

# ENVIRONMENT AND PRODUCTIVITY NEXUS: AN EMPIRICAL ANALYSIS OF A PRODUCTIVE ORIENTED ORGANISATION

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## Abstract

This issue of productivity cannot be over emphasized when considering the nature of an objective minded organization. Although there are different ways of measuring the level of productivity of organizations, yet, it is a great tool that must be considered when analyzing the level of growth and development of an organization. Organizations are integral parts of the environment, thereby can be influenced by the forces and actors of the environment. This study tends to assess the effect of environment on organizational productivity. Although no organization bargains for low productivity, but this can occur if the organization fails to acknowledge and incorporate the vital nature of environmental forces into its management portfolio. This research adopted primary and secondary sources of data. The primary data involves the use of questionnaires while the secondary data envelopes the use of journals, internet and relevant literature materials. The data was analyzed in percentages while the hypotheses were tested using correlation coefficient. The results show that there is a significant relationship between environment and employees productivity. More so, there is also a significant relationship between motivation and employees productivity. It is hereby concluded that environmental factors serve as vital tools for the survival, growth and development of organizations, and thereby should be incorporated in management decision making. In line with this study, it is recommended that management should not only motivate employees but only intensity the degree of the cordial relationship with employees. More so, organizations must constantly watch and monitor the dynamic nature of the environment and provide training and refresher courses that will enhance employees' potential.

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**Keywords:** Environment, tools, productivity, employees and organization

## Introduction

The sustenance of any productive oriented organization tends to stand on the productive capacity of the organization in not only meeting target needs through effective production of goods and services but also achieving the stated objectives of the organization. Implicitly, it is necessary for organizations to constantly take into cognizance the degree at which they are satisfying the target customers as well as the rate at which the objectives are being met.

In having effective production capacity, the environment must be conducive otherwise the degree of productivity of the organization will be adversely affected. Aside from the rate of qualified manpower for the organization, the environment which constitutes a vital ingredient in motivating employees must be friendly in nature. The friendliness of the environment and other motivating factors coupled with employees commitment will no doubt lead to increase in productivity.

In Northern Nigeria today, some of the industries, factories, and the public sectors are not producing effectively due to unconducive environmental factors. This has led to the closure of some industries while some that are still in existence record low output.

The deadly operation of a sec known as Boko Haram has made the entire environment in the North unfriendly for business. Most of the firms e.g. banks, insurance, and other institutions are not working at 100% production capacity. The output of most organizations has dropped drastically because of the threats and bombing of industries, destruction of properties, and killing of lives.

Aside from the adverse effect on businesses, many people including businessmen left the Northern areas because of life insecurity. Churches, mosques, and strategic places were bombed along with lives and properties.

The effect of the deadly operations of this ‘sec’ has made some parts of the Northern areas a ‘no go area’. It is very difficult to find good products in these areas because companies and other institutions are leaving because of insecurity.

David A, Decenzo and Stephen P. Robbins (1988) said ‘without a good product or service to sell, problems in organizations are sure to arise’. Based on this, there is the need for organizations to produce good products and/or services; otherwise the targeted customers may decline patronizing the organization because of low quality product.

High productivity is what makes an organization to strive. This is the reason why productivity improvement programmes are becoming more popular with organization. There

are various factors that affect employees productivity in an organization. One of the vital factors aside from motivation is environment.

Environment is the surrounding conditions and external forces influencing employees' productivity irrespective of the nature of the organization. More so, changes in environmental conditions also affect productivity which may in turn affect the degree of the actualization of stated objectives.

Ibojo B.O and Olawepo G.T stated the fact that the setting up of organizations is for the actualization of specific objectives such as profit maximization, growth, expansion, increase in market share etc.. Organizations have objectives to achieve, and this can be done with the aid of the employees, therefore, employees should perform their responsibilities in a friendly environment. It will be difficult for employees to contribute meaningfully in an unconducive environment; therefore, organizations must make sure that the environment is not only conducive but also friendly in nature.

### **Review of Literature**

Decenzo and Robbins (1988) stated that high productivity is what makes an organization grows. This means that for an organization to achieve success, it should embark on how to instantly improve its production in terms of quality and quantity. However, it is the responsibilities of both the management and employees to make sure that the quality of goods and services produced and rendered meets the expectations of the target market. This can only be successful and accomplished if the environment is friendly in nature.

Middleton, Ziderman and Van Adams (1993), skills for productions, published for the World Bank, opined that developing countries need to improve productivity throughout their economics if they are to compete successfully in the era of rapid economic and technological change. However, for developing countries to improve their productivity, it is vital to understand the state of the external environments. The external environments are economical, political, technological, socio-cultural, natural, legal and demographic environments. If one of these environmental forces is not stable, it will adversely affect other environmental forces. In Nigeria for now, the current threat caused by a sec called Boko Haram has affected negatively the security of lives in the Northern States of the Federation. This crisis has led to the killing of thousands of Nigerians, thereby affecting adversely all sectors in the Northern States. The federal government is looking and working tirelessly to curb this crisis because it has also

affected other environmental forces in the federation, thereby affecting negatively the productivity level of the country.

The level of employees' productivity is determined by a number of factors such as management style, training and development, innovation, capital investment, environment etc. However, environment plays the highest role on productivity level because no employee can function optimally if the environment is a threat to his/her life. Aside from threats to life, at times, the circumstances in the environment can make the environment to be unstable thereby hindering positive response from the employee. In view of this, organization must constantly watch and monitor the circumstances in the environment in order to create friendly environmental conditions that will no doubt increase employees' productivity.

Adrian Palmer and Bob Hartley (2001) viewed an environment as everything that surrounds a system. The organization is a system but a subsystem within the environmental system that is influenced by environmental variables. It should be noted that the human resources made up the organization, and their reactions toward the environment will dictate their contributions to productivity.

Adrian P. and Bob H. reiterated the fact that business organizations exist to turn inputs from the environment (e.g. materials, labour, capital etc.) into goods and services purchase. This transformation process adds value to the inputs, so that the buyers are prepared to pay more to the business organization than the cost of resources that it has used up in the production process. However, if there are threats from the environment, or if the environment is unfriendly, the organization may not be able to add value effectively to the input, thereby affecting the output of the organization which may lead to ineffectiveness of organization in terms of productivity and achievement of organizational objectives.

Bozmen F.F. (1970) states that environment is a term applied to all conditions which are not part of the individual self of a person and which lend to alter each individual, thus forming certain varieties and species. He stated further that the environment may be physical, including such things as geographical or chemical conditions, the latter including the state of the art, the condition of food, and many other such influences. This is a social environment showing the influence of one individual upon another, which leads to the establishment of new customs and new institutions, thus bringing about a new type of individual. It is therefore necessary for individuals in the organization to be happy and friendly with the environment, otherwise the output of the organization will be badly affected.

Stephen P. Robbins (1983) defined productivity as the quantity or volume of the major product or service which an organization provides. Yahaya and Akinyele (1992) defined productivity as a measure of the efficiency of management. They then described the concept (productivity) as a ratio between what is put into anything, human efforts etc and what is gotten out for example refrigerators, soaps, determents etc. it is presumed that if the transformation process of the production process is not effectively done due to negative environmental influence, the rate of output of the productivity level will be low.

Kieitner R (1986) stated that productivity is any output to input ratio. Outputs include goods and service produced during a given time while inputs are the resources consumed to produce the output. He was of the view that labour is one of the input resources, therefore must be motivated and environmentally friendly. However, if the environment is not friendly, the efficiency and effectiveness of labour, with respect to the needed contributions will be adversely affected.

### **Factors Affecting Employees' Productivity**

There are lots of factors affecting employees' productivity. Some of the factors will be briefly looked into.

#### **1. Management Style**

The success or failure of any organization depends on the adopted management style. An open door and team work managers tend to motivate their employees towards increased productivity than unproductive carefree and autocratic managers.

Nwachukwu C.C. (1988) observed that productivity is never low under manager known for his integrity, initiative, a sense of justice, and emotional stability.

#### **2. Training**

It is necessary for organizations to have well – trained and experienced workforce to perform the activities needed in the organization. Training and developmental programmes will aid in bringing out employees potentials and skills which will directly aid productivity.

David A. Decenzo and Stephen Robbins viewed training as a learning experience in that it seeks a relatively permanent change in an individual that will improve his or her ability to perform on the job. From the view of Cascio W.F. (1989), training consists of planned programs designed to improve performance at the individual, group, and/or organizational

levels. From the minds of above scholars, training is a vital necessity for improved productivity.

### 3. **Motivation**

This involves the way in which drives, urges and desires explain the behavior of man. It can also be defined as drives, factors and urges that make an individual to behave in a particular way or refrain from behaving in a particular way. The first management task is to set the organizational goal, and the major task is to move the organization most effectively to reach the goal. This can be done by motivation, the purpose of which is to create conceptual as well as a physical work environment in which the employees are willing to work with zeal, initiative, interest and enthusiasm with a sense of responsibility, loyalty, and a cohesive manner.

### 4. **Environment**

It is a well known fact that a conducive environment increases employees' productivity, and vice versa. As said earlier, environmental factors can hinder or promote (increase) employees' productive capacity. Management should make sure that all environmental factors are friendly in nature. The issue of electricity which affects not only the employees but also the plants and machinery should be made constant. Aside from this, the issue of housing (accommodation) which has a direct linkage with punctuality should be given serious attention. This issue can also be minimized if not eliminated if management provides staff buses for easy movement of employees from their areas to their place of work.

Another vital environmental factor is the degree of relationship between employees and management. This factor goes a long way in increasing the rate of productive capacities of employees. Friendly and favorable relationship with foster productivity increase while unfriendly relationship will always give room for instability which may eventually decrease the rate of productivity in the organization. It is a known fact that any progressive organization must make sure that all the actors are in unity. In other words, there must be favorable and conducive atmosphere employed by friendly relationship between management and employees in the organization. This will lead to integrated management which will also incorporate the intermediates for effective performance.

## **Effect of Environmental Factors on Employees' Productivity.**

Environmental factors as discussed above have impacts on employees productivity. These effect or impacts are either negative or positive, some of the positive effects are.

### **1. Improvement:**

Every organization tends to flourish in productivity, image, quality etc. This can be done if management motivate and care for employees' welfare. Improvement can also be achieved if management takes cognizance of the factors that affect the productivity of employees as discussed above, and are positively implemented. Employees can also improve their potentials if allowed to participate in decision making process in the organization. It should be noted that the organization is a system of collection and integrated components. Employees are integral part of the organization, and also stakeholders in the organization. As a result of the valuable and significance importance of the employees, their welfares and motivating factors must be positively implemented for increased and effective productivity.

### **2. Increase In Productivity**

David A, Decenzo and Stephen p, Robbins stated that high productivity is what makes an organization strive. Nwachukw. C.C (1988) is of the notion that to encourage higher productivity, it is necessary that a system of reward must be fashioned that attempts to equate hard work with reward. Aside from having a friendly and romantic relationship between management and employees, management should also motivate and care for employees' welfarism. If these are done, definitely, there will be an increase in productivity.

### **3. Quality Of Products**

Training is an integral part of environmental packages that must be given to employees at regular and expected interval. A trained employee is expected to perform better than untrained employee in terms of quality and quantity, using the same resources. Employees get frustrated if the necessary training is not provided, thereby negatively affecting productivity.

### **4. Research**

This represents a systematic and goal oriented investigation of facts that seek to establish a relationship between two or more phenomena. Conducive and friendly environment will encourage employees to research more on how to constantly increase

productivity. Management also research effectively on how to constantly increase productivity. However, this can be done if there is a cordial relationship between employees and management.

#### 5. **Good Image**

It is the responsibility of management to make sure that there is good environmental factors that will aid in increasing employees productivity. The certainty and implementation of favorable environmental conditions will increase productivity, thereby leading to good organizational image.

#### 4. **Achievement of Objective**

There are various resources used by organizations in achieving their stated objectives. Human resource is the most vital resource because it plans, organizes, commands, coordinates, and controls other resources in an appropriate and integrative manner in order to achieve the stated objectives. Having viewed the value of employees as a vital factor, it is therefore germane to create and implement a cordial relationship between management and employees, as well as creating favorable environmental situations for effective productivity, and for the achievement of corporate objectives.

#### **Research Methodology**

The methods adopted involve the survey aspect which gives way for the application of questionnaires. The questionnaires envelope questions that are related to the subject matter, and are analyzed using percentages while correlation coefficient was used for testing the hypotheses for effective decision making. Aside from the primary data – questionnaires, the researcher also intend using secondary data which will take care of related materials, internet, and relevant journals.

75 questionnaires were distributed to employees' productive related organization but 60 questionnaires were filled and returned.

### **PRESENTATION AND ANALYSIS OF DATA**

Table 1.1 Distributions of Respondents By Sex

<b>SEX</b>	<b>FREQUENCY</b>	<b>%</b>
Male	35	85.3

Female	25	41.7
Total	60	100

Source: field survey 2012

The table above revealed that majority of the respondents is male for productive purposes.

Table 1.2 DISTRIBUTIONS OF RESPONDENTS BY QUALIFICATION

QUALIFICATION	FREQUENCY	PERCENTAGE
No Formal School Education	NN	0%
1 <sup>st</sup> School Leaving Certificate	15	25%
WASCE, SSCE/GCE	16	26.7%
First Degree B.Sc, HND	16	26.7%
others (Professional)s	13	21.7%
Total	60	100

Source: Field survey 2012

From the table above, it can be observed that the sampled organization has employees of higher educational level for effective productive capacity.

Table 1.3 Responses of respondents on five-likert scale questionnaires, suing issues that are related to the subject matter.

	STATEMENT	SA	A	D	SD	TOTAL
1.	The organization environment is conducive to high productivity	12	29	9	10	60
2.	The organization's pay incentives in relation to the input is satisfactory	11	30	17	2	60
3.	The main cause of low productivity in the organization has been poor managerial style	7	19	19	15	60
4.	Cordial relationship between employees and management is vital for	9	30	16	5	60

	organizational efficiency					
5.	Employees productivity is vital for organizational growth and development	30	14	7	9	60
6.	The organization motivates employees to be effective and efficient.	10	34	6	10	60
7.	Training leads to high productivity	34	15	6	5	60
8.	Evidence support that happy employees are productive employees.	40	16	3	1	60
9.	Climatic conditions affect productivity	8	12	30	10	60
10.	The organization is meeting the productivity target	2	32	22	4	60
11.	Increase in capital investment leads to increase in productivity	25	26	05	04	60
12.	Motivation is vital in any organization	14	40	3	3	60
13.	Productivity improvement programmes are necessary in the organization	17	35	08	-	60

### Testing of Hypotheses

Correlation coefficient will be used in testing the hypotheses, taking two variables into consideration.

The formular is

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\} \{N\sum Y^2 - (\sum Y)^2\}}}$$

where N = total number of respondents

$\Sigma$  = Summation of .....

X = 1st item (Independent variable)

Y = 2nd item (Dependent variable)

In testing each of the hypotheses, two items will be chosen, and calculated with the formular above. Having noted the calculated value, it is necessary to look at the ‘table value’ in the critical value of correlation coefficient, using  $\alpha$  0.05 (5%).

It should be noted that if the table value is greater than the calculated value, one will accept the null hypothesis and reject the alternative hypothesis, and verse versa.

**Hypothesis I**

H<sub>i</sub>: There is a significant relationship between motivation and employees productivity.

H<sub>o</sub>: There is no significant relationship between motivation and employees productivity.

Items 12 and 5 of the questionnaires are used to represent X and Y respectively.

Item 12: Motivation is vital in any organization.

Item 05: Employees productivity is vital for organizational growth and development.

Item 12 is represented with X while item 5 is Y. the codes SA; A; D; and SD are represented with figure 4; 3; 2; and 1 respectively thereby giving the new table

	STATEMENT	SA	A	D	SD	TOTAL
1.	The organization environment is conducive to high productivity	48	87	2	10	163
2.	The organization’s pay incentives in relation to the input is satisfactory	44	90	34	2	170
3.	The main cause of low productivity in the organization has been poor managerial style	28	57	38	15	138
4.	Cordial relationship between employees and management is vital for	36	90	32	5	163

	organizational efficiency					
5.	Employees productivity is vital for organizational growth and development	120	42	14	9	185
6.	The organization motivates employees to be effective and efficient.	40	102	12	10	164
7.	Training leads to high productivity	136	45	12	5	198
8.	Evidence support that happy employees are productive employees.	160	48	6	1	215
9.	Climatic conditions affect productivity	32	36	60	10	138
10.	The organization is meeting the productivity target	8	96	44	4	152
11.	Increase in capital investment leads to increase in productivity	100	78	10	04	192
12.	Motivation is vital in any organization	56	120	6	3	185
13.	Productivity improvement programmes are necessary in the organization	68	105	16	-	189

Using the formular

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X^2 - (\sum X)^2\} \{N\sum Y^2 - (\sum Y)^2\}}}$$

<b>X</b>	<b>Y</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
56	120	3136	14400	6720
120	42	14400	1764	5040
6	14	36	196	84
3	9	9	81	27
<b>185</b>	<b>185</b>	<b>17581</b>	<b>16441</b>	<b>11871</b>

$$\begin{aligned}
 & \frac{(60(11871) - (185)(185))}{\sqrt{60(17581) - (185)^2} \sqrt{60(16441) - (185)^2}} \\
 & \frac{712260 - 34225}{\sqrt{(1054860 - 34225)(986460 - 34225)}} \\
 & \frac{678035}{\sqrt{(1020635)(952235)}} = \frac{678035}{9,7188436} \\
 & \frac{678035}{985842} = 0.69
 \end{aligned}$$

Degree of freedom =  $N - 1 = 60 - 1 = 59$  at 5% = 0.211

Since the calculated value is greater than the table value, we accept the alternative hypothesis which states that, there is a significant relationship between motivation and employees productivity.

### **Hypothesis 2**

$H_0$ : There is no significant relationship between employees relationship and employees productivity.

$H_1$ : There is a significant relationship between employees relationship and employees productivity.

Item 4 and 5 of the questionnaire are used to represent x and y respectively

X	Y	X <sup>2</sup>	Y <sup>2</sup>	XY
36	120	1296	14400	4320
90	42	8100	1764	3780
32	14	1024	196	448
5	9	25	81	45
<b>163</b>	<b>185</b>	<b>10445</b>	<b>16441</b>	<b>8593</b>

It should be noted that the codes SA; A; D; and SD are represented with figure 4; 3; 2; and 1 respectively.

The formular

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{60(8593) - (163)(185)}{\sqrt{(60(10445) - (163)^2)(60(16441) - (185)^2)}}$$

$$\frac{515580 - 30155}{(626700 - 26569)(986460 - 34225)}$$

$$\frac{485425}{\sqrt{5,7146574}} =$$

$$\frac{485425}{755954} = 0.64$$

It is noted that the degree of freedom  $N - 1$  is  $60 - 1 = 59$  at 5% is 0.211. However, the calculated value is greater than the table value, we therefore accept the alternative hypothesis which state that there is a significant relationship between employees' relationship and employees' productivity, and reject the null hypothesis which states otherwise.

### Hypothesis 3

$H_0$ : There is no significant relationship between environment and employees productivity.

$H_i$ : There is a significant relationship between environment and employees productivity.

Items 1 and 5 of the questionnaires are used to represent x and y respectively

X	Y	X <sup>2</sup>	Y <sup>2</sup>	XY
48	120	5760	2304	144
87	42	3654	7569	1764
18	14	252	324	196
10	9	90	100	81
<b>163</b>	<b>185</b>	<b>9756</b>	<b>10297</b>	<b>16441</b>

It should be noted that the codes SA; A; D; and SD are represented with figure 4; 3; 2; and 1 respectively.

The formular

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{60(9756) - (163)(185)}{\sqrt{(60(10297 - (163)^2)(60(16441) - (185)^2)}}$$

$$\frac{585369 - 30155}{\sqrt{(617820 - 26569)(986460 - 34225)}}$$

$$\frac{555205}{\sqrt{5,6300989 \dots 11}}$$

$$\frac{555205}{750339.9} = 0.74$$

It is noted that the degree of freedom is  $60 - 1 = 59$  at 5% is 0.211. However the calculated value is greater than the table value, we therefore accept the alternative hypothesis which states that there is a significant relationship between environment and employees productivity, and reject the null hypothesis which states otherwise. Aside from this, the calculated value shows that, environment is positively correlated with employees' productivity.

## **Conclusion**

Organizations are systems operating in the environment. For an objectively related organization to strive effectively in this competitive globe, such an organization must constantly watch the dynamism of the environment. In essence, environment is a great tool that determines the success or otherwise of any organization. Although there are other factors that also determine the efficiency of an organization such as government policies, salaries of employees, image etc. yet, environment serves as a greater tool for dictating the survival of the organization.

The testing of the first hypothesis shows that there is a significant relationship between motivation and employees productivity. This shows the vital nature of the human resources. The human resource is responsible for planning, organizing, commanding, coordinating and controlling other resources in appropriate manner in order to achieve organizational objectives. Although this resource is an integral part of the environment, they must be motivated in order to develop their potentials to the fullest.

The second hypothesis testing accepted the fact that there is a significant relationship between employees relations and employees productivity. This is certain for an organization to actively increase productivity and achieve its stated objectives; there must be a cordial relationship between employees and management. This friendly and favorable relationship may also allow employees participation in decision making. The last hypothesis testing accepted the fact that there is a significant relationship between environment and employees' productivity. It had been noted earlier that the organization is an integral part of the environment and therefore be influenced by the forces in the environment. For any business oriented organization to succeed, the vital nature and the dynamic rotation of the environment must be acknowledged and responded to.

## Recommendations

In line with this study, the researcher hereby recommends the following:

1. Organizations must constantly watch and monitor the dynamic nature of the environment.
2. Organizations must constantly applying integrated logistic management. That is, team work both inside the company, and among all the marketing channels of the organization. Inside, the company's various departments must work closely together to maximize the company's own logistics performance. Outside, the company must integrate its logistics system with those of its suppliers and customers to maximize the performance of the entire distribution system.
3. Management should intensity the degree of their cordial relationship with employees' in order to encourage employees effectiveness. Employees should also be involved in some decision making.
4. Motivation of employees should be given serious consideration. This will create drives, urges and propensity to intensity effective productiveness.
5. There should be constant training and refreshers courses. This will improve the dynamic tendency of employees to learn more, and contribute meaningfully towards organizational objectives.
6. Management should also embark on productivity improvement programmes in order to ensure increase in employees' productivity. The programmes will give room for innovative ideas.

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