员工参与决策对组织生产力的影响：来自尼日利亚制造业的证据

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摘要：本研究以尼日利亚制造业为视角，探讨员工参与决策对组织生产力的影响。数据收集于216家不同行业的制造企业。为了准确地揭示研究潜在结构之间的关系，采用PLS算法对数据进行了分析。结果表明，在所有变量不变的情况下，参与水平的提高将导致制造业生产率（PRO）提高20.6%。此外，当所有变量保持不变时，内部沟通渠道的增加将导致制造业生产率（PRO）提高33.3%。此外，当所有变量保持不变时，员工参与度（或发言权）增加百分之一（1%）将导致制造业生产率（PRO）增加21.2%。此外，在所有变量不变的情况下，智力资本投资平均增加百分之一（1%）将导致制造业生产率（PRO）增加47.1%。同样，当所有变量保持不变时，管理支持平均增加百分之一（1%）将导致制造业生产率（PRO）增加34.5%。根据这些调查结果，提出了一些建议。研究建议，管理者应该在这些方面付出更多的努力。在鼓励员工提出建议和有用的决策，并努力将其纳入组织的决策和政策中时，管理者应该提高员工参与决策的频率和水平，因为他们是执行主要操作工作的人，因为他们处于更好的位置，知道什么。

关键词：员工参与，决策，组织生产力，尼日利亚制造业

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IMPACT OF EMPLOYEE PARTICIPATION IN DECISION MAKING ON ORGANIZATIONAL PRODUCTIVITY: EVIDENCE FROM NIGERIA MANUFACTURING SECTOR

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Abstract: The study assessed the Impact of Employee Participation in Decision Making on Organizational Productivity: A Perspective of Nigeria Manufacturing Sector. Data was collected among 216 manufacturing firms across various industries. Data was analyzed with the use of the PLS algorithm in order to accurately reveal the relationships between the latent constructs of the study. The results revealed that an increase in level of participation will lead to a 20.6% increase in manufacturing sector productivity (PRO) when all variables are held constant. Also, an increase in internal communication channels will lead to a 33.3% increase in manufacturing sector productivity (PRO) when all variables are held constant. In addition, one percent (1%) increase in employee involvement (or voice) will lead to a 21.2% increase in manufacturing sector productivity (PRO) when all variables are held constant. Also, an average a one percent (1%) increase in investment in intellectual capital will lead to a 47.1%

increase in manufacturing sector productivity (PRO) when all variables are held constant. Likewise, an average a one percent (1%) increase in management support will lead to a 34.5% increase in manufacturing sector productivity (PRO) when all variables are held constant. On the bases of these findings, a number of recommendations were outlined. The study recommends that, Managers should put more effort goes on those areas.in encouraging their employees to come up with suggestions and useful decisions and endeavor to incorporate them into the organization's decisions and policy and Managers should increase the frequency and level of worker participation in decision making considering the fact that they are the people carrying out the main operative work as they are in the better position to know what.

Key words: Employee Participation, Decision Making, Organizational Productivity, Nigeria manufacturing sector

Introduction

The manufacturing sector in Nigeria has been a focal subsector; but little is probably known about the influence of its employee involvement in decision making on firms productivity. Organizations are discovering that people really are the most important asset [26]. Success depends on involving the workforce's entire capacity to generate new ideas and ways of working to outsmart the competitors [26]. Employees must be involved if they are to understand the need for creativity and employee must be involved if they are to be committed to changing their behaviors in work, in new and improved ways. Employee involvement is one of the important aspects of organizational life to achieved increase organizational effectiveness and positive employee perceptions.

The complexity of problems involved in decision making process in management practice imposes a new perspective of a company's management, which emphasis the involvement of the employees in all the actions and decisions in which they are qualified. To survive the intensive competitive situations in the business world, companies must jettison old management practices, based on an excessive authority. Modern management demands the stimulating of employees 'participation in the company's activities and in the decision-making process.

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Also, the major problem for employee participation in decision making is resistance to change by management. Managers create an organizational culture that reflects their own philosophies and styles of management and reinforce their strategies and control. Employee participation in decision making poses threat to the more autocratic manager. Many managers tend to resist participation because it is contrary to their habit-formed ways of thinking and behaving. In addition, failure to respond to employee commendations is an example that reduces employee participation in decision making. If management does not acknowledge employees' endorsements, employees rapidly conclude that management has no interest in their ideas.

Many organizations have experienced lack of commitment by employees towards implementation of decisions taken by top management which undoubtedly has serious repercussion on organizational success. As a result of this many organizations are currently

involving staff participation in decision making process. Even the Nigeria Labor Union has suggested it to the government the need for staff participation in public service organizations.
In most cases dissatisfaction emanating from decisions laterally taken by management has led to some negative actions by employees, such negative action includes loss of interest in the job and strike action. Research has shown that when employees are not made to participate in decision making process, its result or led to job dissatisfaction, lack of organizational commitment, low labor management relation which reduce productivity.
Many researchers have taken a more universal approach to studying employees" participation in decision making, arguing that participative decision making requires a certain context over and beyond a set of programs or techniques. Without the redesign of work, employee participation efforts can even have a negative effect. Participative approach such as delegation gave mixed results, especially in public organizations. In contrast, participative decision making that gives employees the opportunity to make substantive changes in their work is a tool for large-scale organizational change.
In the light of the above, this study therefore seeks to investigate whether employee's participation in decision making has an effect on productivity and finding the effect of not allowing employees to participate in decision making process and measures to address them.

For the purpose of this study on the impact of employee's participation in decision making on manufacturing productivity in Lagos State, Nigeria, the following research questions have been drawn.
What is the impact of level of employee's participation in decision making on manufacturing sector productivity in Lagos State, Nigeria?
What is the effect of internal communication channels in decision making on manufacturing sector productivity in Lagos State, Nigeria?
How employees' involvement (or voice) in decision making affects has a significant impact on manufacturing sector productivity in Lagos State, Nigeria?
What is the role of investment in intellectual capital of employee's participation in decision making affect manufacturing sector productivity in Lagos State, Nigeria?
How does the management support for employees participation in decision making affect manufacturing sector productivity in Lagos State, Nigeria?
The broad objective of this study is to impact of employee's participation in decision making on manufacturing productivity in Lagos State, Nigeria. This broad objective had been subdivided into the following specific objectives: are to;
To ascertain the impact of level of employee's participation in decision making on manufacturing sector productivity in Lagos State, Nigeria.
To determine the effect of internal communication channels in decision making on manufacturing sector productivity in Lagos State, Nigeria.
To examine the employees' involvement (or voice) in decision making affects has a significant impact on manufacturing sector productivity in Lagos State, Nigeria.
To determine the role of investment in intellectual capital of employee's participation in decision making affect manufacturing sector productivity in Lagos State, Nigeria.
To find out the role of management support for employees participation in decision 1.6 Significance of the Study
This study helps management and administrators organize the company as a guide for implementing an effective employee participation program to encourage employee participation in decision-making. In this way, the employee will make an intellectual contribution to improving organizational performance. The results of this research will also

serve as a reference for the academic efforts of professors and students and will help the public who want to know more about certain advantages and disadvantages (if any) of employee participation and their impact on organizational performance.

1.1 Scope and Limitations of the Study

This study was carried out using the employee participation plan on organizational productivity. It is given the process of employees in the decision-making process in an organization in which the responsibility for work. Also, the study will examine the level of participation of employee's participation in decision making, the employee supports and investments in intellectual support in employee's decision making.

The study was limited to selected manufacturing companies in Lagos State Nigeria namely Dangote Nigeria PLC., Dufil Prima Nigeria PLC and Flour Mills of Nigeria PLC. The major challenge was the time constraint involved in collecting the data for the study, which is expected to take several weeks. The study also made use of a lot of financial resources especially in transportation back and forth from the field of study. This also posed a constraint towards the achievement of the goals of the study.

0 Literature Review

[23] Investigated employee's participation in decision making and the hospitality industry in Nigeria, a study of selected hotels in the federal capital territory in Abuja. To guide the study, research questions and hypotheses were designed. An in-depth review of related literature was carried out. Primary data method was used for the study and the instrument used was a questionnaire survey designed using the Likert scale questionnaire format and administered to sixty respondents. Test of reliability of research instrument showed a result of .874 using Cronbach Alpha. Content method was used for validity of the research instrument. Two Hypotheses was postulated in line with the objectives and research question to test the significance of the research problems. The study used linear correlation and regression for analysis of data obtained from research instrument, which proved the alternate hypothesis significant in the two hypotheses tested. Findings in the study showed that employee's participation in decision making impacts on the performance of hotels in Nigeria. The study concludes there is a positive relationship between extent of employee's participation in decision making and organizational performance. The study recommends among others that participation of employees should not just be partial but holistic to give them a sense of belonging.

In a study based on the premise that an organization benefits from their managers and employees were collaborating, [1] examined the connection between employees' participation in decision-making (PDM) and firm performance. The findings showed significant positive relationship participation in decision-making (PDM) and firm performance, thereby suggesting that participation in decision-making (PDM) is an essential component influencing firm performance. Also [1] found that the higher the level of employee participation in decision-making, the higher the level of firm performance.

According to [5], investigate employee participation in decision making on organizational commitment. The objective of the study was to examine employee participation in decision making influences organizational commitment at Savannah Cement Limited. This study adopted a descriptive survey design in the investigation of employee participation in decision making on organizational commitment at Savannah Cement Limited. The study population consisted of 302 employees working at Savannah Cement Limited. A sample of 30 employees was selected using stratified random sampling technique. A questionnaire was used to collect primary data. Data collected was analyzed with the aid Statistical Package of

Social Science SPSS (version 21). A multi regression model was generated to show the influence of the variables to organizational commitment. The regression showed that consultative management had the highest influence on organizational commitment with a coefficient of 0.488, followed by group discussions with a coefficient of 0.384, suggestion programs with a coefficient of 0.269 and briefing groups with a coefficient of 0.221. The study recommends the support of employee participation in decision making. The study also provides insight for further studies on the topic.

[7] Investigated levels of teachers' participation in decision-making as correlates of job satisfaction and morale in public senior secondary schools in Delta State. The target population of the study consisted of all public senior secondary schools in Delta State. A sample size of 976 teachers in 36 public senior secondary schools in Delta State were drawn using stratified random sampling technique. The study was a correlational research aimed at determining the relationship among levels of participation in decision-making, job satisfaction and morale of teachers. The researcher, therefore, formulated three research questions and three null hypotheses to guide the study. A research instrument titled "Questionnaire on Levels of Participation in Decision-Making, Job Satisfaction and Morale of Teachers" (QLPDMJSMT) was designed by the researcher. The instrument was validated in its face and content value and found reliable at a reliable index of 0.87 using Cronbach Alpha technique.

[47] Examine impact of participation in decision making on job satisfaction, group commitment, and group learning. Data were collected from 397 managerial employees working in public sector undertakings across India. Structural equation modeling as a statistical technique and Warp PLS as a statistical tool was used to verify the proposed relationships. The findings of the study suggest that participation in decision making had a positive and significant relationship with job satisfaction. Further, participation in decision making had significant impact on group learning but had no impact on group commitment. Job satisfaction had a positive and significant impact on group commitment. Group learning was positively and significantly related to job satisfaction and group commitment. The results suggest that employee participation in decision making process is highly desirable as it elevates employee identification with their respective organization. The findings of the study are relevant to the people holding key managerial positions in public sector undertakings and they are discussed in detail.

[26] Examined the relationship between employee participation in decision making and organizational productivity among staff in Cross River State Board of Internal Revenue, Calabar. Motivation theory and qualitative data collection approach were employed. The simple and purposive sampling techniques were used to obtain a sample of 80 respondents for study, the questionnaire consisting of 40 question on the various employee participation scenarios and an interview were administered. Finding from the study indicated that when employees participate in decision making implementation becomes easy, and creates a good working environment, increases commitment and satisfaction on decisions taken and also increases employee's moral since the feel recognized and as part of the team in the organization and the direct consequence of all this improved productivity. The paper recommended that employees should be given the necessary skills and adequate training need in order to promote creativity and innovation in decision making and work attitude as this enhance organizational productivity.

[17] examined the impact of employee's participation on decision making in Nigerian banking sector and the research objectives of the study were: to find out how Employee participation in decision making has a significant impact on organizational performance and to ascertain the level of workers participation in decision making of the organizations. The research design was descriptive in nature. To guide the study, objectives of the study, research hypotheses were designed. An in-depth review of related literature was carried out. Primary data method was used for the study and the instrument used was a questionnaire survey designed using the Likert scale questionnaire format and administered to 102 respondents. Findings in the

study showed that employee's participation in decision making impacts on the performance of organizations in Nigeria. The results of the study indicate a statistically significant relationship between employee involvement in decision making and organizational performance. The findings also reveal the involvement of participating organizations in employee involvement in decision making. The implications of this study include the need for banking sector to demonstrate high level of commitment to employee involvement in decision making for performance enhancement.

[21] Examined the effect of employee participation in decision making on organizational performance using *TYX Oil Limited, Lagos State as the unit of study. With the use Multi-stage sampling techniques a sample of two hundred and seventy- nine (279) respondents comprising 172 males (61.6%) and 107 (38.4%) females who participated in the study was drawn. Data were collected using validated instrument designed for the study. Two hypotheses were formulated in line with the study objectives and tested using regression and t-test analyses. The findings showed that employee participation in decision making affects organizational performance. Also, the study found significant differences between direct and indirect participative decision making in relation to organizational performance. The findings showed that the collective voice of workers remains vital for the overall good of the organization. Given the findings, the authors recommended among others that there should a consistent collaborative partnership between employees and management through which the organization could benefit from creative and innovative endowments that are residing in the workforce.

1.1 Participation

Participation is a very broad concept that means different things to different people. The term is often used by people with different ideological positions, who give it very different meanings.

Participation in decision making is defined as sharing the decision-making process in order to achieve organizational objectives [32]. Individuals feel a sense of belongingness to the organization when they are allowed to make suggestions and participate in decision making process. This is due to the fact that employees who make decisions that have their consent in them are more likely to value outcomes [12], Participation in decision making offers employees different levels of influence in making policies ranging from consultative committees to developing good relations with managers. When employees participate in decision making, it helps to build their commitment towards the organization [34],

[44], Identified that participation is an ideologically contested concept which produces a range of competing meanings and applications. The result is a variety of views on how participation is defined, whom it is expected to involve, what it is expected to achieve, and how it is to be brought about.

The vagueness and lack of conceptualization of the concepts of participation and empowerment cause confusion over expectations and over the evaluation of outcomes of the participatory development process [39],

One commonality to all definitions is the role of community in decision-making. As such participation is often referred to as community participation. Community can be defined as a range of factors including geographic location, norms, and interests. Many definitions of participation hint at the participation continuum and the various levels of community involvement. Some definitions focus on other aspects such as the involvement of all stakeholders, at all stages of development; on outcomes; on empowerment; and on the important role of disadvantaged groups particularly women and the poor.

[57], expand the scope of decision-making in their definition: 'Participation is the process through which stakeholders influence and share control over priority setting, policy-making, resource allocations and access to public goods and services.

0.1.1 Types of Employee Participation

Two types of employee participation can generally be identified, namely direct and indirect participation [42].

1.1.1.1 Direct Employee Participation

According to [30], direct participation occurs when employees share in some or all decisions that are made at an enterprise level by themselves. Direct participation "…customarily entails that the subordinates participate, speak for themselves about work or matters related to work. It is regarded as a process of job enrichment and enlargement where the employee is offered the possibility of extending the depth and width of his work tasks, but without any control over organisational planning or goal setting"[42].
Direct participation also includes the sharing of financial rewards, which result from increased productivity; the provision of all information relevant to a job; consultation about changes that may affect the employee; and personal involvement of employees in the decision making process [42]. According to [48], direct participation refers to mechanisms, which enable individual employees to influence their day-to-day operations.
Summarily, direct participation is concerned with face-to-face contact between managers and their subordinates [20], [43], Examples of direct participation include: face-to-face meetings, or one-on-one meetings between management and employees, exchange of emails, and questionnaires.

1.1.1.2 Indirect Employee Participation

Indirect participation is a situation where employees share in some or all decisions that are made in the workplace via their representatives [30], According to [25], the indirect participation of employees in decision making is one whereby employees participate through a TU.
According to [2], collective bargaining (CB) is an indirect form of employee participation in decision making, and it is the most common form of employee participation worldwide. CB is a vehicle used by employee representative TU(s) to regulate workplace behaviours, production, wages and substantive conditions of employment through the process of negotiation between TU(s) and employers' representatives [2],
Similarly, [2], states that CB is an indirect form of employee participation in decision making, particularly because the process of CB allows TU(s) and employers representatives to engage in the joint regulation of workplace-related issues, whilst they may jointly solve problems, which may arise.

0.1.2 Different levels of Employee Participation

Levels of participation refer to the extent, which employees or their representatives influence decision making in an enterprise. This can range from employees simply being informed about management decisions through two-way communication, and up to a stage where employees have joint or full control over decision making in an enterprise [20], [43], A distinction is usually drawn between three levels of participation within an organization [42],

1.1.2.1 Low-Level Participation

At this level of participation, management makes an effort to improve communication and attitudes, but still views employees as relatively passive [20], [43].
Here participation of employees is usually via staff bodies. For example, in public HE institutions, the participation of employees at the level of their department (Departmental Meeting) is a low-level participation.

1.1.2.2 Mid-Level Participation

This takes place when an employee participates in the decision-making processes of the plant or establishment, concerning, for example, the way in which the company's rules, regulations, and disciplinary procedures should be applied and executed [42], According to [20], [43], at this level management seeks to actively involve the employees in productivity and cost management. An example of mid-level participation in a public HE institution is participation at the level of a Faculty (Faculty Board Meeting).

1.1.2.3 Top-Level Participation

At this level management views the employees as partners in the enterprise and rewards efforts through gain sharing or profit sharing schemes [20], [43]. Here, top management and the representatives of employees decide on issues of strategic importance for the organization as a whole [42], an example of top level participation in public HE institution is participation at the level of the institution (Senate).

0.1.3 Participation Issues In Employee's Participation In Decision Making

There a number of factors that can seem to affect participation of employees in the decision making in the organization.

(A) Fear and Distrust: when there is fear and distrust from management that it's carrying along of employees in the decision making of the organization can be viewed as weakness on its part and may prevent them from taking corrective disciplinary measures when necessary on employees. The lack of trust that employees will want to make decisions that will only favour them and not considering the interest of the organization which primarily is to make profit can pose a challenge to employee's participation in decision making process of an organization [24].

(B) Structure of the Organization: size of the working units of the organization including the geographical distribution is another constraint to participation. Some managers have very limited subordinates, which makes participation impracticable. Similarly, the wide geographical dispersion of the organization may make a system of participation in decision making impossible. The structure of the organization may determine the extent to which the manager can initiate his own idea to accomplishment of task that invariably will be in operating matters only [41].

(C) Employees Skill: a major plausible excuse for excluding employees in the decision making process of an organization is the lack of administrative and technical skill on the part of the employees that is required for the job. A critical part of decision making is availability of the requisite knowledge and skill on the subject matter, as a poor skill will only amount in making decisions that are not applicable to the operations of the business. For example, an employee that has not been able to understand the business environment may not be able to take decisions as it affects the expansion of a business [33], [37].

(D) Time: a critical element in decision making is time, as it goes a long way to determine a good decision from a bad one. Therefore, most organizations will not be patience to create the opportunity for employees to come up with their input as the action may require their immediate action on the subject matter. These are the many observable constraints that have necessitated research in this field of study with diverse results as benefits and constraints to decision making in organizations.

0.1.4 Forms of Employee Participation

According to [16], six forms of participation were explain as follows:

i. Participation in Work Decision: - It is the form of participation where employees have a high influence on the decision made. It involves formal and direct means where employees

participate in decision concerning the organization directly. [59], looked at participation in work decisions by surveying 2775 employees in six manufacturing plants in Midwest. They looked at general employee participation in work decisions, job involvement, motivation and personal identification within work group in the organization. The correlation between employee participation and job attitude were consistently positive and significant for the total sample within the six separate plants. The reports shows that employees are more involved, motivated with a higher degree of participation regardless of any difference in actual participation. This form of participation is noted to yield higher positive impacts since employees are directly involved in the decision making process.

ii. Employee Ownership:-Employee ownership is one of the formal ways of making employees to be part of the financial owners of the organization usually through equity shares. Employee ownership as a form of participatory decision making serves as an intrinsic and extrinsic from of motivation.
According to [31], there are three models of the psychological effects of employee ownership. The first is the "intrinsic satisfaction model" of employee's commitment and satisfaction which leads to positive impact on productivity. The second model is the "instrumental satisfaction model" of employee ownership. By this model employee ownership increases employee's influence in decision making which turns to increase the commitment level of the workers. The third model, is the "extrinsic satisfaction model" which suggests that employee ownership increases organizational commitment and productivity thus employee ownership is financially rewarding to the employee.
Emotional attachment to financial ownership enhances commitment and increases productivity. According to [40], 1400 organization were surveyed on Employee stock Ownership plans (ESOP) during the years 1975-1976. It was observed that 229 organizations implemented the program, one-third stated that the quality of work was improved. Other results were on level of turnover. There was a smaller percentage improvement in lateness, absenteeism and employee grievances. Though the results were mostly positive, approximately five percent (5%) of the firms experienced levels employee and turnover and one percent (1%) decline in work quality whilst the majority of the companies surveyed felt that ESOPs had a positive influence in workplace.

iii. Representative Participation:-Representative participation is where workers elect execute or some members to represent their interest in management meetings. With representative participation workers participate in decision through their selected executives. With this form of participation employees input and grievances are made known through their representation. This is indirect form of participation because not all workers involves directly in the decision making. Unions are the most used types of representative participation.

iv. Consultative Participation:-Consultative participation is a formal means where employees can take part in decision making. This is usually done through the use of quality circles. [13], defined quality circles as semi-autonomous work groups wherein employees can work together and participate in the decision making process. It can also be seen as group of employees from different levels of a company who meet regularly to discuss ways of improving quality and to resolve problems related to production. Consultative participation is seen to have positive impact on the success of an organization through job satisfaction, commitment, productivity and other array of a company.

v. Informal Participation:-Informal participation takes place through interpersonal relationship between top and lower management. According to [55], the strength of the relationship between subordinates and supervisor directly affects job satisfaction. His research shows that there is significant correlation between high-quality supervisor-employees relationships and job satisfaction which will improve organization efficiency. Though informal participation is not formally organizes, it shows good result and can effectively influence participation due to the amount of trust that exists between supervisor and subordinate relationship.
[18], indicate that trust can play a huge role in satisfaction of employees and that the type of work environment determines whether or not trust will be expected to result in a positive outcome. He noted that high levels of trust results in more positive attitudes, higher levels of

cooperation and superior levels of performance which shows trust within an organization results in positive work ethics and productivity.

vi. Short Term Participation:-Short-term participation is seen as an informal participation which mostly consists of rare event in which an employee can participate. According to [54], though short-term participation is not widely used, it shows positive results with satisfaction which will enhance a positive impact on productivity.

0.2 Theoretical Framework

This study used the social exchange theory because it is more relevant to this study than other theories reviewed. Hence the underpinning theory for this research study is the social exchange theory.

According to [49], employee participation is provided by social exchange theory. The theory argues that obligations are generated through employers engaging employees in decision making. According to the theory relationships evolve over time into trusting, royal and mutual commitments as long as parties abide by certain rules of exchange. It involves reciprocity or repayments rules such that the actions of one party lead to a response or actions by the other party [4], According to [6], social exchange theory best describes employee participation because it sees feelings of loyalty, commitment, discretionary effort as all being forms of reciprocation by employees to a good employer.

However, the research extends to Social exchange contribution to knowledge by examining how employee participation in decision making influences manufacturing productivity.

Productivity

Productivity can be defined as performance measures, which encompasses both efficiency and effectiveness [11], therefore, measures of institutional productivity for this study are effectiveness and efficiency. Hence this researcher used effectiveness and efficiency to determine the impact employee participation has on the productivity of a Faculty.

According to [45], an organization can improve its productivity either by changing its technology or by using its people. Similarly, there are many ways in which an organization can improve its productivity. These include: investment in plants and equipment, research and development, new methods of production and new technologies. The author further states that the largest unexplored opportunity for increasing organizational productivity is through effective use of the workforce or employees. Part of the concerns of this study was to understand how an organization can use its people or workforce to increase its productivity.

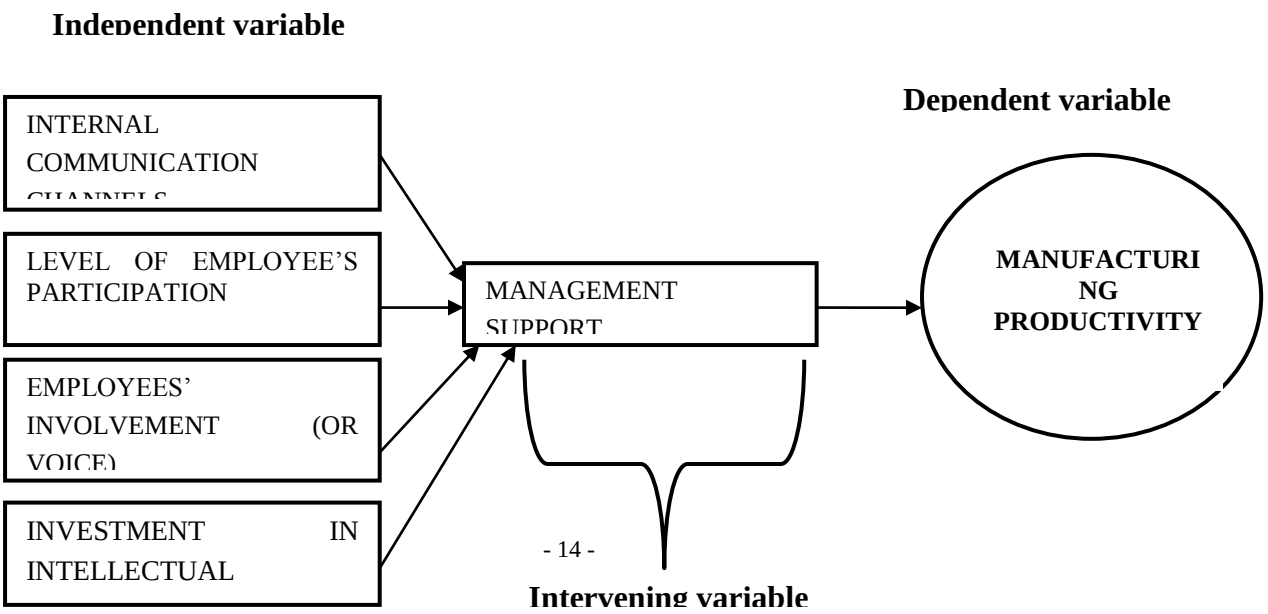

Fig 1: Conceptual Framework of the study
Source: Daniel (2019) and Udu & Aturu-Aghedo (2016)

1 Research Methodology

1.1 Research Plan

The study employed a descriptive survey research design. The descriptive survey design enables the researcher to "describe phenomena accurately". This design also corresponds to what [14], describes as Cross-sectional research design that aims at getting data from multiple places at a given point in time so as to analyze relationships across a number of variables of interest. Survey in research is a technique in which data are gathered by asking questions from respondents.

This study made use of qualitative and quantitative data to research. This design enables the researcher to collect information from the respondents that will help the researcher to examine issue raised from various angles to construct a rich and meaningful picture of a complex, multifaceted situation" [36], The objectives for this study clearly show that the intention of this research is to explore the ways by which employees participate in decision making process and the impact on manufacturing development level. The study also used a structured questionnaire to collect data which the data was analyzed using simple percentages and frequency counts.

1.2 Population of the Study

The target population is the population to which the study findings would be generalized [15]. The population of the study comprises of employers and employees of selected manufacturing companies in Lagos State Nigeria. However, there is no exact figure or statistics of the number of the respondents of various selected manufacturing companies in Lagos State Nigeria. The present study is focused on staffs of various selected manufacturing companies in Lagos State Nigeria namely Dangote Nigeria PLC., Dufil Prima Nigeria PLC and Flour Mills of Nigeria PLC.

1.3 Sample of the Study

The population of this study is the number of manufacturing enterprises in Nigeria, but due to the size of the country, the large number of manufacturing enterprises and the high cost of time, effort and difficulty in obtaining reliable statistics, the researchers decided to reduce it to Lagos State. Consequently, the population surveyed is made up of all managers and a selected number of employees of these manufacturing companies. A sample of three manufacturing companies was selected. Dangote Group Nigeria Plc, Mills of Nigeria Plc and Dufil Prima Foods Nigeria Plc. The choice of these publishers is based on the fact that all manufacturing companies in Nigeria operate in a similar political, social and economic environment. We therefore have to hope for a fair generalization.

On account of the nature of the population's heterogeneity, convenience sampling technique will be used to select respondents for the research.

A convenience sample is a type of non-probability sampling method where the sample is taken from a group of people easy to contact or to reach. For example, standing inside the bank and asking people to answer questions would be an example of a convenience sample in the case of this study. This type of sampling is also known as grab sampling or availability sampling.

Table 1 Sample Size

Company	Sample Size

Dangote Nigeria PLC	50
Dufil Prima Nigeria PLC	40
Flour Mills of Nigeria PLC	20
TOTAL	110

Source: Compiled by the author' (2019)

Thus, the sample size for the study is 120 staff of the organizations.
For this research, the survey technique was main technique used to collect data mainly from primary data source. The structured questionnaires were distributed to the target respondents using survey technique. The respondents were asked to fill in the required questionnaires at their convenience.

1.4 Method of Data Collection

For this research, primary data source was the main source of data collection through the use of structured questionnaire; the structured questionnaire was adapted from [17], [58]. The collected information from the respondents was used to estimate the research model. The questionnaire consists of close-ended questions i.e. respondents are only required to supply short answers by ticking the correct answers to the questions. This is because it will increases some control and enhance guidance to the respondents, which significantly enhances the validity and reliability of the instrument (i.e. the extent to which expected results are obtained).
Despite some studies in the literature that used different Likert scales, the researcher prefers to use a five point Likert scale. According to [22], five point scales is preferable, and increase in the number from five to whatever as the case may be would not assures improvement in the reliability of rating. This is supported with the argument of who viewed that five point scales is the most appropriate and provide better results. Hence, five point Likert scale is adopted for this study.
The questionnaire that is used in this study has three sections. Section A consists of demographic information of respondents. It covers five (5) items in nominal scale. Section B has ten (10) questions on the dependent variable of manufacturing productivity. Section C also has thirty-seven (37) questions regarding the independent variable of decision making strategies (level of participation, internal communication channels, employees' involvement (or voice), investment in intellectual capital and management support).

1.5 Measurements of Variables

Items that measure the decision making strategies in questionnaire were adapted from past researches. The reason for adapting the items is to suit the field of study for easy interpretation to respondents and guide against respondent bias. The decision making strategies of level of participation, internal communication channels, employees' involvement (or voice), investment in intellectual capital and management support was measured with different items respectively adapted from the study of [17], [58]. who itemized the decision making strategies used in this study, Manufacturing sector productivity was measured using ten (10) items adapted from favorable measures of works of [17], 58].
A total number of fifty-Two (52) questions connected to the variables were included in the questionnaire. Responses of all items were measured by agreement with statements, which are ranging from 1= strongly disagree to 5= strongly agree on a five- point Likert scale. Below is the basic description of the variables in the questionnaire.

Table 2: Measures of Variables

S/N	Variable	Measurement	No. of	Status

				Questions	
1	Manufacturing Productivity (PRO)	5 point Scale	Likert	10 questions	Dependent Variable
2	Level of Participation (PART)	5 point Scale	Likert	6 questions	Independent Variable
3	Internal Communication Channels (INCC)	5 point Scale	Likert	9 Questions	Independent Variable
4	Employees' Involvement (or voice) (INV)	5 point Scale	Likert	9 Questions	Independent Variable
5	Investment intellectual capital (IIC)	5 point Scale	Likert	8 Questions	Independent Variable
6	Management Support (Mas)	5 point Scale	Likert	5 Questions	Intervening/ moderating Variable

Source: Designed By the Author

1.6 Reliability and Validity

There are many kinds of validity, but they all refer to whether or not the data being measured truly reflect what it ought to be. Reliability refers to consistency and ability to obtain the same answer each time a measure is used. There are three types of reliability test: inter-rater, internal consistency, and test-retest. Validity test determines if a measurement truly reflects the concept being studied. There are three common types of validity: internal, external, and construct. Reliability test determines the consistency that researchers should be able to obtain the same answer each time a measure is used. It is concerned with how consistent the result obtained with the instruments are and that the instrument gives similar, close or the same result if the study is replicated under the same assumptions and conditions [5].

This study made use of Cronbach's Alpha reliability test to examine the reliability and validity of the instrument use for data collection. The instrument was validated using reliability Cronbach's Alpha test, to ensure the internal consistency of scales' items; Cronbach's Alpha coefficient will be reported in the analysis of the questions. Cronbach Alpha is one of the most commonly used indicators of internal consistency. It measure how well individual item in a scale correlates with each other, it describes the degree to which the items that make the scale hang together, It usually starts from 0 to 1, the more closer is the value to one the better and more consistent of the items in measuring a particular variable. Ideally 0.7 and above is the acceptable region of Cronbach Alpha, it is very sensitive to the number of items in the scale i.e. the higher the items the better, or vice versa, therefore, when the scale have fewer items, the value of inter-item correlation should be reported as recommended.

1.7 Mode of Data Analysis

In this study, both descriptive and inferential statistics was used in the analysis of data. The descriptive statistics was used to describe the nature of the data collected, the demographic characteristics and the measure of dispersion. Meanwhile, the inferential statistics are used to analyses the relationship among the variables used in the study to make inferences as to answer the research questions and test the working hypothesis of the study. The inferential statistical techniques of multiple linear regression and correlation analysis were used. The Spearman rank correlation was used to ascertain the direction of relationship between the dependent variable and the independent variables. The Multiple linear regression analysis is used to examine the associative impact of the independent variables on the dependent variables. Statistical package for social sciences (IBM SPSS Version 20.0) was be used to analyze the data collected. The choice of SPSS is supported by who highlighted the benefits of the package unit in terms of its relative simple use, its familiarity to several applied math

consultants and its practicality.

1.8 Descriptive Statistics

A brief descriptive was presented in this study. The descriptive statistics was used for the analysis of demographic distribution of respondents using frequency counts and simple percentages. The measures of central tendencies (mean, median, and mode) were computed to ascertain the nature of the distribution of the variables used in this study. The skewness and kurtosis was also computed.

1.9 Spearman Rank Correlation Coefficient Test

The Spearman rank correlation coefficient was used to test the direction of relationship between the variables. The Spearman rank correlation coefficient will help us to establish the strength of association between the variables under the study and by so doing determine whether or not a significant relationship exists between variables. The Spearman rank correlation coefficient is calculated using:

$$r = \frac{n\sum xy - \sum x \quad \sum y}{\sqrt{\quad n\sum x^2 - (\sum x)^2}\ \sqrt{n\sum y^2 - (\sum y)^2}}$$

Where:

n = number of periods being considered
x = (Independent variable): Budget Appropriation
y = (dependent variable): Actual funding

The value of r lies between – 1 to + 1 inclusive. If the value of r is equal to one (1) or minus one (-1) there is a perfect correlation in same or opposite directions respectively.
If the value of r is equal to zero then there is no correlation between the two variables.
We will also adopt the following criteria for interpreting the value of r.

Table 3: Interpretation procedure of correlation coefficient

Value of r	Interpretation
Between 0 and $\pm$ 0.25	Zero or weak correlation
Between $\pm$ 0.25 and $\pm$ 0.50	Moderately weak correlation
Between $\pm$ 0.50 and $\pm$ 0.75	Moderately strong correlation
Between $\pm$ 0.75 and $\pm$ 1.00	Strong to perfect correlation

Source: Sabo (2000).

1.10 Model of the Specification (OLS REGRESSION)

Ordinary Least Square model could be used when the dependent variable is continuous. To examine the relationship between the dependent and independent variables in the study, the following equation was adopted by the study:

$$Y_t = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \hat{e}$$

Where Y_t is the dependent variable, i.e. Manufacturing sector productivity, β_1 is the intercept, it is constant and measures the service quality; $\beta_1 x_1$, $\beta_2 x_2$, $\beta_3 x_3$, $\beta_4 x_4$ and $\beta_5 x_5$ are the independent variables and they stand for level of participation, internal communication

channels, employees' involvement (or voice), investment in intellectual capital and management support, while *e* is the error term which is random or stochastic.
Since, all the respondents' responses are not expected to lie within exactly the straight line of the equation: because of sampling technique, and the variables explaining the phenomenon may not have been captured in the study. Hence, the probabilistic model will be adopted as follow:

$$\hat{y} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \hat{e} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Incorporating the model to suit the specification as adapted from the study of [17], [58], the model for this study is presented as follows;
*Manufacturing sector productivity = **f** (level of participation, internal communication channels, employees' involvement (or voice), investment in intellectual capital, And management support)*

$$PRO_i = b_0 + + b_1 PART_i + b_2 INCC_i + b_3 INV_i + b_4 IICC_i + b_5 MAS_i + \mu_t \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where,
PRO= Manufacturing sector productivity
PART= Level of Participation
INCC= Internal Communication Channels
INV = Employees' Involvement (or voice)
IICC = Investment in Intellectual Capital
MAS = Management Support
b_0-b_5 = coefficients of the variables
μ_t = stochastic error term.

1.11 Model Diagnostics

To determine the appropriateness of multiples model, the study conducts some diagnostic tests which includes the Normality Test, the Hetroscedasticity Test and Multicollinearity Test. These tests are necessary because in multiple linear regression models the variables in the model most meet the various assumptions of Ordinary Least Square method.

2 Results and Discussion

2.1 Demographic Distribution Respondents

The demographic and socio-economic characteristics of the respondents captured from the study area includes gender distribution, age, educational qualification, marital status, and work experience of the respondents, were analyzed in this section using the simple descriptive statistical analysis which are frequency statistics and simple percentages.

Table 4 below shows the demographic distribution of the respondents. There are one hundred and seventy (120) respondents, from this 92(76.7%) are males while 28(23.3%) are females. Also, 49(40.8%) of the respondents are single while 71(59.2%) of the respondents are married. The age distribution showed that 27(22.5%) are between the ages of 20 years-29 years as 27(22.5%) of the respondents are between 30 years- 39 years of age. Also, 34(28.3%) of the respondents are within the ages of 40 years-49 years and 20(16.7%) are between the ages of 50 years- 59 years so also, 12(10.0%) are 60 years of age and above.

Table 4 Demographic Distribution of the Respondents

	Frequency	Percentages

Gender		
Male	92	76.7
Female	28	23.3
Total	**120**	**100.0**
Marital Status		
Single	49	40.8
Married	71	59.2
Total	**120**	**100.0**
AGE		
20 years-29 years	27	22.5
30 years- 39 years	27	22.5
40 years-49 years	34	28.3
50 years- 59 years	20	16.7
60 years and above	12	10.0
Total	**120**	**100.0**
Academic Qualification		
Master's Degree	12	10.0
First Degree/HND	66	55.0
Diploma/NCE	42	35.0
Total	**120**	**100.0**
Work Experience		
1 year-10 years	30	25.0
11 years-20 years	43	35.8
21 years to 30 years	28	23.3
31 years and above	19	15.8
Total	**120**	**100.0**

Source: Field Survey (2020)

The academic qualifications of the respondents showed that 12(10.0%) of the respondents have attained master's degree while 66(55.0%) of the respondents have attained either a first Degree or a HND. Also, 42(35.0%) of the respondents have Diploma/NCE certificates.
The length of working experience of the respondents showed that 30(25.0%) of the respondents have been working between 1 year-10 years while 43(35.8%) have been working for 11 years-20 years. Also, 28(23.3%) of the respondents have been working for 21 years to 30 years while 19(15.8%) of the respondents have been working for 31 years and above.

4.3 Descriptive/Summary Statistics of the Variables

This section the measures of central tendencies (mean, and standard deviation) were computed to ascertain the nature of the distribution of the variables used in this study. The skewness and kurtosis were also computed to understand the nature of normality distribution of the variables.

Table 5 Descriptive/Summary Statistics of the Variables

Variables	Minimum	Maximum	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**

PRO	3.50	4.80	4.3742	.27363	-.895	.703
PART	3.67	5.00	4.4681	.22589	-.880	1.706
INCC	3.56	4.89	4.4750	.22819	-1.118	2.148
INV	4.00	4.78	4.4926	.16533	-.343	-.181
IIC	4.13	4.88	4.5125	.16950	-.143	-.610
MAS	4.00	5.00	4.5183	.22379	.242	-.521

Computed by the researcher (2020)

The table 5 above shows summary statistics of the variables used in this study. There are six (6) variables used in the study which include, Manufacturing sector productivity (PRO), Level of Participation (PART), Internal Communication Channels (INCC), Employees' Involvement (or voice) (INV), Investment in Intellectual Capital (ICC) and Management Support (MAS). From the results above, PRO has a mean value of 4.37 with a standard deviation of 0.27, meanwhile, PART has a mean of 4.47 and a standard deviation of 0.23 as INCC has mean of 4.48 and a standard deviation of 0.23. Likewise, INV has a mean and standard deviation of 4.93 and 0.165 respectively while, IIC has a mean and standard deviation of 4.51 and 0.17 respectively. Also, MAS has a mean of 4.52 and a standard deviation of 0.22.

In relation to the normality of the variables, the distribution is normal if the values of skewness and kurtosis are close to zero. A positive skewness value indicates positive (right) skew; a negative value indicates negative (left) skew. The higher the absolute value the greater the skewness. Similarly, a positive kurtosis value indicates that the variables are flatter to the left as compared to the normal distribution and they are of a leptokurtic distribution, while a negative kurtosis indicates that the variables are flatter to the right as compared to the normal distribution and they are of a platykurtic distribution. The higher the absolute value the greater the kurtosis.

From the table 4.2 above, the skewness values of the variables range from -1.118 to 0.242, thus indicating that the data is approximately symmetric, and all the variables are negatively skewed. In respect of kurtosis, the values fall within positively skewed and which are far from zero, hence indicating that the data is approximately symmetric, and the variables have a leptokurtic distribution.

4.4 Reliability Test

Reliability test is to determine the extent of internal consistency of items in the questionnaire's measurement scales. The Cronbach Alpha Reliability Test was used to test the reliability of the items in the questionnaire. It is required that, for items to be reliable, the coefficient of Cronbach's Alpha should be between 0.70 to 0.90, anything less is considered inconsistent and unreliable. The following are the results obtained from the test.

Table 6 Reliability Test

Variables	Number of Items	Cronbach's Alpha Coefficient
PRO	10	0.905
PART	6	0.887
INCC	9	0.885
INV	9	0.950
IIC	8	0.868
MAS	5	0.864

Computed by the researcher using IBM SPSS version 20 (2020)

The result from table 6 above shows the result of reliability test for the variables used for the study. The entire variables used for the analysis have reliability co-efficient above 0.50. The result above shows that all the variables have a homogeneous and internally consistent item

in the reliability of the measuring instrument.

4.5 Inferential Analysis

The inferential analysis here constitutes the estimations analysis which are Correlations and multiple regression analysis. Also, some post-estimation test will be presented here, which include Linearity Test, Normality Test, and Homoscedastic Tests. The variables that will be used in the study are, Manufacturing sector productivity (PRO), Level of Participation (PART), Internal Communication Channels (INCC), Employees' Involvement (or voice) (INV), Investment in Intellectual Capital (ICC) and Management Support (MAS)

4.5.1 Correlation Analysis

The study uses the correlation matrix to analyze the relationship between the dependent variables and the independent variables

Table 7 Correlation Matrix

Variable	Spearman Rank Correlation Coefficient	Sig
PRO	-	-
PART	.320**	.000
INCC	.242**	.008
INV	.133*	.027
IIC	.274**	.000
MAS	.306**	.000

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

Computed by the researcher using IBM SPSS version 20(2020)

The table 7 above shows the spearman rank correlation matrix of the variables used for the study. The correlation matrix shows the extent of relationship between the dependent variable and the independent variables.

From the results above, PART has a positive relationship with PRO at 32% and the relationship is significant at 5% level of significance, while INCC have a positive relationship with PRO at 24.2% and the relationship is significant at 5% level of significance. Also, the relationship between INV and PRO is highly significant at 5% and they have a positive relationship at 13.3%. The relationship between IIC and PRO is highly significant at 5% and the relationship is positive at 27.4% as the relationship between MAS and PRO is also positive at 30.6% and statistically significant at 5% level of significance.

Because the correlation was positive in all the dimensions of decision-making strategies, hence employee participation in decision making and manufacturing productivity are positively related, which means the employees involvement in decision making has a high relationship with manufacturing productivity. Accordingly, the most important decision-making strategies that affects manufacturing productivity is Level of Participation (PART), which goes to prove that Level of Participation (PART) perceived as a dominant decision-making strategies followed by Management Support (MAS), Investment in Intellectual Capital (ICC), Internal Communication Channels (INCC) and Employees' Involvement (or voice) (INV); indicating improvements in manufacturing productivity levels were significant.

4.5.2 Multiple Regression Analysis

The table 8 below shows the regression result of the variables used for the study. The OLS multiple regression technique was used to test the impact between the independent variables and the dependent used for the study. An econometric model was designed to investigate the effects on the dependent variable, as the expected direction and amount of change in the

criterion for a 1-unit increase of independent variable; while all the other variables held constant.

Probability test of significance (p-value) of the parameters are employed in the research to verify the statistical significance of the estimates. All computations were done at 5 percent (5%) level of significance. If the probability (p-value) is less than or equal to 0.05 (p-value ≤ 0.05) the null hypothesis will be rejected and alternate hypothesis will be accepted, given that the estimates are statistically significance. However, if the p-values is greater than 0.05 (p-value > 0.05) the null hypothesis will be accepted and the alternate hypothesis will be rejected, certain that the estimates are not statistically significance

From the table 4.5 below presents the R^2 and the Adjusted R-Square and the F-Statistics of the model for the model. The R-Square measures the goodness of fit of the estimated model. The R^2 measure the proportion of total variation in the dependent variable as explained by the independent variables in the regression model.

Table 8 Multiple Regression Table

Variables	Coefficients	SE	t-values	P-Values
PART	.206**	.107	1.922	.047
INCC	.333**	.106	3.152	.002
INV	.212**	.106	1.994	.047
IIC	.471**	.169	2.778	.006
MAS	.345**	.182	1.898	.048
Constant	.785			
R^2	.347			
Adj R^2	.120			
F-statistics	3.113			
F-probability	.011			

*The asterisks ** indicate significance* at *5%. The figures in parenthesis ( ) are standard errors.*

Source: Computed by the researcher using IBM SPSS version 20 (2020)

The table above shows an R-Square value is 0.347 while the Adjusted R-Square is 0.120. This implies that the model explains about 35% of the total variation in manufacturing productivity (dependent variable) as explained by the independent variables.

F-Statistics of the model measures the overall significance of the regression model. It shows if the model as a robust and fit. The null hypothesis explained that the model is statistically insignificant if P-value is greater than 0.05. From the table above, the P-value is 0.000 which is less than 0.05, which implies that at 5% level of significance we thereby reject Ho and conclude that the model has a fit and robust and it is statistically significant, that means there exist a true relationship between the independent variables and the dependent variables.

The table above also shows the coefficient of independent variables provided with the t-statistics values as well as the probability values to ascertain the level and significant of the impact of the independent variables on the dependent variable.

Level of Participation (PART):- The sign of the coefficient of PART is positive and statistically significant. The value of the coefficient of 0.206 implies that on an average a one percent (1%) increase in PART will lead to a 20.6% increase in manufacturing sector productivity (PRO) when all variables are held constant. This implies that the higher the level of participation of employee in decision making in the manufacturing the higher the manufacturing sector productivity of the manufacturing sector.

Internal Communication Channels (INCC):- The sign of the coefficient of INCC is positive and statistically significant. The value of the coefficient of 0.333 implies that on an average a one percent (1%) increase in INCC will lead to a 33.3% increase in manufacturing sector

productivity (PRO) when all variables are held constant. This implies that the improvement of internal communication channels of employee in decision making in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

Employees' Involvement (or voice) (INV):- The sign of the coefficient of INV is positive and statistically significant. The value of the coefficient of 0.212 implies that on an average a one percent (1%) increase in INV will lead to a 21.2% increase in manufacturing sector productivity (PRO) when all variables are held constant. This implies that the higher the involvement of employee in decision making in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

Investment in Intellectual Capital (IIC):- The sign of the coefficient of ICC is positive and statistically significant. The value of the coefficient of 0.471 implies that on an average a one percent (1%) increase in IIC will lead to a 47.1% increase in manufacturing sector productivity (PRO) when all variables are held constant. This implies that the higher the investment in intellectual capital of employs in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

Management Support (MAS):- The sign of the coefficient of MAS is positive and statistically significant. The value of the coefficient of 0.345 implies that on an average a one percent (1%) increase in MAS will lead to a 34.5% increase in manufacturing sector productivity (PRO) when all variables are held constant. This implies that the higher the management supports for employee's participation in decision in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

4.5.3 Post-Estimation Test

The post estimation test presents various tests conducted in multiple linear regression models to test if the variables in the model have met the various assumptions of Ordinary Least Square method. The Classical Linear Regression Model (CLRM) assumes that the model has Best, Linear and Unbiased Estimators (BLUE). The assumption of CLRM includes that the errors of the model should be normally distributed (Normality). The variance of the error term should be constant over time (Homoscedasticity). The model should not suffer from Multicollinearity; when the error terms correlate with the variables in the Model (Multicollinearity). All the assumptions are examined and are presented below;

(i) Normality

One of the major assumptions of CLRM is that errors of the model should be normally distributed with Zero Mean and Constants Variance. The statistical consequences when the assumption of normality collapsed, is that there is presence of outliers in the data (Gujarati & Porter 2009).

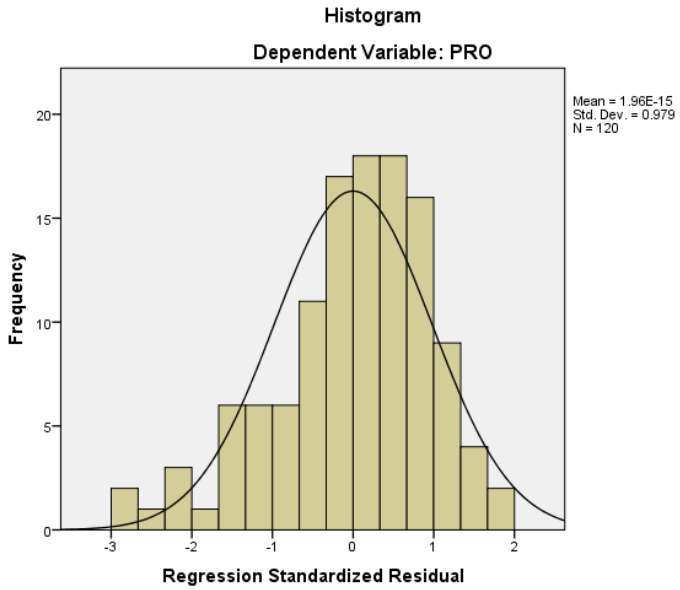

Figure 2: Normal Q-Q Histogram Plots
Source: Generated by the Author using IBM SPSS version 20 (2020)

To determine normality graphically the study used the output of a normal Q-Q Plot. If the data are normally distributed, then the data points will be close to the diagonal line. If the data points stray from the line in an obvious non-linear fashion, then the data are not normally distributed. As presented in figure 4.1 above the normal Q-Q plot show that the data is normally distributed. The histogram of the fitted residual showed that the distribution is normal as seen in figure 2. A fitted normal distribution plot indicates that, the assumption of normality has been met, the entire bars on the histogram were close to the normal curve.

(ii) Multicollinearity Test

Multicollinearity occurs when two or more predictors in the model are correlated and provide redundant information about the response. Multicollinearity is a situation where two or more independent variables in a CLRM are correlated. A collinearity Diagnostic test using condition index as well as Variance Inflation Factor (VIF) method was used. The table below presents VIF index and condition index for variables used in the model;

Table 9 Collinearity Statistics

Model	Tolerance	VIF	Condition Index
PRO			1.000
PART	.982	1.018	47.265
INCC	.996	1.004	50.781
INV	.971	1.030	55.900
IIC	.991	1.010	68.360
MAS	.964	1.037	139.679

Computed by the researcher using IBM SPSS version 20 (2020)

The table 9 above showed the VIF and tolerance level as well as the condition index. A VIF that exceeds 10 and tolerance value that is lower than 0.10 indicate a problem of multicollinearity. The result of this study shows that VIF are less than 10 and the tolerance value is more than 0.10.

A condition index greater than 15 indicates a possible problem. An index greater than 30

suggests a serious problem with collinearity. From the table above none-of the variables have a condition index greater than 15 or 30. This shows that the model those not suffer from multicollinearity problem.

(iii) Homoscedasticity Test

It is assumed under CLRM that the variance of the error term is constant over time. Homoscedasticity means that the variance of independent variables is approximately the same at different level of the independent variable. If the variance of the error term is not constant, then there is a statistical problem in the model. The problem of hetroskadacity exits in the model. Homoscedasticity is normally assessed by visual inspection of the scatter plot of the regression residual.

Homoscedasticity appears to be indicated when the width of the band of the residual is approximately the same at the dissimilar of the dependent variables and the scatter plot as presented in appendix section in figure 2 shows a pattern of residuals normally disseminated around the mean. It was found that for all the variables the assumption was not violated. (Appendix).

3 Conclusion

The purpose of the study was to assess the Impact of Employee Participation in Decision Making on Organizational Productivity: A Perspective of Nigeria Manufacturing Sector The study has drawn some conclusions based on the data analysis of the study. Based on the findings, the study therefore concludes that;

The study findings revealed that level of participation has a positive and significant effect on manufacturing productivity. The results showed that the higher the level of participation of employee in decision making in the manufacturing the higher the manufacturing sector productivity of the manufacturing sector.

Also, the study findings lead to a conclusion that the improvement of internal communication channels of employee in decision making in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

In addition, the study concludes that indeed higher the involvement of employee in decision making in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

The study further concludes the higher the investment in intellectual capital of employs in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

Furthermore, management support for employee's participation in decision making has a significant positive influence on manufacturing productivity. The results showed that higher the management supports for employee's participation in decision in the manufacturing sectors the higher the manufacturing sector productivity of the manufacturing sector.

Managers should put more effort in encouraging their employees to come up with suggestions and useful decisions and endeavor to incorporate them into the organization's decisions and policy.

Managers should increase the frequency and level of worker participation in decision making because they are the people carrying out the main operative work as they are in the better position to know what goes on those areas.

The managers of manufacturing sector should improve the internal channel communications whereby information regarding the activities of the industry to be channelled easily to the employees. Also, managers should encourage sharing of ideas within the industrial with employees included. Likewise, motivating structures and accessibility and usability of technology should be provided for the enhancement of internal communication channel.

In addition, the study concludes that indeed higher the involvement of employee in decision making in the manufacturing sectors the higher the manufacturing sector productivity of the

manufacturing sector. The managers of the industry should encourage the employees to speak during meetings and conferences. Also, the managers should encourage employees to offer suggestions to their supervisor to help solve work-related problems.