

THE IMPACT OF ENVIRONMENTAL AWARENESS ON ORGANIZATIONAL PERFORMANCE IN THE SUSTAINED ENVIRONMENT: THE CASE OF SELECTED COMPANIES IN NIGERIA

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Abstract

Recently there are some significance changes in economic, social, technological and political trends within the global environment. These changes have affected largely the level of industrial growth and consumption rate of the people. Consequently, Nigeria has been benefiting from the revolutionized and enabling environment, inspite of its economic doldrums in the past two decades. This paper investigates the relationship between environment awareness and performance measures. There are two categories of companies those classified as having high environmental awareness as a result of the capability to define their corporate missions and their low environmental awareness counterparts, which are firms with inability to meet up the environmental needs. High environmental awareness companies seem to concede an improved performance than the low environmental awareness firms. It is therefore observed that environment strategies enhance better performance.

Introduction

The last two decades have witnessed an increased level of environmental changes in social, technological and political trends throughout the world. Persistent rate of industrial growth in human consumption and production has raised the challenge for sustainable and ecological equilibrium. Although, this nation's economic situation remains an ever-pressing need of finding out the level of companies' performance, the environmental awareness is presumed to relate to all techniques of measuring performance. It has been noted that the main concept of environmentalism dwells on carrying capacity, which means the ability of earth or universe to sustain level of population. Thus carrying capacity measures the ability to feed the population on earth. Carrying capacity has increased tremendously all over the world due to advanced technology (Duffy and Potter, 1992). Modern perception of technology gradually transforms the term 'carrying capacity' to cultural carrying capacity (Duffy and Potter, 1992; Ahmed et al, 1998). However, cultural carrying capacity takes into consideration other factors of consumption as they influence environmental awareness. Obviously, the rate of consumption is a factor for continued environmental degradation. The era of low consumption rather in terms of housing, cars, food, clothing etc is no more in existence. Therefore, it has become essential for companies to improve performance in consonance with pressing environmental needs.

Unlike developed environment Nigerian companies seem to have reacted very low on environment concerns, many of them are just stabilizing and resuscitating from poor performance in this nascent democratic regime. It is important to opine that inappropriate environmental awareness has been affecting negatively firms' performance in the past, because of inadequate fund supply to invest in product processing and services. The main focus of this study is to find out the extent to which environmental awareness as a strategy has influenced the sustenance of companies' performance. Generally, management of environment is viewed along the compliance of government policy.

Literature Review

Environmental awareness as an impetus to company's performance has been viewed in various manners.. Freeman (1994) and Judge and Hema (1994) note that

environmental attributes (social, technological, economic and political) negatively affect firm performance. White and Savage (1995) empirical studies confirm that environment concerns either prove or disprove the importance of environmental awareness for better performance. Furthermore, Allen (1992), Baker (1993), Fornberg (1993), and Shi and Kane (1995) explain the success of specific companies using environment awareness as strategy. Bandle (1992), Remich (1993), and Wells (1993) have suggested that being proactive environmentally could lead to long term economic gain. Environment awareness as a strategy influencing company performance has also been investigated by AviJa (1993), Rhodes (1993), and Rome (1994). Generally, these studies have been carried out in a situation where environmental attributes are more or less consistently stable. Alexander and Bucholtz (1978) have used environment reputation as a measure of environment performance. However, in business environment, environmental profile questions appear more specific than general reputation.

Besides, Stevens (1994) and Ahmed et al (1998) conclude that some studies have found that firms that are proactive in environmental management strategies do have negative market reaction. It means high expenditure on environmental measures may have high market reaction. In the Nigerian business environment stock market valuation is an indicator of financial performance. It has however been noted by Ahmed et al (1998), Jarrel and Petzman (1985) that inadequate social responsibility influences negatively stock prices which may in turn reflect market's evaluation of future earnings. In this respect, stock price alone may not be a good indicator of performance, as every performance measure must be related to the market product, economics and labour (Thompson and Strickland 1994). It is evidence from the foregoing that much has been written empirically to relate the significance of environmental awareness with company's performance in Nigeria.

In the literature review different studies stress different approaches without specially discussing environmental awareness. All the studies available in this paper gear towards the more developed and traditionally captured

environment, contrary to what exist in a developing business environment like Nigeria.

Research Questions

From the previous findings, it is established that, environment profile questions are more specific and precise than general reputation (Ahmed et al, 1998). These questions correlate more significantly with organization performance. Data on environmental reputation of certain companies may be difficult, because of confidentiality ascribed to them.

Despite the problems that emanated from the environmental reputation study, nine performance measures relevant to Nigerian firms operation were chosen from the literature. The questions examined are as follows: i. Does environmental awareness influence companies' performance? ii. Does firm size affect environment awareness? iii. What is the effect of environment awareness on Unionism?

The Null Hypothesis

*The null hypotheses formulated are: i. Company of high Environmental Awareness does not exhibit high performance than the low Environmental Awareness counterparts. ii. The size of company does not influence its level of environmental awareness
iii. Unionized company does not influence its level of environmental awareness than the non-unionized counterparts.*

The focus of these questions and hypothesis is to address the deficiency of

research literature with regard to the effect of companies' environmental efforts. The questions are designed to explain a wide range of variables essential to companies' performance. Such as economic performance, size, unionism etc, while the hypotheses are meant to establish company's decision on performance.

Methodology

In order to investigate the specific questions of this study structured questionnaire was used to gather information on issues relating to organizational strategies. A follow-up interview was conducted and the report reviewed in line with the questionnaire to increase the validity of the survey.

The variables for the survey were based on performance measures. From the literature. Items concerning environmental awareness were identified, in addition with input from companies' managers. Managers suggested some relevant items to be included in the survey to ensure clarity.

Questions on performance were based on based on items such as market shares, sales volume, product quality, productivity etc. Respondents were requested to indicate on a five point scale (i.e. on a five-year basis) the level of increase or decrease in performance.

Data Sample

Data sample of this study consisted of one hundred and twenty companies (120) drawn from the list of the Nigerian Stock Exchange 1998 Handbook, with their several branches spread all over Nigeria. Approximately, 400 questionnaires were distributed and 250 returned out of which 233 were found useful for the study (60.25%). Companies involved in the study came from a broad range of industries, such as textile, banking, commerce/service, building material, chemical and paints, construction, computer and office equipment, automobile and tyre, food and beverages, healthcare, packaging, petroleum (marketing), printing and publishing etc.

Some of the responding companies have branches in at least twenty-six states of the federation. However, seventy percent (70%) came from southwestern zone. Classification in terms of response and size are shown in Tables I and II.

Table 1: Classification of Responding Organizations

a. "Manufacturing Sector Type of Company	No.	Percentage
Textile	15	9.38
Building material	10	6.25
Construction	12	7.50
Chemical and paints	14	8.75
Industrial/Domestic Production	16	10.00
Packaging	9	5.63
Conglomerates	22	13.73
Automobile and tyre	13	8.13
Healthcare	23	14.38
Food and beverages	<u>26</u>	
Total	<u>160</u>	<u>100.02</u>

Source: Fieldwork, 2001

Companies From Non-Manufacturing Sector

Computer and office equipment	13	17.81
Petroleum (marketing)	24	32.88
Banking	29	39.73
Commerce/service	07	9.59
Total	73	100.01

Source: Fieldwork, 2001

Table 2: Size Of The Company

No of Employees	No of Companies	Percent
1-100	10	4.29
101-200	19 *	8.16
201-300	25	10.73
301-400	22	9.44

501-600	17	7.30
601-700	15	6.40
801-900	19	8.16
901-1000	21	9.01
1001-2000	18	7.73
	26	11.16
Above 2000	21	9.01
	20	8.58
Total	233	100.01

Source: fieldwork 2001

Table 3: Companies Classified on Environment Questions

Questions on Environmental Awareness	Yes No.of responses	%	No No of responses	%	Total No of responses	%
1. Companies that design policy on Environmental awareness.	166	69.53	71	30.47	233	100
2. Companies that establish units monitoring environment policy	88	36.05	149	63.95	233	100
3. Level of confidentiality of policy.	204	86.27	32	13.73	233	100
4. Put high priority on environment consideration as strategy.	56	28.76	166	71.25	233	100

Source: Fieldwork, 2001

Note: 4 High value 3. Moderate value, 2 low value, 1 very low value

Procedure

Copies of the questionnaires were distributed through research assistants

to the top managers at both headquarters* and division of each company mentioned in the sample. These managers or their deputies were instructed to complete the questionnaire in a more appropriate form. The questionnaire explained the purpose of the study and full confidentiality of the respondents was guaranteed.

With regard to environment awareness of the enterprises, four questions

were considered on environment profile. These are: i. Does the company have a policy on environment? ii. Does the company establish a unit for reviewing environment policy? iii. Is the policy made confidential or public? iv. What form of rate does the company value environmental awareness as a strategy based on scale 1-4 (1-No Value, 2-Little Value, 3-moderate value 4-High value).

Organization performance depends on environmental awareness if proper environment audit is defined (Epstein, 1995). An appropriate environmental audit structured in form of four questions above should have the following components: (as stipulated by Ferdinard and Kleinsorge, 1993); i. Firm environmental policy ii. Firm environmental reporting system iii. Collection of data procedure and environmental database iv. Management environmental information system

v. Decision support system to analyze, plan and formulate corporate environmental strategy.

Companies which provided answer in form of YES to four questions were grouped under "High Environmental Awareness" and those with less than four were considered as "Low Environment Awareness" responses to the above four questions are shown on Table 3. Further companies were asked to indicate whether their performance had:

- (i) improved,
- (ii) stagnant or
- (iii) decreased on items ascribed for measuring performance over the past five years (1996-2000).

In addition questionnaire administered showed some understanding of the performance of environmentally awareness companies against the non-environmentally awareness type. Answer to questions also revealed performance measures that had affected organizational decision in the pursuance of environmental programme. Table 4, 5 and 6 present the result.

Interpretation of Result

Response of companies to environment awareness using performance measures.

Figure 4 explains the effect of environmental strategy on performance measures. It shows that majority of respondents in the LEA group tend indicate that market share of their companies slightly increased within the last five years. While in the HEA group, the market shares increased highly, based on environmental strategy, other measures indicate the following outcomes:

Sales volume in LEA companies increases slightly, sales volume in HEA companies increases moderately, product quality in LEA remains the same, product Quality in HEA companies increases highly, introducing new and

improved quality in LEA companies increases slightly, introducing new and improved in HEA companies increases moderately, productivity in LEA companies increases moderately, earnings per annum in LEA companies increases slightly. Earnings per annum in HEA companies increases highly,

Employees skill in LEA companies remains the same, Employees skill in HEA companies increases highly, profitability in LEA companies remains the same profitability in HEA companies increases highly.

Table 4: Response Of High Environmental Awareness Against Low Environment Awareness Companies In Terms Of Performance Measures

Performance Measures	HEA No 56	LEA No177
Market share		
Sales volume	5	3
Product quality	4	3
Introducing new improved product	5	2
Product	4	3
Earnings per annum	5	3
Employees skill	5	2
profitability	5	2

Statistical Tool used: Mode (Descriptive)

Source: Primary data 2001

Table 5: Size As The Basis For Comparison

Table 5 shows the result of size ranging from 1-500 indicates that group HEA rated 28.6% while LEA group 57.1%, 501-1000 HEA Group 55.4% and Group 36. & S 1001 and above HEA Group 16.1% and LEA Group 6.25.

Employee size	HEA	Group 1 Group 2 %		/o
0-500	16	28.6	101	57.1
501-1000	31	55.4	65	36.8
100 land above	09	16.1	11	06.2
Total	56	100.00	177	100.00

Source: Fieldwork, 2001

HEA: High Environmental Awareness

LEA: Low Environmental Awareness

Table 6 : Union As Basis Of Comparison

This table presents the results of the effect of unionism on companies that are environment concerned. Companies with strong union is rated 53.60% under HEA. But in LEA the rate is 44.66%. the non union companies are rated 46.4% under HEA and 55.36% under LEA groups.

Employee size	Group 1 HEA	%	Group 2 LEA	o/
Have strong Union	30	53.60	79	44.6
Have non strong Union	26	46.40	98	55.36
Total	56	100	177	100

HEA: High Environment Awareness

LEA: Low Environment Awareness

Source: fieldwork 2001

Hypothesis 1: Table 7 presents the result for hypothesis 1 which is the comparison of Environmental Awareness influence on total performance measure of the companies statistical technique used is ANOVA. The F-calculated is 616,743 on environmental awareness. It is found to be significant at 0-05 since the calculated value is less than 0.05 the specified significant level. The R^2 for this analysis is also computed as 0.78 indicating that environmental awareness accounts for 72.8 percent of the total variation in the performance measure of the companies.

In all, the effect of environmental awareness is highly significant on the performance measures. Therefore, the null hypothesis is rejected meaning that companies of high environmental awareness exhibit high performance than the low environmental counterparts.

Table 7: The Influence Of Environmental Awareness On Performance Measure

Source	Total Measure Of Performance Measure				
	Type (111) sum of squares	df	Mean squ	F	Sig.
Corrected Model	9918.668	1	9918.668	616743	.000
Intercept	140904,729	1	140904.729	8761.452	.000
Environment Awareness Coy	9918.668	1	9918,668	616.743	.000
Error	3715.022	231	16.082		
Total	157067.000	233			
Corrected Total	13633.691	232			

* R^2 - 0.728

source: Field work 2001

Hypothesis 2: Table 9 compares the effects of size of companies on performance measure. The F-calculated is 145.859. The significant level in table is 0.00,

which is less than .005 level. Therefore, size of company affects performance measure.

The R^2 is also .795 or 79.5%. This indicates that size explains 79.5% of the total variation in the performance measure of the companies. The null hypothesis is again rejected confirming that the size of company has effects on the degree of performance measure.

Table 8: The Effect Of Size On Performance Measure

Source	Type (iii)sum of Squares	Df	j Measurement	F	Sig
Corrected model	10835.521	6	1805.920	145.859	.000
Intercept	43726.528	1	43726.528	3531.664	.000
Size	10835.521	6	1805.920	145.859	.000
Error	2798.170	226	12.381		
Total	157067.000	233			
Corrected total	13633.691	232			

Source: Field \vork200i

$R^2 = .795$ (Adjusted $R^2 = .789$).
Significant level $< .005$

Hypothesis 3: Table 9 explains the effects of unionized companies on performance measures. From the table; computed F is 281,931. It also significant at .000 which is less than the specified significant level of .005. The R² is high at 83.2%. This is the total variation in the union contribution as it is capable of analyzing performance measures. The effect of performance measures on union contribution is thus highly significant. This implies that the null hypothesis is rejected. Hence, unionized companies tend towards supporting performance measures.

Table 9: The State Of Unionized Companies On Performance Measures

Dependent Variable:		Total Measure of performance			
Source	Type (iii) sum of squares	DF	Measurement squ	F	Sig.
Corrected model	35.86	4 1 4	5.847	281.931	.000
Intercept	554.179	228	552.179	17661.005	.000
Unionized company Error	35386	233	8.847	281.931	.000
Total	7.154	232	-3.138e-02		
Corrected total	764.000				
	42.541				

Source: Field Work 2001 R² = .8323

Significant level - < .005

Discussion

Previous studies confirmed that High Environment Awareness companies did perform better than Low Environment Awareness counterparts with respect to market share, sales volume, product quality etc. (Remih, 1993; Epstein, 1995; Ahmed et al, 1998). In appraising the survival tendency of any company, the performance measures have also been found desirable by several countries including Nigeria. Series of studies into the influence of environment consciousness and performance had showed that unimaginable gap existed between companies grouped as high Environment Awareness and those grouped as low Environment Awareness in terms of performance. (Steven, 1994 and Well, 1990).

However, the result of this study explain as follows:

Responses from Table 4 of the first research question confirmed that all indicators used for measuring performance were satisfied by companies grouped under High Environmental Awareness. But mode of scores for sales volume, introducing new and improved quality and productivity seems not to have high significance. These three indicators or variables could as well influence other indicators to improve performance. The second question assessed the relationship of company size on environmental awareness, the companies were grouped into three based on employees size. It is observed from Table 5 that percentage of high Environment Awareness group are less than their counterparts in Low Environment Awareness meaning that size is not necessarily essential when appraising environment Awareness. Tables 6 presents the result of the effect of unionism in companies that are environmentally concerned. It is observed from the Table again that strongly unionized companies are more likely to have an environmental strategy than the non-strongly unionized counterparts.

Furthermore, Analysis of variance (ANOVA) statistical techniques was used to test the influence of performance measure on environmental Awareness, Size and unionized companies. All the three Null Hypothesis were rejected. (See Tables 7, 8 and 9). The results therefore confirmed that performance measures had significant impact on companies' environmental awareness, size and the strength of firm unionism.

Conclusion

In recent past, some public companies have decided to focus their strategic interest on environment awareness profile. Few among the companies did achieve a lot

financially as a result of this innovative approach. Despite the importance of environmental concerns in accomplishing organization's mission, business owners still uphold that social responsibility linked to environmental strategy may oppose company goals and performance.

This study contradict business owners perception. It has been established in the study that across all the sectors, environmentally sustained companies perform better than the non-environmentally sustained counterparts.

Again strongly unionized companies are more likely to environmental

strategies. It has again been noted that large public companies in terms of size incline more to environmentally awareness profile. The reason for this cannot be divorced from resource constraints of some companies due to size. It appears riskier to invest in environmental strategies when size is small.

Since there is a significant correction between some attributes, adopting environmentally assumed strategies may not have casual inferences. Successful companies should afford to invest in long-term environment strategies.

- Managerial implications drawn from this study are: i. Companies should consider environmental strategies as part of steps for improving performance, ii. Operations involving environmental concerns can reduce product or service waste.*
- iii. To attain a high level of efficiency companies should increase their performance measures and at the same time be socially responsible by concentrating on some of these strategies.*
- iv. Observing the foregoing can assist by making some inferences about environmental strategies and organizational performance.*

Further research should survey the process of environmental concern and integration of social responsibilities in business operations.

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