



Security Risk Analysis and Management Practices and Its Overall Impact on the Performance of Shopping Malls in Nigeria.

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ABSTRACT

Security Risk management in online shopping mall has significant influence on business performance. Regardless of the security risk, threats and vulnerabilities users are exposed to, customers and shoppers still find the e-commerce platform useful and most convenient. This study seeks to address user satisfaction in relation to security analysis and management using SHOPRITE Nigeria as a case study. Questionnaires were sent out and respondents data was collected via Whatsapp application. Using Cronbach's Alpha, the statistical reliability and accuracy outcome was determined. This study proved that customers are satisfied with the security risk management of SHOPRITE Nigeria and therefore feel safe to shop both online and offline

Keywords: Security Risk Management, E-Commerce, Online and Offline

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1. INTRODUCTION

Security Risk analysis and Management is a vital component for any business to thrive and compete favorably in the 21st century. Risk as defined by [1] is a function of threats, vulnerabilities, the likelihood of an event, and the potential impact such an event would have on a business enterprise. Security risk analysis management and Its application is therefore pertinent to the survival and growth of any organization. In recent times, Cybersecurity threats have become a major concern and would vary depending on the business type, industry and even location [2]. It is vital therefore for organizations to regularly review and update business processes and procedures commonly associated with threats and vulnerabilities as well as its overall impact on business activities. An improved security risk management procedure will require a clear understanding of the challenges faced by the enterprise [3].

This is usually an expensive and cumbersome process involving series of steps; from Identifying and analysing what information the business stores and uses, to determining the value of the information, developing an inventory, and understanding/assessing the threats and vulnerabilities associated with the business [1]. Several organizations lack these understanding and fall victims of cybercriminals and terrorism manipulation. Shopping Malls Enterprise, like every other enterprise, has the potential to boost market share if risk exposure is reduced to the barest minimum and managed effectively. Nigerians are known all over the world as big spenders and go out for shopping every other day. While there are different Local Supermarkets scattered across the country, one that has quickly become a house hold name is the Shoprite Nigeria Supermarket. Since its inception in December 2005 in Lagos, Shoprite has launched an additional 24 stores across eight states in Nigeria including the FCT. Over the years Shoprite has built relationship with over 300 leading Nigerian suppliers, small businesses and farmers securing a wide range of local brands.



This paper seeks to evaluate Security risk analysis and management in shopping mall enterprise in Nigeria, using the popular SHOPRITE as case study. Worthy of mention is, as at the time of writing this paper the researcher discovered that owners of shopping malls in Nigeria do not necessarily pay enough attention to the security risk management procedures. This lacuna ultimately became the basis of the objective of this research which is to “critically examine the relationship between security risk analysis and management practices and its overall impact on the performance of shopping malls in Nigeria”.

A descriptive research design and the use of questionnaires was deployed to selected respondents scattered across the six geo-political zones in the country. The questionnaire used was both quantitative and qualitative in nature and was administered as follows: 20% to Casual/contract staff (cashiers, cleaners and security personnel), 30% to senior staff (Managers and line supervisors of various departments) and 50% to customers (Online and walk-in shoppers) of randomly selected SHOPRITE branches within the Country. This was done so as to have better understanding of the effect of security risk analysis and management on the SHOPRITE enterprise. The study revealed that Security risk analysis and management has significant impact on the overall performance of SHOPRITE in Nigeria.

The study further recommends that the management of SHOPRITE in Nigeria should have regular Security risk analysis and management practices. This will help to swiftly identify internal and external threats, vulnerabilities, the likelihood of an event, and the potential impact such an event would have on the enterprise.

1.1 Limitations of the Study

The main limitation encountered during this study was the researchers' inability to involve more Shopping Malls across the country. The researcher would have also loved to increase the number of respondents as well as have a wider range of questionnaire. This could not happen due to time constraint as well as limited resources. As such, the study focused more on the impact of security risk analysis and management on the performance of SHOPRITE enterprise in Nigeria, with a view to boost market share and improve customer perception. Another constraint that was encountered, was Staff of SHOPRITE were reluctant in giving information as they fear it could be used against them. The researcher had to present a valid University Identification with a written undertaking assuring them that the information would be treated with full confidentiality and used only for academic purposes.

2. LITERATURE REVIEW

This section reviewed related works in this field of study. It looked at the theories of security risk management in relation to organizational performance and how an enterprise is impacted by such functions as threats, vulnerabilities, and the likelihood of an event. As shopping malls deal with both online and offline security activities, it was imperative to look at literature from both areas within the research context of Security Risk Management.

2.1 The Online Features:

The Online features entail the security of information and information systems in relation to Confidentiality, Integrity and Availability, in a view to prevent unauthorized use of information and information systems from cyber criminals and Hackers [4]. (Zhang and von Dran, 2013) [5] demonstrated that factors like quality of information and system security are the key success factors for e-commerce organizations.

2.1.2 Cybersecurity

Often times, the term cyber security is used interchangeably with information security, and although there may exist a substantial overlap between both terms, many authors have argued that both cyber security and information security are distinct in many ways [2]. Cybersecurity goes beyond the protection of information resources but of other assets and even protection of the user [9]. Cyber security has since become an issue of universal importance and have gained a great deal of attention from many nations which have come up with strategy document detailing their stance on cyberspace, cybercrime and cyber security [12]. Cyber security is often used as an all-inclusive term and its definition may vary depending on the literature. The oxford dictionary for example defines it as “The state of being protected against the criminal or unauthorized use of electronic data, or the measures taken to achieve this. The National institute of Standards and Technology (NIST) defines cyber security as the “Prevention of damage to, protection of, and restoration of computers, electronic communications systems, electronic communications services, wire communication, and electronic communication, including information contained therein, to ensure its availability, integrity, authentication, confidentiality, and nonrepudiation” [13]



2.1.3 Information Security

All business organizations or enterprise use one form of Information or the other – for example, Customer details, employee details, tax details, company details etc. Information Security simply entails the protection of information from unauthorized access so as to provide confidentiality, integrity and availability [1]. Information quality should be prioritized with the overall aim of ensuring user satisfaction [6]. However [7],[8] argues that since online platform lacks the actual presence of a physical face-to-face verification, features like security, reliability and responsiveness will play an important role towards enhancing customers perception and ultimately impact the performance of the organization.

2.1.4 Confidentiality

One of the reasons for cyber and information security is to protect and preserve confidentiality [4]. Confidentiality simply means the protection of sensitive information from those not authorized to have access to such information. This can be achieved using security instruments such as username, password, encryption, Access Control list (ACLs) etc. Many systems have been compromised by cyber criminals, who discovered vulnerability within the system and exploited it because the user did not take adequate security measure to protect the system. A quality system should ensure that users confidentiality is protected at all times as this will increase confidence and improve customers perception which will ultimately impact on the business organization [1] [9].

2.1.5 Integrity

A system is said to have passed the integrity test when it seeks to protect information from unauthorized modification thereby ensuring that information is true and correct at all times [6]. The receiver of the information must have confidence in the originality of the information sent to him by the initiator, this information can be modified or edited only by authorised persons and should maintain its original state always [10]. In security information, integrity can be achieved using security techniques like hashing, encryption etc [2]. It is also worthy of mention that information modification can occur as a result of other factors like System malfunction, sever crash or electromagnetic pulse (EMP) [11]. It is therefore important to ensure systems update/upgrade and regular backup are adhered to.

2.1.6 Threat

A threat, in information security, refers to anything that has the potential to cause adverse effect which could invariably affect the confidentiality, integrity and availability of the system [1]. Logically speaking, a threat may or may not happen, but possess the ability to cause severe harm when it does happen. In a typical business setting, threats can lead to attacks on both hardware/software systems and networks which could disrupt business processes and procedures [4]. However, (Workman, 2017) [14] stated that threats could also include everything from virus, to personnel (Hostile actors, hackers, criminals etc.) and or natural events e.g. fire, flood, earthquake.

2.2 Offline Features

The Offline features include Physical Security like CCTV cameras, scanners, fences etc, Operational Security which include administrative policy, procedures and processes- Personnel Security which include background checks and staff training, especially staff in the security and audit department. The Offline advantages finds its roots in the traditional marketing which guarantees availability and access to products [15]. These features are quite distinct from online features. For example, the online features may not provide enough information concerning the variety and functionality of products but the offline customers have access to these information first hand and there is no limit to information available to them [5]. (Sumner and Mary, 2014) [3] argued that customer service and product delivery is a more vital business component than online features. However, (Izak et al, 2010) [16] insists that although physical logistics remains significant, offline customers are comfortable with the e-commerce platform as an option.

3. METHODOLOGY

This section is a summary of the methodology used for the study. The research design, targeted population, method of Data collection and the methods used to analyse the data. Data was collected through questionnaires which was divided into 3 sections as follows: Section A: Personal data, Section B: Customers feedback on online transactions Section C: Data on Security Risk Analysis and Management in Shopping Mall. The data from the questionnaires was tabulated and analysed using Statistical Product and Service Solution version 20 (SPSS v.20) and subsequently the result was analysed by means of descriptive statistics. Multiple regression analysis was also used to analyse the data so as to determine the relation of a single dependent variable to multiple independent variables.



3.1 Research Design

Research design is an integral part of a research, and according to (Spyros et al, 2015, 2018) [17] it is the overall strategy used to integrate the different components of a research in a coherent way and how to collect, analyse and interpret data to provide a logical answer to research problems. It is of importance to mention that a research problem determines the research design to be adopted and not the other way round [18]. (Spyros et al, 2015, 2018) [17] identified some basic elements of a typical research design which include: Purpose of the study, Type of investigation, Extent of researcher interference, Unit of analysis and the time horizon. A descriptive research design therefore refers to the question, design, and analysis that will be applied during the research. This research work used a descriptive survey to determine the impact and effect of security risk analysis and management on the performance of SHOPRITE.

3.2 The Targeted Population

According to (Mahago and Eva, 2015) [15] Target population is referred to as a group of people to whom a research result is conducted and generalized. This study targeted 69 respondents/population in this order: 20% junior staff of SHOPRITE (i.e. cashiers, cleaners and security personnel), 30% senior staff of SHOPRITE (i.e. Managers and line supervisors of various departments) and 50% customers of SHOPRITE (i.e. Online and walk-in shoppers) This was done so as to have a clearer understanding of the effect of security risk analysis and management on the SHOPRITE enterprise.

3.3 Method of Data Collection

For the purpose of this study primary data was used which is both quantitative and qualitative in nature. The method of data collection was done by questionnaire which was administered to the target population using the google online form to collate and collect responses as it relates to the effect of security risk management in SHOPRITE. (Vannette and David 2015) [19] stated that, questionnaires are appropriate for studies as it obtains detailed information not only verifiable but also accessible.

According to (Colosi and Laura 2014) [20], questionnaires are a very useful and appropriate in the collection of vital information/data from a large number of individuals. (Frary and Robert 2002) [21] however made it clear, that before questionnaires are administered, careful consideration needs to be given in a clear and precise manner with consistency across all respondents, only then can a questionnaire be said to be effective and valid. The questionnaires in this study were administered through drop and pick format with strict adherence to industry best practice.

3.4 Data Analysis Method

Upon collection of Data from respondents (through questionnaires) the data was tabulated and subsequently analysed using Statistical Package SPSS version 20 (SPSS v.20). Descriptive statistics was used to tabulate and analyse the results. Once this was done, result obtained was further analysed using multiple regression analysis: one dependent variable to multiple independent variables so as to obtain the regression output which was done using SPSS version 20.

4. RESULT

4.1 Introduction

This seeks provides the data analysis, result interpretation and discussions of this research as outlined in the research methodology. The objective of the study was to assess the impact of security risk analysis management on the performance of SHOPRITE in Nigeria. The data was collected from carefully designed questionnaire inputted into SPSS (version 20.0) and used to measure the impact of Security risk analysis and management on the performance of SHOPRITE. The respondents answered by choosing either of the following from the drop down: Agree, Disagree, Neutral or Strongly Agree. Key metrics was also used to assess the responses of respondents in order to ascertain the level of threats, vulnerability and the likelihood the impact of an event will have on SHOPRITE enterprise in Nigeria. A four (4) scale point was used to represent responses as follows:

4= Strongly Agree, 3= Agree, 2= Neutral, 1= Disagree.

Also, Table 5 shows that the validity of the submission was established to be excellent based on the analysis of Cronbach's alpha (0.966).

TABLE 1: SHOWING DETAILS AND STATISTICS OF QUESTIONNAIRE

STATISTICS OF QUESTIONNAIRE		
Missing	Valid	SECTION A
0	69	Personal Data i.e name, sex, email D.o.B
0	69	Marital Status
0	69	AGE
0	69	Highest Educational Qualification
0	69	Employment Status
Missing	Valid	SECTION B
0	69	Customers are reluctant to disclose Details such as PIN, Card Number, CVV, Email and D.o.B
0	69	Customers naturally prefer online shopping
0	69	Customers feel relatively secure during online transactions
0	69	Customers prefer card payment to cash payment
Missing	Valid	SECTION C
0	69	Staff in the internal audit department possess the requisite skills and training
0	69	Staff in the Security Department Possess the requisite qualification and Training
0	69	Risk management and physical control of assets, such as CCTV etc. are strictly adhered to
0	69	Organizational performance is better with Risk analysis procedures implemented
0	69	Customers and Shoppers feel safe when compared to other shopping malls

The study established the composition of age brackets of respondents. This was done so as to know the level of awareness of respondents on the impact of security of risk analysis and management on the performance of SHOPRITE.



According to the results It was discovered that 71.0% of the respondents were aged between 31 and 50 years, 20.3% aged 30 years and below and 4.3% of respondents were aged between 51- 60 years with another 4.3% above 60years. The results clearly demonstrated that the respondents were well spread and the majority showed that the age brackets of 31-50 have in-depth knowledge of technological progressions, as such their responses could be taken as valid and effective as it relates to this study on the impact of Security risk analysis and management on the performance of SHOPRITE

TABLE 2: DEMOGRAPHICS.

This table highlights the feedback from the questionnaires received from all 69 respondents

S/N	STATEMENT	FREQUENCY	PERCENT (%)	CUMULATIVE (%)
1	Customers are reluctant to Disclose details such as PIN, Card Number, CVV, Email and D.o.B	SA= 17 A= 11 D= 35 N= 6	24.63 15.94 50.72 8.70	65.2 66.7 98.6 60.9
2	Customers naturally prefers online shopping	SA= 4 A= 27 D= 31 N= 7	5.80 39.13 44.92 10.14	60.9 63.8 91.3 98.6
3	Customers feel relatively Secure during online transactions	SA= 17 A= 27 D= 20 N=5	24.63 39.13 28.98 7.24	44.9 60.9 91.3 98.6
4	Customers prefer card payment to cash payment	SA=14 A= 35 D=19 N=1	20.30 50.70 27.50 1.44	36.2 60.9 85.5 95.7
5	Staff in the internal audit department possess the requisite skills and training	SA= 11 A= 31 D= 26 N=1	15.94 44.92 37.70 1.44	1.4 59.4 62.3 94.2
6	Staff in the Security Dept. Possess the requisite Qualification and Training	SA= 17 A= 25 D= 17 N= 10	24.63 36.23 24.63 14.50	1.4 53.6 60.9 87.0
7	Risk management and Physical control of assets, such as CCTV etc. are strictly adhered to	SA= 1 A= 36 D= 23 N= 9	1.44 52.20 33.33 13.04	1.4 62.3 62.3 94.2
8	Organizational performance Is better with Risk Analysis procedures implemented	SA= 4 A= 40 D= 15 N= 10	5.80 57.97 21.73 14.50	1.4 62.3 62.3 94.2
9	Customers and Shoppers Feel safe when compared to other shopping malls	SA= 8 A= 44 D= 11 N= 6	11.60 63.76 15.94 8.70	1.4 62.3 62.3 94.2
	VALID	69	100.0	100.0



TABLE 3: PERSONAL DATE

Personal Data i.e name, sex, email D.o.B		Frequency	Percent	Cumulative Percent
Valid	Female	23	33.3	33.3
	MALE	46	66.7	100.0
	Total	69	100.0	

TABLE 4: AGE DEMOGRAPHICS

Age Status		Frequency	Percent	Cumulative Percent		
Valid	18 -30	11	20.33	65.2		
	31 – 50	52	71.01	66.7		
	51 - 60	3	4.33	98.6		
	ABOVE 60	3	4.33	100.0		
	Total	69	100.0			

4.2 Scale of Assessment & Reliability

According to (Ganesh et al, 2010) [22] The appropriate measures for customers satisfaction and security could not be found. However, Exploratory Factor Analysis (EFA) was conducted to spot the numbers that factor the nine (9) outcomes from respondent. The researcher used Cronbach's Alpha as the parameter of measurement of internal consistency. The rating is as follows: Excellent = ($\alpha > 0.9$), Good ($0.7 < \alpha < 0.9$), Acceptable = ($0.6 < \alpha < 0.7$), Poor = ($0.5 < \alpha < 0.6$), Unacceptable = ($\alpha < 0.5$)

TABLE 5: RELIABILITY STATISTICS

CRONBACH'S ALPHA	NO.OF ITEMS
0.966	9



TABLE 6: STATEMENT AND ESTIMATES.

SN	Representation	Statement	STD estimate
1	security	Customers are reluctant to disclose details such as PIN, Card Number, CVV, Email and D.o.B	10.96
2	Customer satisfaction	Customers naturally prefers online shopping	11.88
3	Customer satisfaction	Customers feel relatively secure during online transactions	7.94
4	Customer satisfaction	Customers prefer card payment to cash payment	12.17
5	Customer satisfaction	Staff in the internal audit department possess the requisite skills and training	11.92
6	security	Staff in the Security Department Possess the requisite qualification and Training	5.30
7	security	Risk management and physical control of assets, such as CCTV etc. are strictly adhered to	13.38
8	security	Organizational performance is better with Risk analysis procedures implemented	13.69
9	security	Customers and Shoppers feel safe when compared to other shopping malls	15.54

4.3 Questionnaire Return Rate

The study witnessed 87.5% return rate of respondents from the questionnaires. The study involved a total of 69 respondents out of 80 target population. This laudable response rate was possible after several personal visits, calls, SMS and emails were made. This response rate is in line with (Frery and Robert, 2002) [21] which states that a minimum response rate of 50% is valid for an effective research analysis



5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This research established that Security risk analysis and management has substantial impact on the performance of SHOPRITE enterprise in Nigeria. The various risk management practices investigated in this study include Security Risk Identification, Security Risk Analysis, and Security Risk Evaluation. The study found that the respondents established that the management of SHOPRITE enterprise in Nigeria carry out periodic security evaluation that conforms to the stipulated minimum security standard(s) in the industry. It also showed that organizational performance factors can be impacted upon by the implementation of enterprise security risk analysis and management.

The respondents agreed that newly recruited staff in SHOPRITE enterprise in Nigeria undergo training while existing staff go for mandatory re-training program. On the other hand, the respondents remained Neutral when asked if Staff in the internal audit department possess the requisite qualification. On the whole the study was able to establish that Security risk analysis management practices play a significant role in enhancing a business organization.

5.2 Conclusion

From this findings, it is safe to conclude that Security risk analysis and management practice impacts the overall performance of SHOPRITE enterprise in Nigeria. For measurement of internal consistency, Cronbach's alpha was used to obtain the reliability which turned out to be excellent.

5.3 Recommendations

The study recommends that the management of SHOPRITE Nigeria have a more robust and effective risk management practice in place. This will help to identify potential threats, vulnerabilities, the likelihood of an event, and the potential impact such an event would have on the business enterprise.

5.4 Recommendations for Further studies

This study recommends that further work be carried out in other Shopping Malls across the country. This could be a basis for policy formulation with particular reference on the minimum security standards and requirement expected of shopping malls across the Nigeria.

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