

OPERATIONS PLANNING AND CAPACITY UTILISATION OF FOOD AND BEVERAGE FIRMS IN RIVERS STATE

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ABSTRACT

This study examined the correlation between operations planning and capacity utilisation within the moderating variable of technology of food and beverage firms in Rivers State. The study used quasi-experimental research design based on cross sectional survey. Using convenience sampling, seven (7) firms were selected out of the fifteen (15) registered food and beverage firms in Rivers State. Data were collected through questionnaire and 105 copies of questionnaire were administered out of which 91 copies were returned as valid copies. The data retrieved were evaluated using Spearman's Rank Order Correlation Coefficient Statistic after testing for normality for data gathered for this study. The findings showed a significant and positive correlation between operations planning and capacity utilisation. The findings further revealed that human resource and equipment are significantly correlated to the measures of capacity utilisation (operating capacity and installed capacity). Technology was also found to positively affect the influence of operations planning on capacity utilisation. Based on these findings we concluded that the development of human resource planning in an organization would further enhance outcomes related to operating capacity and installed capacity. Human resource and equipment brings about the desired output in an organization. We therefore recommend that the food and beverage firms in Rivers State must with all atom of seriousness embark in an effective and formal planning of their operations activities, regardless of the technology they adopt. The study focused on food and beverage firms in Rivers State which may not provide a concrete generalization to cover the manufacturing sector. Therefore, the study suggested that further research can be conducted on the correlation between operations planning and capacity utilisation using other dimensions and measures in other sectors other than the food and beverage industry.

1.0 INTRODUCTION

Capacity utilisation, as reported by Fabayo (1981), is an essential source of industrial change and advancement and also a priori justification for its (capacity utilisation) analysis in an advancing economy becomes indisputable. Capacity utilization is an essential viable metric for organizations, and also it's a major industrial symbol when related to total productive capacity (Hashim, 2003). A firm using less than 100% utilization will apparently boost their operations activities without acquiring exorbitant depreciation costs coupled with procuring brand-new appliances or properties. The notion of capacity utilization is most desirably used in the manufacturing of physical commodities that are easier to compute. Capacity utilization is essential for appraising a firm's present operating performance and it also helps to clarify cost structure both in the short term and in the long term (Prior & Nelda, 2001). Capacity utilisation is essential for ascertaining the flexibility of supply. If organizations are near 100% of capacity utilisation then supply will be absolutely inextensible, most likely in the short-term (Pettinger, 2012). Pettinger posited further that, productive capacity utilization results to greater profitability. According to him, devising the application of production capacity to bring out the best-quality products as well as maximizing income is very essential to the attainment of organizational goals and objectives. Capacity utilization relies on exchange demand and on arranging how goods are being manufactured for the most productive use of equipments. An organized way to capacity planning permits one to use capacity utilization estimate to ascertain when capacity should be expanded to satisfy growing demand for goods created (Markgraf, 2015). Capacity utilisation is an all-important notion, considering the fact that; (1) it is generally adopted as a benchmark of productive performance, (2) average operation costs is liable to decline as the rate of output multiplies— hence higher utilisation can decrease unit costs, making an organization more competitive. Therefore, organizations generally aspire to produce as close to full capacity (100% utilisation) as possible.

Firms with more productive operational planning usually have an improved capacity utilisation rate and the other way round. Research has revealed that organizations with higher operational planning level of advancement present improved effectiveness of the operation process compared to companies with less operational planning level of production (Segerson & Squires, 1990). The capacity utilisation rate usually reveals the magnitude of utilisation of effective machines, and the period of utilisation time of equipments. The higher the capacity utilisation rate, the more improved handling of the operation gear would be. Less operational planning leads to lower average capacity utilisation rate, contrary to higher operational planning level of growth (Mihanovic & Mateljak, 2016).

In the past, in Nigeria there have been observed works surrounding the problems of capacity utilisation. For instance, Ukoha (2000) along with Fabayo (1998) examined the determinants and measurement of capacity utilisation in the manufacturing sector respectively. Although Fabayo was more concerned in the way output gap can be used to quantify capacity utilisation, Ukoha established his own view on federal government capital disbursement and exchange rate. Researches such as, Meade (1998), Gordon (1993), Michael (1998) and Obi (1999) established their quantifications on unemployment rate and inflation. Despite all of

these facts, it has also been revealed that different prototypes of the past analysts, for instance, Iyoha and Ekanem (2002), Fabayo (1998), Obi (1999), Ukoha (2000), and Gordon (1993) among others have neglected to add energy symbol that Anyanwu (2000) has depicted as a vital determinant. Repeatedly, well-pronounced and accurately enforced guidelines have given reasons for improving manufacturing output via capacity utilisation in advanced nations which in the past was apparently not present in the Nigerian economy.

Several researches had revealed that the capacity in any organization is generally as a result of innumerable factors. In an ideal input-output prototype, Meade (1998) formed prices applying Leontief input and output technique to quantify the outcomes of capital and capacity utilisation on costs in the manufacturing sector and established that, the things that determines price are accruals to capital and capacity utilisation rate. Furthermore, he identified the association between output gaps (applying GNP), unemployment rate and capacity utilisation. In several researches carried out on aggregate inflation, diverse techniques of “tightness” were being used to ascertain the “disequilibrium” factors of inflation as reported by Shatz (1930). The 3 cardinal methods of tightness that was adopted by Meade (1998) are; output or GNP gap, unemployment rate, and some methods of capacity utilisation. Based on his discoveries, it was evident that capacity utilisation is very much connected with the speeding up of inflation. Both unemployment rate together with output gap also emulates this style. This also corresponds with the discoveries of Franz and Gordon (1993), who established that inflation relies more on capacity utilisation than on unemployment rate both in Germany and in the US. Concluding from his discoveries, Meade (1998) reasonably assumed that an outstanding way to design the styles of price adjustment at the business level would be to adopt a business capacity utilisation method as a descriptive variable, together with other variables for cash disburse development in relation to GDP, and maybe a disburse eye-opener variable.

Operations planning may be very essential in dealing with under-utilisation of resources in food and beverage firms (Delaney & Huselid 1996). Operations planning permit businesses to adequately maximize the usage of their resources which will definitely result in low cost and high rate of returns for the organization and also boosts satisfactory services to consumers.

Firms that operate at full capacity usually encounter problems such as; insufficient time for routine maintenance, delayed orders, machine breakdown regularly occurs, increasing labour costs, inefficient work, and demotivated staff among others (Sarabapriya 2013; & Summers 1996).

When there is very little or no operations planning in a firm, it will lead to: time wastage, less operational efficiency, very low standard of capacity output, etc. (Meredith & Scott, 2010). A conflict between operations planning and the capacity of a firm will definitely result in inefficiency, either in underutilized resources or product idea. While insufficient capacity can result in the loss of clients and the loss of the business at large, too much capacity can

decrease the company's resources and restrict investment into more competitive ventures. The different capacity approaches chosen to answer the question of when capacity should be increased and by how much are urgently important as failure to select the correct method can bring about damage to the general functioning of the firm (Cannella, 2008).

A firm that produces at full capacity or close to maximum capacity may constitute some problems (Learnloads, 2010). For instance, running a restaurant at full capacity is more lucrative but it can also generate numerous challenges. This could be seen when all the tables in the restaurant are full and all the seats at the bar are taken, so you find customers standing near the bar. In this case, customers can have trouble moving around because there are countless number of persons, and the servers will probably not have enough space to mingle through the crowd, which will now constitute a problem to that firm. In an efficient production process the advantages of full capacity will considerably outweigh its drawbacks, but in the long-run at least one or more of these enumerated problems will definitely occur; unexpected manufacturing problems which definitely will lead to a delay in meeting orders and displeased customers. And also quality might suffer. A breakdown or problems with sourcing components in a factory operating at full capacity will mean that the business has no way of quickly making up on lost production. Any business organization with extra capacity will have less problems (Learnloads, 2010). Full capacity utilisation indicates that there is little slack for monitoring quality and correcting problems. When staffs are always busy then there is more likelihood for quality problems to occur. So, it is not always advisable for organizations to use 100% capacity utilisation. Consequently, nearly all organizations seeking to boost capacity utilisation, will strive to avert these types of situations by having some spare capacity. In order to meet up with recent changes in the food and beverage sector, firms must pay close attention to technology as a way of enhancing their operations planning.

Akinpelu (2003) emphasized that the fortunes of manufacturing industries (particularly the food and beverage firms) in the past four years have been mixed. This has always been held accountable for certain factors such as; inadequacies in infrastructures and imperfections, inconsistent exchange rate, heightened smuggling activities, intense and perpetual increase in manufacturing cost, disparities in government policies, hike in levies and taxes by different levels of government, and irregularities in custom tariffs on unprocessed materials. He recognized that the preceding factors among others have influenced manufacturing industries, hence denying it of being called the engine of growth in the Nigerian economy. The gross under-utilization of resources in Nigerian Manufacturing Industries with particular reference to the food and beverage industry has been traced to; a fall in the demand for manufactured goods, regular power outages, and insufficient funds to acquire inputs. Consequently, Anyanwu (2000) considers the decreasing capacity utilisation as a menace to the continuity of major enterprises in the manufacturing sector of which the food and beverage industry is one of them.

Therefore, the researcher seeks to examine if operations planning in relation to human resource planning and equipment planning (Alter, 2000) can boost capacity utilisation (in

terms of operating capacity and installed capacity) of food and beverage firms in Rivers State.

2.0 THEORETICAL FOUNDATIONS

Operations completely changes either material or nonmaterial inputs into the desired goods, services, or results, and develop and transfer financial worth to the customers. Two or more related operations make up a process, and are broadly divided into four main categories, they include: processing, inspection, transporting, and storing. A fundamental management function known as planning basically has to do with the establishment of at least one or more detailed plans to accomplish maximum balance of needs or demands with the resources at hand. The planning procedure; finds out the goals or objectives to be actualized, develops methods to accomplish them, creates or arranges the means recommended, and performs, oversees, and supervises all phases in their proper order, Chase and Nicholas (1989).

The operational plan can also be regarded as a comprehensive plan which is normally been used to clearly state how a group, segment or department will contribute their own quota towards the actualization of the organization's vital goals and objectives. Operational planning is a method of planning important organizational goals together with organizational objectives to well-planned organizational goals and objectives. It defines events, circumstances for triumph and defines how, or what segment of, an organizational vital plan would be integrated into their operations within a specified operational period, in the case of commercial purpose, a budgetary year or another specified monetary term. An operational plan is basically the essence for, and reason of a yearly operating budget request. For instance, in an organization 5 years vital plans therefore, would mainly require 5 operational plans, which would be financed solely by 5 operating budgets, Meredith and Scott (2010).

2.1 OPERATIONS PLANNING

In practical terms, how you will operate to enforce your monitoring plans and actions is described in the operational plan i.e. what your organizations capacity (operating and installed capacity) needs are, how you'll adequately utilize the organizations assets, how you'll handle uncertainty, and also how you'll guarantee that the achievements of the project will be maintained.

An organizations operational plan is neither self-contained nor able to operate without other segments; but rather the other segments of the total Strategic Plan are combined with the vital segments (Reid & Nada, 2012). According to Meredith and Scott (2010), the vital segments of an Operational Plan which is termed as complete may include findings and / or explanations of:

- Manpower and Other Capacity Requirements – The manpower capacity together with the skills needed to enforce an organizations project, as well as its present and likely sources of these assets. Some other capacity requirements that are also needed to enforce an

organizations project includes; a backup legitimate structure, internal systems, business partners employed and Network NOs and POs, together with the organizations structures.

- Monetary Requirements – The money / cash needed to fund an organizations project, its present and likely sources of these funds, and it's most crucial resource together with funding gaps.
- Assessing Risk and Relief Strategies – The risks that are involved and how such risks can be catered for.
- Estimation of Lifespan of a Project, Ability to Sustain it, and Withdrawal Strategy – The duration of your project, when and ways you will withdraw your project (if possible), and how you will guarantee that the achievements of the project will be maintained.

The organizations vital plan can only be termed as complete when all of the above segments have been explained extensively. As the organizations project advances into Enforcement, many of these segments will then be explained in a more detailed way and also tested in reality. Hence, the Operational Plan is what provides a serious gap between the Monitoring and Action Plans, and Enforcement of those plans (Chase & Nicholas, 1989).

The level at which an organizations Operational Plan is detailed and formal will definitely differ based on the volume and ramification of the organizations programme and / or project. It is only small projects that can briefly touch on the above topics before advancing on to enforcement. Organizations programmes that are termed as large and difficult to understand should proffer prove that such programmes have taken care of all of the above segments of an Operational Plan. The larger the organizations programme the more formal and extensive it would be to handle each of the different segments (Will et. al., 2007).

Human resources planning is a techniques that develops different methods, which is usually being used to arrange the size and competencies of the human resources that an organization needs at a particular point in time (Delaney & Huselid, 1996).

Human resource planning enables the organizations to foretell, employ, keep, and optimize the placement of the workers needed to meet business demands, aspirations and to respond to the adjustments in the business' external environment, such as competition, technology, customers, socio-cultural organizations, creditors, national and international organizations, political parties, government, etc. The process of human resource planning comprises of; finding out the abilities and competencies of the human resources at the organizations disposal, performing human resources forecasting, and taking deliberate actions to make sure that human resources are adequately supplied. It also includes adopting methods like individual development, as well as training and retraining (Delaney & Huselid; 1996).

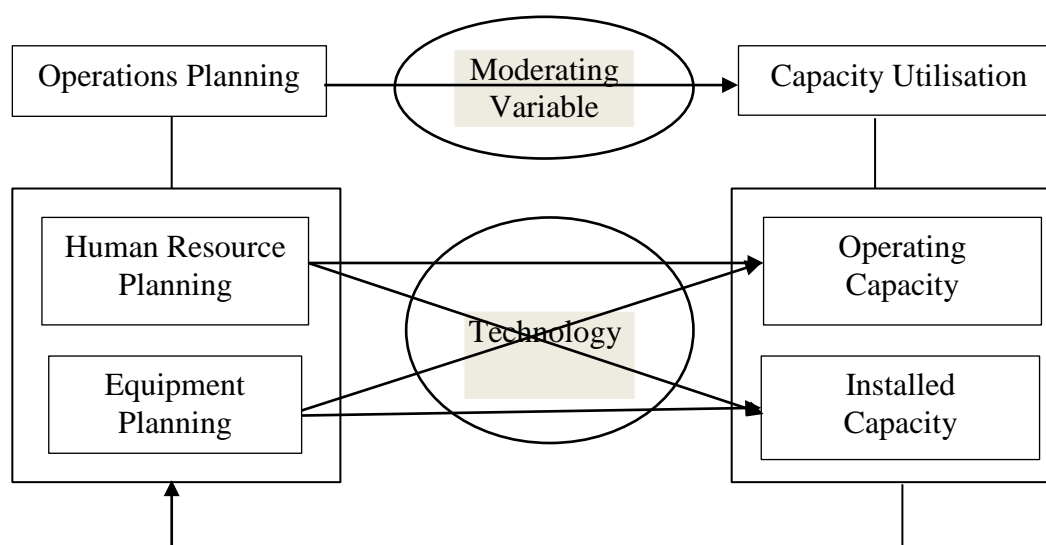
Equipment planning, either for a brand-new facility, an already existing facility or a facility that is going through renovation, is an easy and unambiguous process. It involves ascertaining the utility requirements (for example, air conditioning, plumbing, vacuum, electrical, heating, etc.), the quantum of space needed to house the equipment, as well as the predicted cost of the new equipment. The equipment consultant, architect, medical and nursing staff, general contractor, as well as the hospital administrator should be involved when carrying out equipment planning (Mariann, 1988).

The starting point in equipment is determining who will be in charge of planning, acquiring, and fixing up the equipment. Those set of persons mainly involved in equipment planning are equipment consultants, architects, medical and nursing staff, general contractors, physicians, together with the hospital administrators. They collectively design an equipment checklist. Nevertheless, different persons may be delegated to be in charge of planning, procuring, and installing equipment under the owner. These include persons like; nursing supervisor, biomedical engineer, hospital administrator, and purchasing agent. Furthermore, the interior designer, architect, contractor, and consultant can assume the duty of more than one person. For instance, the interior designer can either be associated or independent with the architect. The architect represents the structural, electrical and mechanical engineers. And the contractor represents individuals such as the plumbing or electrical contractors. The main aim of a checklist is to explain the responsibility in the “grey” areas. In several construction projects, they usually ensure that all parties are in charge of equipment and furnishings (Mariann, 1988).

A short-run concept, which capacity is known for is the purpose why industries and firms usually encounter short-run limitation, such as; the nature of their technology and several other limitations like technology, the capital stock or other fixed inputs, and the regulations that exists (Morrison, 1985). The proportion of the exact or examined capacity output or likely output is referred to as capacity utilization (Prior and Nelda, 2001). Several kinds of capacity utilisation are in existence on the grounds of how its operating and installed capacity is calculated. When the operating capacity is correlated to the installed capacity, it can be physical capacity utilisation or technology based capacity utilisation (Gold, 1955; Johansen, 1968) or when the operating capacity is correlated to the installed capacity (from the economic perspective) of an organization, it can be economic capacity utilization (Hashim, 2003).

It is true that all business organizations usually have a minimal capacity to produce. Generally, organizations will always like to occupy themselves with something doing, by trying as much as it seems realistic to produce as close to the confines of their capacity. Consequently, a high rate of capacity utilisation is what businesses seek to achieve. Whereas in the instance of a bakery, it is the magnitude of the ovens used that defines its capacity (Fare, Grosskopf, & Kokkelenberg, 1989).

According to (Berndt, Ernest & Morrison, 1981), capacity utilisation theory has extensively been evaluated in the economic findings from different viewpoint, both empirically and theoretically, and it is used on a more frequent basis to describe changes in the indicators of macroeconomic such as; productivity of labour or the level of inflation. Also, there are very many measures / quantifications of capacity utilisation substitutes that have been explained, but as an aftermath of disagreements in interpretation it is generally not unanimously accepted as the most accepted way of measuring and defining capacity utilisation. In this research, we are considering the theory of capacity utilisation from the viewpoint proffered by the economic theory of the firm, as a short-term concept on the grounds of a firm's fixed inputs level.



Source: Dimensions of Operations Planning adapted from the work of Alter (2000). Measures of Capacity Utilisation adapted from the works of (Ritchie, 2014; Daniel & Mike, 2009).

Figure 1.1 Operational framework for studying operations planning, capacity utilisation and technology.

Based on the operational framework, the following hypotheses are conveyed for this study;

- Ho₁: There is no significant relationship between human resource planning and operating capacity of food and beverage firms in Rivers State.
- Ho₂: There is no significant relationship between human resource planning and installed capacity of food and beverage firms in Rivers State.
- Ho₃: There is no significant relationship between equipment planning and operating capacity of food and beverage firms in Rivers State.
- Ho₄: There is no significant relationship between equipment planning and installed capacity of food and beverage firms in Rivers State.
- Ho₅: Technology does not significantly moderate the relationship between operations planning and capacity utilisation of food and beverage firms in Rivers State.

3.0 METHODOLOGY

In this research, the cross-sectional survey which is a type of the quasi-experimental design was adopted. This is because the total population cannot be investigated so a survey will be more suitable. “This method of research investigation borders on interview of participants and administering of questionnaire” (Creswell, 2007, p. 68). The researcher chose this method because it is cost effective (economical), time effective and also gives respondents sufficient time to study the questions and provide suitable answers.

3.1 Population of the Study

According to the Rivers State (South South) Nigeria Directory (www.directory.org.ng) as at 2016 reveals that there are 15 registered food and beverage firms in Rivers State, which forms the target population for this study. But for convenience and easy access, the researcher chose seven (7) of the food and beverage firms located within Trans Amadi metropolis and Rumuogba axis, which forms the accessible population for this study because they are easily accessible and maintain accurate records of their merchandising activities for more than ten (10) years of carrying out their operations. The accessible population include; Riv. Biscuits Co. Nig. Ltd., Amalgamated Distillers of Nig. Ltd., Pabod Breweries Ltd., Dictachi Foods Nig. Ltd., Nigeria Bottling Co. Plc., Genesis Food Nig. Ltd., and Imco Int. Manufacturing Co. Ltd. From the information made available to the researcher by the human resource department of these seven (7) firms reveals that they have a total of 105 Management Staff (i.e. Line Managers, Middle Managers and Top Managers). And since the accessible population is relatively small, the researcher chose to study the entire accessible population and hence, there was no need for a sample size determination. Therefore, the questionnaire will be administered to all of the 105 Management Staff.

4.0 TESTING OF HYPOTHESES

4.1 Bivariate Data Analysis

This segment has to do with the tests for the assumed bivariate null hypotheses using the Spearman’s rank order correlation coefficient at a 95% confidence interval and at a 0.05 level of significance (2-tailed). Five hypothetical assumptions are postulated with four being bivariate in nature and thus tested herein. The decision rule for adopting or rejecting the hypothetical statements is set at a $P < 0.05$ for the rejection of the null hypotheses and a $P > 0.05$ for the acceptance of the null hypotheses.

Table 4.1: Spearman’s correlation of Human Resource Planning (HRP) and measures of Capacity Utilization

		HRP	OC	IC
HRP	Correlation Coefficient	1.000	.490**	.587**
	Sig. (2-tailed)	.	.000	.000
	N	91	91	91
Spearman's rho OC	Correlation Coefficient	.490**	1.000	.413**
	Sig. (2-tailed)	.000	.	.000
	N	91	91	91
IC	Correlation Coefficient	.587**	.413**	1.000
	Sig. (2-tailed)	.000	.000	.
	N	91	91	91

The data (table 4.1) reveals a significant relationship between human resource planning, which is a dimension of operations planning and the measures of capacity utilization. The result is interpreted as follows:

Human Resource Planning (HRP) and Operating Capacity (OC): The outcome of the analysis reveals a significant relationship between human resource planning and operating capacity which is a measure of capacity utilization. This is as the rho value = .490 and level of significance where $P = .000$ indicate a substantial level of connection between both variables; hence base on the decision rule of $P < 0.05$ for the tests, the null hypothesis is hereby rejected as the result shows a significant relationship between human resource planning and operating capacity.

Human Resource Planning (HRP) and Installed Capacity (IC): The results of the analysis reveal that there is a significant relationship between human resource planning and installed capacity which is a measure of capacity utilization. This is as the rho value = .587 and level of significance where $P = .000$ indicate a substantial level of association between both variables; hence base on the decision rule of $P < 0.05$ for the tests, the null hypothesis is hereby rejected as the result shows a significant relationship between human resource planning and installed capacity.

Table 4.2: Spearman’s correlation of Equipment Planning and measures of Capacity Utilization

		Correlations		
		EP	OC	IC
EP	Correlation Coefficient	1.000	.736	.693
	Sig. (2-tailed)	.	.000	.000
	N	91	91	91
Spearman's rho OC	Correlation Coefficient	.736	1.000	.413**
	Sig. (2-tailed)	.000	.	.000
	N	91	91	91
IC	Correlation Coefficient	.693	.413**	1.000
	Sig. (2-tailed)	.000	.000	.
	N	91	91	91

Equipment Planning (EP) and Operating Capacity (OC): The results of the analysis reveal that there is a significant relationship between equipment planning and operating capacity which is a measure of capacity utilization. This is as the rho value = .736 and level of significance where $P = .000$ indicate a high level of association between both variables; hence base on the decision rule of $P < 0.05$ for the tests, the null hypothesis is hereby rejected as the result shows a significant relationship between equipment planning and operating capacity.

Equipment Planning (EP) and Installed Capacity (IC): The results of the analysis reveal that there is a significant relationship between equipment planning and installed capacity which is a measure of capacity utilization. This is as the rho value = .693 and level of significance where $P = .000$ indicate a high level of association between both variables; hence base on the decision rule of $P < 0.05$ for the tests, the null hypothesis is hereby rejected as the result shows a significant relationship between equipment planning and installed capacity.

4.2 Multivariate Data Analysis

The partial correlation was adopted in testing for the moderating effect of technology on the relationship-between operations planning and capacity utilization at a 95% confidence interval and at a 0.05 level of significance (2-tailed). The decision rule for the acceptance or rejection of the hypothesis is on the grounds that $R1 > R2$ coefficient at a 0.05 level of significance for rejection of the null hypothesis and $R1 \leq R2$ coefficient at a 0.05 level of significance for acceptance of the null hypothesis.

**Table 4.3: Moderating effect of Technology
 Correlations**

Control Variables		HRP	EP	OC	IC
TG	Correlation	1.000	.515	.410	.464
	HRP				
	Significance (2-tailed)	.	.000	.000	.000
	Df	0	88	88	88
	Correlation	.515	1.000	.049	.291
	EP				
	Significance (2-tailed)	.000	.	.000	.000
	Df	88	0	88	88
	Correlation	.410	.049	1.000	.291
	OC				
	Significance (2-tailed)	.000	.000	.	.000
	Df	88	88	0	88
Correlation	.464	.291	.291	1.000	
IC					
Significance (2-tailed)	.000	.000	.000	.	
Df	88	88	88	0	

Table (4.3) above illustrates the control for the moderating effect of technology on the relationship between operations planning and capacity utilization. The data reveals significant levels of moderation as a result of the $R1 > R2$ decision criterion. The result indicates a significant level of moderation and thus a sign that technology is a significant moderating variable on the relationship between operations planning and capacity utilization.

5.0 DISCUSSION OF FINDINGS

This study adopting descriptive and inferential methods, empirically examined the relationship between operations planning and capacity utilization within the framework of technology of food and beverages firms in Rivers State. In this chapter, analysis assessed the distribution of the variables and also tested the expectations of bivariate and multivariate relations between the study variables. A total of five (5) hypotheses were analyzed herein using Spearman's rank order correlation and the Partial correlation technique was applicable. The result of the evaluation revealed significant relations in all five (5) instances and are discussed as follows:

Human Resource Planning (HRP) and Capacity Utilization:

The outcome of the analysis revealed that human resource planning is significantly associated with capacity utilization; this implies that human resource planning is considerably important in boosting capacity utilization and expressions towards work in a firm. Also, it is essential to examine the human resource needs of a business under unsteady circumstances and also establishing the projects that are essential so as to certify that these needs are met. This argument shares a similar view with Becker & Gerhart (1996) (2012), who posit that very

much like investments in manpower capital, analysts claim that investments channeled in the HR framework, such as training, hiring, and performance management systems, generate "invisible assets" that can boost a firm's capability to operate (Becker & Gerhart, 1996). Basically, these kinds of investments (1) train and inspire workers to improve their skills, knowledge, together with abilities; (2) inspire workers / employees to utilize a considerable force in the interest of the business that they work for; and (3) enhance their long-term productivity (Delaney & Huselid, 1996; Youndt et al., 1996). Also in Wright et al., 1995, they posited that firms attain a competitive edge because they engage in HR schedules and also selectively adopt the suitable combination of schedules. While we all know that a well-designed schedule of HR actions is completely dependent on a business' monetary worth, we still have less knowledge about the ways in which they work collectively to do so.

Equipment Planning (EP) and Capacity Utilization:

The starting point in equipment is determining who is going to be in charge of planning, procuring, and installing the equipment. Those set of persons mainly involved in equipment planning are equipment consultants, architects, medical and nursing staff, general contractors, physicians, as well as the hospital administrators. The analysis reveals that there is a positive correlation between equipment planning and capacity utilization; this implies that equipment planning is the physical setting-up of factory equipment for effortless movement of material or input (Mayer, 2005). It entails the arrangement of plant, machine, as well as equipment in a suitable way such that production is done without difficulty. Equipment is the resource of a business, which ascertains the amount of production of that organization (Vollman, 1997). Also, nursing supervisor, biomedical engineer, hospital administrator, and purchasing agent.

Furthermore, the interior designer, architect, contractor, and consultant can assume the duty of more than one individual. For instance, the interior designer can either be associated or independent with the architect. The architect represents the structural, electrical and mechanical engineers. And the contractor represents individuals like; the plumbing or electrical contractors. The main aim of a checklist is to explain the responsibility in the "grey" areas. In majority of the building projects, they usually ensure that all parties are in charge of equipment and furnishings (Mariann, 1988).

The moderating role of Technology on the relationship-between operations planning and capacity utilization:

The analysis revealed that technology is a significant moderator on the correlation between operations planning and capacity utilization. This is confirmed in Weill's (1990) analysis that meaningful productivity can be ascribed to transactional forms of information technology (IT) (e.g. data processing), but it was incompetent to recognize the profits correlated with strategic systems (e.g. sales support) or investments in IT (e.g. e-mail infrastructure). The main argument behind this dilemma is the manpower factor; that is to say that, operators / users of the technology decline to completely choose the technology to adequately appropriate the scientific knowledge to their own benefit. As indicated by Rogers (1962), the extent to which a discovery is noticed, should not be hard to learn, comprehend, or operate.

In a subsequent thought, the choice of IT has always been described as the extent that a person thinks that by adopting a certain technology it will culminate in to free of effort (Davis, 1989). This hesitation can as well be interpreted in diverse ways; firstly, it may be that operators / users of the technology are not usually given the chance to participate in its adoption processes.

5.1 RECOMMENDATIONS

Based on the discoveries of this study, the following recommendations have been made:

- Food and beverage firms in Rivers State should select a good and well-suited inventory policy based on the type of goods they produce so as to attain the desired result from the accessible materials and thereby reducing waste.
- Food and beverage firms in Rivers State must with all atom of seriousness embark in an effective, efficient and formal planning of all of their operations activities, irrespective of the technology they adopt.
- Food and beverage firms must embark on proper human resource planning through training, hiring, and good performance management systems, for the sake of generating "invisible assets" that can boost a firm's capability to operate. By doing this, an organization can attract, retain and utilize qualified workforce, that will make their operations more efficient.
- Food and beverage firms in Rivers State should select an automated manufacturing technological system like computer aided manufacturing procedures, for the sake of boosting cost and time savings.
- As confirmed in Weill's (1990) analysis, this study also recommended that the kind of technology adopted by food and beverage firms should reflect in their capability and readiness to manage and use new technology in their daily activities which would enhance the correlation between operations planning dimensions (human resource planning and equipment planning) and the measures of capacity utilisation (operating capacity and installed capacity).

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