

# An Appraisal Of Chemical Marketing Management In Nigeria

**Onwubiko N. Dike, Ph.D**

College of Management Sciences,  
Rhema University,  
Nigeria, P.M.B. 7021, Aba.  
Email : bikodike@gmail.com

*pp 118-125*

## ABSTRACT

This study appraises the conformity of chemical marketing activities of channel members with ethical practices. The study is a survey design and adopts stratified and simple random sampling techniques. One hypothesis and a research question guide the study. The target population is 2068 comprising importers (43), manufacturers (113), wholesalers (247), retailers (552) and end users (1113) of chemicals in the five South Eastern States of Nigeria. The sample size of 335 is determined using Yamane (1967) formula (Eboh, 2009). Applying Bowley's proportional allocation statistical technique, the sample size for each category of respondents is estimated, viz, importers (7), manufacturers (18), wholesalers (40), retailers (90) and end users (180). Primary and secondary sources are accessed for data. The questionnaire is designed in line with the five point Likert Scale format, viz, strongly agree (5points), agree (4points), undecided (3points), disagree (2points) and strongly disagree(1point). Marketing experts validate the questionnaire. Pilot study is carried out. The reliability coefficient of the research instrument is estimated to be 0.901 using Cronbach's Alpha technique. The hypothesis of the study is formulated and tested at 0.05 level of significance and 15 degrees of freedom. Using one-way ANOVA and Minitab software package, the extent of conformity of chemical marketing with ethical practices is determined. Recommendations include formal registration of chemical channel members and organization of workshops, seminars, conferences to equip them with ethical principles and practices of sound management of chemicals and their implications.

**KEYWORDS:** Ethical marketing, Chemicals, Toxicity, Environment, Sustainability.

## 1.0 Background Of The Study

Chemicals are material substances capable of breaking down or combining with their kinds or other substances under suitable environment to become new substances, having completely different characters, behaviors, qualities or uses (Eke, 2008). The exponential increase in the use of chemicals in Nigeria is a pointer to their relevance in national development. Chemical marketing or chemical marketing refers to the process of creating, communicating and delivering total chemical offering to facilitate mutually satisfying exchange relationship between people or organizations with diverse requirements. Total chemical offering is a wholesome package, comprising quality chemicals, genuine certificates of analysis, material safety data sheets, expiry dates, warranties, guarantees and other relevant information. Chemical marketing management encompasses the analysis, planning, implementation and control of chemical value chain to ensure safe handling, distribution and full utilization, prevention of diversion for unwholesome uses and disposal of wastes within regulatory frameworks.

Chemicals are rarely sold directly from manufacturers to consumers except as finished products. The movement of chemicals from the manufacturers' or importers' warehouses to end users involves a network of intermediary institutions. The wholesalers and retailers such as open markets, chemical stores and agents, typically State licensed or registered companies control the chemical distribution network. Every channel member contributes to the movement of the chemicals, fund and information in the value chain.

The marketing of chemicals in Nigeria is a flourishing business due to their applications in every sphere of life. They are used in all stages of food production ranging from soil remediation, weed/pests control to preservation and packaging of food stuffs. Drug production is made possible with chemicals. All drugs are chemicals but all chemicals are not drugs (ICCON,2008). Dead bodies are preserved with chemicals. Safety and military hard wares, nuclear weapons, explosives/mines are manufactured with chemicals. The exploitation of crude oil and subsequent catalytic fractionalization into various chemical products drive the nation's economy. Borehole drilling, water treatment and purification require the application of chemicals. The electrical cables and insulators used in power generation are fabricated with chemicals. Automobile and aircraft body profiles, television sets and computers, cameras, plastics, paints, clothing, beauty care products are made with chemicals, among others.

However, chemicals present sweet and sour

scenarios. While chemicals contribute immensely to the growth of the economy, their hazardous effects and resultant wastes pose great danger to human and environmental health. At the United Nations Conference on Sustainable Development (Rio+20) countries reaffirmed the vision of achieving sound management of chemicals (SMC) by the year 2020 (UNDP Guide, 2012). SMC entails the use of managerial best practices in ensuring safe handling of chemicals (Oghifo, 2013). The initiative encompasses the manufacturing and placement of chemicals in the Nigerian market. The channel members, including downstream industrial users in the South Eastern States of Nigeria with virtual knowledge of chemicals are involved in the distribution activities. Invariably deaths and health effects arising from chemical exposures / contaminants could be minimized if the marketing and use of chemicals conform to ethical practices.

Ethical marketing, an amalgam of social responsibility and ethics, strives to promote honesty, fairness and accountability in the marketing of chemicals as to impact significantly on the environment and societal welfare. In view of the hazards associated with chemicals, the exposure of people and environment to chemicals on daily basis is becoming worrisome. The marketing practices in relation to packaging, labeling, storage, sales, distribution and even the use/disposal of chemicals need to be guided by sound chemicals management regime to reduce the risks of exposures and attendant health hazards. The extent of conformity of the marketing activities of channel members with ethical practices as to ensure sustainable use of chemicals in national development provoked this study, among others.

### 1.1 Statement of the problem.

The utilization of certain chemical substances in the industries and other areas of human endeavor have been implicated in the devastation of natural environment, including the ozone layer. The thin cloud of gas which protects the earth from the sun's harmful radiations is the ozone layer (Ababio, 1998). Chemicals such as chlorofluorocarbons, halons, carbon tetrachloride, methyl chloroform, hydro- chlorofluorocarbons and methyl bromide have inflicted much damage to the ozone layer, leading to intense solar radiation on earth (Bayero, 2004). Every creature on earth is affected by the intense solar radiation, even the early stages of animal life, such as the larvae or eggs of frog in shallow waters.

Dike (et al, 2014) state that the global plant cover which serves as a sink for carbon dioxide to reduce the incidence of global warming is adversely affected by ozone layer depletion. Studies have also shown positive correlation between chemical

exposures and health hazards. Severe health disorders such as lung cancer, chronic bronchitis, kidney tissue damage, heart failure and inability of the blood to supply oxygen to the body have been linked to chemical exposures (ATSDR). Sound management of chemicals, especially lead, mercury/other heavy metals, pesticides and persistent organic pollutants (POPs) aims at reducing significantly the adverse effects on the environment and human health. The chemical marketing management focuses on the tasks of deciding the target markets, discovering their needs and wants, developing and packaging the types of chemical that meet the unique requirements of the markets, designing marketing strategies to reach and satisfy the target customers in the competitive global business environment. Nigeria being a producer and importer of chemicals, the sound chemicals management regime needs to assess the marketing practices relating to all chemicals that gained access to the local markets. Ethical behavior drives sound management of chemicals regime and sets the guidelines for moral and social responsibility marketing practices. If marketing decisions and efforts of channel members are geared towards meeting the diverse chemical requirements of customers including wastes disposal, in conformity with ethical practices, health hazards due to chemical exposures would be drastically reduced.

The life-cycle (cradle-to-grave) evaluates the effects of chemicals on the environment and human health from the time of their extractions from the earth or manufacture until they are discharged to the environment and sometimes through landfills. In a nutshell, the production, importation, marketing and consumption of chemicals including waste disposal, ought to be grounded in ethical considerations. The study therefore seeks to determine the extent to which the marketing activities of chemical channel members conform to ethical practices as to safeguard lives of citizens and ensure environmental sustainability, among others.

### **1.2 Objectives of the study.**

The broad objective of the study is to appraise chemical marketing practices of channel members in Nigeria. The specific objective is to determine the extent to which marketing of chemicals has conformed to ethical practices in the South Eastern States of Nigeria.

### **1.3 Research question**

To what extent has marketing of chemicals conformed to ethical practices?

### **1.4 Limitations of the Study**

The study is limited to the channel members primarily engaged in the production/importation, distribution and use of chemicals in the five South

Eastern States of Nigeria. The research is conducted in Aba, Onitsha, Abakaliki, Enugu and Orlu, being the commercial nerve centres of Abia, Anambra, Enugu, Ebonyi and Imo States respectively.

### **1.5. Hypotheses formulation**

At 95% confidence level, the hypotheses are formulated for testing;

**Ho.** Marketing of chemicals has not significantly conformed to ethical practices.

**H1.** Marketing of chemicals has significantly conformed to ethical practices.

### **2.0. Review of Related Literatures**

Chemical refers to a homogenous substance or mixture of substances that result from atomic reactions, molecular changes or natural phenomenon. It is remarkable for its reproducible qualitative and quantitative properties. For purposes of effective regulation, chemicals can be classified into two main categories namely, General and Controlled chemicals. General chemicals include Laboratory, Agricultural, Industrial and Consumer chemicals. The Controlled chemicals include chemicals under the International Chemical Weapons Convention of 1987, Precursor Chemicals under the United Nations Convention against illicit traffic in narcotics and psychotropic substances of 1988 and Banned/severely restricted chemicals. Banned chemicals are prohibited by the final regulatory authorities in order to protect human and environmental health.

A chemical is said to be severely restricted when virtually all its uses within one or more categories have been prohibited by final regulatory action to protect human health or the environment but for which certain specific uses remain allowed (Eke, 2008). Examples include persistent organic pollutants (POP), mercury and ozone depletes. To ascertain the acceptability, safety in use and confirmation for intended use, all chemical substances manufactured, exported or imported into Nigeria must be registered with the appropriate authorities before entry into the nation's market. Import permits are issued by the regulatory bodies to companies and individuals to import chemicals into the country. The exact quantities of chemicals are stated with evidence of licit use in the relevant documents.

The Global Harmonized System (GHS) of classification and labeling of chemicals provides information on the label and Material Safety Data Sheet (MSDS) and ensures uniformity in chemical packaging worldwide. A major component of the total chemical offering is the MSDS. It contains important information about chemicals, viz; name & address of manufacturer, specific

composition/abstract service number, hazard identification, first aid/accidental release measures, handling and storage procedures, exposure controls/personal protection, physical /chemical properties, stability & reactivity, toxicological, disposal, transport/regulatory information (ICCON,2008).Although the importance of chemicals in national development is crucial, they pose serious threat to life on earth and the physical environment. According to Bovee (et al, 1992), when an action or choice is motivated by the desire to do a right thing, it is ethical and if it is motivated by the desire to do a wrong thing or avoid doing the right thing, it is unethical.

The practice of devastating human and environmental health for financial gains through the production and marketing of chemicals is rather unethical. Ethical practices entail preserving the integrity, stability and beauty of the natural environment. The marketing of chemicals ought to anchor on the principle of mutually satisfying exchange relationships. Chemical marketing management strategies should therefore be designed to satisfy human needs and wants with minimal harmful impact on the natural environment (Grundey and Zaharia, 2008). The principle is aimed at achieving a sustainable society by avoiding or reducing environmental pollutions at every stage of the market-oriented activity (Ezeokafor, 2003). Channel members should endeavour to fulfill the ethical expectations of the customers in course of performing their marketing activities.

Bartels (1967) related the bases for action under ethical obligation to self-interest(lower level), legal ethics (obey the law only),voluntary codes(e.g. by trade or professional associations), conviction (personal integrity, honesty and fairness), balance of claims (from expectations/obligations that often conflict) and economic circumstances (may determine the level of ethical behavior adopted).

The code of conduct of the Nigerian Marketing Association (NIMARK) outlined four prescriptions for members, namely; good marketing practices seek to make fair and honest profit by meeting the needs of the consumers; a member shall at all times act in a manner to uphold the dignity, image and integrity of the marketing profession; a member shall communicate only the truth at all times to the consumer; a member should avoid any conflict between his personal interests and those of his employers. Where such conflict of interests arises, it should be disclosed to and resolved with the employer/client (NIMARK). The concern of the intermediary institutions involved in chemical business should surpass profit motives. Ethical responsibility should be integrated into chemical marketing management practices and align

environmental issues with consumer needs through the principles of Sound Management of Chemicals (SMC). The United Nations Development Programme (UNDP) has advocated the integration of chemicals management schemes into national development policies and plans in developing countries, including Nigeria as to promote human health and environmental sustainability (UNDP Guide, 2012).

The significance of the advocacy of UNDP is to improve knowledge in safe handling of chemicals and reduce chemically-linked pollution in developing countries. The Nigerian Government has shown concern to implement the Strategic Approach to International Chemicals Management (SAICM) principles in accordance with the Dubai Declaration on International Chemicals Management (Oghifo, 2013). The National Agency for Food and Drugs Administration and Control (NAFDAC) regulates the manufacture, importation, exportation and undertakes registration and market authorization of chemicals (Monye, 2007). In spite of the dire consequences of chemical exposures, the marketing practitioners appear to have reneged on the measures that would impact more positively on the environment and public health. The extent, to which the marketing activities of channel members conform to ethical practices in relation to sound management of chemicals, forms the core of investigation of this study.

### 3.0 Methodology

The study adopts a survey method. The target population is 2068 comprising importers (43), manufacturers (113), wholesalers (247), retailers (552) and end users (1113) of industrial chemicals. The sample size of 335 is determined using Yamane (1967) formula (Eboh, 2009). Applying Bowley's proportional allocation statistical technique, the sample size for each category of respondents is estimated, viz, importers (7), manufacturers (18), wholesalers (40), retailers (90) and end users (180). Primary and secondary sources are accessed for data. The questionnaire is designed in line with the five point Likert Scale format, viz, strongly agree (5points), agree (4points), undecided (3points), disagree (2points) and strongly disagree(1point). Marketing experts validate the questionnaire. Pilot study is carried out. The reliability coefficient of the research instrument is estimated to be 0.901 using Cronbach's Alpha technique. The hypothesis of the study is formulated and tested at 0.05 level of significance and 19 degrees of freedom. Using one-way ANOVA and Minitab software package, the extent of conformity of marketing of chemicals with ethical practices is determined.

## 4.0 DATA PRESENTATION AND ANALYSIS

TABLE 4. 1: Profile of respondents.

Parameters (%)	Total	Percentage
<b>Category</b>		
Importers	7	2.0
Manufacturers	18	5.0
Wholesalers	40	12.0
Retailers	90	27.0
End-users	180	54.0
<b>Age</b>		
20-30	50	15.0
31-40	101	30.0
41-50	119	36.0
Above 50	65	19.0
<b>Gender</b>		
Male	263	79.0
Female	72	21.0
<b>Marital status</b>		
Married	229	68.0
Single	106	32.0
<b>Qualification</b>		
Ph.D.	2	1.0
MSc/MBA	19	5.0
BSc/HND	31	9.0
ND/NCE	77	23.0
WASC/GCE	113	34.0
FSLC	93	28.0

In Table 4.1, the percentages of importers and manufacturers of chemicals are 2.0 and 5.0 respectively. Retailers (27.0%) outnumber the wholesalers (12.0%) and the percentage of the end users is 54.0. The respondents above the age of 40 are 55 percent while 45% are within 20 to 40 years old. The male respondents are 70% and females 21%. The study involves 68% of married respondents and singles 32%. The literacy levels of the respondents indicate that 62% possess FSLC/WASC/GCE, 23.0% OND/NCE while a few of them (15.0%) has higher qualifications.

In Table 4.2 the mean score of responses, 582 representing 62.6 percent of the respondents' opinions, indicates that marketing of chemicals has not significantly conformed to ethical practices. The mean score of 347, representing 37.4 percent of the respondents' responses affirms the conformity of chemical channel members with ethical practices.

## 4.1 Test of hypothesis

Ho. Marketing of chemicals has not significantly conformed to ethical practices.

H1. Marketing of chemicals has significantly conformed to ethical practices.

Table 4.3. Result of One-way ANOVA application: Scores: A, Scores: D

Analysis of Variance					
Source	DF	Adj SS	Adj MS	F-Value	P-Value
Factor	1	221135	221135	4.28	0.058
Error	14	723705	51693		
Total	15	944840			
Model Summary					
S	R-sq	R-sq(adj)	R-sq(pred)		
227.361	23.40%	17.93%	0.00%		
Means					
Factor	N	Mean	StDev	95% CI	
Scores: A	8	346.6	236.3	(174.2, 519.0)	
Scores: D	8	581.8	218.0	(409.3, 754.2)	

Pooled St. Dev = 227.361

**Decision:**

From Table 4.3, the F-critical (4.54) is greater than F-computed (4.28) at 0.05 level of significance and 15 degrees of freedom. In applying the decision rule, the null hypothesis, HO is not rejected. An additional insight into the decision shows that p-value (0.058) is greater than the significance level of 0.05 (i.e.,

TABLE 4.2 Analysis of responses on appraisal of chemical marketing management in Nigeria

Item	No. of Respondents: Agree	Scores of Respondents: Agree	No. of Respondents: Disagree	Scores of Respondents: Disagree	Total No. of Respondents
1	269	907	66	199	335
2	94	242	241	813	335
3	119	202	216	719	335
4	168	212	167	552	335
5	94	239	241	798	335
6	122	229	213	715	335
7	125	383	210	398	335
8	193	359	142	460	335
Total	1184	2773	1496	4654	2680
Mean	148	346.63	187	581.75	335

Source: Field data, 2018.

$p > 0.05$ ). The null hypothesis is therefore upheld. The co-efficient of determination,  $R^2$  (adj) is 17.93 percent. This result shows that the extent of conformity of marketing of chemicals with ethical practices is about 17.93 percent. In conclusion, marketing of chemicals has not significantly conformed to ethical practices.

## 5.0 Discussion Of Results

The findings of the study reveal that at 17.93 percent, marketing of chemicals has not significantly conformed to ethical practices. By implication, only about eighteen percent of the marketing activities of channel members are in conformity with ethical practices while a huge proportion of eighty-two percent is non-compliant.

Experiences of most manufacturers of chemical products in recent past corroborate the report of the study. During periods of scarcity of chemicals in the market, some wholesalers and retailers (chemical distributors) adulterate chemicals. For instance, an end user in Aba narrated how he bought a tonne of Ethyl Diamine Tetra-Acetic acid (EDTA) valued N670,980.00 from a chemical distributor in Lagos only to discover after use that the consignment neatly sealed in a carton-colored paper sack was something else. revalidation of expiry dates of chemicals to extend their shelf life and omitting vital information to deceive customers are common practices.

Qualities of some finished products are compromised by adulterated chemicals, leading to huge losses. The umbrella body of the chemical distributors, Chemical Dealers Associations, shield channel members from the arms of the law against unethical practices like price collusion, adulteration, customer deceit, lying or stretching the truth about the state of the chemical substances. Price collusion is socially irresponsible as it hinders marketplace competition. The prices of chemicals are arbitrarily raised to earn huge profits. The distribution of chemicals appears chaotic with overlapping of channel functions. The chemicals are often sold to the wholesalers and retailers alongside the end users by the same manufacturers or importers, creating channel conflicts. Large chemical manufacturers or importers package their products in cylinders, drums, plastic kegs, boxes and deliver them through pipelines, tankers, and trailers (for solids, liquids and gases).

Observations have shown that some channel members repackage these chemicals in various sizes for commercial utilities and with misleading information relating to country of origin or place of production, chemical and physical properties, suitability for use, including fake material safety data sheet. The country of origin is an important feature in chemical marketing as it is perceived as a reflection of

quality. Interviews held with some end-use industries reveal that chemical distributors even use trademarks, names and labels or packages belonging to firms that have high quality reputation in the same industry to deceive customers. Since ethical practices imply wholesome application of standards of fairness, honesty, moral rights or judgment to chemical marketing management, the activities of these channel members are devoid of ethical standards.

## 5.1 Implications of the study

The study implies a paradigm shift to ethical marketing practices by chemical channel members as to resolve the contentious issue of doing the right or wrong thing to make money. Integrating ethical principles into the corporate culture of the intermediary institutions involved in the chemical value chain would ensure a healthy society and sustainable environment.

## 5.2 Conclusion

The study investigates the extent to which the marketing activities of chemical channel members conform to ethical practices. The report of the study shows that about 17.93 percent of the marketing activities of the chemical distributors is in conformity with ethical practices while eighty-two percent is not. Chemicals present sweet and sour scenarios. Chemicals contribute immensely to the growth of the economy while their hazardous effects and resultant wastes pose great danger to human health and environmental sustainability.

The principle of chemical marketing management demands that channel members be ethically accountable for what happens in the value chain as the products move from manufacturers or importers to end users, including waste disposal. If the marketing practices depart from ethical standards, the outcome may lead to bad publicity, lack of trust, lost businesses and even legal action, resulting to customer dissatisfaction. A frustrated or disappointed customer would not only stop buying but badmouths the total chemical offering to others.

Ethical abuses are capable of arousing pressures from the government, consumer interest /self-regulatory groups, professional associations to protect consumer rights and compel the intermediary institutions to assume greater responsibility for their actions. A paradigm shifts to integrate ethical culture into chemical marketing management would resolve the hot button issue of doing the right or wrong thing by channel members to make money. The impact is on the sustenance of both human and environmental health and enhancement of the nation's economy through improved customers' attitudes toward total chemical offerings in the country. Equipping

distributors with good knowledge of chemicals/waste disposal, the target markets, ethical principles and practices of sound management of chemicals in Nigeria is more compelling now than ever, if the (Rio+20) countries' vision 2020 would be achieved. However, interviews held with the respondents reveal that if ethical marketing practices reduce profits, most chemical channel members would not adopt them, notwithstanding the benefits of sound management of chemicals.

It behooves the Federal and State Governments of Nigeria to intervene as to ensure ethical compliance. In summary, chemical marketing management becomes plausible especially when members of the public recognize that intermediary institutions are engaging in ethical practices that improve human health and environmental sustainability and are not compelled by governments or professional associations to do so.

### 5.3 Recommendations

Based on the findings of the study, the following recommendations are articulated to enhance the conformity of the marketing activities of chemical channel members with ethical practices.

- i) A joint committee of the leadership of Institute of Chartered Chemists of Nigeria and National Institute of Marketing of Nigeria should be constituted to synergistically monitor chemical production, storage, distribution and use, including waste disposals in the country.
- ii) The Institute of Chartered Chemists of Nigeria (ICCON) should formally register the chemical distributors (members of the Chemical Dealers Union, CDA) and issue them operational licenses, renewable yearly for control purposes.
- iii) ICCON should take the responsibility of organizing workshops, seminars, conferences to equip members of the CDA and others with the principles and practices of sound management of chemicals and their implications.
- iv) The joint committee should mount intensive public enlightenment campaigns on the consequences of chemicals exposures on human and environmental health.
- v) The National Institute of Marketing of Nigeria should enforce ethical behaviour throughout the culture and practices of the intermediary institutions involved in chemical marketing management.
- vi) The Federal and State Governments of Nigeria should enact stringent laws on chemical marketing management, including penalties for violations.

- vii) The joint committee should monitor the activities of the chemical channel members, enforce the implementations of the laws and penalties.

### REFERENCES

- Ababio, O.Y., (1998). *New School Chemistry, Seminar Secondary Science Series*, New edition. Onitsha: Africana-Feb Publishers Limited, in Association with FEP International private Limited, Singapore.
- Aftalion, F.,(1991). *A History of the International Chemical Industry*. Philadelphia. University of Pennsylvania Press. pp. 11–16. ISBN 0-8122-1297-5.
- Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, Georgia, U.S. Department of Health and Human Services.
- Bartels, R. (1967). *A Model for Ethics in Marketing*. *Journal of Marketing*, Vol.31. pp.20-26
- Bayero, A.K., (2004). “ODS Regulation and Solvent Sector” A Paper Presented at One Day Technical Workshop for Formulators Under the ODS Phase-out Project for the Solvent Sector, Lagos, 14th October.
- Bovee, C. L. and Thill, J.V., (1992). *Marketing*. New York: McGraw-Hill Inc.
- Dike, O.N., Onwuka, E., Avanenge ,F., (2014). *Marketing Implications of the Ozone Layer Protection in Nigeria International Journal of Business and Management Invention*, ISSN(Online) 2319-8028,ISSN(Print):2319-801X. www.ijbm.org. Volume 3, Issue , 21.February.pp.15-22.
- Eboh, E.C., (2009). *Social and Economic Research, Principles and Methods*. Africa Institute for Applied Economics. Enugu.
- Eke, G.E., (2008). “Regulatory Mechanism For Sound Chemicals Management” *Mandatory Training Workshop Manual*. Institute of Chartered Chemists Of Nigeria, Lagos. 21-22 October.
- Ezeokafor,U.B.,(2003). *Green Marketing: Approaches and Prospects in the 21st Century*. *Marketing Hallmark, Journal of Marketing*. Volume 2 No 1.ISSN 1596-3098.
- Grundey, D. and Zaharia R.M., (2008). “Sustainable Incentives in Marketing and Strategic

Greening: The cases of Lithuania and Romania” in *Baltic Journal and sustainability* 14(2), 130-143.

ICCON, (2008). *Mandatory Training Workshop Manual*. Institute of Chartered Chemists of Nigeria, Lagos, October.

Monye, F., (2007). “Tips on Consumer Protection.” In *Consumer Journal*, Enugu. Consumer Awareness Organization's Publication (3). 129-141.

National Institute of Marketing of Nigeria (NIMARK), Lagos.

Oghifo, B., (2013). “: FG Seeks to Incorporate Management of Chemicals in National Development Strategies.” *THISDAY Newspaper*, July 30.

Oshima, R. (2004) “Alternative solvents/formulations UNIDO, Vienna-Austria” A Paper Presented at Technical Workshop for formulators under the ODS Phase-out Project for the Solvent Sector. Lagos, 14th October.

UNDP Guide, (2012). “Integrating the Sound Management of Chemicals into Development Planning. Copyright United Nations Development Programme, September.

UNIDO, (2004). “Working Arrangement of implementation of Terminal ODS Phase-out Umbrella Project in the Solvent Sector. “Nigeria Lagos, 14th October.