as their internal environment". In addition, Shet et al. (2019) opined that policies give birth to different strategies that can be employed to achieve success and investing methods and sustainable development objectives are some of such strategies. The theory used to support the study revealed that resources are assets in organisational and have the potential of generating profitable results to the company when used efficiently. This implies that tangible and intangible resources contribute to sustainability of manufacturing businesses when managed adequately and effectively.

CONCLUSIONS AND RECOMMENDATIONS:

The study established that defect management processes, financial management processes and policy are measures that affect sustainable growth. Defect management processes according to the study improves quality production that influences customer loyalty. It reduces wastage and loss of resources and materials, thereby helping to control production process. Also, financial management process is linked to sustainable growth of the firm. When there are financial management processes through good organisational policy, wastage is reduced in purchase of materials needed, production process, the right quantity, "investment in the right market and management of profit".

Recommenations

Based on the findings, the following recommendations were made:

i) Companies should incorporate defective management processes to produce almost zero defect management in the company. The implementation of such strategies will help to bolster growth through reduction in waste and improvement in the quality of production,

ii) Manufacturing companies should design a financial management plan that accounts for the cash coming in and those going out "in order to provide a work sheet" for expenditure and income. This way, wastage will be reduced and

resources used adequately to meet the core needs of the organisation especially those of production and remuneration and

iii) Manufacturing firms should design a good policy plan that has long term goals which do not compromise and sabotage short term goals. Policies tied to the goals create a template to work with and guide the action of members in achieving the set goals

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