

CUSTOMER ADOPTION OF ONLINE GROCERY SHOPPING IN COLOMBO DISTRICT, SRI LANKA

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ABSTRACT

This study investigates the factors affecting the customer adoption of online grocery shopping in Colombo district, Sri Lanka. Data were collected by using a structured questionnaire that was distributed online among 200 respondents. This study selected a quantitative approach and considered as a single cross-sectional design. Five factors have been identified as determinant factors of the customer adoption of the online grocery market in Colombo district, Sri Lanka after the unidimensionality test. According to the analysis, it can be concluded that there is a significant impact Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, Perceived Relative Advantages, Perceived Online Grocery risk on customer adoption of online grocery Among those factors Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, and Perceived Relative Advantages were the most critical factors and Perceived Usefulness. They Perceived Online Grocery risk was the less important factors. It can suggest that the marketers who are in to improve the online grocery industry, especially within the Colombo district to pay the significant attention to Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, and Perceived Relative Advantages to enhance the customer adoption towards online grocery shopping.

Keywords: *customer adoption, e-commerce and online grocery shopping*

INTRODUCTION

Information and communication technologies (ICT) are generally applicable to many work and non-work situations (Weisberg, Te'eni, & Arman, 2011). It is more critical due to that the design of ICT considers the social implication of use (Bogue, 2016). Because virtual activities are different from physical activities (Weisberg et al., 2011), E-commerce can be denoted as the process of buying or selling products or services through the Internet (Theerasak, 2003). When considering the Sri Lankan context, E-commerce is mostly used in some industries such as apparel, fast foods, equipment, fancy items. But online grocery retailing is not a popular activity in the Sri Lankan lives. It is mostly spread in Colombo and the nearest cities only. Keels super, Cargill's Food City, Arpico Super Center, and other grocery retail can be considered as main modern trade grocery retailers in Sri Lanka. With the development of the internet facilities, busy lifestyles and other reasons, physical grocery markets are converted as virtual super market. Keels super online, Kapruka, U.K.Pola, grocerypal are few examples for virtual grocery markets.

The activities that are used commonly by some Sri Lankan online grocery websites can be summarized like this; According to Kapruka operated by Cargill's food city chain, the purpose of this service is to deliver grocery to consumer's doorstep at the same price as the store; through this consumer can save time and money. Previous research regarding online grocery shopping focused on online and offline purchase behavior, brand loyalty (Gotzamani & Tzavlopoulos, 2009), shopping behavior, customer perception of the advantages and disadvantages of online shopping for grocery foods (Thakur, &

Srivastava, 2015). and the importance of brand names (Terry, Gallois, & McCamish, 1993). In addition to that, some researches have studied the consumer traits of internet shoppers, either in terms of their general shopping orientation (Tak-KeeHui & David Wan, 2009), other is about web usage related lifestyle (Yoon and Cho, 2011), or psychographic characteristics (Bogue, 2016). Tak-KeeHui and David Wan in 2009 developed a typology of internet grocery shoppers based upon their motivations towards the shopping online.

Some more researches that can be found regarding customer adoption of online grocery shopping have studied consumer's intention to maintain an online grocery purchase in the future (Terry et al., 1993). However, there are some exceptions; only a few studies have been conducted to investigate the behaviour of consumers already have purchased groceries via the internet (Morganosky & Cude, 2000). According to Yoon et al., in 2011, the reasons for the trend in online grocery shopping can be identified as development and changing internet characteristics, consumer characteristics, products attributes, search conditions, the future commercial success of online grocery shopping, situational factors, understanding about already exist online consumers perceive characteristics.

However, the literature has not yet fully explored the consumer adoption of online grocery purchasing. As per the researcher's knowledge, there is no research found regarding online grocery and applying the issues found in this market in the Sri Lankan context. Therefore, this study intended to investigate the online grocery shopping behavior of Sri Lankan

customers. Therefore, this research aims to empirically investigate the factors' influence on online grocery adoption in the online consumer market In Sri Lanka because there are no considerable consumers in this market in Sri Lanka. Through identifying the effect of the factors can be used to improve the industry.

LITERATURE REVIEW

Online Shopping/ E-Commerce

Online shopping can be introduced as a growing phenomenon worldwide, especially among countries in there are available well-developed infrastructure for marketing activities over the internet (Kau, Tang, & Ghose, 2003). According to a study of international data, more than 600 million people will have entered the internet globally by the year 2002 and they are willing to spend more than US\$1 trillion buying goods and services online (Strait time, 2002). Several reasons are affected by this continuous growth. The expansion of more advanced technology has facilitated smoother surfing on the internet. Further, people can access the internet through personal computers and web TVs, PalmnPilets, and mobile phones from anywhere. On the other hand, with the developed navigation software and search engines, people are finding it more comfortable and convenient to become a member of the internet environment (Kau et al., 2003).

With the internet considered commercial medium new methods of doing business have improved in almost every industrial sector. In some sectors, better, new, and efficient internet business models have evolved a huge step forward. (Anckar, Walden, & Jelassi, 2002) According to

Morganosky et al., (2000), there is currently a glut of trade publications and consulting reports that try to predict online purchasing's future potential.

Online Grocery

Online grocery shopping can be introduced as a major innovation in the online retail industry by offering consumers the opportunity to order from home through the internet and delivered to their homes or private address (Gotzamani et al., 2009; Tak-KeeHui et al. 2009). Like other innovations, internet grocery shopping has to hang with some difficulties in spreading to customers (Terry et al., 1993; Bogue, 2016). This study has investigated the effect of the factors for customer adoption by referring Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment (Pikkarainen, Pikkarainen, Karjaluoto, & Pahlila, 2012) Perceived Social Norms, Perceived Relative Advantages, Perceived Online Grocery risk some consumers carried out their online grocery shopping (Hansen, 2005).

Adoption of Online Grocery

Adoption theory examined the determinants affecting an individual's behavior toward innovation or items, (Thakur et al., 2015) it can be explained under the theory of technological acceptance. The present online grocery market recorded a fast growth rate; it mainly challenges the Supermarket chain to protect its market share. A better understanding of starting points that may affect the adoption of online grocery shopping is the foundation of this sector's strategic management in elsewhere (Hand, Dall' Olmo Riley, Harris, Singh, & Rettie, 2009). However, in

some contexts, online grocery is arguably considered a discontinuous innovation (Hansen, 2005) therefore, it required a significant behavioural change. Findings of Hansen (2005) suggest that US adopters of online grocery shopping attached higher compatibility, higher relative advantage, more positive social norms, and lower complexity to internet grocery shopping, not only compared with consumers who had never bought anything on the internet, but crucially, also compared with consumers who had purchased other goods/services on the internet, but not groceries.

Technology Acceptance Model

The Technology acceptance model can be considered the more accepted model for innovations imaging in the Information Technology industry. It describes the adoption of the Theory of Reason Action (TRA). Organizations use information systems for many reasons, such as cutting costs, producing more without increasing cost, and improving the quality of the product and services (Terry et. al., 1993). It has been describing that users' attitudes toward and acceptance of a new information system have a critical impact on successful information system adoption (Ambali & Bakar, 2015). Suppose users are not like to accept IT systems. In that case, it will not hand over the benefits to the organizations (Davis, 1993) Davis developed the original TAM in 1993 and to recognize the factors that help the integration of technology into an organization and find why to accept or reject technology (Lindsay, Jackson, & Cooke, 2011). According to the adoption of the theory of reasoned action developed by Terry et al., (1993), that is a more generalized theory. The

TAM is the most used model for identifying factors that help toward accepting the technology (Lindsay et al., 2011).

Perceived Usefulness

Perceived usefulness can be defined as the level of people who believe that using a system enhances their performances (Lu, Yu, Liu, & Yao, 2003). Behavioral adoption is determined by attitude and perceived usefulness (Pérez, Sánchez, Carnicer, & Jiménez, 2004). Both Perceived Ease of Use and Perceived Usefulness impact attitudes (Pinho & Soares, 2011). Consumer Perceived Usefulness considers the potential user's belief that adopting a given technology contributes to more performance (Pinho et al., 2011).

Perceived Ease of Use

According to Davis (1993), Perceived ease of use can be considered that a person believes that using a system would be free of mental hassles. The application perceived to be easier to apply than another is more likely to be used by users. Both PEU and PU are impacting on attitudes (Pinho et al., 2011). In other words, PEU expresses to the degree to which people expects no physical and mental difficulties in adopting the technology at hand (Davis, 1993). Moreover, PEU shows how much effort an individual needs to effort into using information technology (Pinho et al., 2011).

Perceived Enjoyment

Enjoyment can be considered the activity of using a computer is perceived to be enjoyable in its own right (Davis et al., 1996). This is

different from the PU, which can be known as an external motivation nevertheless perceived enjoyment (PE) as an inner motivation to use information systems as cited by Davis et al. in 1996. Several studies have proven that PE significantly affects intentions to use computers. Terry et al., (1993) found that PE affects positively with a time of use whereas not with the frequency of use or number of tasks. Differently, Gotzamani et al. (2009) expressed that PE relates fairly to Internet usage frequency and daily Internet usage. PE also can be called perceived fun and perceived playfulness are quite similar to the concept of it. In this research, it is applied to the same. Some researchers have considered perceived fun and perceived playfulness (Igbaria et al., 1994; Bogue, 2016).

Perceived Social Norms

According to the theory of adoption of innovations, innovations that can be recognized or communicated to consumers are more likely to spread. Like any other trend in online buying, it is generally given more attention in the media and among many people interested in IT-technology. Because consumers may receive the communication messages by concerning the internet as a grocery-shopping channel, such communication may also happen among consumers through the internet as, e.g. in chat-rooms, newsgroups. Considering the general level, Anckar in 1996 expressed that, “while it might have been overlooked early on, the internet cannot now be ignored as a cultural phenomenon”. Communicability gives the facts to how easily a product can be seen and communicated to each other through formal and informal networks (Thakur et al., 2015). Also, communicability can also assume the level of social acceptance that is communicated to a consumer from other

consumers (Tak-KeeHui et al., 2009). However, it depends on such opinions due to online grocery shopping is not visible to other consumers.

Perceived Relative Advantages

Perceived relative advantage can be concerned as the level to which an innovation is perceived by potential adopters as being better than the idea, product, or service it set aside (Yoon et al., 2011). It has been empirically expressed that consumers' perception of relative advantages may affect their intention to adopt online grocery shopping (Tak-KeeHui et al., 2009). According to Anckar et al. in 2002 and Kaufman-Scarborough and Lindquist (2002), in some Previous research suggests that the main relative advantages of engaging in internet shopping include a higher transaction speed (time advantage) and the ability of price reduction. Because a reduction in operational costs and manufactures' ability to improve the efficiency of the activities traditionally performed by retailers (economic advantages). It is also based on several large-scale research studies that exploring in the supermarket industry (Ring et al., 2001) indicate that in typically "low prices are always the first or second most important determinant of store choice in grocery shopping". Also, Anckar et al., (2002) expressed that "consumers generally dislike shopping for groceries, they have a desire to accomplish the task as fast as possible". Hereupon, it is positively related to investigating the extent to which the extent to which consumers' level will differ in their perception of the relative advantages of online grocery shopping.

Perceived Online Grocery Risk

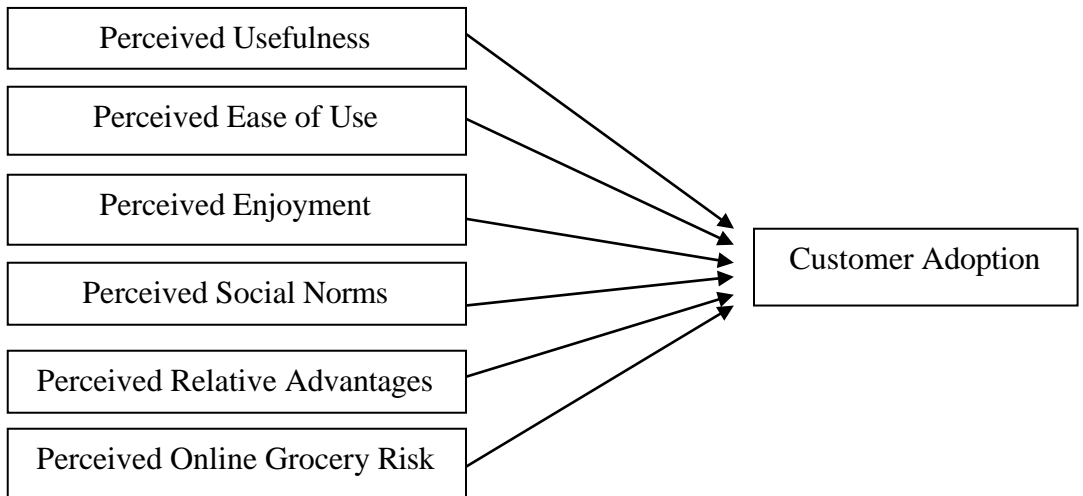
Perceived online risk can be identified as a multidimensional construct involving different aspects, for example, perceived product risk (Geuens et al., 2003; Yoon et al., 2011), perceived vendor risk (Tak-KeeHui et al., 2009; Yoon et al., 2011), perceived social risk (Davis et al., 1996), and perceived technology risk (Yoon et al., 2011). Previous researches (Thakur et al., 2015; Terry et al., 1993) proposed that consumers' perceived risk is high when considering purchasing online is frequently larger than when considering purchasing offline and that perceived risk is a useful construct to justify barriers to online shopping (Thakur et al., 2015; Gotzamani et al., 2009). In some Previous research also suggests especially perceived technology risk. It means potential losses occur due to the internet and its related technologies. For example, security weakness, perceived vendor risk. Potential losses occur due to internet vendors like untrustworthy vendors, problems with having the vendor exchanging incorrect items and perceived product risk. The possibility is that the received products are not as required like low quality. Therefore, that is may negatively affect consumer intentions to transact with a web-based vendor. For example, it has been proved that perceived web security (Gotzamani et al., 2009) and concerns after product delivery (Cho, 2004) might affect consumer online behavior.

RESEARCH METHODOLOGY

Conceptual Framework

In this study, five variables have been deliberated as independent and dependent: Customer Adoption of online grocery displays dependency upon customer value which consists of variables such as Perceived

Usefulness, Perceived Ease of Use, and Perceived Enjoyment Perceived Social Norms, Perceived Relative Advantages, Perceived Online Grocery risk impact.



Source: Author Developed based on Literature

Figure 1: Conceptual Framework

Research Design and Techniques

The primary objective of the study is to identify the impact factors of online grocery shopping. Because this study is quantitative and the researcher used a cross-sectional time horizon to conduct this study. The population relevant to the study is the customers in the online grocery shopping market in Colombo District in Sri Lanka. Due to the high internet usage in the Colombo district, it was selected to conduct this study. The researcher uses a purposive sampling technique to conduct the study since the study is focused especially on the customers in the retail market in the Colombo district who use online grocery shopping. The sample size consists of 200 respondents taken from the population who live in the Colombo district and engage in online grocery shopping.

This study used primary data and a structured questionnaire was distributed to collect data from the respondents. Data was collected from the sample elements by using online and personal methods. Descriptive analysis and hypotheses testing were conducted by using SPSS 21 as a statistical tool. Regression analysis was conducted to identify the impact of independent variables on customer adoption of online grocery shopping in the Colombo district.

DATA ANALYSIS

The research objectives were tested against the data collected; using mean scores and one-way analysis of variance (ANOVA). Mean scores are used to determine the level of the effect of six factors towards the online conformity behavior and ANOVA is used to determine whether there is any significant impact of the six factors on Customer adoption of online shopping. According to the unidimensionality test, Perceived Social Norms & Perceived Relative advantage indicators are loading on one component. Based on that, those two factors will consider as one factor.

Table 1: Summary of the Reliability and Validity Test Measures

Variable	KMO	BTS	AVE	CR
	Cronbach's Alpha	X ²	Sig	
Standard	0.7<	0.5<	0.05>	0.5< 0.7<

Perceived Usefulness	0.793	0.693	145.256	0.000	0.67946	0.720
Perceived Ease of Use	0.848	0.841	381.093	0.000	0.62381	0.762
Perceived Enjoyment	0.816	0.760	266.764	0.000	0.64450	0.741
Perceived Social Norms & Perceived Relative Advantages	0.838	0.780	303.148	0.000	0.67433	0.770
Perceived Internet Grocery Risk	0.845	0.725	241.351	0.000	0.76423	0.808
Customer Adoption	0.835	0.830	348.633	0.000	0.60456	0.743

As mention in table 1, Cronbach’s Alpha value of all the variables was greater than 0.7 and it revealed that all the variables are reliable. KMO values for five independent and dependent variables were greater than 0.5, the significant value of the respected dimensions was less than 0.05 Average Variance extracted values were greater than 0.5, and Composite Reliability values were greater than 0.7. Therefore, the convergent validity of the respective dimensions was satisfied.

Interpretation of central tendency is based on the mean and mean of the Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms & Perceived Relative advantages, Perceived Online Grocery Risk and Customer Adoption distributions are respectively 3.9914, 3.9247, 3.8905, 3.7784, 4.0155 and 3.9021. So, it can be concluded that on average most of the respondents' online customer adoption is affected by these five factors. According to the skewness and kurtosis, all the values were position in between the +2 and -2. So, it can be concluded that data were normally distributed for all five factors of customer adoption (Malhotra, & Malhotra, 2010). Therefore, regression analysis is applied to test the research objectives and research hypothesis.

Table 2: Regression Analysis

Variable	Coefficient	t value	Sig
Perceived Usefulness	0.329	5.309	0.000
Perceived Ease of Use	0.448	7.419	0.000
Perceived Enjoyment	0.458	8.619	0.000
Perceived Social Norms & Perceived Relative advantages	0.363	7.192	0.000
Perceived Risk	0.267	5.218	0.000

According to table 2, the significant values of all the variables are less than 0.05. Therefore. All the independent variables impact customer adoption of online grocery shopping behavior of the Colombo district customers.

The research suggests that all the alternative testable hypotheses accept since all P values of variables are less than 0.05. According to the analysis, it can be concluded that there is a significant impact of Perceived Usefulness to Customer Adoption of online grocery. There was a significant positive impact of Perceived Usefulness on Customer Adoption. This implies that when Perceived Usefulness is building in the online grocery industry automatically, Customer Adoption will improve. The findings are consistent that Perceived Usefulness is not a central aspect of Customer Adoption. According to data, it could justify this by asserting that PU is often emphasized as an essential issue for managing the customers' adoption.

The findings of this study showed a significant impact of Perceived Ease of Use towards the Customer Adoption of Online grocery. This implies that when online grocery shoppers and other service providers in the grocery industry decide to improve Perceived ease of Use will positively affect Customer Adoption. On the other hand, consumers Perceived Ease of Use influences positively Customer Adoption, hence continuance of the shopping.

The findings from the study revealed a significant impact of Perceived Enjoyment on Customer Adoption. This implies that the more Perceived enjoyment of customers, the more their adaptive behavior will improve. The research findings revealed a significant and positive impact on the adoption of the perceived Enjoyments.

There was a significant impact of Perceived Social Norms and Perceived Relative Advantages towards Customer Adoption. This implies that when Perceived Social Norms and Perceived Relative Advantages are building in the online grocery industry automatically, Customer Adoption will improve. The findings are consistent that Perceived Social Norms and Perceived Relative Advantages are an influential aspect of Customer Adoption. According to data, it could justify this by asserting that Perceived Social Norms and Perceived Relative Advantages are often emphasized as an essential issue for managing the customers' adoption. The previous researches also denote that according to the theory of consumer adoption of innovations (Yoon et al., 2011) some consumers may generally be more innovative than other consumers willing to take risks. Bogue, (2016) suggested that innovative consumers share specific personal characteristics.

CONCLUSION AND RECOMMENDATIONS

This study has broadly examined the impact of Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, Perceived Relative Advantages, Perceived Online Grocery risk in the online grocery industry in Colombo district, Sri Lanka. Specifically, the study examined Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, and Perceived Relative Advantages, Perceived Online Grocery risk most of which were found to have a significant impact.

Five factors have been identified as determinant factors of the customer adoption of the online grocery market in Colombo district, Sri Lanka.

Among those factors Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, and Perceived Relative Advantages were the most crucial factor, and Perceived Usefulness, Perceived Online Grocery risk was the less important factors.

The researcher suggests that the marketers who improve the online grocery industry, especially within the Colombo district, pay the significant attention to Perceived Ease of Use, Perceived Enjoyment, Perceived Social Norms, and Perceived Relative Advantages. Since most online grocery shoppers pay attention to perceived enjoyment, it shows that managers have to pay more attention to developing Perceived Enjoyment. It is essential in providing an authentic experience. Perceived ease of use is a crucial aspect of online grocery shopping. Moreover, it is vital in providing quick service. The customers also consider perceived Social Norms and Perceived Relative Advantages. Marketers need to pay more attention to provide more advantages to customers than their competitors.

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