

Security Risk Analysis and Management in Online Retailing Transactions, using Konga as a case study

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Abstract

Online shopping has influenced on business of shopping in Nigeria and the rest of the World. Despite the security risk, threats and vulnerabilities customers are exposed to, Nigerians has adopted the platform for convenience purposes. This study seeks to the address customers satisfaction and security analysis while shopping specifically on Konga Online Platform. Questionnaires were sent via customers Whatsapp application and data was collected. Using Cronbach's Alpha to determine the statistical reliability of the Platform. Most customers are satisfied with the both service and security risk of the Konga Online Platform. Some of the customers remain neutral on the customer's satisfaction and security risk of the platform. Therefore the platform is generally accepted for electronic commerce convenient.

Keywords: *Online shopping, E-Commerce, Service Delivery, Satisfaction and Security*

1.0 Introduction

Online shopping is a type of electronic commerce business which permits a consumer to plainly and directly access goods and services from a seller over the internet with the help of his computer browser. Consumers visit vendor's website to find a product that they found interest in or by searching amongst the alternative vendors that's that provides same services. As of 2014 customers, customer's uses computers and difference mobile devices such as desktop computers, laptop, Smartphone's and tablets to shop online.

An online shopping bring to recall the physical transaction of buying and selling of goods and services at a regular shopping centers, market places; this is call Business to Customers (B2C) online shopping. When an online store is established to set up and enable businesses to buy from another business, the process is called Business to Business (B2B) online shopping.

A classic online store (Konga as a case may be) enables a customer to browse on a website for the type of products and services, view pictures and images of the item, products and services, along site with the information displaying the specification, features and prices of the items. Online shopping users (Customers) must be connected to Internet, create an account which captures a basic information about the customers such as Name, Physical Address, Address, Phone number, Contact Email Address etc. and a valid method of payment in order to compete a single transaction such as a service Interswitch, Quick teller or a Credit Card and or Debit Card.

Online store is a convenient, people can access it 24/7 to shop, regardless the store hours, and without leaving the house or dealing with the queue in the store.

1.1 Objective Of Study

Many people have developed preference for online shopping using the Konga retail platform despite the challenges they encounter. The challenges are enormous and many amongst but not limited to the following issues of service delivery and security of the online platform. The objective of this study is to analyze the security risk and management requirements in Konga online shopping platform.

2.0 Literature Review

The basis of understanding of consumer satisfaction or dissatisfaction in that order resides in people's ability of knowledge from their past experiences(Isac & Rusu, 2014).

The word satisfaction first appeared in English during the 13th century. It is derived from a latin word *satis* which means (enough) and *faction*. Satisfaction is a concept that has appeared in so many fields amongst which is office evaluation by an employee satisfaction, site assessment by visitor satisfaction etc. However, satisfaction has been fundamental to the marketing concept for more than three decade now. The most acknowledged concept of user satisfaction theory. Expectancy disconfirmation theory was developed by Richard Oliver who proposed that a user's satisfaction level a result of the difference in what a user expects, perceives on product performance and expectations as prediction of a future performance. Satisfaction occurs when a product or service is better expected.(Aigbavboa & Thwala, 2013).

2.1 Security Risk

Customers shopping online are exposed to security risk. These are because most of the security incorporated on the vendors (Konga) website is not adequate. This is because the management of the Konga focuses on the service delivery and the functionality of the websites rather that security, and so security is generally affected. Information of customers being provided on the site too constitutes security risk on privacy by sending a customer's information to a third party without their permission.

Security Risk analysis is a method to know exactly the risk of a computer related resources and lost because of manifested threat. First, the practice is to establish the resources level of vulnerability by identifying and evaluating the effects counter measures put in place. A resources level of vulnerability of a threat is to determine solely by controls measure of security put in place at the time of conducting the risk analysis.(Jenkins, 1998).

3.1 Methodology

To improve the speed of response with a important audience (online customers) with Konga, an online survey was conducted and data was collected from Customers who are were truly online shoppers with Konga by providing their user names. The researcher forwarded a message via whatsapp to the respondents explaining the nature of the study and what it will be use with a secured URL link to the online survey. In other to reveal the study framework, respondents were requested to answer some questions involving their shopping experience with Konga Online store in Nigeria. (Fazal-e-Hasan, Ahmadi, Mortimer, Grimmer, & Kelly, 2018). A total of 56 online surveys were collected from the respondent. The Respondents were female (25%) and male (75%). And for age, the Respondents were divided into four categories: 18 below (0%), 18-30 (39.3%), 30-40 (51.8%) and 40 above (8.9%). (Fazal-e-Hasan et al., 2018).

3.2 Measures

The questionnaire was divided into Three (3) sections. Section A, B and C. Section A consisted of questions involving general information about the respondents. Section B respondents were asked to provide information about how satisfied they were with Konga Online Store for their service delivery and the Section C deals with security awareness of the customers, questions that has to do with trust factors. To show the level agreement, we used a 5-point scale for Section B and C. The scale indicate 5= **Strongly Agree (S A)** , 4= **Agree (A)**, 3 = **Neutral (N)**, 2= **Strongly Disagree (S D)** and 1= **Disagree (D)**. (Osho, Onuoha, Ugwu, & Falaye, 2016).

4.0 Result

From the 56 responses from our respondents. The table 1 was analyzed and the percentage was taken as shown. Also, from table 3 shows that show the validity of the analyses was confirmed excellent based on the outcome of Cronbach's alpha (0.944). Most importantly, the scores of the ten (10) questions almost showed that it's correlated and the respondents are having almost same view.

Table: Demographics

Details	Description	Frequency	Percent
Gender	Male	42	25
	Female	14	75
	TOTAL	56	100
Age	18 Below	0	0
	19-30	22	39.3
	31-40	29	51.8
	40 above	5	8.9
	TOTAL	56	100
How would you rate the Konga online shopping platform?	Strongly Dissatisfied (SD)	0	0
	Dissatisfied (D)	2	3.6
	Neutral (N)	19	33.9
	Satisfied (S)	32	57.1
	Very Satisfied (VS)	3	5.4
	TOTAL	56	100
How can you rate Konga's level of experience with the service quality rendered by Konga?	Strongly Dissatisfied (SD)	0	0
	Dissatisfied (D)	5	8.9
	Neutral (N)	18	32.1
	Satisfied (S)	30	53.6
	Very Satisfied (VS)	3	5.4
	TOTAL	56	100
How can you rate the speed of delivery of Konga online store?	Strongly Dissatisfied (SD)	1	1.8
	Dissatisfied (D)	1	1.8
	Neutral (N)	20	35.7
	Satisfied (S)	30	53.6
	Very Satisfied (VS)	4	7.1
	TOTAL	56	100
Are you satisfied with online product and the actual physical product delivered to you?	Strongly Dissatisfied (SD)	2	3.6
	Dissatisfied (D)	3	5.4
	Neutral (N)	16	16
	Satisfied (S)	32	32
	Very Satisfied (VS)	3	3
	TOTAL	56	100
Shopping on Konga website is secured	S D = Strongly Disagree	0	0
	D = Disagree	1	1.8
	Neutral	22	39.3
	S = Agree	30	53.6
	V S = Strongly Agree	3	5.4
	TOTAL	56	100
Your card details can be stolen by criminals.	S D = Strongly Disagree	0	0
	D = Disagree	9	16.1
	Neutral	20	35.7
	S = Agree	15	26.8
	V S = Strongly Agree	12	21.4
	TOTAL	56	100

Your Pin number or CVV can be modified.	S D = Strongly Disagree D = Disagree Neutral S = Agree V S = Strongly Agree TOTAL	1 9 28 14 4 56	1.8 16.1 50.0 25.0 57.1 100
Konga's website always displays no information.	S D = Strongly Disagree D = Disagree Neutral S = Agree V S = Strongly Agree TOTAL	2 25 24 5 0 56	3.5 44.6 42.9 8.9 0 100
Someone can pay with his/her Bank Credit/Debit card even if he/she is offline	S D = Strongly Disagree D = Disagree Neutral S = Agree V S = Strongly Agree TOTAL	5 24 21 5 1 56	8.9 42.9 37.5 8.9 1.8 100
You can make payment on Konga's website without providing your CVV card details.	S D = Strongly Disagree D = Disagree Neutral S = Agree V S = Strongly Agree TOTAL	2 22 26 4 2 56	3.6 39.3 46.4 7.1 3.6 100

TABLE 2: STATEMENT AND STD ESTIMATES

REPRESNTATION	STATEMENTS	STD ESTIMATES
Customers Satisfaction	How would you rate the Konga online shopping platform?	14.30
Customers Satisfaction	How can you rate Konga's level of experience with the service quality rendered by Konga?	12.56
Customers Satisfaction	How can you rate the speed of delivery of Konga online store?	13.83
Customers Satisfaction	Are you satisfied with online product	12.98

	and the actual physical product delivered to you?	
Security	Shopping on Konga website is secured.	14.25
Security	Your card details can be stolen by criminals.	4.69
Security	Your Pin number or CVV can be modified.	10.61
Security	Konga's website always displays no information.	12.91
Security	Someone can pay with his/her Bank Credit/Debit card even if he/she is offline	10.49
Security	You can make payment on Konga's website without providing your CVV card details.	11.79

4.0 SCALE OF ASSESSMENT & RELIABILITY

Scale of items for products satisfaction and security was borrowed from (Ganesh, Reynolds, Luckett, & Pomirleanu, 2010) The authors didn't find an appropriate measures for customers satisfaction and security. Exploratory factor analysis (EFA) was conducted to spot the numbers that factor the ten (10) outcomes from respondent. A cronbach's alpha for measurement of internal consistency was used. Excellent ($\alpha > 0.9$), Good ($0.7 < \alpha < 0.9$), Acceptable ($0.6 < \alpha < 0.7$), Poor ($0.5 < \alpha < 0.6$), Unacceptable ($\alpha < 0.5$) (Bhatnagar, Kim, & E. Many, 2014).

TABLE 3: RELIABILITY STATISTICS

CRONBACH'S ALPHA	NO OF ITEMS
0.944	10

4.2 DISCUSSION RESPONDENTS PERCEPTION ON VARYING EFFECTIVENESS OF CUSTOMERS SATISFACTION AND SECURITY CONCERNS

The overall respondent rated their perception on customer's satisfaction and security concerns to be relatively effectively with means ranging a low of 11.20 to 14.00 on a five (5) scale point. The table below shows the means and the standard deviation from our respondent.

Table 4: Mean And Standard Deviation Result

STATEMENTS	NO OF SCALE AS ANSWERED	MEAN	STD. DEVIATION
STATEENT 1	4	14	14.3062
STATEENT 2	4	14	12.5698
STATEENT 3	4	14	13.8323
STATEENT 4	5	11.2	12.9885
STATEENT 5	4	14	14.2595
STATEENT 6	4	14	4.69042
STATEENT 7	5	11.2	10.616
STATEENT 8	4	14	12.1929
STATEENT 9	5	11.2	10.4976
STATEENT 10	5	11.2	11.7983

We further investigated the differences in the rating provided by respondents on the ten (10) questions as well as a comparison was carried out. The comparisons categorized the ten (10) mean score into two (2) comparable subsets. Question 1, 2, 3,5,6,8 and Question 4, 7,9 & 10 respectively as showed in table 4. Respondents rated question 1, 2,3,5,6,& 8 highest with mean of (14.00). Question 1 asked about how would you rate the Konga online shopping platform?, question 2 asked about how can you rate Konga's level of experience with the service quality rendered by Konga?, question 3 asked about how can you rate the speed of delivery of Konga online store? Question 5 asked about Shopping on Konga website is secured, question 6 asked about your card details can be stolen by criminals and question 8 asked about Konga's website always displays no information.. Question 4, 7,9 & 10 scores were lowest. The questions asked are: Question 4 asked Are you satisfied with online product and the actual physical product delivered to you?. Question 7 asked about Your Pin number or CVV can be modified. Question 9 asked about Someone can pay with his/her Bank Credit/Debit card even if he/she is offline and question 10 asked about You can make payment on Konga's website without providing your CVV card details.

5.0 Conclusion

Security is a major concern in any online transaction as there are various threats on internet which can affect the security of internet and increase risk. The authentication techniques provided by the merchants these days is not so secured to protect user from his cards details been stolen by hackers, CVV been modified etc. Merchants like (Konga) should ensure that their financial institution should make authentication necessary to enforce security.

Section 1 highlight the what's an online shopping is, how a user can go to a vendor or merchants websites, search for the image of he want to by and placed the order using a mobile devices, computers and tablets to shop online. Section 2 reviews literatures in that field or area of proposed work. Section 3 highlights the results and the discussion. The response of the respondents that was analyses and eventually got the mean and the standard deviation was obtained. Exploratory factor analysis (EFA) was conducted to spot the numbers that factor the ten (10) outcomes from respondent in section 4. A cronbach's alpha for measurement of internal consistency and was used to obtain the reliability which is excellent.

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