

OPERATIONAL CAPACITY PLANNING AND EFFECTIVENESS OF
MORTGAGE BANKS IN RIVERS STATE, NIGERIA

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ABSTRACT	KEYWORDS
This study examined operational capacity planning and effectiveness of mortgage banks in Rivers State, Nigeria. This study was guided by two measures of operational capacity planning namely capacity scheduling and capacity utilization, together with two indicators of effectiveness like adaptability and cost reduction. The researcher applied survey design purposive sampling method useful in collection of data. The population size for this study was 150 employees carefully chosen from five mortgage banks in Rivers State, Nigeria. Managers and supervisors were the selected participants. A sample size of 109 employees was unveiled through the aid of Taro Yamane’s formula. Structured questionnaire was used as the primary research instrument while information received from Rivers State government statistics and mortgage bank reports served as the secondary source. Spearman correlation coefficient was used to test the hypotheses. The findings of the study indicated that there was a positive significant relationship between capacity scheduling and adaptability, together with capacity utilization has positive relationship with cost reduction. The researcher insisted that operational capacity planning is positively connected to effectiveness of mortgage banks in Rivers State, Nigeria. The researcher recommended that mortgage banks should implement effective capacity utilization that could minimize production cost.	Operational capacity planning, capacity scheduling, adaptability, effectiveness

Introduction

The sustainability and progress of an organization depend on attained and developed knowledgeable skills and experience of their workers. The salary earners are expected to improve along with the present-day reality and respond to rapidly growing competition in the corporate world. It is through capacity planning that change is maintained in the organization, which appears to be the most enduring phenomenon and a necessary condition for development of manpower to deal with or adapt to the dynamic nature of work environment. Moreover, irrespective of the size and resources no organization could survive without competent or qualified employees and workforce planning. Indeed, operational

capacity planning is a predominant work apparatus to improve the input of employees as well as managers. Teemu (2011) disclosed that organizations with operational capacity planning are likely to fulfill the demand of customers and have successful operations which is vital in the enhancement of firm's effectiveness. Capacity is the competence of a manufacturing firms or financial institutions resources such as equipment, facility, process, workstation, and manpower to serve it purpose at a given time (Dawson, 2006). Operational capacity planning entails the amount of input resource available to produce a relative output over a period of time (Christopher, 2005). Thus, operational capacity planning usage is important to facilitate supply competence and capability levels with the predicted demand by the customers. The concept of capacity planning or workforce planning is evolving and changed to operational capacity planning (CIPM, 2013). Operational capacity planning is the process of ensuring that human resource requirements of an organization are identified, and plans are made for satisfying those requirements (Bulla & Scott, 1994). Meanwhile, operational capacity planning connotes an effort to forestall the organization's future, permit personnel recruitment to fulfill the organizational objective, improve effectiveness, and enhance service delivery (Ehlers & Lazenby, 2007). This interpretation advocates several specific interrelated activities that constitute operational capacity planning which include: human resource process, evaluation, personnel inventory, action plan, and control.

Operational capacity planning also signifies the personnel management practice that provides suitable human talents to achieve organizational goals. It contains forecasting future needs for workers, comparing these needs with the present employee capacity, and determining the numbers and types of workers to be recruited or terminated. Investing in operational capacity planning and infrastructure could boost economic growth, development, effectiveness of firms and productivity (Grant, 2014). Hence, the effort of top management in mortgage banks is highly required to implement operational capacity planning effectively in aligning the goals of the company with external opportunities and threats. Zeplin and Hotlan (2021) insisted that operational capacity planning assists companies to develop strategies for the purchasing of raw materials, handling the distribution system, and maintaining effective customer order. Considering the high rate of spread of technology together with unending rivalry among firms, enhancing effectiveness of firms may go a long way to lift their sustainability in the industry. Barnard (1964) claimed that effectiveness is the ultimate measure of managerial and organizational performance. Opoku-Mensah (2012) noted that effectiveness is a derivative result of accomplishing the cooperative purpose, which is social and non-personal. Effectiveness is the extent to which a firm accomplishes its predetermined goals. Drucker (1967) highlighted that society cannot satisfy its desires while excluding effectiveness. The effectiveness of firms boosts the economic wellbeing and also enhances the financial position of the organization (Schein, 1976). Operational capacity planning has a positive impact on the advancement of many enterprises. Mangwengwende et al. (2011) discoursed that adequate operational capacity planning promotes fast talent output towards greater performance results across the diverse departments in an organization. However, wrong application of operational capacity planning and unethical behaviours among employees in the banks created the need for this study. Therefore, the researcher deems it necessary to examine the impact of operational capacity planning on the effectiveness of mortgage banks in Rivers State, Nigeria.

Research Hypotheses

H_{0:1} There is no significant relationship between capacity scheduling and adaptability in mortgage banks in Rivers State, Nigeria.

H_{0:2} There is no significant relationship between capacity utilization and cost reduction in mortgage banks in Rivers State, Nigeria.

Literature Review

Operational Capacity Planning

Operational capacity planning refers to the procedure of verifying and establishing a direction for business activities by evaluating both the present and future objectives (Henderson & Hines, 2019). Operational capacity planning encompasses the method of formulating and directing strategic management practices. Although, Corrado and Matthey (1997) described the term capacity as the maximum level of output an organization could achieve within its optimal resources and operational schedules or shifts. Similarly, Teemu (2011) conceived capacity as the constraint, which the operating element is able to process, the number of services executed, and tangible products produced. Ordinarily, operational capacity planning represents a crucial strategic element in designing a system (Stevenson, 2005). Operational capacity planning entails a scan of the environment to build interactions with related functions in setting decisions, as a parameter for corporate objectives and improve the organization's competitiveness towards its business environment (Cochran et al., 2005). Furthermore, Ifeanyichukwu (2017) pronounced operational capacity planning as activities human resource practitioners adopt to identify the number of employees an organization requires to accomplish present and future business necessities. It is the process of determining the resources required to fulfil customers demand, accomplish the priority plan, and the methods needed to enhance organizational effectiveness. Operational capacity planning exists at each level of the priority planning process such as production planning, production scheduling, and material requirements planning.

These importance plans cannot be implemented, unless the firm has sufficient operational capacity to satisfy the demand of the customers and the workforce. Stevenson (2009) emphasized that the aim of operational capacity planning is to ensure that supply correspond to demand of products including to determine how much technology, skills, could be needed to meet present and future demand. Thus, banks and related firms get involved in operational capacity planning to manage changes in technology, changes in demand, perceived threat or opportunities, and changes in the environment (Arnold et al., 2008). Accordingly, capacity planning involves the expansion of detailed plans to implement policies and strategies to achieve objectives and basic aims of the company. A firm has to use appropriate operational capacity planning in order to beat its rivals, in the face of uncertainties in business and keep in touch with the changing environment (Yadav et al., 2020). When there is lack of operational capacity planning the organization is likely to mismanage warehouse space or material handling equipment which leads to high operating cost. The availability of appropriate capacity planning makes management to function effectively than when capacity is unjust hence, poorly planned capacity results in labor shortages and threatens the ability to meet service level commitments. Garba, et al. (2012) investigated capacity planning and its implication on infrastructural development needs of institutions of higher learning in Nigeria. They found that absent of capacity planning both by the government and institutions contributed to shortage of infrastructure needs in the institution. The basic two measures

of operational capacity planning such as capacity scheduling and capacity utilization were listed in the work of (Gunter & Guerilla, 2006).

Capacity Scheduling

Capacity scheduling relates to short range day to day activity concerned with understanding the level of work that could be produced by a facility, in a given time and allocating resources in the light of prevailing resource constraints, with the aim of achieving a uniform and efficient work standard (Agbadudu, 2003). Capacity scheduling signifies the process of coordinating labor hours, work orders, and improvement actions to guarantee the efficient use of resources, to achieve objectives (Gunter & Guerilla, 2006). Besides, capacity scheduling entails planning maintenance work based on equipment disappointments or operational needs without rushing the process. Schedules are therefore short-term plans designed to implement the sales and operations plans. Jacobs et al. (2013) state that scheduling is important in operations as it involves short-term planning as a part of the overall production planning operations. Apparently, scheduling is done through flexible working hours, offering overtime in peak periods, scheduled working shifts, and part time workers (Neely, 2012). Moreover, Johnson et al., (2008) proclaimed that there is need for mortgage banks or other firms to carefully apply capacity scheduling because if schedules are not prudently planned bottlenecks, pending queues of customers waiting to be served, unmet orders or increased work in progress inventory, are the consequences. Wairimu (2014) emphasized that appropriate production schedules act as sources of competitive advantage leading to improve operations management, respond to changing needs, and greater customer satisfaction. Indeed, capacity scheduling facilitates delivery speed and quick respond to the customer requirements. Most organizations are confronted with various constraints like material unavailability, resource shortages, unpredictable events, and unexpected machines break down (Dewa et al., 2013). To compete effectively firms, need flexible manufacturing processes or scheduling to promote job order and utilization of resources. Consequently, numerous methods may be used to generate schedules. These production techniques include linear programming, Gantt charts, computer models, and the priority sequencing rules (Arnold et al., 2008).

Capacity Utilization

Capacity utilization refers to the extent to which a company's resources are being used to generate output, which comprises labor force, equipment, material, facilities, and other resources at hand (Darlan, 2021). Capacity utilization denotes the extent to which an organization uses its maximum potential production size to meet high demand and improve operational efficiency. Capacity utilization measures the extent to which a company or economy is using its productive capacity (Dawson, 2006). It is expressed as a percentage of the total potential output that is achieved. Indeed, high-capacity utilization specifies efficient use of resources, while low-capacity utilization suggests underuse or inefficiencies. Low-capacity utilization could have significant negative effects on a business's performance and financial health. When capacity utilization rates are low in banks, it shows that a company is not fully utilizing its production resources, such as equipment, facilities, and labor (Meredith et al., 2002). This underutilization often results in inefficiencies. For example, fixed costs would be spread over fewer units, increasing the per-unit cost of production and potentially reducing profit margins. Low-capacity utilization may also lead to decreased revenues, low production level which could stress a company's cash flow. Capacity utilization applies techniques such as just in-time

(JIT) production and total productive maintenance, to increase utilization by ensuring that resources are effectively used and equipment is maintained in optimal condition (Corrado & Matthey, 1997). Capacity utilization involves automation which lowers error rates, reduces the need for manual labour, speeds up production processes, and increases precision, leading to higher output (Dewa et al., 2013). Capacity utilization is also useful for designing production systems that could easily adapt to changing product demands, reduce depreciation cost, and increase production volumes (Meredith et al., 2002). The use of available capacity result in skilled workforce strategies, minimizing idle time, allows for quick adjustments to production schedules and product types (Stevenson, 2005). When the production capacity of a firm is less than 100%, it shows that the organization is producing at less than its full potential. The formula for capacity utilization rate is $(\text{actual output} / \text{potential output}) \times 100$.

Effectiveness

Effectiveness relates to the measurement standards for organizational performance (Mishra & Misra, 2017). Effectiveness is meticulously linked to efficiency and organizational goals. Ashraf & Kadir (2012) declared that effectiveness entails the ratio reflecting finances, time, space incurred during the performance while measuring the organizational activities and the number of resources utilized. This description is similar to Mathis & Jackson (2008) who regarded effectiveness as a common measure of the organizational performance and the way output interact with the economic and social environment. Effectiveness is the degree to which an organization scores high in the aspect of job satisfaction, performance, independence, control, and job involvement. Most organizations assess their performance in terms of effectiveness with the primary aim to achieve their mission, vision, and goals. Effectiveness oriented companies are concerned with sales, cost reduction, innovation, output, quality, and creation of value added (Opoku-Mensah, 2012). organizational effectiveness helps to evaluate the progress towards mission fulfillment and goal attainment. (De Mennezes, 2011). Accordingly, effectiveness determines the policy objectives of the organization or the degree to which an organization realize its own goal. Effectiveness occurs when a firm provides products or services that exceed customer expectations and satisfies organization member desired.

Adaptability

Adaptability is the ability of an organization to adjust behaviour, structures, and systems in order to survive within the environmental change (Obi, 2015). In complementing this assumption, Garba et al., (2012) highlighted that adaptability denotes translating the demands of business environment into action. Organizations as open systems exist in environment that is complex and uncertain. To survive and make profit, organizations need to adapt continuously to the different levels of environmental uncertainty. Hunger & Wheelen (2011) claimed that environmental uncertainty epitomizes an important contingency for organization structure and internal behaviour. Adaptability enables employees and organizations to comply with internal structure and the external environment. Successful organizations do not disregard their customers and competitors. They have the capacity to restructure, re-institutionalize a set of behaviour and processes that permit the organization to adapt. Without the ability to implement adaptive response, an organization cannot be effective (Obi, 2015). Implementing change requires the ability of an organization to create adaptive measures to meet changing needs (Jackson & Schuler, 1990). This actually includes the ability of the organization to quickly react to current trends, read the business environment, and anticipate future changes. Although,

customers focus index of the adaptability trait involves the ability of an organization to understand and react to their customers, and anticipate their future needs. Adaptability relates to the degree to which an organization is driven by an interest to satisfy its customers (Goetz, 1979). To achieve adaptability, the organization needs to deliberately align its leadership, strategy, vision, layout, culture, and structure to facilitate organizational goals.

Cost Reduction

Cost reduction is when the prices of all the elements of production fall as output expands (Andersen & Nielsen, 2009). Organization is said to be reducing cost if its long run supply is negative signifying that output may rise as prices drops (Grant & Jordan 2015). Cost reduction refers to when the factor costs become lower per unit of output. The improved demand for factors encourages their suppliers to improve their skills, so that the decline in factor prices shifts the cost of individual firms downwards. The manufacturing supply shift so that fee in the long run falls beneath the early level. The main aim of companies to reduce their cost is to achieve the efficiency of the firm's processes (Snell, 1992). Apparently, a successful organization tends to fast-track the productivity by reducing the input required to produce a unit of output. Customer satisfaction enhancements are possible through reduction of costs. Thompson (1967) stated that several organizations have made significant profit through improved quality and lowering of prices.

Methodology

The researcher adopted survey design necessary to provide a systematic approach to analyze data. The population size for this study was 150 employees carefully chosen from five mortgage banks in Rivers State, Nigeria. The two types of employees that participated in this study were managers and supervisors selected from the five various banks. The information that the participants provided was received from different mortgage banks report and Rivers State government statistics. A sample size of 109 employees was disclosed through the aid of Taro Yamane's formula. Purposive sampling method was applied to allow the researcher and participants demonstrate their personal experience in the study. Structured questionnaire was used as the primary research instrument while information received from Rivers State government statistics and human resources data served as the secondary source. The questionnaire was structured within the domain of operational capacity planning and effectiveness (Cohen et al., 2011). This questionnaire was divided into three parts such as section A, B, and C. The section A, was for the profiles of the participants whereas section B, epitomizes the operational capacity planning and section C, represented effectiveness. The research instrument was validated by experts in management. The reliability of the instrument was determined using Cronbach alpha method and a correlation coefficient of 0.971 was obtained as a measure of consistency and reliability. Spearman correlation coefficient was used to test the hypotheses at 0.05 level of significance. The consent of the selected companies was obtained and the information conveyed by the participants were voluntarily and confidential. This study was guided by two measures of operational capacity planning namely capacity scheduling and capacity utilization, together with two indicators of effectiveness like adaptability and cost reduction. The researcher also employed ordinal scale and 5-point Likert's scale ranging from 1-5. Where 1 = strongly disagree, 2 = disagree 3 = neutral 4 = agree and 5 = strongly agree.

Table 1 Population Distribution

S/No	Names of mortgage banks	Population
1.	Federal mortgage bank	39
2.	Cooperative mortgage bank	28
3.	Aso savings and loans	26
4.	Platinum mortgage bank	30
5.	Rosanbon financial service	27
	Total	150

Source: Rivers State Government Statistics, 2024.

Table 2 Cronbach Alpha Reliability Test

	Variables	Cronbach's Alpha	Number of Items
Operational capacity planning	Capacity scheduling	0.966	5
	Capacity utilization	0.965	5
	Adaptability	0.964	5
Effectiveness	Cost reduction	0.966	5

Results and Discussion

Test of Hypothesis One

H₀₁: There is no significant relationship between capacity scheduling and adaptability in mortgage banks in Rivers State, Nigeria.

H_{A1}: There is significant relationship between capacity scheduling and adaptability in mortgage banks in Rivers State, Nigeria.

Table 3 Spearman Correlation Coefficient between Capacity Scheduling and Adaptability Correlations

		Capacity scheduling	Adaptability
Spearman's rho	Correlation Coefficient	1.000	.979**
	Sig. (2-tailed)	.	.000
	N	109	109
	Correlation Coefficient	.979**	1.000
	Sig. (2-tailed)	.000	.
	N	109	109

** . Correlation is significant at the 0.01 level (2-tailed).

The results in Table 3 illustrated the significant positive relationship between capacity scheduling and adaptability in mortgage banks in Rivers State, Nigeria. This advocates that the relationship was statistically significant. The r- value was 0.979 and p – value 0.000 which specified that capacity scheduling has positive significant relationship with adaptability. Where p – value = 0.000 < 0.005, the null hypothesis was rejected while alternative hypothesis was accepted. The positive significance r-

value of 0.979 unveiled that 97.9% increase in a firm capacity scheduling may lead to more adaptability in the organizations.

Test of Hypothesis Two

Ho2: There is no significant relationship between capacity utilization and cost reduction in mortgage banks in Rivers State, Nigeria.

HA2: There is significant relationship between capacity utilization and cost reduction in mortgage banks in Rivers State, Nigeria.

Table 4 Spearman Correlation Coefficient between Capacity Utilization and Cost Reduction

Correlations		Capacity utilization	Cost reduction
Spearman's rho	Correlation Coefficient	1.000	.958**
	Sig. (2-tailed)	.	.000
	N	109	109
	Correlation Coefficient	.958**	1.000
	Sig. (2-tailed)	.000	.
	N	109	109

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 4 revealed that there was positive significant relationship between capacity utilization and cost reduction in mortgage banks in Rivers State, Nigeria. This showed that r- value was 0.958 and p – value 0.000 which revealed that capacity utilization is meaningfully connected to cost reduction of the banks. Where p – value = 0.000 < 0.005, the null hypothesis was rejected while alternative hypothesis was accepted. The positive significance r- value of 0.958 showed that 95.8% rise in capacity utilization could lead to more cost reductions.

Discussion of Findings

The findings in hypothesis one shows that there is a positive significant relationship between capacity scheduling and adaptability in mortgage banks in Rivers State, Nigeria. This result reveals that banks that have adequate scheduling and effective production process may respond to customers and changing needs. The finding is in harmony with Wairimu (2014), who highlighted that appropriate production schedules act as sources of competitive advantage leading to improve operations management, respond to changing needs, and greater customer satisfaction. The second hypothesis demonstrated that there is positive significant relationship between capacity utilization and cost reduction in mortgage banks in Rivers State, Nigeria. This finding shows that banks with capacity utilization increases productivity without acquiring excessive depreciation costs. The result is similar to the study in Meredith et al. (2002), they acknowledge that capacity utilization is also useful for designing production systems that could easily adapt to changing product demands, reduce depreciation cost, and increase production volumes.

Conclusion

In view of the various data collected through the use of questionnaire on operational capacity planning and effectiveness in mortgage banks in Rivers State, Nigeria. The results revealed that capacity scheduling has significant positive relationship with adaptability. It was also discovered that the relationship between capacity utilization and cost reduction in mortgage banks in Rivers State, proved a positive statistically significant. The study indicated that operational capacity planning is significantly associated with effectiveness of mortgage banks. However, the researcher recommended that:

- i. Mortgage banks should prioritize capacity scheduling over any other form of operational capacity planning, by training and retaining of employees to have knowledge on work standardization so as to enhance adaptability.
- ii. Mortgage banks should implement effective capacity utilization that could promote cost reduction.
- iii. Mortgage banks should integrate operational capacity planning as a policy or culture to enhance organizational effectiveness.

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