

WEB-BASED MARKETING IN ENUGU STATE OF NIGERIA: DEVELOPMENT QUESTION

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Abstract

This study made a broad examination of the effect of information communication technology in Nigeria with special emphasis on Enugu State. The study was descriptive in nature and therefore survey research method was adopted. Data were collected through personal interview, questionnaire and focus group discussion. Data collected were presented in frequency tables and hypotheses formulated were tested using chi-square (X^2) and correlation coefficient statistical measures. Several findings were made. Essentially the study revealed that electronic commerce (e-commerce) concept represents a relevant substance to marketing in Nigeria. Product marketers appreciate internet marketing. There is no form of scepticism and unworthy acts to future challenges of internet marketing. Based on the findings the major recommendations include: That greater awareness of the benefits of online access to information, goods and services should be actively pursued throughout Nigeria especially for all those involved in marketing. To turn the 'digital dividend' to increase technology and computer skills among young people so as to build from an early age, an internet culture from web-enabled business, fertilize the public imagination and watch the buds of innovations blossom so that healthy fruits of products and services can be ripen to enrich the lives of citizens.

INTRODUCTION

Electronic mail which is a component of Information Communication Technology (ICT) was originally designed to allow a pair of individuals to

communicate through the computer. Iheakwuaba (2002) argues that the first electronic mail software provided only a basic facility, it allowed a person using one computer to type a message and send it across the network to a person using another computer. Information and communication Technology (ICT) no doubt plays a crucial role in modern marketing.

Marketing of existing products or the introduction of new ones is probably the most risky phase of the decision-makers responsibilities according to Booke and Kartz (1977). Sales promotion includes such selling activities that supplement advertising and personal selling, coordinating them and thus rendering them more effective. These include sampling, displays, demonstrations and various kinds of non-recruitment selling efforts (Olakunori (2002).

Sales promotion argues Anyaele (1991) includes methods adopted by producer's manufacturers, which are aimed at bringing to the attention of consumer, the existence of goods and or the introduction of new ones in order to boost sales and establish the product at the market place. The ICT which started in the late 1950s became popular in Nigeria in the late 1990s. By a way of history, it was started by the American military as a means of sharing research results and it developed into a network of micro-computer together on a worldwide web (www.google.com) . Since the inception of ICT in the world, information has been shared by people living at far distance from each other in an instant thereby breaking down physical and spatial barriers and it has revolutionalized the way many things are being done. Marketing being no exception.

By connecting millions of people worldwide, the internet provides a global interactive environment devoid of geographical or spatial constraint and characterized by the absence of national borders. Infact marketing practices and concepts in the realm of international marketing management became modified and recognised, as the ICT developed into a vivid marketing tool which companies could only ignore to their peril, Schumpeter (2003).

Computer communication however involves interaction between the programmes called a client and a server.

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STATEMENT OF THE PROBLEM

Nigeria as a developing economy has a lot of challenges posed by marketing on the Internet. Information and Communication Technology is still at its crudest stage in Nigeria. The vital links in the internet structure (the telecommunication link) is virtually absent, with the global satellite mobile (GSM) epileptic network delivery. There is low intelligent coefficient in the advancement of Telecommunication facilities. Computer literacy is also very low, with government very apathetic about a subject it should support with all vigour. Electronic mail (e-mail), electronic commerce (e-commerce) and other electronic related communications are still at its nadir stage in Nigeria, especially among agro-business marketers. Electricity supply is at its epileptic best with generators providing the bulk of the needed power. So how has the potential of the internet appreciated in Nigeria? Among the financial institutional, has the ICT affected the way business is being done? With the introduction in Nigeria of the GSM telephone technology and the expected reduction in the cost of telephone lines coupled with the increasing number of ICT services providers (ICTSPs). There is also the problem of phobia amongst the employees and the end users of the internet in marketing services. So they are faced with how to win and maintain customer satisfaction, royalty and retention. The problem is therefore how businesses in Nigeria, especially Enugu State would be repositioned for the intrigues and challenges of marketing on the internet.

OBJECTIVES OF THE STUDY

The general objective of this study is to assess the effect of the information communication Technology (ICT) on the marketing activities in Nigeria, with special emphasis on Enugu State. Arising from the foregoing, the specific objectives are therefore;

1. To ascertain the degree of awareness of the ICT by those involved in marketing business.
2. To ascertain the preparedness of the marketers for the revolution being unfolded in the international market place in the area of e-commerce and web-based marketing techniques such as internet marketing and

the credit card system that has been adopted by some of the Nigeria marketers.

3. To ascertain the challenges of electronic system in today's marketing.

HYPOTHESES

The following hypotheses have been formulated to guide this study.

1. H₀: There is no significant awareness of the ICT and product marketing in Enugu State
H₁: There is significant awareness of the ICT and product Marketing in Enugu St .
2. H₀: The product marketers are not significantly prepared for e-commerce and web-based marketing.
H₁: The product marketers are significantly prepared for e-commerce and web-based marketing.
3. H₀: The electronic system of marketing products in Nigeria is not faced with challenges.
H₁: The electronic system of marketing in Nigeria products are faced with challenges

LITERATURE REVIEW

The world-wide web

Internet or international network is a network of connectivity between several computers around the world. It therefore limits together people and information, thus making the world a global village. The internet is at times confused with the world-wide web (www) which is only a component of it,(The most important components). It is the graphical path used by the user to see and collect audio and video information contained in those computers connected to the internet. Useen (1999).

A simplified view of the internet is to imagine a room filled with many spiders, each spinning its own web. (www.google com.) The webs are so interconnected that the spiders can travel freely within this maze. Just as a telephone enables you to

talk to someone on the other side of the earth who also has a phone, the internet enables a person to sit at his computer and exchange information with other computers and computer users anywhere in the world. Some refer to the internet as the information super highway. Just as a road allows travel through different areas of a country, so the internet allows information to flow through many different interconnected computer networks (Awake, 1997).

Marketing on the internet

The internet has become an indispensable tool in today's marketing communications and advertising. Its profile is rising everyday as millions of people get connected to the internet every year. Its marketing potentials though, are yet to be fully harnessed as technologies surrounding it are yet to be fully stabilized enough to make web-based marketing what it readily should be.

Yet the love of web-based markets is in the struggling growth of business to consumer's transaction at consumer good and services arising from specialty goods to luxury goods can be effectively marketed on the internet with varying degrees of ease.

With the internet marketing, fast reliable and efficient services are been rendered to our prospective audience or customers. This in term boosts their morals which will eventually lead to constant patronage to such firm that provides them quality and fast services.

Internet marketing is an indispensable tool for any bank, firm or organization that wants to remain in business and also achieve greater success in this our volatile and competitive business environment.

The internet and the web-based Marketing

The international experience according to Ihekwaba (2000) the advent of the internet has doubtlessly altered the way business is conducted the world over. It has ushered in the fastening of the globalization process at an astonishing speed, taking the unprepared by surprise and leaving cooperate casualties in its trail. Among these are those companies that had failed to be pro-active in the edification of their marketing strategies or which had embraced the paradigm shift that the

internet represents half-heartedly and has been injured in the battle for market share, both in the brick and mortar business as well as in cyberspace.

In his opinion, companies must recognize the rule represented by the theory of economic natural selection, which is the survival of the fittest; As such, they must constantly be on guard. The situation of the market however, as well as the position of the company in the market, the structure of the market in terms of entry and exit barrier will determine the type of generic or alloyed strategies that the company may adopt. With the internet technological breakthroughs are rewriting the rules of business. Where a company feels it is a clear leader in its industry without any trace of competitors in the horizon, such a company may adopt a stability strategy. The caveat here is that those competitors that suddenly turn into industrial enfact terrible usually come unannounced (like Terabeam, the company that is rewriting the basic rules of broad band technology of qualicom, the company that discovered the code division multiple access (CDMA technology). With the internet, the use of a stability strategy may be akin to the initiation of disaster.

On line market place, a company can be a market leader, a market challenger, a market follower or a market matcher. In whatever position a company finds itself, it should as a matter of strategy, not sit down idle, but take essential steps aimed at improving its position and altering the balance of force against its competitors. It should take those steps that will give it sustainable competitive advantage over its competitors (Kotler 1983).

Ideally, a company can have three types of competitors, those that are wholly brick and mortar, those that are a combination of both. A company that is keen on market survival ought to identify and assess its weakness by evaluating their strength and weakness as well as their opportunities and strengths. This, can be achieved by drawing an environmental threat and opportunities profile (ETOP). According to Gbade (2004), a good ETOP must be able to bring out the competitions so as to enable the company develop its own encounter balancing strategies. With today age of breath taking technological breakthrough, one of such areas, according to him, where concrete competitive attack and defence strategies are essential to in cyber marketing.

The on-line marketing must understand the nature of the on-line market place and the different opportunities it presents in terms of the various types of customers contained therein. Such marketers must therefore determine the type of marketing, differential marketing or niche marketing. This is a very daunting task as each of these alternative market approach strategies have their own peculiar problem as applied to net marketing (also known as the interacts) transverse the web into a random manner. They are so faceless and impersonal that they are mostly recognized by whether they are "dotcom" or do net" yet the company must find a way of presenting its products to its target or niche market segment where such strategies are chosen. One way of doing this is to identify the various consumer groups and means of getting to them.

Introduction technology and strategic Marketing in the 21 century

The 21 century has been adequately described as the information technology century. This appellation is informed by the role that information technologies are strategically playing in the affairs of both people and business organizations. The theory and practice of marketing in the future certainly will never be the same sequel to visible transformation that will occur as a result of information technology.

Prior to the 21st century quite a lot had been spoken and writing about technological advancement in almost every aspect of human endeavour. In the developed part of the world, technological advancement has become an old logical technology. Hard work pays off someday; science in such societies has been very operational; hence the scientist have not relented to make technological innovation a reality in the aspects of their life. In the developing countries like Nigeria, the relevance of technological advancement is felt everyday. The journey to it is gradual although still at its cradle stage.

The term information technology can be described as an information system meant to provide information so as to aid planning and organization. It includes the internet, E-mail, and its vacant, the electronic commerce (E-commerce) (Financial

Digest 1994). On the other hand information technology IT has been identified as the acquisition, production and transformation, storage and transfer

of data (information) by electronic means in forms such as vocal, pictorial, textual and numeric so as to facilitate interactions and implications (social economic and cultural) of these processes (Meadow journal 1991p.104). Thus the electronic commerce is born to minimize the cumbersomeness of time, distance and space in doing business. Information technology has thus become a vital strategic marketing management tool.

Reacting to the role of information technology in world business growth, John Naisbith the driving author of mega trends and the global paradox observed "Telecommunication is the driving force that is simultaneously crating the huge global economy and making its parts smaller or more powerful".

Telecommunication has been defined by Laudon and Laudon (1994) as "communication of information by electronic means usually over some distance". Technological breakthrough can be said, to be categorized into five categories. The followers of pioneering economist Joseph Schumpeterz fifty year model noted that, the first wave in modern history (1780s-1840s) brought steam power which piloted the industrial revolution, next came the rail roads (1890s); and then the cheap oil and automobile (1930s). Now the fifth wave is being powered by information technology.

The information technology era is characterized into two categories. The first generation was characterized by relatively straight forward automated data processing while the second era has moved to automated decision making move technology based telecommunication and the information super highway. In the United States they are not only currently in the middle of telecommunication revolution which has witnessed rapid changes in the technology of communications but also important changes in the ownership control and marketing of telecommunication services.

The Emerging Web-Business And E-Commerce in Nigeria.

The world is facing two basic truths first the internet is truly a global phenomenon and, second, that phenomenon has hardly touched the African continent Tooki (2000).

According to Hayatu-deen (2000), many e-commerce entrepreneurs in Nigeria have not learnt the lesson of the experience from abroad, where many rushed into the business without proper

studies and business plan, resulting in what is now called “e-commerce jitters” in the west. In his opinion, the area have done so without checking whether their customers will be willing and capable of transacting business with them through a personal computer connected to the internet.

According to him, there are also the issue of payment. E-commerce works abroad because they have an acceptable mechanism, e.g the credit card. In Nigeria, the mechanism for e-commerce does not exist, aid in his opinion, and in his opinion, if there was none, fraud could be more, as there is no reliable and predictable framework for transactions. It is his view also that in Nigeria, the risk of getting caught committing fraud is low, and even when caught, it is easy to circumvent the law.

Hayatu-deen also highlighted the issue of logistic and security as militating against the proper takes – off of e-commerce in Nigeria. He posited that until there is a good issuance framework for the goods and services being transported, and people are confident that their goods and services are guaranteed to be delivered, the workability of e-commerce in Nigeria would remain in doubt.

METHODOLOGY

Questionnaire, oral interview and focus group discussion were used as instruments for data collection. In this case the researcher fashioned an interview guide”. it contained the structured questions. The questions covered essential issues in ICT marketing. The instrument was used mainly to select information from classified respondents. While instrument 2, questionnaire was made up of structured questions, multiple choice questions, open ended questions. The questionnaire was administered to the respondents. The structured questions gave respondents answers to choose from. The questions were drawn from the hypotheses and objectives of the study.

The study centred solely on those who market home made products on the internet. However, it was too vast and unrealistic to cover all the marketers in Enugu state,of Nigeria, hence the population composed of those marketing home made products in Enugu metropolis for this purpose, the area was divided into four zones for adequate representations.

These zones are as follows.

- A - Ogui
- B - Uwani
- C - New Haven
- D - Coal camp

In the course of the survey, Enugu state of Nigeria was used as the sampling centre. In determining the sample size the formular stated below applied

To calculate the sample size

$$N = \frac{Z^2 (pq)}{e^2}$$

Where n = the required sample size
 Z = standard decimation for the desired level of confidence

P = probability of success
 Q = limit of tolerable error for the study

Where Z = 1.96%
 P = 90%
 Q = 10%
 E = 5%

$$K = \frac{1.96^2 (90 \times 10)}{0.05^2} = \frac{0.3457}{0.0025} = 138$$

Thus a sample size of 138 was used for this study.

A total of 138 questionnaire instrument were administered to the 138 respondents. Questionnaire were administered to the respondents within the four zones i.e.

- Ogui 14
- New Haven 40

Uwani	28
Coal camp	55

Out of the whole questionnaire distributed 124 favoured internet as an including factor for bringing products while 14 respondents had a contrary opinion. The researcher used the simple random sampling technique method and regarded the responses positive to form a base for the research work. That is 90% positive response and 10% negative response. Questionnaire distributed to the four zones were Ogui, Uwani, New Haven and Coal Camp in the ratio of 1:2:3:4 respectively.

This is as follows:

Ogui questionnaire	$1/10 \times 138$	=	14
Uwani questionnaire	$2/10 \times 138$	=	28
New Haven questionnaire	$3/10 \times 138$	=	41
Coal Camp questionnaire	$4/10 \times 138$	=	55

Chi-square and correlation coefficient to analyse the data collected. This is considered appropriate in view of the nature of the research objective and hypotheses. The chi-square is to find out the discrepancies in the calculated and tabulated values using the level of significance of 5% in order to reject or to accept the hypotheses that can be attributed to change.

DISCUSSION

Here the result of the analysis as contained in the Appendix are discussed and interpreted information obtained through interview, focus group discussion, documents, records, personal observation supplements the information obtained through the main instrument – questionnaire. Some product marketers are quite aware of internet marketing but yet have not deemed it necessary to imbibe it. Some of the people interviewed claimed that change is some what difficult to adapt to. However the chi-square in table .8 dwelt on the awareness of ICT among marketers in Enugu State. The result of the test revealed that there is adequate awareness of ICT among the marketers. But though there is adequate awareness, the use of ICT is still

very low among the marketers in Enugu State of Nigeria. One of the respondents interviewed argues that many of them in product business dread to use ICT because of hawkers, and other forms of internet fraud inherent in ICT related transactions (Ogbu , 2000) another agro product marketer based in Ogui Enugu also argued that he in particular do not like to market on internet because of unstable power supply in the country especially around Ogui area of Enugu. According to him, he would like to market on the internet soon he is sure of steady power supply in Nigeria.

There is no gainsaying however that in a developing economy like Nigeria, marketing on the internet poses its own challenges especially at the time when the world is embracing wireless and global satellite mobile (GSM) Technology computer literacy being very low, and government being apathetic about a subject it should support, how has the potential of the internet been appreciated in Nigeria? Amongst the product marketers , has the internet affected the way their business are being done? The answers to these questions according to Nze (2008) is not in the affirmative.

Summary of findings

The findings from the item-by-item analysis revealed that the questionnaire return rate is encouraging. About 90% of the questionnaire distributed were duly filled and returned (table 1). Table .2 revealed that over

80% of the respondents have more than school certificates which imply that the greater percentage of the respondents is educated. Table .4 revealed that those who are aware of ICT marketing number more than those who are not aware: This implies that the question of the ICT awareness has been established. Thus table 5 showed that the awareness has encouraged many marketers to imbibe web-based marketing. From the responses, it was revealed that ICT marketing is being filled with some challenges, but even at that marketers still access internet in their marketing. However, the responses from interview and focus group discussion revealed the following

- a.) That internet connectivity negatively affects the communications facilities in Nigeria.
- b.) Those product marketers agree that there is a responsible appreciation of the internet.
- c.) That e-commerce concept represents a relevant substance to marketing in Nigeria.

- d.) That marketers strongly disagreed there is any form of sceptics and unworthy acts to future challenges of internet marketing.
- e.) That the internet is a relatively cheap, fast and convenient means by which goods and services are being marketed and promoted.
- f.) Those marketers disagreed that they are neither positioned nor repositioned for any perceived future challenges as regards internet marketing.

Conversely, the hypotheses tested revealed that:

- a.) There is significant awareness of the ICT among product marketers in Enugu State. That many up till date do not like to use internet in their marketing is not the function of unawareness.
- b.) The marketers are prepared for the revolution being unfolded in the international market place in the area of e-commerce and web-based marketing.
- c.) The electronic system of marketing products are not faced with serious challenges yet.

CONCLUSION

The researchers were able to find out that the advent of internet in the tremendously facilitated and grossly expedite all activities connected with marketing. The facility has been generally accepted to be cheap, convenient and timely.

RECOMMENDATIONS

A number of reasons have been adduced for Nigeria's position on the outskirts of the information superhighway which has brought civilization and economic development to many people and emphasized a digital divide among nations.

These include poor infrastructure, low level of education, poverty, low awareness and social disequilibrium amongst others. Result of this study has underscored a few of these problems, and it is in the light of this that the following recommendations are made:

- 1.) The announcement by the Federal Government of Nigeria of an ambitious target that would make telecommunications facilities (voice) data and video available to most parts of the country at an affordable price by 2015 is praise worthy and should be faithfully implemented to the latter, starting with a reform of current telecommunication policy and the need to determine how to price bandwidth, how to effectively deploy infrastructure and the decision on what technologies are best to be suited to network expansion, the high cost of the service being the main barrier to internet diffusion.
- 2.) On the importance of knowledge which the internet aids, this study showed that the average Nigerian marketers reasonably appreciates the importance of the internet and as such , greater awareness of the benefits of online access to information, goods and services should be actively pursued throughout the society, in particular, all involved in marketing.
- 3.) To turn the 'digital dividend', programmes should be developed to increase technology and computer skills among young people so as to build from an early age, an internet culture, grow web-enabled business fertilize the public imagination and watch the buds of innovations blossom so that healthy fruits of products and services can ripen to ripen to enrich the lives of citizens.
- 4.) The government should consolidate power generation across the country hence the epileptic and inadequate MHW of power generation currently experienced in the country does not encourage the use of internet facilities.

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Appendix

Data Presentation and Analysis

Distribution and collection of Data gathering instrument (Questionnaire)

The questionnaires were distributed to the respondents based on the sample size of study.

On the whole a total 138 copies of questionnaires were returned.

Data collected from the field survey were presented as per the tables below.

Table 1: Questionnaire Return Rate

Response	No of questionnaire	No returned	No not returned
Uwani	14	12	2
New Haven	28	25	3
Coal Camp	41	38	3
Ogui	55	53	2
Total	138	128	10

Source: Field survey (2010))

Table .1 revealed that greater percentage of the respondents returned their questionnaire as against a negligible number of 10 who did not return.

Table .2 Sex of Respondents

Area	Male	Female	Total
Uwani	10	4	4
New Haven	21	7	28
Coal camp	32	9	41
Ogui	49	6	55
Total	112	26	138

Source: field survey (2010)

Table .2 showed that, Uwani had only 4 female respondents, as against 10 males, New Haven have 21 males as against 7 females that responded to the opinion. Coal camp had only 9 females as against 32 males and finally Ogui recorded 49 males as against 6 females who responded to the opinion. The implication of this is that more men are into business than women.

Table .3 Educational Qualification of the respondents

Area	Below school Cert.	Above School Cert	Total
Uwani	4	10	14
New Haven	7	21	28
Coal camp	9	32	41
Ogui	6	49	55
Total	26	112	138

Source: Field survey (2010))

Table above revealed that among the entrepreneurs interviewed in the four study areas, those who have certificates that are above school certificate are higher in number than those who have below school certificate.

Table .4 Question: Do you know about Internet marketing?

Response	Uwani	New Haven	Coal Camp	Ogui	Total	Total%
Yes	11	22	31	48	112	81.16%
No	3	6	10	7	26	18.84%
Total	14	28	41	55	138	100

Source: Field Survey (2010)

From the table above, it becomes obvious that 11 respondents from uwani said yes that they know internet marketing, while only 3 said No. Also from New Haven 22 respondents said yes while 6 said No. Similarly from Coal Camp, 31 respondents said yes while only 7 respondents from Ogui said yes while only 7 respondents said No. It means that 81.16% of the total respondents said yes while 18.84% said no.

Table .6. Are you prepared for the revolution being unfolded in the international market in the area of e-commerce?

Response	Uwani	New Haven	Coal Camp	Ogui	Total
Yes	11	22	31	48	112
No	3	6	10	7	26
Total	14	28	41	55	138

Source: field survey (2010)

Table .6 reveals that marketers are quite prepared for the revolution being unfolded in the international market in e-commerce. 112 respondents on the whole said yes while 26 said no.

Table .7. Question: you think that there are challenges in the electronic marketing of agro-products in Nigeria?

Response	Uwani	New Haven	Coal Camp	Ogui	Total
Yes	12	23	30	40	105
No	2	5	11	15	33
Total	14	28	41	55	138

Source: field survey (2010)

Table 7 revealed that majority of the respondents notice challenges in the electronic marketing of agro-products. 105 of the respondent said yes while 33 said no. When probed further during the oral interview they stated that the challenges include , systematic instability in Nigeria, persistence power outage, frequent breakdown of savers and network problem.

Test of hypotheses

In an attempt to test hypotheses, the researcher firstly presented the null hypotheses and the alternative hypotheses. Chi-square technique and was applied to test the hypotheses.

In the application of the chi-square (χ^2) test, the generally accepted criteria for decision are stated below:

Accept H_0 (null hypotheses)

If $T.V \geq C.V$ - (1)

Reject H_0 if $T.V < C.V$ - (2)

Where C. V - Calculated value
of the chi-square test (χ^2)

T. V - tabulated value
or critical ratio

Hypothesis I : there is no significant awareness of the ICT among product marketers in Enugu State of Nigeria

H_1 : There is significant awareness of ICT among product marketers in Enugu State.

$\chi^2 = \sum (oi - ei)$

ei

where oi = Observed frequency

ei = expected frequency

Level of significance = 0.05 i.e 95%

Table 8

Research Question: Do you think there is significant awareness of the ICT among agricultural product marketers in Nigeria?

Response	Uwani	New Haven	Coal Camp	Ogui	Total
Yes (A)	11 (11.38)	22 (22.72)	31 (33.28)	48 (44.64)	115
No (B)	3 (2.64)	6 (5.26)	10 (7.72)	7 (10.36)	26

Source: Field survey (2010)

Expected frequencies = Roll Total x Column Total Grand total

Expected frequencies = RT x Ct

	GT
(AW)	(BW)
=112 x 14 = 11.36	26 x 14 = 2.64
<u>138</u>	<u>138</u>
=112 x 28 = 22.72	26 x 28 = 5.28
<u>138</u>	<u>138</u>
=112 x 41 = 33.28	26 x 41 = 7.72
<u>138</u>	<u>138</u>
=112 x 55 = 44.64	26 x 55 = 10.36
<u>138</u>	<u>138</u>

Table .9 Calculation of Chi-square for the Hypotheses

Cell Oi	Oi - Ei	(Oi - Ei) ²	$\frac{(O_i - E_i)^2}{E_i}$
AW 11	11.36 - 0.36	0.1296	0.00114A
DX 22	22.72 - 0.72	0.5184	0.228
AY 31	33.28 - 2.28	05.1984	0.1562
AZ 48	44.64 - 2.36	11.29	0.2529
AW 3	2.64 - 0.36	0.1296	0.0490
DX 6	5.28 - 0.72	0.5184	0.0982
AY 10	7.72 - N2.28	5.1984	0.6734
AZ 7	10.36 - 3.36	11.2896	1.0892
			2.35

Source: compiled from Table 4.8

$$\text{Degree of freedom} = (R-1) (C - 1)$$

$$(4 - 1) (2 - 1)$$

$$3 \times 1 = 382$$

$$X^2 = 2.35$$

Using 0.05 level of significance

i.e $X^2_{0.05} = 7.82$

Decision Rule:

Given the criterion to accept if $X^2 < X^2_{0.05}$

The researcher therefore accept the hypotheses that there is significant awareness of the ICT among agricultural product marketers in Enugu State since $2.35 < .82$

Test for hypotheses two:

H₀: The Nigeria marketers are not prepared for revolution that unfolded in the international market in the area of e-commerce and web-based marketing.

H_i: The Nigeria marketers are prepared for the revolution being unfolded in the area of e-commerce and web-based marketing.

Table 10 Research Question

Do you believe that agro-based, marketers are imbibing the revolution in the international market in the area of e-commerce?

Response	Uwani (W)	New Haven (X)	Coal Camp (Y)	Ogui (Z)	Total	%
Yes (A)	(12.65)	(21.30)	(31.20)	(14.85)	105	76.09
NO (B)	2 (3.35)	5 (6.70)	11 (9.30)	15 (13.15)		
Total	14	28	41	55	138	100

Source: Field survey (2010)

Expected frequencies = RT x CT

GT

$$= \frac{105 \times 14}{138} = 10.65$$

$$\frac{33 \times 14}{138} = 3.35$$

$$= \frac{105 \times 28}{138} = 21.30$$

$$\frac{33 \times 28}{138} = 6.70$$

$$= \frac{105 \times 41}{139} = 31.20$$

$$\frac{33 \times 41}{138} = 9.80$$

$$= \frac{105 \times 35}{138} = 41.85$$

$$\frac{33 \times 28}{138} = 13.15138$$

Table 11. Calculation of Chi-square for Hypotheses two:

Cell O _i	E _i	O _i - E _i	(O _i - E _i) ²	$\frac{(O_i - E_i)^2}{E_i}$
AW 12	10.65	1.35	1.82	0.1709
2 x 23	21.30	1.7	2.89	0.1357
AY 31	21.30	1.2	1.44	0.0462
AZ 48	41.85	3.45	3.423	0.0818
AW 3	3.35	1.35	1.823	0.5440
AX 6	6.70	1.7	2.89	0.4313
AY 10	9.80	1.2	1.44	0.1469
AZ 7	15	1.7	8.85	3.423
				4.9798

Source: compiled from table 4.10

$$\begin{aligned} \text{Degree of freedom} &= (R - 1) (C - 1) \\ &= (4 - 1) (2 - 1) \\ &= 3 \times 1 = 3 \end{aligned}$$

$$X^2 = 4.97: \text{ Using } 0.05 \text{ level of significance i.e } x^2_{0.05} = 7.82$$

Decision Rule: Given the criteria to accept if $X^2 < y^{0.05}$. The respondents therefore accepted the hypotheses that the agro-based marketers are prepared for the revolution being unfolded in the international market place the area of e-commerce and web-based marketing.

Since $4.97 < 7.82$, the research hypotheses is accepted while we reject the null hypotheses.

Test of Hypotheses three:

H₀: The electronic system of marketing products is not faced with challenges.

H_i: The electronic system of marketing products is faced with challenges.

Table .12 Research Question:

Do you believe that you are faced with challenges in the use of electronic marketing?

Response	Uwani	New Haven	Coal Camp	ogui	Total
Yes	10 (10.2)	20 (20.5)	30 (33.28)	40 (40.2)	101
No	4 (3.8)	8 (7.5)	10 (10.9)	15 (14.7)	37
Total	14	28	41	55	138

Source :Field Survey (2010)

$$\frac{101 \times 14}{138} = 10.2$$

$$\frac{28 \times 101}{138} = 20.5$$

$$\frac{101 \times 41}{138} = 33.28$$

$$\frac{101 \times 55}{138} = 40.2$$

$$\frac{37 \times 14}{138} = 3.8$$

$$\frac{37 \times 28}{138} = 7.5$$

$$\frac{37 \times 101}{138} = 10.7$$

$$\frac{37 \times 55}{138} = 14.7$$

Table .13 -Calculation of Chi-square for hypotheses three.

Cell Oi	Oi - Ei	(Oi - Ei) ²	$\frac{(Oi - Ei)^2}{Ei}$
AW 10	10-10.2 = 0.02	0.04	0.00392
DX 20	20-20.5 = 0.05	0.0025	0.0071219
AY 31	31-33.28=2.28	5.1984	0.1562
AZ 40	40-40.2=0.02	0.0004	0.0010
AW 4	4-3.8=0.2	0.04	0.0010
DX 8	8-7.5=0.5	0.25	0.033
AY 10	10-10.5=0.5	0.25	0.0022
AZ 15	15-14.7=0.3	0.09	0.004
			0.2025

Source: compiled from Table 4.12

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$$\begin{aligned} \text{Degree of freedom} &= (R - 1) (C - 1) \\ &= (4-1) (2-1) \\ &= 3 \times 1 = 3 \end{aligned}$$

$$X^2 = 0.2025$$

Using 0.05 level of significance i.e

$$X^2_{0.05} = 7.82$$

Decision Rule: Given the criterion to accept if $X^2_1 < X^2_{0.05}$

We therefore accept null hypotheses that the electronic system of marketing products is not faced with serious challenges.