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OPERATIONS MANAGEMENT AND ITS CRUCIAL ROLE TO STABILIZE THE NIGERIAN ECONOMY

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ABSTRACT:

This study examines how operations management (OM) is important to Nigeria's economic development. OM allows the capacity of technology to minimize resources, optimize processes, and enhance development, which, in turn, increases productivity, competitiveness, and sustainability of the economy in several sectors. Effective OM overcomes such barriers as inadequate infrastructure, a lack of market maturity, and excessive costs using corrective resource management methods and the use of lean production techniques. The streamlined theme in resilient supply chains, among others, involves effective inventory management, logistics optimization, and strong supplier relationships. Total Quality Management (TQM) and Theory of Constraints (TOC) are meant to provide customers with high-quality production and find out the structure that slows down production. Investment in infrastructure developments and maintenance plays a key role in the overall health of OM. Through the introduction of a circular economy model, OM accomplishes a reduction in waste disposal, optimum utilization of available resources, and further technological developments. Much of this is due to its role in chatting up jobs as well as add-ons that are employed to beef up industries through skills development and effective operations. It is an economic growth catalyst to the extent that it sparks business growth and enhances economic output. Strategic achievement involves national economic objectives, environmental studies, and business operations to achieve the stability of the country's economy. As a cornerstone of a healthy Nigerian economy, OM provides an opportunity through which transition to an efficient, innovative, smart, and sustainable economy, improvement of infrastructure and reliability of supply chains, facilitation of investment, and creation of job opportunities are ensured.

KEYWORDS:

Operations Management, the Nigerian Economy, and Economic Development.



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Introduction

In a Nigerian economic terrain characterized by challenges, exigencies, and endemically gyrating trends, operations management is the hinge that attaches both stability and progress. Nigeria is currently facing challenges of different kinds, such as bad infrastructure or market forces. Management of operations therefore becomes a critical journey in the country that should streamline resources and focus on efficiency and resilience. The article addresses the discrete yet comprehensive impacts of operations management on indices of productivity, competitiveness, sustainability, and economic stability in Nigeria (Ojo, 1995; Saad & Farouk, 2019; Russell & Taylor, 2019). Indeed, the smooth running of business activities is more than paramount for keeping the economy in stable shape and, at the same time, for its steady growth. It does that by making procedures much swifter and smoother, reducing waste as well as preventing needless resource consumption typical in the areas of agriculture, manufacturing, and service delivery. In addition to ensuring supply chain resilience, it implements inventory management, logistics optimization, and supplier relationship management as its practices. In the area of operations management, effectiveness is also achieved by using lean principles, just-in-Time inventory systems, and process optimization techniques to cut costs and enhance competitiveness (Calicioglu et al., 2019). This creates an advantage for Nigerian products in both the domestic and foreign markets by also impacting favorably the balance of trade, where exports rise and imports reduce. Infrastructure optimization is another element in the operations management puzzle that we need to consider carefully. Through the re-alignment of existing assets, modernizing the asset management systems, and using data to project infrastructure priorities, Nigeria has a chance of increasing economic stability and sustainable growth in the long run. Efficiency, quality improvement, and customer satisfaction are some of the areas that operations management should take care of (Sanni, 2006). The deployment of total quality management systems, such as TQM and Six Sigma, would enable the organization to provide better products that meet customer expectations, ensuring they develop an image of reliability. This last aspect of operations management is a key background factor that drives innovation and adaptability, allowing Nigerian companies to stay on top of market trends, react accordingly to customers' changing preferences, and seize development opportunities, expanding and providing stability to the entire economy (Patyal&Maddulety, 2015; Ojo, 1995; Saad & Farouk, 2019).

Operations management in Nigeria plays a vital role in the creditable aspects of resources, productivity, their competitors's landscapes, and their supply chain's uninterrupted participation in the stability of the Nigerian economy. Efficient utilization of corporate assets such as workforce, raw materials, and equipment helps businesses cut down on waste and eliminate redundant operation processes, leading to cost savings that are used or reinvested in additional expansion, job creation, and innovation. Profitable and effective operations strategies like process redesign, automation, and performance measurement act as the core drivers for business productivity within different sectors, enabling businesses to expand their GDP and boost the entire economy (Ugoani&Ugoani, 2018). This competitiveness offers local businesses these foreign and local markets as a domain for gaining competitive advantage, and that, consequently, reduces reliance upon imports, giving a positive role in the balance of trade. Management of operations also includes investments in maintenance and existing infrastructure as well as infrastructure creation. Economic development is thus achieved, which includes, firstly, the involvement of traders and investors, and secondly, it provides a strong platform for future growth and stability (Hall, 2018). The rightful management of the economy will be necessary for the whole operations management to be in place, and thus people will get engaged in active work and earn income, thus lifting them out of poverty and reducing social inequalities. Such a condition of stabilizing socio-economic features gives overall political stability and provides an

environment that favors sustainable development. Operations management is involved in promoting innovation and technological progress, which has a direct effect on the competitiveness of industries, the productivity of workers, and the birth of more industries, thus achieving higher economic diversification and stability of the economy in Nigeria (Rodrik, 2007; Annarelli&Nonino, 2016).

If there is an enterprise that produces services and products, the management of that institution must handle the processes that go through putting in resources and personnel until they reach desired outputs or inputs, such as operations management (OM). The role of operations management is twofold: chiefly achieving productivity at a low cost to the organization while taking care of the customers' satisfaction; this can be done by continuing the maximization of processes (Barnes, 2018). The function area of operations involves making planned, operative, and sourcing decisions, designing production, managing the supply chain, providing customer support, and returning defective products (Walden, 2021). This function takes care of purchasing, assembling, programming, and maintaining the use of resources aimed at production in a company. It comprises managing personnel, PM, technology, information, and other parameters. The strategic aim of operations management is to put into motion, plan ahead, control, coordinate, and utilize all the production resources employed in the manufacture of either goods or services. Moreover, the main function is directing and monitoring the business so that it conforms to the consumer's will and its goods meet enough expectations (Gunther, 2018).

That which is called operations management is the making, working out, and maintaining of a method that will be perfect for carrying out recurrent jobs or one-time big projects aimed at fulfilling particular organizational goals (Jelani & Muhammad, 2019). Operations management (OM), from the classical definition of Fantozzi, Di Luoazzo, and Schiraldi (2023), and Brown et al., *Organizational Leadership* (2018), is an area of management that aligns all processes in the production and delivery of products and/or services. To provide for the smooth and successful operation of the organization, it constitutes the strategic framing, ordering, and cohesively directing of the resources, which include labor, materials, equipment, and technology. The act of changing raw materials employed in an organizational production or operation system into finished products or services with appropriate policies acquired through mixed techniques is considered operations management (Goether, 2019). The term production management refers to the gathering of management tasks, which are the basis of producing certain commodities, while operations management refers to this same collection of tasks being applied to service provision (Kang et al., 2016).

Operation management is the process of combining and transforming different resources employed in the organization's production/operation subsystem into value-added goods and services in a regulated way by the organization's policies (Wolniak, 2021). Operation management's primary responsibility inside the organization is to turn inputs, such as raw materials, into completed goods and services (Fiorentino, 2018). The conversion of an organization's inputs into completed goods or services is the responsibility of operations management. Human resources, such as employees and supervisors, facilities and procedures, such as structures and machinery, as well as supplies, technology, and data, are examples of inputs (Analytics & Muñoz, 2023). The operation's management purpose is to use different resources in the transformation of inputs into outputs (Pacana et al., 2014). Operation management is one of the major management fields, and this implies that it is aimed at regulating how various businesses operate and function. Its scope involves how to carry out routine tasks, how to plan, and what to do to get the work done (Epi &Maganti, 2022). The functions entrusted to operations management include arranging the necessary resources and materials to produce the final

manufactured product. The tasks are comprised of product design, requiring resource materialization, setting up factories and schedules, maintaining inventory, quality assurance, making the goods requirements, and making new work procedures (Annarelli&Nonino, 2016; Reid &Sanders, 2019).

Operation is one of the business processes involving production, service, and project management. The implementation of these planned activities, the use of the resources effectively, and the targets will be achieved within the deadlines and budgets, as reported. This process of implementation involves devising a schedule, coordinating, controlling, organizing, buying, retaining quality control, and handling inventory control. The first step is to develop a thorough document that contains a schedule with a deadline for the completion of every manufacturing stage. It will also monitor and guide personnel, equipment, and supplies, making sure all tasks are completed on time. Scheduling also involves deciding on a company site and planning the manufacturing schedule, which directly affects a firm's success. Organization within the operations subsystem involves setting up roles and information flow, delegating power and accountability for tasks, and negotiating the best price for supplies, machinery, and raw materials. Controlling involves assessing actual outputs and comparing them to planned operations management to ensure that the plans for the operations subsystems are carried out. Quality control involves ensuring the quality of products produced, including their freshness, strength, design, and conformity to industry or federal requirements. Inventory control is the monitoring of the reserves required for the production process or service, which prolongs the availability of the company's funds in other business places. Along with this enter the expenses of other kinds, to which those in charge of inventory control must devote attention as well as the right quantity of inventory that they have to hold in stock.

Theory of Constraints (TOC)

To explain the core of this research, I relied on the Theory of Constraints (TOC). The Theory of Constraints (TOC) was first proposed by Eliyahu M. Goldratt in his 1984 work, "The Goal: "Theory of Constraints: Never-ending Renovation of the Leading Theory of Management." Goldratt introduced TOC as a controlled revolutionary system that goes beyond pointing out constraints but seeks to discover all possible constraints' instructions that will enable us to achieve the desired targets. The obvious ones in the TCL movement who played a big role are Schragenheim, Jeff Cox, Eli Schragenheim, Robert E. Fox, and James F.R. Cox III. From the Five Focusing Steps to the Drum-Buffer-Rope (DBR), Goldratt introduced his flagship TOC management tool, Theory of Constraints Thinking (TOC). Cox, being a talented author, carried out the major part of the task of translating Goldratt's thought into a wonderful plot and made TOC well-known far beyond manufacturing into many other spheres of activity. Eli Schragenheim puts a great deal of effort and resources into the popularization and usage of TOC methodological principles, especially when working on projects and supply chains. John has been utilizing his research work and thesis in the fields of finance, marketing, and organizational change management throughout his career to establish the application of the Theory of Constraints. Cox III, who is a respected figure in the Theory of Constraints (TOC) field, has authored countless pieces on the subject and has demonstrated its effectiveness for many organizations in the various market sectors (Şimşit et al., 2014).

The Theory of Constraints (TOC) is a management approach with a focus on the fact that every system includes constraints, whether manufacturing processes, supply management, or organizational systems. These constraints may include load limitations, policy constraints, or market constraints, and thus, the system capability can be restricted and not be scalable. TOC is one of the productivity management tools. This theory accurately states that the performance of the system is a function of its

bottleneck and non-bottleneck areas (Pozo et al., 2009). However, improving non-constrained areas would not induce an improvement in the system's overall performance. It says that nothing is apart from it; the way we organize and allocate our budget is conditioned by its functioning. TOC infers that such barriers can be weakened or removed through strategic or intentional deployment of resources. This involves discovering and removing the causes that are causing limitations on throughput, thus enabling a high level of achievement. TOC focuses on a holistic approach and conceptualizes organizations as the whole, which is a system of functions that are interconnected instead of just the sum of their parts. Not only does it stress improvement through constant modification of the company manual, but each organization also needs to know and rectify its shortcomings that hamper progress. Fundamentally, TOC places the core objective of any organization to allow it to be capable of getting its intended results, either as regards operational excellence, efficient operations, or strategic objectives. Any action or mistaken choice should be meticulously considered from the point of view of helping achieve a goal. These conceptions are the basis for the application of TOC ideas and methods in real operations. Through this guide, firms may easily identify their ways for optimization, effectively allocate their resources, and achieve sustainability in the long term (Şimşit et al., 2014; Rahman, 1998).

The Theory of Constraints (TOC) is a significant concept in the area of operations management seeking attention in the economy of Nigeria. TOC aims to distinguish and deal with the framework of the systems, which is basic in dealing with concerns in sectors that employ infrastructure, supply chains, and production processes. Through the implementation of tactical interventions like the creation of infrastructure and transportation systems, as well as in-chain processes and project efficiency initiatives, operations management can improve the efficiency of the Nigerian economy. TOC stands for The Operational Condition, advocating for the highest rates of throughput and effectively accomplishing organizational aims. Nigeria's operations management is devoted to energy and resource maximization in various fields such as agriculture, manufacturing, and services, introducing the best approaches, implementing the latest technologies, and minimizing waste. It does so by raising output, stabilizing prices, and lowering total amounts paid, thereby ensuring economic stability in the long run. The Conservation and Optimization Committee also underscores the importance of resource efficiency, like workforce, raw materials, and investment into tools and infrastructure, to obtain the expected results. Through achieving its objectives, such as reducing waste and inefficiency and making the best possible use of what funds are available, operations management contributes to economic stability in this way. A continuous improvement of an operations management program and, at the same time, adaptation are also fundamental. Lean manufacturing, agile supply chain management, and continuous process improvement can be used in manufacturing as a guideline that promotes creativity and the ability to be above adversity or any kind of challenge or opportunity. Additionally, TOC focuses on goal alignment and performance measurement, which entails establishing clear objectives, setting up performance metrics, and following a practical process of monitoring outcome implementation. The cooperation of the economic sectors with the aim of sustainable growth and development entails the concentration of resources on the economy, thus leading to its stability.

Components of Operations Management

The components of operations management based on empirical review are as follows: (i). Materials: raw materials, components, assemblies, and other pieces are the materials that are added to the operations management chain. These resources will be processed to create final goods, additional assemblies, or parts that are employed to produce another finished good or render service at a

different point in the operations management chain (Albert et al., 2021; Walden, 2021). (ii). Machines: Machines are inputs used to turn other materials, assemblies, or components into products, even though they are the result of another transformation process that transforms raw materials, parts, and components. One example of the operations management chain is the use of machines as inputs to the operations management transformation process. There is no production of goods or services in a vacuum (Walden, 2021). (iii). People: Humans are not commodities that can be transferred or handled, in contrast to other inputs such as machinery, materials, and other items in the operations management chain. Individuals must be guided, not controlled (more on this in the chapters that follow). One important link in the operations management chain is people. Humans are required to operate machinery, get goods and resources, maintain equipment and systems, transport materials, and deliver finished goods to the final consumer—an additional human link in the operations management chain (Walden, 2021). (iv). Management: System management is a must for someone. Without management mechanisms, it is easy to exceed tolerance. Management methods can become intolerable and generate subpar goods. A manager has the potential to distinguish between an excellent and a poor business (Favara, Appasamy, & Garcia, 2015; Walden, 2021). (v). Leadership: Although management and leadership are far from being synonymous, there are important distinctions. Not everyone is cut out to be a leader, and not everyone even desires to be one. It takes time for a competent manager to develop into a competent leader. Not every manager possesses all the talents required to be a leader. A leadership development program is necessary for a quality business to produce leaders who can guide the employees and management of the firm (Edwin, 2014; Walden, 2021). (vi). Money: The operations management chain cannot exist without money as an input. Why? Because no one can sell anything if no one is purchasing it. There won't be any materials, parts, or components to produce the goods or render the services if no one is purchasing or selling. Hiring competent managers, executives, or employees is impossible without revenue if no one is purchasing or selling. Nothing is created if there are no workers. Furthermore, no one will use the operations management chain's services if there is no money (Walden, 2021).

Strategic administration (OM) would do, not only to bolster the nation's potential towards growth but also to stabilize the economy as well. While technology is on its way to fulfilling human potential, it still needs to overcome current limitations and be applied in a supportive environment to achieve the best results. Implementing OM tools like process improvement, quality management, and lean techniques can bring productivity and job efficiency to many industries, like manufacturing and agriculture. Thus, it eliminates the result of waste, combats money spending, and springboards production, propelling economic growth (Chete et al., 2014; Adeodu et al., 2021; Olatunji et al., 2022). This is one merit of OM, as Nigerian businesses have the advantage of keeping their goods and services standardized with the use of different mechanisms such as TQM and Six Sigma. This makes companies not only domestically recognized but also internationally respected, resulting in the growth of their brands and an increase in demand for their goods. Supply chain management can enable Nigerian firms to obtain components, raw materials, and other components, thereby shortening lead times, lowering the composite cost, and making the delivery of an item more stable (Kumar et al., 2022). Operations management too depends on the application of innovation and technological adoption, hence ensuring that Nigerian companies modernize their operations and improve to be related to global trends. Through the application of Industry 4.0 technology, including digital tools and automation, or high-tech ways of manufacturing, it can be achieved (Fiakpa, 2020; Kiran, 2016; & Ross, 2017).

Efficiency is also one of the contributions of OM, considering the resource limitations of the country, as it leads to waste reduction, increased productivity, and optimal allocation of resources. This is a true case in point in manufacturing, services, and agriculture, in which saving resources translates into real yields that the economy depends on (Russell & Taylor, 2019; Stanton, 2023). The enhancement in efficiency combined with the effective function of all areas of the economy may be a catalyst for GDP growth, as companies that become more effective by using the same number of resources to manufacture more goods and services will boost the output of the economy, and as the bottom line of the economy increases, the economy of the country will thrive. As a result of that, people are more interested in investing, they get job opportunities, and it often results in sustainable development (Uju& Racheal, 2018; Olubusoye et al., 2023). Skill creation and job development become a second benefit of efficient operations since they require the presence of trained staff. The participation and investments made by Nigerians in OM education and training enable them to engage economically, ensuring the long-term stability of the Nigerian economy (Salaudeen&Alayemi, 2020; Fofana et al., 2023). Economic growth is also another advantage of an open market because it spurs competition in local and global markets, which strengthens the economy of the country, increases the proportion of exports in the economy, and draws in foreign direct investment to the country. Also, Nigeria can increase the rate of economic stability and change the structure of the economy by making it less dependent on volatile oil prices and implementing operational efficiency in non-oil sectors (Arowolo& Perez, 2020; Kuyoro& Olanrewaju, 2020; Nwozommuo, 2021; Ezeudu et al., 2021).

For Nigeria to stabilize its economy, it needs to follow a few important steps: Setting national economic objectives for Nigeria, conducting environmental assessments, and creating operational plans such as supply chain management, lean manufacturing, or Six Sigma are all part of strategic planning (Bhaskar, 2020). Identifying inefficiencies, mapping out current processes, and resource optimization in a nation are all part of process design and improvement (Faraj, van der Grinten, Meyerhenke, Träff, & Schulz, 2020). Building trusting relationships with suppliers, streamlining distribution and logistics, and cutting lead times and inventory expenses are all part of supply chain management (Davies, 2014). Establishing a culture of quality, concentrating on continual improvement, and putting quality control procedures into action are all components of quality management (Jelinkova&Striteska, 2015).

Monitoring key performance indicators (KPIs), evaluating data, and disseminating findings to stakeholders are all part of performance measurement and analysis (Gackowiec et al., 2020). To stay competitive and create a culture of quality, ongoing assessment and development are crucial to the nation. To ensure accountability and transparency, performance measurement and analysis also entail monitoring KPIs, evaluating data, and disseminating findings to stakeholders (George, 2019; Gackowiec et al., 2020).

Table 1: Components of Operations



Conclusions and Practical Implications

A look at the role of operations management in the smooth running of the economic structure of Nigeria indicates that the aspect is multifaceted as well as very fundamental for economic development in the country. As has been pointed out several times by now, operations management performs the crucial role of tying production, logistics, and various industries together, all aiming for increased efficiency, competitiveness, and stability withstanding the changes in the economic environment. The United Nations recognizes the strategic importance of operations management in guiding various sectors for emergent resource utilization, such as the agriculture, manufacturing, and service sectors. Through process simplification, resource optimization, and lean management, the operations function plays a huge role in cost reduction, competitiveness enhancement, and boosted market standing. Through this, the productivity of businesses can be enhanced, which in turn spurs the domestic economic output of the country. And last, but not least, the talk we had brings this home: that operations management is not only an innovator but also a cause of technological progress. The government can decentralize commercial activities to local communities by acquiring equipment, providing technical training, and facilitating trade through simplified regulations. This not only gives the entities some edge over their competitors but also promotes variety among the economic sectors and stability in that regard since they are now less volatile after oil setbacks.

Besides that, operations management has found its niche in the areas of infrastructure optimization, reliable supply chains, and quality product production. Through the provision of infrastructure, the effectiveness of supply chain systems, and quality assurance of outputs, operations management ultimately improves long-term economic stability as well as economic growth and sustainability. From facilitating both domestic and international investment to generating employment to contributing to socio-economic development, they contribute a lot to this aim. To add to the convergence of the theory of constraints (TOC), this adds a theoretical framework to understand the bottlenecks within the Nigerian economy. TOC advocates for pinpointing the bottlenecks and steers the operations with the purpose of, for example, optimizing inputs and outputs and the accomplishment of the objectives in general. At the end of the day, operations management turns out to be one of the most influential factors in keeping Nigeria on course. Through the pursuit of efficacies, innovations, and quality determinations, operations management plays a role in increasing productivity, competitiveness, and resilience in the face of economic challenges. To ensure the continuation of economic gains, the implementation of the present operations management policies, the formulation of an effective strategic plan, and the incorporation of collaboration will be important in sustaining economic development in Nigeria.

Although focused on improvement, operations management (OM) can significantly contribute to stabilizing the Nigerian economy. It stresses adjusting and cutting down expenses. This is done by diminishing waste and getting output at peak performance using lean manufacturing, process optimization, and automation. Therefore, local communities receive benefits, and traders become more competitive and profitable. Furthermore, OM focuses on resource efficiency, allowing for a balanced and enriching development process. An inventory management method that is well managed prevents stock losses and stockouts and, as a result, saves warehouse space costs. It helps to create more stability and sturdiness in the economy through damage reductions and an improved ability to resist disruptions. Additionally, through OM, every participant working in the supply chain comes together, thereby decreasing the delivery time and responsiveness to the market situation, but increasing it. This sharing of tasks and knowledge in a team workplace helps to increase the overall

output and efficiency, which makes the business more competitive. OM is meant to help drive the continuous improvement process that guarantees reliability and consistency of product and service quality, reducing defects, increasing customer satisfaction, and raising brand image. Cultures that give significance to ongoing development facilitate long-term financial stability by improving competitiveness as well as adaptability.

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