

# Uncertainties Faced in E-Shopping; Suggesting Possible Solutions

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**Abstract**—E-commerce is fast becoming a means subjected in the mind of individuals, business is sort to be transacted in a way that is suitable for individuals' conveniences, and at the same time considering a basic factor known as "security", as without it, e-commerce will lose its value. Insufficient security has made certain individuals totally avoid e-commerce as an option. This paper defines e-commerce, suggest possible solutions to problems, need for security seals, ethical issues, reason why shoppers abandon shopping carts, and challenges faced on a website while shopping e.g. speed, SSL, enhancing the capabilities of search engines etc.

**Index Terms**—E-shopping, consumer behavior, privacy, e-commerce security.

## I. INTRODUCTION

E-commerce is a transaction which often takes place over the internet, often using digital technology. These transactions include buying and selling of goods, services, and information [1]. However, brick-and-mortar; is a type of commerce but not an e-commerce, i.e. it does not involve any electronic means to perform transaction; rather it involves face-to-face method of transaction (traditional method of commerce) [21].

## II. BENEFITS OF E-SHOPPING

The major benefits impacts offered by e-commerce are its flexibility and convenience for shopping, and then what are on offer are motives surrounding the organization of everyday use. For example, buying in bulk that is been delivered saves time rather than money [33]. In other words e-commerce is convenient; it cut time and reduces the labor associated with various forms of shopping. However, this assumption requires careful consideration in terms of what time related benefits e-commerce actually offers.

- i) *Increase Sales*: The ability to shop from home allows many people who have trouble getting to real world shops such as elderly or disabled people or others with transport or mobility issues to still purchase the products and services they need. Many people also have trouble shopping during their opening hours, such as those that

work the same hours as shop opening times, mothers with young children and no one to mind them.[22]

- ii) *Provide convenience*: It enable individual to purchase product without having to stress themselves, using their cars to travel. However; there are products such as refrigerators, washing machine etc. that are likely not to fit into their cars. Therefore, attracting fare of transporting the goods.
- iii) It reduces costs of processing and retrieving.
- iv) Time factor; online service is often available to customers 24-hours[1]
- v) Availability; online operations reaches an individual from their various homes irrespective of distance or location.

Another factor determining the frequency of e-commerce use, again, returns to issues of delivery. The speed at which items are delivered following order will be important. Supermarkets will presumably need to deliver ordered items within 24 hours; otherwise the consumer may prefer to travel to their local store for immediate gratification [34]. However, for other products which are not so usual or open to the same degree of routine searching web sites may not actually increase the rate at which buying a particular item can take place. For example, allocating one afternoon for a visit to the shops in order to buy new clothes allows the consumer to buy several items at once, even if they only intended to buy one pair of shoes. The practice is not as simple using e-commerce where sites tend be ordered around search tools or hierarchical categories rather than facilitating browser [35].

## III. STANDARD FOR E-COMMERCE SITE

In other to meet a standard for e-commerce website, it is important that the following factors are considered:

Increasing the speed of home page loading

- 1) providing the ability to translate site language into multiple languages
- 2) enhancing the capabilities of search engines
- 3) displaying security policies more conspicuously
- 4) offering multiple payment options
- 5) And reducing the minimum number of clicks to complete a transaction. [2]

Metrics of equality is used, considering home page dimension; in this phase the quality of a home page and factors that leads to a quality home page is discussed. Among the dimensions are as follow: [11]

- 1) Selection of home page titles
- 2) Selection of domain names
- 3) Speed of page loading
- 4) Presence of privacy policy etc.

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#### IV. WHY CONSUMER ABANDON SHOPPING CART AT TRANSACTION COMPLETION STAGE

According to research; it shows that shoppers abandon shopping cart at the transaction completion stage due to some reasons; Perceived transaction inconvenience, risk and waiting time, in the case of “waiting time”, the inability of a shopping site not to boot quickly especially if response time is greater than 10 seconds, it is likely to make shoppers abandon shopping cart[15]. However, the issues of privacy and safety are considered as a factor also[3].

##### A. Perceived Risk

The idea of some shopping site requiring information that is very vital and personal makes individual get discourage from shopping, therefore, abandoning shopping cart[14].

##### B. Perceived waiting time

It explains the inefficient speed of some shopping site and perception of checkout process involve at the transaction phase [2].

##### C. Perceived transaction inconvenience

The inappropriate validation process, in the process of making purchase, the inability of the site to prompt individual of items that are out of stock at the early phase of adding to cart, and not providing alternative payment options are likely factor that can lead to transaction inconvenience.

Below are some of the reason why some people abandon shopping cart:[11]

- i) The online shop did not promise secure transaction.
- ii) The order forms were very lengthy.
- iii) Afraid of exposing credit card number
- iv) Registration before making purchase etc.

##### D. Consumer behavior towards online shopping

Online shopping is often related to consumers characteristic, for a customer to purchase a product or service, they are often influenced by some certain factors psychologically such as; motivation, perception, learning, beliefs and attitude [4].

The fishbone model was used to measure the attitude of internet users towards online shopping and shopping decision, hypotheses “H4” state that the attitude towards online shopping has a significant relationship with the consumer lifestyle.[20] However, attitudes are developed from personal experience and learning with reality, as well as from information, from friends, salespeople and new media. They are also derived from both direct and indirect experience in life [13] research has proven that consumers who are always online, or like computer, purchase more product online, as they are familiar with the environment.

##### E. Effect of service quality and satisfaction on customers

Behavioral intention in e-shopping; it focuses on quality and satisfaction an organization can offer to her online shoppers (customer) in order to maintain a steady relationship and gain maximum profit. Regarding the effects of service quality, the study [5] identified four key drivers of e-service quality, they are: friendliness, information, adaptation and aesthetics that impact significantly

satisfaction from e-shopping.

#### V. RISK ASSOCIATED WITH ONLINE SHOPPING

*Risk related to the purchase channel,*

*Risk perceived during the purchase of products/services, and*

*Social risk*

##### A. Risk in the Channel.

Also known as psychological risk refers out to a feeling of worries when shopping online. Studies referring to anxiety as a variable have examined the capacity of an individual to process all the information [26].

##### B. Risk in The Transaction,

Also known as risk relating to products and services. In an online context, this type of risk refers to concerns over whether the product will fail to meet the buyer's expectations or will prove too expensive in the buyer's judgment, and is therefore a financial and functional risk [25].

##### C. Social Risk.

This risk is associated with the opinions of close associates when buying online. This type of risk implies that the buyer is prompted by thinking about the group that the consumer belongs to principally either friends or family [25].

#### VI. WHERE DO INDIVIDUALS PREFER TO SHOP?

Where individuals prefer to shop really depends on consumer shopping method, where do they prefer to shop, online or brick and mortar (cultural), and why? Information regarding this research was collected through a 5self-administered mail survey.

However, findings show that shopping motivation (online or physically)[6] depends greatly on product, it show that services are more of online business but products are more associated with brick and mortar. It will help managers in the area of segmentation [17].

#### VII. MANAGERIAL IMPLICATIONS

It offers a recommendation on how managers can also take a step to identify what satisfies the consumers, in other to meet their needs.

Three of the advantages reported for electronic retailing are: [16]

- 1) 1 attractive price;
- 2) 2 convenience of shopping; and
- 3) 3 Ability to do comparison shopping

#### VIII. E-SECURITY SEALS IN E-COMMERCE

An E-security seal in e-commerce is tend to employ customers awareness to trust service provider, to guarantee e-payment success, there is need for e-shopping site to employ the use of security seals, example of organization providing security seals are; Trustee, BBBOnline, etc. [7]

#### A. *Www.Truste.Org*

Trustee; it builds consumer confidence and trust online. It enables privacy protection.

#### B. *Www.Bbbonline.Org*

BBB (Better Business Bureau), they are security providers whose task is to promote trust on the Internet through its Reliability and Privacy Seal programs.

Another Simple guide to enable individual purchase items online with little or no worries at all is the use of Secure Socket layer(SSL); is a commonly-used protocol for managing the security of a message transmission on the Internet, using encryption method that scrambles private information that is been sent over the internet,[23][24] SSL are often embedded in Microsoft and Netscape browsers and most Web server products, below are some example to enable you identify a browser with SSL-embedded:

##### 1) Example 1:

There is often a padlock icon on the bottom right corner of the browser window, in both Explorer and Netscape. If it's unlocked, then it suggests the web page is not secured, but when is locked it means the webpage is secured.

##### 2) Example 2:

Compare <http://www.google.com/> and <https://www.google.com/>, one has "s" in front of the http and the other don't, the "s" suggest the site is using SSL and is therefore secure.

### IX. ETHICAL ISSUES

The 7 principles of Safe Harbor is a rationalized process for US companies to comply with the EU Directive 95/46/EC on the protection of personal data. It has served as a great source of advantage to customers and the society as a whole in privacy protecting. The 7 seven principles are:

- 1) Notice: Companies must tell consumers how and why personal data is collected and it's shared with.
- 2) Choice: Consumers must be able to request their data not be shared.
- 3) Onward transfer: Companies must provide notice and choice before data is given to third parties.
- 4) Security: Consumers must have access to data about them and have the ability to correct mistakes.
- 5) Data integrity: Companies must take reasonable measures to protect data.
- 6) Access: Personal data be relevant to its intended purpose
- 7) Enforcement: Procedures must be in place to settle complaints and resolve dispute.

With regards to the 7 principle of Safe Harbor, a bridge of trust between customers and an e-commerce website is been developed, as trust can reduce uncertainty created by other people regarding the issues related to e-commerce, it is however, every important as it will increase confidence in the minds of individuals [31], and has been shown to affect consumers' fears of unreliability and risks of being cheated [32]. It is of great importance for an e-commerce website to be trusted as it will help reduce consumers' uncertainty, and the issues of trustworthiness and reliability are indeed a very serious concern in online transaction [38].

### X. PAYMENT SYSTEM

The transactions that take place without raw cash involve, and are often executed by the payer himself, in the sense that both the payer and the receiver are in a different location [27][28].

There are several payment methods to complete transaction in an online commerce, the use of Master Cards, Visa, UKash, CashU, and PayPal etc. PayPal is fast becoming a trusted and reliable method use in an online payment today, because all PayPal transactions are based on the user's e-mail address, merchants never have access to the user's account information,[28] PayPal then charges each purchase to the individual's credit card or checking account. This method is safer, more secure and more convenient than providing financial information to various different e-commerce sites. Individual information provided to PayPal is stored on a secure, highly encrypted server. Information encrypted cannot be altered by malicious third parties to create fraudulent payments [29].

### XI. PRICING

Price can be of great impact in day to day business. Although, there are several types of pricing, each is determined by the nature of a given business it best suits, for example; In dynamic pricing, the price is not firmly set; instead it changes based on one circumstance or the other, such as increases in demand at certain times, an example is the Airlines industries; they have been identified as the best beneficiaries of dynamic pricing[37]. Another type of pricing is the psychological Pricing, which is believed that the price ends in uneven, rather than even numbers, for example: \$9.99 are used instead of \$10, and 149 instead of \$150. Customers view this method as having a better value [36].

### XII. USABILITY TESTING

It is very important for any site that is developed to undergo a usability testing; it is a technique used to evaluate a product by testing it on users. The operational definition of usability includes one or more of the following factors: [18]

- 1) Usefulness
- 2) Effectiveness
- 3) Learn ability
- 4) Attitude

The aim is to observe people using the product to discover errors and areas of improvement. Usability testing generally involves measuring how well test subjects respond in four areas: efficiency, accuracy, recall, and emotional response [19].

### XIII. DISCUSSION

The common assumption among the shopping sites is that their success is dependent on having the right answers at the right time and providing clear direction to their consumers or customer's admits of day-to-day operations. This may have been due to the complexity of change were moderate,

but is far less so in time of high pressured transformational change.

The transformation of E-shopping is very uncertain and unpredictable process that requires a new approach or solution that will further enhance the possible solution that will be introduced and ease the problems customers face when shopping online.

In E-shopping today consumers are still searching for a more secure and better new way of making their purchases. The interdisciplinary study of the structure of regulatory systems in E-shopping will bring significant different experiences to consumers. As such, in the online shopping environment, although some factors are still influencing consumers' behavior, it is obvious, i.e., how these factors influence consumer online shopping behavior, will differ from that in the traditional shopping environment. Therefore, there are compelling needs for studying the uncertainties of online shopping of consumers behavior and the influences of different groups of factors. The factors could be linked to cultural, social, personal, insufficient security and psychological factors.

The influences of these factors mentioned above affect consumers' online shopping behavior in different ways which differ from the traditional shopping environment. The cultural differences of consumer's online shopping behavior become very necessary and important. While culture or subculture and social class play the important roles in consumers in purchasing decision making is because consumers tend to have different online behavior. Comparing the behavior or reaction of consumers from different countries to web sites of several global shopping of electronics, the shopping behavior of the two people from different countries could be subtly different in nature from traditional consumer behavior due to the unique characteristics and interplay of technology and culture.

#### XIV. CONCLUSION

The uncertainties in on-line shopping are numerous, ranging from social risk, psychological risk, ethics (such as using customer information for gainful purposes without the customers' knowledge) and risk relating to product and services; which borders on whether the product or services sold will meet customer expectation. On the other hand the advantages of e-shopping far outweigh its numerous uncertainties. Convenience, a minimal cost of processing and retrieving, the 24 hour availability of on-line services and the utter eradication of distance all constitute the benefits of e-commerce. Besides, tangible measures have been taken to tackle the number of problems related to on-line buying. These include the Better Business Bureau, Trustee and the 7 principle of safe Harbor.

PayPal is fast becoming the people's choice of payment; therefore, it is advisable for e-commerce website to involve it in their site as an option for payment, therefore, attracting the number of PayPal users who will want to purchase a product from that particular website.

During online shopping, perceptions of transaction inconveniences are created mainly by too many questions being required in order to make a purchase. However,

minimum and yet useful information should be required to make a purchase, example, like having a secret question.

Further research however should be made to devise other ways by which a more secured website and ethical issues could be handled. Moreover, readers should keep in mind the four cardinal issues on which this study rests: the need for ethical issues, consumer behavior, need for security seals, and web site efficiency; in terms of speed, payment option, security and flexibility with which users communicate with an e-commerce website.

Building trust, dealing with ethical issues, pricing and time at which a shopping site is able to respond to customers, will account for why many more people should consider online shopping.

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