

Effects of E-Mail Scams on E-Business Growth: A Study of Globacom Limited in South East of Nigeria

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Abstract

The paper is on the effects of e-mail scams on e-business growth in particular interest to Globacom limited in south east region of Nigeria. It has been observed that there are different forms of e-mail scams which are very dangerous for users of e-business in Globacom. Among which are; hijacked profile scam, online credit scam and survey scam. Hijacked profile scam has to do with cyber criminals hijacking the profile of someone related to the victim and then send e-mails to the victim. The objectives were to determine whether there is a relationship between Hijacked profile scam and visitation frequency of Globacom E-business users; to ascertain whether there is a relationship between online credit card scam and subscriber growth of Globacom E-business; And, to determine whether there is a relationship between survey scam and total time spent by users on Globacom E-business. The study adopted a survey research design and the population of the study is four hundred and ten staff of operation and sales of Globacom in south eastern Nigeria. A sample size of eighty was obtained using Taro Yarmani. Using a simple random sampling method in distributing the questionnaires sixty were returned. Z-test statistic were used to test the three hypotheses stated for this study. The study found that E-mail scams are serious attenuators to E-business growth in Globacom limited E-business is a phenomenon growing in prominence and it is important to reduce the risks associated with it, especially the problem of E-mail scams. A serious measure need to be applied to halt and reverse the growing trend of e-mail scams. Doing nothing serious to curb this menace may mean that not only will E-business be hindered in an organisation, but we could also be shutting ourselves out of future international trade and businesses.

Keywords: E-mail Scams; Hijacked profile scam; e-business; online credit card scam

INTRODUCTION

Information Communication Technology (ICT) has proved to be an imperative tool for sustainable business growth and development. Durbhakula and Kim (2011) defined electronic business (e-business) as the use of the internet and communication technologies to support all business activities. They further stated that E-business is no longer an alternative but an imperative as E-business has a strong influence on global economy. Sharma, Lavania and Gupta (2011) asserts that E-business provides the ways for an organisation to improve productivity, improved customer service, reduced costs, commercial competitiveness and streamlined business processes. The Boston Computer Exchange, a marketplace for used computer equipment started in 1982, was one of the first known examples of e-business. Throughout the 1980's, the proliferation of credit cards, automatic teller machine (ATM), machines and telephone banking was the next step in the evolution of electronic business. In the 90's, e-business include things like Enterprise Resource Planning (ERP), data warehousing and data mining. Industry "experts" predicted explosive growth in e-business related businesses.

Salifu (2008), in response to these expert opinions between 1998 and 2000, a substantial number of businesses in Western Europe and the United States built out their first rudimentary e-business websites. With the growth of e-business, the unsolicited e-mails began to occur trying to reduce the confidence on e-business. E-mail scams are unsolicited emails from scammers whom gain access to website users email addresses, through a database. These E-mail scams discourage users from initial sign-ups for E-businesses.

Globacom started operations in August 2003 as the only indigenous, non-governmental operator. Globacom Nigeria limited introduced per second billing, long denied subscribers by other networks. In addition to lower call rates, flexibility in product offerings and other trail blazing innovations, the network has created a new record in the Nigeria telecommunication industry. Forms of E-business in Globacom Limited's operations are; Globacom Human Resources Management System (GLOHRMS), Globacom Intranet System and Globacom Internet website.

E-mail scam has become a general issue affecting all businesses. Globacom E-business is not exclusive of the adverse effects of the menace. It has been observed that there are different forms of E-mail scams which are very dangerous for users of e-business in Globacom Limited. Among which are; Hijacked profile scam, online credit scam, and survey scam. Hijacked profile scam has to do with cyber criminals hijacking the profile of someone related to the victim and then send E-mails to the victim. For example, a friend that has never asked a victim for money can all of a sudden send an E-mail to the victim requesting for money if the friend's profile

had been hijacked. Online credit card scam has to do with receiving unsolicited E-mails from acclaimed financial houses or E-business companies asking for details of the victim's credit card. Survey scam is common E-mail scam that looks innocent enough. The victim may have expressed interest in social issues like global warming or the war in the Middle East, and the victim will be sent a survey that requires his/her input. When the victim clicks on the link to take the survey, malicious spyware is installed on the computer and cyber criminals can spy on the victims' computer to collect passwords, bank account information and more. Thus the study of E-mail scams effects on E-business growth in Globacom Nigeria Limited. The general objective of this study will be to determine the effects of E-mail scams on E-business growth in Globacom limited. Specifically; (i) To determine whether there is relationship between Hijacked profile scam and visitation frequency of Globacom E-business users. (ii) To ascertain whether there is relationship between online credit card scam and subscriber growth of Globacom E-business. (iii) To determine whether there is relationship between survey scam and total time spent by users on Globacom E-business.

2.1 Conceptual Review

2.1.1 E- BUSINESS

Durbhakula and Kim (2011) defined electronic business as the use of the internet and communication technologies to support all business activities. They further stated that E-business is no longer an alternative but an imperative as E-business has a strong influence on global economy. They are of the view that the growth of e-business furnishes the overall business environment and productivity enhancing practices for a country. And that technology dimension is an important prerequisite for the development of e-business.

Furthermore, Luqman and Nurmuslimah (2011) opined that e-business enable companies to reach potential customers all over the world, making such companies more competitive and developing a sustained competitive advantage Tan (2001) identified the potential improvements in several areas from the adoption of e-business as ;Cost performance, Customer service ,Process capability and Better productivity and dependability.

However, Sukumar and Edgar (2009) asserts that Electronic business has a limited understanding of its risks in organizations and in particular in small to medium size organizations (SMEs).

They set agenda for research into key e-business risks like strategic risks, customers risk, branding risk security threats, legal and tax risks, leadership risks, outsourcing and dependency risk and technology risk.

2.1.2 E- MAIL SCAM

Sumajit and Nayak (2013) called E- Mail scam 'cyber-stalking' the duo explained E-mail scam as a phenomena in which persistent messages are sent to an unwilling recipient.

Olusola, Ogunlere, Ayinde and Adekunle (2013) asserted that E-mail scams are characterized by using E-mail addresses obtained from the internet access points using E-mail address harvesting applications (web spiders or E-mail extractor). These tools can automatically retrieve E-mail addresses from web pages.

2.2 Empirical Review

Kyalo and Kanyaru (2015) conducted a research on the factors affecting online transactions in the developing countries; A case of E-commerce businesses in Nairobi county, Kenya. The objectives of the study were; (a) To identify the challenges in online transactions and (b) To identify the best practices for dealing with fraud in online transaction. The study used secondary data obtained from various sources including scholarly journals, books and credible publications. After analysing the secondary data, the study concluded that; lack of customer awareness on the security risks found in online transactions, increased use of mobile devices with high vulnerabilities and the increasing sophistication of fraudsters attacks are specifically the challenges in the online transaction. And further identified ; robust security systems for detection and prevention of fraud related attacks, continuous detection and conventional protection measures, incident management plans, and regular security assessments as the best practices that can be used to prevent online transaction fraud.

Sumanjit and Nayak (2013) conducted a study on the impact of cyber-crime: issues and challenges. The study was carried out in India. And some of the specific objectives of the study were to determine the impact of cyber-crime over socio-eco-political riders, to ascertain the impact of cyber-crime over private industry and the impact of cyber-crime over business. The study used secondary data sourced from various industry sectors published by Ponemon Institute, and analysed the data obtained with multiple bar charts for the industries. The key findings of this study are: A positive correlation between the growth in incidences of crime and the population of a country and a correlation of crime with the socio-economic and political factors, that industries fall victim to cyber-crime, but to different degrees and with different economic impact and that cyber-crime can result to less revenue in the long-term if customers decide not to do business with a company vulnerable to attack.

2.3 Theoretical Framework

Effects of E-mail scams on E-business growth will be anchored on Systems Theory.

2.3.2 Systems Theory

Katz and Kahn (1966) summarized and presented organizations as complex systems that are interdependent on the environment, which may be relatively stable or relatively uncertain at a particular point in time.

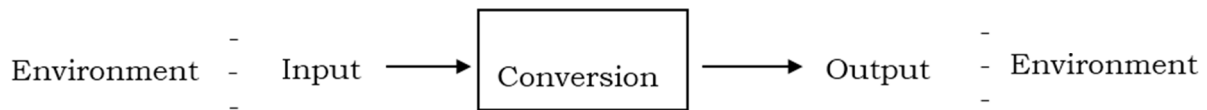


Fig 1: Basic model of an open system

The Basic assumptions of the systems theory are:-

- That organizations import energy and stimulation, e.g people and material
- Conversion that is processing of materials and organizing of work activities
- Output e.g products of services
- Cyclic nature, e.g the returns from marketing the output enable further inputs to be made to complete the cycle production.
- Negative entropy, importing more energy than is required for output, and then storing it for future use.
- Feedback enables the system to correct deviations
- Steady state, maintaining a dynamic equilibrium between inputs and outputs
- Differentiation, specialization of functions and multiplicity of roles
- Equifinality, achievement of goals through different paths or approaches

Effects of E-mail scams on e-business growth will resultantly be anchored on systems theory with reason that organizations are open systems and can exchange with the environment in which they operate. And e-businesses are business organizations. Whereas E-mail scams can be treated as distortions (unwanted inputs) into the E-business system.

Methodology

The study adopted descriptive survey research design. The reason for the chose of this design to enable the study elicited response from the respondent. The population of Globacom Limited in South East region is 410 workers. In determining the sample size, the researchers used a method known as Taro Yamani.

The Taro Yarmani formular is as follows:

$$n = \frac{N}{1 + N(e)^2} \quad \text{where: } n = \text{unknown}$$

N = population, 1 = Constant

$$\begin{aligned}
 e &= \text{error Margin.} & n &= \frac{410}{1 + 410(0.1)^2} \\
 & & &= \frac{410}{1 + 4.1} = \frac{410}{5.1} = 80.4
 \end{aligned}$$

Of this eighty (80) questionnaires distributed to the operations and sales staff of Globacom limited, 20 questionnaires were not returned. Based on the sixty (60) returned questionnaires the analysis were made. The study adopted Z-test to analytical test the stated objectives.

The assumptions of the analytical tool include;

- A one-tailed test is in view as the aim is to accept the alternate hypothesis only when the null hypothesis is rejected.
- A Z –test of hypothesis would be used with one critical value of 1.64 derived from the 5% level of significance from the critical value table of Z scores.
- The question items were designed in likert scale, and only “Strongly Agree” and “Agree” were used as positive responses.
- If the calculated Z score is greater than the tabulated value, then the null would be rejected and the alternate hypothesis is accepted. (Ogiji; 2004).

First Test

H₀ = There is no significant relation between Hijacked profile scam and e-business users visitation frequency.

$$Z_c = \frac{P - P_0}{\sqrt{\left[\frac{P_0(1-P_0)}{n} \right]}}$$

P = Percentage of positive responses

P₀ = Probability of rejecting the null hypothesis.

n = Sample size.

$$Z_c = \frac{0.9333 - 0.5}{\sqrt{\frac{0.5(0.5)}{60}}} = \frac{0.4333}{\sqrt{\frac{0.25}{60}}} = \frac{0.4333}{\sqrt{0.004}}$$

$$= 6.7$$

Z_{cal} 6.7, Z_{tab} = 1.64

Alternate hypothesis accepted.

Second Test

H₀ = There is no significant relation between online credit card scam and subscriber growth for e-business.

$$Z_c = \frac{0.90 - 0.5}{\sqrt{\frac{0.5(0.5)}{60}}} = \frac{0.4}{\sqrt{\frac{0.25}{60}}} = \frac{0.4}{\sqrt{0.0042}}$$

= 6.15, Z_{cal} = 6.15 > Z_{tab} = 1.64

Alternate hypothesis accepted.

Third Test

H₀ = There is no significant relation between survey scam and users time spent on e-business.

$$Z_c = \frac{0.933 - 0.5}{\sqrt{\frac{0.5(0.5)}{60}}} = \frac{0.433}{\sqrt{\frac{0.25}{60}}} = \frac{0.433}{\sqrt{0.0042}}$$

$$= 6.7$$

Z_{cal} = 6.7 > Z_{tab} = 1.64

Alternate hypothesis accepted.

Summary of the Results

Test 1

Amongst the 60 respondents studied, 56 respondents (93.33%) agreed that there is significant relation between hijacked profile scam and e-business users visitation frequency. analysis of the data collected, gave a calculated Z score of 6.7, while the critical value is 1.64. And thus the acceptance of the Alternate hypothesis.

Test 2

For the 60 respondents studied, 54 respondents (90%) agreed that there is significant relation between online credit card scam and subscribe growth of e-business. Analysis of the data gave a calculated Z score of 6.15, while the critical value is 1.64. And thus the acceptance of the Alternate hypothesis.

Test 3

Also, on the test of a significant relation between survey scam and users time spent on e-business. Out of the 60 respondents that were studied. 56 respondents (93-33%) agreed. And an analysis of the data gave a Z_{cal} of 6.7 with the critical value of 1.64., the alternate hypothesis was accepted.

Conclusion

From the findings above; E-mail scans are serious attenuators to E-business growth in Globacom limited E-business is a phenomenon growing in prominence and it is important to reduce the risks associated with it, especially the problem of E-mail scams. Serious measure need to be applied to halt and reverse the growing trend of e-mail scams. Doing nothing serious to curb this menace may mean that not only will E-business be hindered in organisation, but we could also be shutting ourselves out of future international trade and businesses.

Completely exterminating e-mail scams is impossible, just as real crime cannot be completely suppressed. The best alternative is to prepare for unexpected attacks and damages. Prevention is one way. Precautions, protections and detections should be properly implemented by businesses to remedy the situation of E-mail scams.

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