

# Impact of Environmental Scanning On Organizational Performance and Productivity. A Study of Nigeria Bottling Company in Enugu, South East Nigeria

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**ABSTRACT:** - This paper investigated the impact of environmental scanning on organizational performance and productivity using Nigeria bottling company as a case study. The study anchored on the following objectives, to determine the impact of environmental scanning on organizational performance and productivity and to examine the factors that influence the performance and productivity of an organization based on its environment. In order to achieve the above objectives, the following research questions were asked: to what extent does environmental scanning affect organizational performance and productivity? And what are the effects of environmental scanning on organizational performance and productivity? The study used survey method. The case study: manufacturing company was selected using stratified and simple random sampling techniques, while the respondents were selected using simple random sampling techniques. The findings of this study were that a large number of respondents (57.7%) strongly agreed that environmental scanning have impact on organizational performance and productivity and that 48.7% of the respondents also agreed that there are factors that influence organizational performance based on organizational scanning and determine the productive level of the organization. The study found that there was a relationship between organizational performance and productivity and environmental scanning and that environmental scanning does affect organizational performance and productivity in a manufacturing industry. The study amongst other things recommended that the company or organizations should routinely engage in environmental scanning as it enhances organizational performance and increase their productive level.

**Keywords:** Environmental Scanning, Organizational Performance, Productivity, manufacturing,

## INTRODUCTION

Organizations today are facing unprecedented challenges in maintaining commercial survival and success. Due to the rapid changes happening in today's market place and emerging business practices, it is more likely for an organization to fall behind by not keeping up with trends of their external environment (Subramainan et al., 2010). On the one hand, numerous companies went out of business simply because a change happened in their business environment to which they failed to respond quickly and appropriately. However actively detecting environmental changes in business and grasping opportunities or countering

threats can lead firms to success and prosper. Environmental scanning is the first link in the chain of perceptions and actions that permit an organization to adapt to its environment (Hanbrick 2011; Jennings & Lumpkin 2012). Environmental scanning has become an important aspect of strategic management for coping with environmental uncertainties and its impact on organization performance has been receiving more attention among scholars. Environmental scanning is a systematic process that starts from scanning needs identification and ends at evaluation and utilization of environmental information for effective performance. The concept of scanning

dated in the 1960s is still an emerging discipline with explorative studies conducted in various organizations in light of the changes and development of business organizations. It has become imperative for organizations to scan their environments continuously and systematically to ensure that business still meet up with the demand of customers. However, previous literature, beside information acquisition, insufficient attention has been paid to the other steps of environmental scanning. Moreover, for studies attempting to discover the relationship between environmental scanning and organizational performance, the majority of them choose to measure organization's financial performance only such as profitability, return on capital and net profit margin, while neglecting the other aspects as customer satisfaction, operation efficiency and organization growth. As a result, there is need to develop a refined model presenting a clearly defined environmental scanning process, paying equal attention to all its steps while investigating the impact of environmental uncertainty, and showing the indirect contribution of environmental scanning or organizational performance other than merely from the financial perspective.

Environmental scanning is the acquisition and use of information about events, trends, and relationships in an organization's external environment, the knowledge of which would assist management in planning the organization's future course of action. (Aguilar, 2011). Organizations scan the environment in order to understand the external forces of change so that they may develop effective responses which will secure or improve their position in the future. They scan in order to avoid surprises, identify threats and opportunities, gain competitive advantage, and improve long and short term planning (Sulton 2010). To the extent that an organization's ability to adapt to its outside environment is dependent on knowing and interpreting the external changes that are taking place, environmental scanning constitutes a primary mode of organizational learning. According to Onuoha (2010), environmental scanning include

both looking at information (viewing) and looking for information (searching). It could range from a casual conversation at the lunch table or a chance observation of an angry customer, to a formal market research program or a scenario planning exercise.

Aguilar (2011), in his study of the information gathering practices of managers defined environmental scanning as the systematic collection of external information in order to

1. Lessen the randomness of information flowing into the organization
2. Provide early warnings for managers of changing external conditions.

More specifically, Coates (2013) identified the following objectives of an environmental scanning system.

1. Detecting scientific, technical, economic, social, and political trends, and events important to the organization.
2. Defining the potential threats, opportunities or changes for the organization implied by those trends and events.
3. Promoting a future orientation in the thinking of management and staff, and
4. Alerting management and staff to trends that are converging, diverging, speeding up, slowing up, slowing down, or interacting.

Aguilar (2011) asserts that an effective environmental scanning program should enable decision makers to understand current and potential changes taking place in their organization's external environments. Scanning provides strategic intelligence useful in determining organizational strategies. The consequences of this activity include fostering an understanding of the effects of change on organization aiding in forecasting, and bringing expectations of change to bear on decision making. May, et al.(2000) pointed out that environmental scanning should focus on target information needs, allocate efforts among employees exposed to relevant information, and have an effective system for storing, processing and disseminating

information. In the work of Draft and Weick (1998), the way an organization deciphers its environment in order to learn it may be divided into three phases: scanning (information seeking), interpretation (giving meaning to the collected data) and learning (taking action based on the data). Similarly, Onuoha (2010) define environmental scanning as a management process of using information from the environment to aid decision making with three key components: obtaining the information, analyzing - the information and using the information. This definition highlighth consequent steps after information acquisition. Miliken (2007) proposes a strategic information scanning system which consists of six steps in order to preserve much of the information which is invariably last in many organizations, and hence enhance the effectiveness of these scanning efforts. Steps one and two of his proposed system specify information needs and sources; steps three and four identify the participants of the system and assign them scanning tasks; and steps, five and six deal with the storage, processing and dissemination of the information.

## **THEORETICAL PERSPECTIVE**

Organizations today are facing unprecedented challenges in maintaining commercial survival and success. Due to the rapid changes happening in today's market place and emerging business practices, it is more likely for an organization to fall behind by not keeping up with trends of their external environment (Ile, 2003). On the one hand, numerous companies went out of business simply because a change happened in their business environment to which they failed to respond quickly and appropriately. However, detecting environmental signals and immediately grasping opportunities or countering threats can lead firms to success and greater performance.

Environmental scanning is the link in the chain of perceptions and actions that permit an organization to adapt to its environment and has become an important aspect of strategic management for coping with environmental uncertainties, and the impact of environmental scanning on organizational

performance has been receiving more and more attention among scholars (Jones, George & Hills, 2005). Environmental scanning as a systematic process starts from scanning needs identification and ends at evaluation and utilization of environmental information. With the term coined in the late 1960s, environmental scanning is still an emerging discipline, with explorative studies conducted in various organizations. In light of the changes and developments, it has become imperative for organizations to scan their environments continuously and systematically with all the phases being studied as a whole. Nonetheless, in prior literature, besides information acquisition, insufficient attention has been paid to the other steps of environmental scanning. Moreover, for studies attempting to determine the relationship between environmental scanning and organizational performances and productivity, the majority of them choose to measure organization's financial performance only, such as profitability, return on capital and net profit margin, while neglecting the other aspects as customer's satisfaction, operation efficiency and organization growth. As a result, there is need to develop a refined model presenting a clearly defined environmental scanning process, paying equal attention to all its steps while investigating the impact of environmental uncertainty, and showing the indirect contribution of environmental scanning on organizational performance other than merely from the financial perspective. Ejiofor, (2010) asserts that environmental scanning should focus on target information needs, allocate effort among employees exposed to relevant information, and have an effective system for storing, processing and disseminating information. Enudu (2013), says that it is the way an organization deciphers its environment in order to learn from it which may be divided into three phases, namely: Scanning information (seeking); interpretation (giving meaning to the collected data) and learning (taking action based on the data). Similarly, environmental scanning is a management process of using information from the environment to aid decision

making with three key components (obtaining the information, analyzing the information and using the information). Organizational environmental consists of both external and internal factors. Environment must be scanned so as to determine both external and internal developments and forecasts of factors that will influence organizational success. In the work of Hastings, (2009), he says that environmental scanning refers to possession and utilization of information about occasions, patterns, trends, and relationships within an organization's internal and external environment. It helps the managers to decide the future path of the organization. Scanning must identify the threats and opportunities existing in the environment while organization must take advantage of the opportunities and minimize threats through strategy formulation. A threat on one organization may be an opportunity to another. Theoretically, perceived strategic uncertainty will trigger the need for scanning (Draft et al; 1998; Elenkou, 1997). Strategist and strategic management scholars generally agree that both large and small firms that align their business strategies with their respective environments are likely to perform better than firms that fail to achieve such alignment (Shubin, 2007, Stoffels, 2010, 1990).

In recent times, business and organizations are influenced by endogenous and exogenous factors. To this end, the performance of these organizations will be based on the extent to which they are able to scan through their environment in order to plan on how to avoid threats, competitions from other organizations which could lead to poor performance. Lack of environmental scanning leads to ineffective response to improve organizational position in the future. Further to the aforementioned, ineffective environment scanning affects decision making processes of managers in organizations. In the light of the following problems, this study is embarked upon to reverse them for greater performance in organizations especially as it affects Nigerian Bottling Company Plc Enugu, South East Nigeria.

## **OBJECTIVE OF THE STUDY**

The broad objective of this study is to evaluate the impact of environmental scanning on organizational performance and productivity with particular reference to Nigeria bottling Company Plc, Enugu.

The specific objectives include the following,

1. To determine the impact of environmental scanning on organizational performance and productivity.
2. To examine the effect of environmental scanning on the organizational performance and productivity.

## **RESEARCH QUESTIONS**

The following research questions are formulated for the purpose of this research work:

1. To what extent does environmental scanning affect organizational performance and productivity?
2. What are the effects of environmental scanning on organizational performance and productivity?

## **RESEARCH HYPOTHESES**

In order to answer the research questions and achieve the objectives of the study, the following hypotheses are advanced and will be tested in the course of this study

1. There is no relationship between organizational performance and environmental scanning.
2. Environmental scanning does not affect organizational performance and productivity in a manufacturing company.

## **METHODOLOGY**

In this study, survey research design was adopted. Survey research design was chosen because the sampled elements and the variables that are being studied are simply being observed as they are without making any attempt to control or manipulate them. The theoretical population of the study consists of the entire workers of Nigeria Bottling Company in Enugu. For effective coverage

and lower cost, stratified sampling technique was used to select the manufacturing company. Employees in the selected company were divided into three strata: management staff, senior staff, and junior staff. A simple random sampling technique was used to select a total of 100 employees that constituted our sample size. It should be pointed out that limited financial resources at the researcher’s disposal could not permit or allow for a greater sample size. Every research work has a framework for collecting data. Its function is to ensure that the required data are collected accurately and economically. Primary method of data collection was used in this study. The primary data consists of a number of items in structured questionnaires that were administered to the respondents. The decision to structure the questionnaire is predicated on the need to reduce variability in the meanings possessed by the questions as a way of ensuring comparability of responses. The questionnaire is titled “the impact of environmental scanning on organizational performance and productivity”. However, only 78 out of 100 respondents returned their questionnaire and were used for final analysis in this study. One important way of ensuring that we have used the right instrument and have taken correct measurement is that our outcome must be in consonance with two major criteria for measuring quality known as validity and reliability. To ensure the validity and reliability of the questionnaire used for the study, even number of experts were

consulted to look at the questionnaire items in relation to its ability to achieve the stated objectives of the research, level of coverage, comprehensibility, logicity and suitability for prospective respondents. A pilot test which took the form of test-retest method was conducted at the branches of selected manufacturing company in Enugu State where 10 workers from each of the department of the industry selected using purposive random sampling technique. The choice of Enugu for the pilot study was informed by the fact that it is the city where the researchers are living with a fair concentration of the branches of the manufacturing industry studied. The manufacturing industry is Nigeria Bottling Company plc (NBC). Data collected from the questionnaire were analyzed, summarized, and interpreted accordingly with the aid of descriptive statistical techniques such as total score and simple percentage. Chi-square was used to measure the discrepancies existing between the observed and expected frequency and to proof the level of significance in testing the stated hypotheses.

The formular of chi-square is:

$$X^2 = \frac{\sum(O-E)^2}{E}$$

**Data Presentation and Analysis**

**Table 1: Sex Distribution of Respondents**

*Respondent sex*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Male	58	74.4	74.4	74.4
	Female	20	25.6	25.6	100
	Total	78	100	100	

*Source: Field Survey 2015*

The table above shows that 58 (74.4%) of the respondents are male while 20 (25.6%) of the respondents are female.

This information was sought about respondents’ number of years of working in the organization as it will help to show how much the respondents know about the organization and its activities.

**Table 2:** Respondents number of years of working in the organization

*Respondent number of years of working in the organization*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Below 5yrs	39	50.0	50.0	50.0
	6-10yrs	21	26.9	26.9	-76.9
	11 – 15yrs	7	9.0	9.0	85.9
	16 – 20 yrs	11	14.1	14.1	100
	Total	78	100	100	

Source: Field Survey 2015

This table shows that 50.0% of the respondents have worked in the organization for less than 5yrs while 26.9% of the respondents have worked in the organization for 6-10yrs, 14.1% have worked in the organization for 16-20yrs and 9.0% of the

respondents have worked in the organization for 11-15yrs. The respondents were asked if environmental scanning has impact on employee performance. Their responses are shown in the table below:

**Table 3:** Does Environmental scanning have impact on Organization Performance and productivity?

*Environmental scanning has effect on organization performance and productivity*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Strongly Disagree	1	1.3	1.3	1.3
	Disagree	1	1.3	1.3	2.6
	Undecided	3	3.8	3.8	6.4
	Agree	28	35.9	35.9	42.3
	Strongly Agree	45	57.7	57.7	100
	Total	78	100	100	

Source: Field Survey 2015

The table above shows that 57.7% of the respondents strongly agree and 35.9% of the respondents agree that environmental scanning has impact on organization performance and productive. Also, we have 3.8% of the respondents who are undecided, 1.3% of the respondents who strongly disagree and 1.3% of the respondents who disagree

that environmental scanning has impact on organization performance and productivity.

The respondents were asked if environmental scanning determines the performance and productive level of the organization. Their responses are shown, in the table below:

**Table 4:** Does Environmental scanning determine the Performance Level of the Organization?

*Environmental scanning determines the performance level of the organization*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Disagree	1	1.3	1.3	1.3
	Undecided	4	5.1	5.1	6.4
	Agree	35	44.9	44.9	51.3
	Strongly Agree	38	48.7	48.7	100
	Total	78	100	100	

Source: Field Survey 2015

From the table above, we can see that 48.7% of the respondents strongly agree that environmental

scanning determines the performance and productive level of the organization and then

followed by 44.9% of the respondents who also agree, 5.1% of the respondents are undecided and 1.3% of the respondents only disagree that environmental scanning determine the performance and productive level of the organization. In this

study, researcher also sought to know the respondents view on if there are factors that influence the performance in an organization based on its environment. Their responses are shown in the table below:

**Table 5:** Are there factors that influence the performance and productivity of an organization based on its environment?

*There are factors that influence organization performance and productivity based on environmental scanning.*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Strongly Disagree	2	2.6	2.6	2.6
	Disagree	6	7.7	7.7	10.3
	Undecided	9	11.5	11.5	21.8
	Agree	38	48.7	48.7	70.5
	Strongly Agree	23	29.5	29.5	100
	Total	78	100	100	

Source: Field Survey 2015

From the table above, 48.7% of the respondents agree, 29.5% of the respondents strongly agree, 11.5% of the respondents are undecided, 7.7% of the respondents disagree and 2.6% of the respondents strongly disagree that there are no factors that influence organization performance and productivity based on its environment.

The researcher sought to know the respondents view on if there is a positive relationship between environmental scanning and organizational performance. Their responses are shown in the table below:

**Table 6:** Any positive relationship between environmental scanning and organizational performance and productivity?

*There is a positive relationship between environmental scanning and organizational performance and productivity*

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Strongly Disagree	3	3.8	3.8	3.8
	Disagree	6	7.7	7.7	11.5
	Undecided	6	7.7	7.7	19.2
	Agree	40	51.3	51.3	70.3
	Strongly Agree	23	29.5	29.5	100
	Total	78	100	100	

Source: Field Survey 2015

This table reveals that 51.3% of the respondents agree and 29.5% of the respondents strongly agree that there is a positive relationship between environmental scanning and organizational performance and productivity. On the other hand, we have 7.7% of the respondents who are undecided, 7.7% of the respondents who disagree

and 3.8% of the respondents who strongly disagree that there is a positive relationship between environmental scanning and organizational performance and productivity.

**Testing Of Hypotheses**

Hypotheses testing are very crucial in a research work because until a hypothesis has been tested and checked against available data, it is nothing more than a guess. There are various statistical tools that can be used for testing of hypotheses but this research work will be limited to the use of chi-square ( $x^2$ ) statistical tool. The chi-square test is used in goodness of fit to assess whether a particular set of observation is sufficiently reliable for the purpose for which it is been collected. Chi-square involves calculating the probability that an observed value randomly picked from the population equals a normal curve frequency of the hypothetical population. Hence, the observed and expected set of frequencies will be compared and arranged in single columns.

Chi-square ( $x^2$ ) is calculated using this formular:

$$X^2 = \frac{\sum(O-E)^2}{E}$$

Where:

- $\sum$  = Summation
- O = Observed frequency
- E = Expected frequency

**Hypothesis 1**

$H_0$  There is no relationship between organizational performance and environmental scanning

$H_1$ : There is a relationship between organization performance and environmental scanning.

Table 7: Test of hypothesis one

	Observed (O)	Expected (E)	Residual (O-E)	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
Strongly Disagree	2	15.6	-13.6	184.96	11.86
Disagree	6	15.6	-9.6	92.16	5.91
Undecided	9	15.6	-6.6	43.56	2.79
Agree	38	15.6	22.4	501.76	32.16
Strongly Agree	23	15.6	7.4	54.76	3.51
Total	78	78			56.23

*Decision rule: Reject  $H_0$  where  $x^2$  calculated is greater than  $x^2$  tabulated, otherwise, accept  $H_1$*

$$\text{Calculated } (x^2) = \frac{\sum(O-E)^2}{E} = 56.23$$

Degree of freedom “d .o. f” = n - 1

Where n = number of rows

$$\text{Therefore, d.o.f} = 5 - 1 = 4$$

Tabulated ( $x^2$ ) = At 0.05% level of significance, the tabulated value of  $x^2$  for 4 degrees of freedom is 9.488.

**Decision:**

Since the calculated  $x^2$  is greater than tabulated  $x^2$ , we reject the null hypothesis ( $H_0$ ) and accept the alterative hypothesis ( $H_1$ ).

This indicates that there is relationship between organizational performance and environmental scanning.

**Hypothesis 2**

$H_0$  Environmental scanning do not affect organizational performance and productivity.

$H_1$ : Environmental scanning affects organizational performance and productivity.



	Observed (O)	Expected (E)	Residual (O-E)	(O-E) <sup>2</sup>	$\frac{(O-E)^2}{E}$
Strongly Disagree	2	15.6	-12.6	158.76	10.8
Disagree	6	15.6	-9.6	92.16	5.91
Undecided	6	15.6	-9.6	92.16	5.91
Agree	40	15.6	24.4	595.36	38.16
Strongly Agree	23	15.6	7.4	54.76	3.51
Total	78	78			63.67

Decision rule: Reject  $H_0$  where  $x^2$  calculated is greater than  $x^2$  tabulated, otherwise, accept  $H_1$

$$\text{Calculated } (x^2) = \sum \frac{(O - E)^2}{E} = 63.67$$

Degree of freedom "d .o.f" = n - 1

Where n = number of rows

Therefore, d.o.f = 5 - 1

$$= 4$$

Tabulated ( $x^2$ ) = At 0.05% level of significance, the tabulated value of  $x^2$  for 4 degrees of freedom is 9.488

Decision: Since the calculated  $x^2$  is greater than the tabulated  $x^2$ , we reject the null hypotheses ( $H_0$ ) and accept the alternative hypotheses ( $H_1$ ).

This indicates that there is a positive relationship between organizational performance and environmental scanning.

### Empirical Findings

Based on analysed data, the findings in this study include the followings:

- A. A large number of respondents (57.7%) strongly agree that environmental scanning has impact on organizational performance and productivity.
- B. 48.7% of the employees also agree that environmental scanning determines the performance and productivity level of the organization.

C. This study further reveals that there is a positive relationship between organizational performance and employee performance. This is evidenced in the first hypothesis tested in which the calculated value of chi-square 56.23 is greater than the tabulated value of 9.488.

D. There is also a positive relationship between environmental scanning and organizational performance/productivity. This also came from the second hypothesis in which the calculated value of chi-square 63.67 is greater than the tabulated value of 9.488 which made us to accept alternative hypothesis two and reject null hypothesis two.

### Conclusion

In this study, the researchers tried to look at the impact of environmental scanning on organizational performance and productivity with evidence from a selected manufacturing industry. Our results indicate that environmental scanning has an impact on organizational performance and productivity. Environmental scanning is very important in every organization and that it has positive impact on organization performance. Besides, environmental scanning affects the level of organizational productivity in a positive way. Environmental scanning is the link in the chain of perceptions and actions that permit an organization to adapt to its environment and has become an important aspect of strategic management for coping with environmental uncertainties, and the impact of environmental scanning on organizational performance has been receiving more and more

attention among scholars. Environmental scanning as a systematic process starts from scanning needs identification and ends at evaluation and utilization of environmental information. In light of the changes and developments, it has become imperative for organizations to scan their environments continuously and systematically. It is important to note that organizations scan the environment in order to get a strategic understanding of external influences so that they may be able to develop effective response that secures or adjusts their position in the future. This study shows that there is a positive relationship between organizational performance and environmental scanning. The following recommendations are made to the management of case study of manufacturing industries that are interested in influencing their environment in order to improve their organization's performance and productivity.

1. The Company should effectively study both its internal and external environment while carrying out environmental scanning.
2. They should as well carry out SWOT analysis to determine every aspect of their environment.
3. The company should routinely engage in environmental scanning as it enhances organizational performance and productivity.

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