The Role of E-Security in the Success of the E-Store With Reference To UAE Customers

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Abstract: **E-customers love to do online shopping, but free from risk and danger over the internet ie., protection of information & system resources with respect to confidentiality, integrity and authentication. The confidentiality ensures that the non-access of information by unauthorized persons, integrity ensures that the non-alteration of information by unauthorized persons in a way, non-detectable information by authorized users and authentication ensures that the users are persons they claim to be. Even though all the security features are installed, 85% of the e-customers say e-shopping is safe. The remaining 15% felt that e-shopping is unsafe. This is due to fear of loss of money, non-deliverance of goods, probability of misusing of credit cards, stealing of personal information gives the negative impact. These 15% of the users from the samples, felt unsafe, there are many retail shoppers doesn't want to do e-shopping just because of e-security issues. The objective of this paper is twofold: one is to analyse the major factors influencing e-shoppers attitudes towards e-security and another objective is to frame a E-Security Model Check to enlighten the e-customers before proceeding for e-shopping. To analyse the major e-security factors influencing e-shoppers, the samples has been taken from UAE residents. The result reveals that even premium loyalty customer are much worried about the security factors. The E-Security Model Check has been developed to strengthen the e-security shopping.**

Key Words: **Internet security, E-shopping, E-customers, E-commerce, Online shopping, E-Security Model Check**

I. INTRODUCTION

Increasingly, people are using their tablets & smart phones for online shopping. Cyber Monday records 190% in mobile purchases this year and Black Friday hits 193% jump according to mobile payments company PayPal. The shift to mobile presents its own unique e-security challenges, including malware apps and text phishing scams. Before entering any personal or payment information, make sure to look up at your browser bar. The URL should start with HTTPS, not HTTP. That one letter on the end, S, is the difference between a secure site and an unsecured site. A secondary thing to look for SSL ie., it is the small lock icon in the address bar. This lock symbol indicates whether we have an SSL (secure sockets layer) connection. The icon is standard for most popular browsers, including Internet Explorer, Chrome, Safari and Firefox. Security and value for money are the two most important factors for e- shoppers, followed by the reputation of the e-store and the belief that there should be no extra charges for the use of different payment and delivery methods.

Convenience, user-friendliness, transaction speed and ease usage or user friendliness are the main factors triggering the credit cards usage for online shopping. Before proceed for online payment, kindly search for answers to these key questions. Is it safe to do transaction in that particular e-store? Whether it has adequate security features? Is privacy is protected? Did the private information leak anywhere? Whether there is a protection in the online passwords?

II. REVIEW OF LITERATURE

Schaupp & Bélanger (2005) study reveals e-commerce site's ability to minimize customers' worries and regrets as well as their perceived reliability and integrity of the system will be the dependent upon the customer's faith in the merchant and their computer system [4]. If the customer doesn't have faith on e-shopping system it is highly unlikely that they will perceive the e-marketer to be reliable and of integrity. Without this positive perception there is little chance of being able to minimize the worries and regrets of the consumer. Mojtaba Nourbakhsh & et al., (2012) says that a negative effect on online shopping attitude is due to the fear of probability of losing money, leakage of financial details and also the fear of non-delivery of order [3]. That is, the higher the risk of losing money and probability of disclosing credit card information, the lower attitude toward online shopping. This finding is compatible. Wen Gong & et al (2012) reveals that the Chinese consumers perceive online shopping to be more complicated than American consumers.

Poor distribution networks, the lack of an effective online payment mechanism and limited experience with shopping at a distance may all have contributed to the lower perception of ease of use. Given Chinese consumers' current relatively low usage of credit cards and their preferred cash on delivery payment method, it seems to be in the best interests of the e-tailers to collaborate with reliable logistic providers for payment collections as well [5]. Kirsten A. Passyn, Memo Diriker & Robert B. Settle (2011) suggests benefit of online marketers to be especially eager to take whatever steps are necessary to make self-regulation and

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self-governance in the matter of privacy and security effective. Online and database marketers would be well advised to cooperate enthusiastically when regulation or legislation is proposed in order to avoid over-regulation and binding requirements and prohibitions [2]. Gurvinder S.

Shergill & Zhaobin Chen (2005) research found that website design, website reliability/fulfilment, website customer service and website security/privacy are the four dominant factors which influence consumer perceptions of online purchasing [1].

III. RESEARCH OBJECTIVES

The research objectives are two-fold:

(1) To analyse the major factors influencing e-shoppers attitudes towards e-security

(2) To frame a E-Security Model Check to enlighten the e-customers before proceeding for e-shopping

To attain these objectives, a structured questionnaire was designed and used for data collection among e-customers residing in UAE. As a web based survey, the questionnaire has been sent to online shoppers in UAE through a random mailing survey.

IV. DATA ANALYSIS AND INTERPRETATION

E-customers take greater care in what they buy, how they buy, how they pay and how much they pay? Although hardly a sufficient silver lining, the questionnaire has been collected to examine more thoroughly many of the issues discussed to bring a new light. The results of gender wise respondents are given in the Table 1.

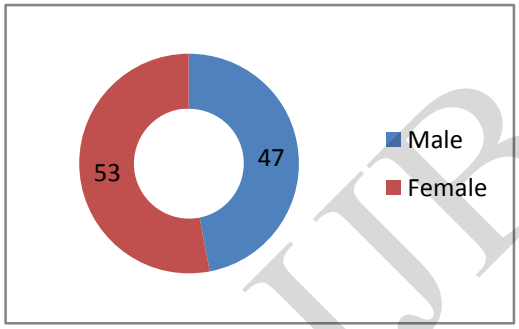

Figure 1: Gender Wise Respondents of UAE E-Customers

The table 1 shows 53% of female and 47% of the male responded the e-security questionnaire.

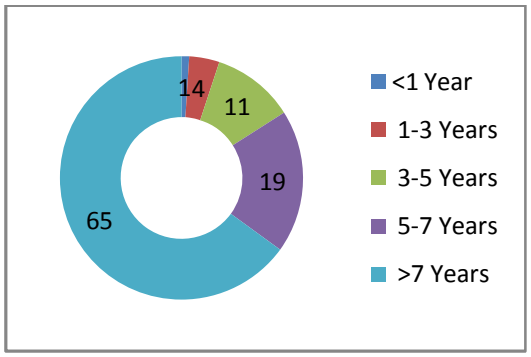

Figure 2: Active Usage of Internet by UAE E-Customers

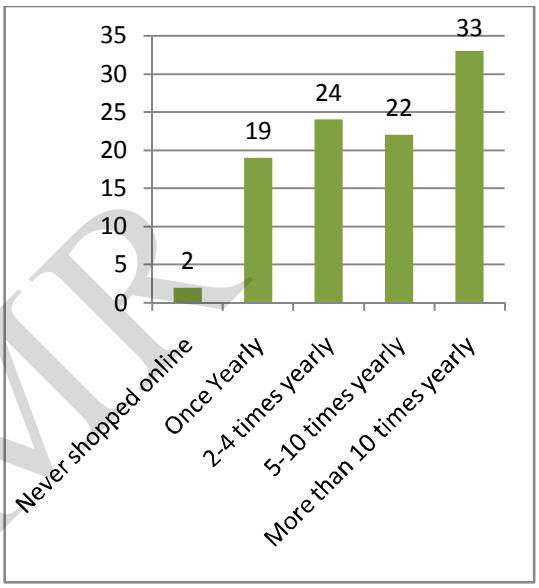

Figure 3: Active Period of E-Shopping By UAE E-Customers

This Figure 2 describes about the active usage of internet over UAE e-customers. The figure 3 shows the Active period of e-shopping by UAE e-customers. Based on their frequency of online purchase, the e-customers are categorized. The category of "never shopped online" and "once yearly" is named as "No loyalty customers". The category of shopping "2-4 times yearly" is named as "Latent loyalty customers". The category of shopping "5-10 times yearly" is categorized as "Inertia loyalty customers". The category of shopping "More than 10 times yearly" is named as "Premium loyalty customers".65% of the people actively uses internet for more than 7 years, but % of purchases done by inertia loyalty and premium loyalty customers are lesser than their internet usage. So we can say even though they use the internet, they hesitate to do purchases over internet.

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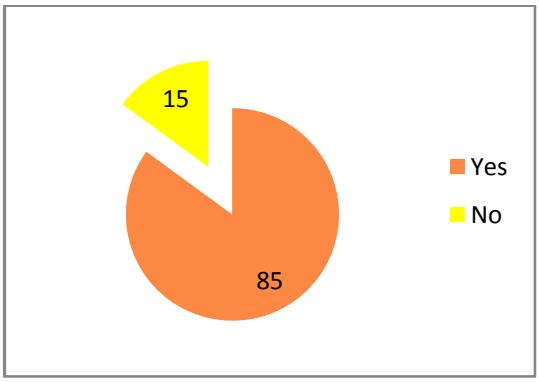

Figure 4: Is Internet Shopping Safe?

Here, the figure 4 report says 85% of the e-shoppers revealed the e-shopping is safe. 15% of the shoppers say it is unsafe because the shoppers don't know who the vendor is?, fear of loss of money, non-deliverance of goods, probability of misusing of credit cards, stealing of personal information, post purchase services gives the negative impact.

The following Figure 5 describes the list of categories shopped online. 81% of the people book airline/train tickets online, 69% deals with banking & other financial services, 78% customers book tours online and do hotel reservations, 34% book medical appointments, 43% of them purchase books and magazines online, 41% of the e-shoppers buy CDs / DVDs online, 21% of them buy dresses, apparels, footwear & jewellery online, 12% buy health & cosmetic products and 32% of them buy electronics, mobile phones and home appliances online. Here this report clearly describes, the e-customers mostly prefer to opt for services rather than purchasing products online.

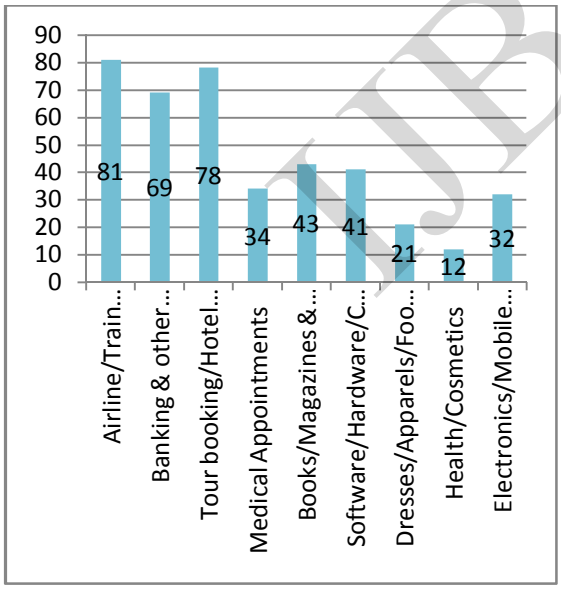

Figure 5: List Of Categories Shopped Online By E- Customers

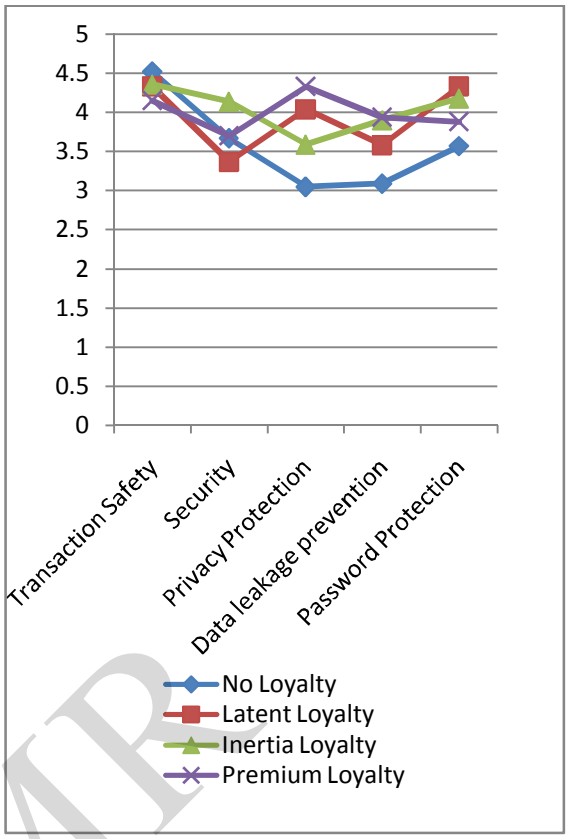

Figure 6: Mean of E-Security Factors

In the figure 6, the mean values of e-security factors are displayed. The no loyalty customer thinks lack of privacy protection, but they are comfortable with the transaction safety. The latent loyalty customers feels unsecure, they feel that transaction safety and password protection is available. The inertia loyalty customers says that the privacy protection is low, but they feel that transaction safety and password protection is present. Last but not the least the premium loyal customers, eventhough they do online shopping more than 10 times a year, they gave low rating to security & data leakage prevention and higher voting to transaction safety & password protection.

The result reveals that even premium loyalty customers are also much worried about the security factors.The Figure 7 below ANOVA Table shows the analysis of E-Security Factors with reference to UAE e-shoppers attitude. The four rows denote the no loyalty, latent loyalty, inertia loyalty and premium loyalty customers. X1 denotes the transaction safety, X2 for Security, X3 for Privacy Protection, X4 for Data leakage prevention and X5 for Password Protection.

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ANOVA TEST

x1	x1 ²	x2	x2²	x3	x3²	x4	x4²	x5	x5²
4.52	20.430399	3.67	13.4689	3.05	9.3024995	3.09	9.5481	3.57	12.7449
4.33	18.7489	3.37	11.356900	4.04	16.3216	3.58	12.8164	4.33	18.7489
4.36	19.009600	4.14	17.139599	3.59	12.8881	3.9	15.209995	4.18	17.472399
4.15	17.222500	3.7	13.690000	4.33	18.7489	3.94	15.5236	3.88	15.0544

	x1	x2	x3	x4	x5	Total
Number (n)	4	4	4	4	4	20
∑x	17.36	14.879999	15.01	14.51	15.96	77.72
Mean	4.34	3.7199999	3.7525	3.6275	3.99	3.89
∑x²	75.411400	55.6554	57.2611	53.0981	64.0206	305.4466
Variance	0.02	0.10	0.31	0.15	0.11	
Std. Dev.	0.141	0.316	0.557	0.387	0.332	
Std. Err.	0.071	0.158	0.279	0.194	0.166	

ANOVA Result :

	SS	df	MS	F
Between	1.3168500	4	0.3292	2.3397
Within	2.11015	15	0.1407	
Total	3.4270000	19		

Figure 7: ANOVA Table Fore-Security Factors With Reference To UAE E-Shoppers Attitude

The above table shows that the calculated value of F is 2.3397 which is less than the table value of 3.05 at 5% level with degrees of freedom v1=4 and v2=15 and hence could have arisen due to chance. This analysis supports the null hypothesis of no difference is sample means. We may, therefore, conclude that the difference in e-customers attitude due to these e-security factors is insignificant and is just a matter of chance. From this analysis, we can say, when it comes to e-security factors, almost all the category of people are more conscious about their e-transactions to be executed with safety, security and privacy.

V. "E-SECURITY MODEL CHECKS" TO IMPROVE THE ONLINE SHOPPING

The following E-security Model Checks framework has been developed to improve the security remainders to e-shoppers before they proceed for online shopping. Before the e-customers proceed for e-shopping, initially they have to look into the above four E-security model checks discussed as follows. In the *computer check*, the e-shoppers should adjust your security settings to the safety mode, ensure your anti-virus is up-to-date and use strong passwords with the mix of alphanumeric characters and to be safer side, always backup your data. In the *brand check,* ensure where the e-tailer is located in and check whether it is a reputed brand name and it has its own identity and ensure the billing address of e-tailer.



Figure 8: E-Security Model Checks - Framework

In the *security check*, always look for a secured lock when you are dealing with the financial transaction and note the address bar, it should be HTTPS:// instead of just HTTP://, activate mobile SMS for online transactions, so that you will knowing immediately by SMS, once the amount is debited or credited in the account. Always ensure to set-up a firewall for safe internet surfing. In the *information check*, keep record purchase details as a soft or hard copy, it will be helpful for the reference. Avoid public terminals when the bank payment is involved. Make sure the correct personal and credit card information given, it may lead to delay is getting the products. Before doing the purchase, learn post purchase warranties and guarantees. It helps to support the post purchase transactions. These four

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checks will act as a security remainders before the e-shoppers proceed for the e-shopping.

VI. CONCLUSION AND FUTURE RESEARCH

E-shopping and E-payment is the part and parcel of our life. Every day we are forced to do some or other transaction over the internet starting from electricity bills till the school fees. E-shopping means we may think of products, but in service sector, we are already in the e-payment loop. From *no loyal customers* till *Premium loyalty customers*, each and every shopper is much conscious about the loopholes in the e-shopping. Many shoppers hesitate to initiates e-shopping, just thinking of e-security. For them, *E-Security model checks* framework will give enlightenment about secure shopping. Before proceed for online shopping payment, the e-shoppers can go for E-Security model checks to do their shopping safe. The future research can be done beyond the E- Security model check in search for answers to these following key questions. Is it safe to do transaction in the newly coming e-store? Whether it has adequate security features in the new e-stores? Is privacy is protected with the familiar brands? How to identify the brands goodwill, even the customers are unfamiliar with the familiar brands?

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