

## **Determinants of Online Buying Behaviour**

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### **Abstract**

*The emerging digital economy has opened up new paradigms for retailing, and consumers across the world face new opportunities and challenges. However, the online firms face various problems today. The shopping cart abandonment in online shopping context is one such serious concern at present. On average, 71% of shopping carts are abandoned without a purchase. As a result, the researcher intends to probe the causes of online shopping cart abandonment in this study. According to the theory of planned behaviour, if there is a positive behavioural intention supported by favourable perceived behavioural controls online customers should end up with buying the product. However, abandonment of shopping cart is a situation that goes against this theory. The data was collected from online buyers across the world (n = 521) who were selected based on convenience in accessing them. This study while supporting the demographic factors of Age, Status and Gender to determine the abandonment behaviour shows there is no such relationship between geographical divide and abandonment behaviour. Moreover, this study suggests the executives and scholars to consider Age, Status and Gender when segmenting the markets in online context to minimize the abandonment behaviour and not to focus more on the geographical divide in such instances.*

**Keywords:** *Online Buying Behaviour, Shopping Cart Abandonment, Geographical divide, demographics, Electronic Commerce*

### **1. Introduction**

E-commerce is a fast growing retail market in the world as the growth of online sales at such a rate will inevitably reduce the market for traditional shops. The emerging digital economy has opened up new paradigms for retailing, and consumers across the world face new opportunities and challenges. The internet has given birth to online retailing, a new and

increasingly popular way of selling products for most organizations in the twenty-first century (Mukherjee & Nath, 2007).

The study intends to explain the shopping cart abandonment behaviour based on Theory of Planned Behaviour (referred to as TPB herein) (Ajzen, 1991). The shopping cart abandonment is a critical issue faced by many online retailers and very less number of studies were carried in this area. The shopping cart abandonment behaviour is not well explaining with TPB. Hsu, Chang, & Chen (2011) suggest that antecedents of online buying behaviour should be studied. From the antecedents of online buying behaviour, trust is a complex construct that has been widely studied in online shopping acceptance research (Pavlou & Gefen, 2005) but yet to study referring to the online shopping cart abandonment behaviour (Zhou, Dai, & Zhang, 2007). Therefore, it is required to study the abandonment of shopping cart relating to the trust.

TPB is not used much to explain the consumer behaviour in the online context (Kinney & Close, 2009). TPB is suggested to test additional insights into how to induce more consumers to make Internet purchases (George, 2004). Kinney & Close, also state that the researchers could use other theoretical bases to derive predictions of consumers' online shopping cart use. Further, the Theory of Reasoned Action (Fishbein and Ajzen, 1975) could help explain, yet under-investigated online consumer behaviour. Therefore, the researcher selects TPB in order to fulfil this knowledge gap.

The objectives of the research are (i) to examine the factors influencing the online buying behaviour, (ii) to measure the moderating effect of trust on relationship between intention to purchase online and online buyer behaviour and, (iii) to measure the relative importance of factors influencing the online buying behaviour.

The theory used in this study is TPB. This explains about the rationale of behaviour of people. The behaviour of a person may be determined by the behavioural intention and the perceived behavioural controls, again that the behavioural intention is determined by the attitude toward the behaviour, subjective norms and perceived behavioural controls. Apart from this the trust construct was introduced with the Commitment–Trust Theory (Morgan & Hunt, 1994). Therefore, the conceptual model was assisted with the aforesaid theories.

Various researchers have defined key terms in different ways and the researcher selected most appropriate definitions relevant for the study. Purchase intention was defined as “trying to perform a given behaviour rather than in relation to actual performance” (Ajzen, 1985). Online buying behaviour is defined as “behaviour is a task extrinsic to the IT since the web system primarily provides the means to achieve the purchase. (Pavlou & Fygenson, 2006)”, online shopping cart abandonment is defined as “when a consumer visits an internet shop intending to make a purchase but does not complete the transaction and abandons their purchase intention” (Cho, 2004), and Trust is defined as “a willingness to rely on an exchange partner in whom one has confidence (Moorman, Deshpande, & Zaltman, 1993)”.

The significance of the study is three fold namely theoretical significance, organizational significance and societal significance. The paper provides transaction completion stage specific guidance to the managers operating in an online environment to prevent online shopping cart abandonment at the transaction completion stage. Specifically, the findings suggest that marketers must pay attention to the perception of risk and transaction inconvenience; otherwise they risk losing consumers during the final stage of transaction. As the competition in e-commerce is intensified, it becomes more important for online retailers to understand the antecedents of consumer acceptance of online shopping. Such knowledge is essential to customer relationship management, which has been recognized as an effective business strategy to achieve success in the electronic market (Zhou, Dai, & Zhang, 2007).

This paper consists of introduction to the study that covers the theoretical and empirical gap, purpose and objectives of the study, significance of the study and key definitions. Next the literature survey is included to collect all the previous knowledge in order to build the arguments in the conceptual framework. Then the conceptualisation is presented linking all the relationships of the relevant literature.

## **2. Literature Review**

### ***2.1. Online Buying Behaviour***

Electronic commerce adoption is broadly described as the consumer’s engagement in online exchange relationships with Web vendors (Pavlou & Fygenson, 2006). Gefen and Straub (2000) as referred in Pavlou & Fygenson

(2006) state product purchasing is a task extrinsic to the IT since the Web system primarily provides the means to achieve the purchase. Online shopping behaviour is confused with the online shopping most of the time. Online shopping behaviour is different from online buying behaviour. In fact, online shopping is both exploring information about the products and purchasing the products. Therefore, the online purchasing the procurement of a product by providing monetary information in exchange for the focal good. In addition to monetary information, product purchasing usually involves providing consumer information.

According to Zhou, Dai, & Zhang (2007), the online shopping behaviour was defined as the ratio of online shoppers to the total population of a nation, and the economic condition was measured with GDP per capita. Thus, the data did not permit the study to reveal online shopping intention, behaviour, or their antecedents, which are important to online retailers whose motivation is to increase their profits. The online buying behaviour is "... a task extrinsic to the IT since the Web system primarily provides the means to achieve the purchase (Pavlou & Fyngenson, 2006:117)". To a very large extent, online consumer behaviour can be studied using frameworks from 'offline' or traditional consumer behaviour. A number of general frameworks in consumer behaviour are available that capture the decision-making processes of consumers (Heijden, Verhagen, & Creemers, 2003). Accordingly, looking more closely at the difference between online and 'off-line' consumer behaviour, it is identified at least two types of issues that differentiate online consumers from off-line consumers. First, online consumers have to interact with technology to purchase the goods and services they need. The physical shop environment is replaced by an electronic shopping environment or, in other words, by an information system (IS). Second, a greater degree of trust is required in an online shopping environment than in a physical shop.

Despite the online context or offline context, the buyer behaviour in shopping is alike. Similar to bricks-and-mortar shopping, online shoppers form a need or want, they search, consider alternatives, evaluate them, and decide whether or not to buy the item(s) in the cart (Kinney & Close, 2009). The online purchasing is an activity coming under online shopping. Online shopping is a sequence of activities carried out by internet users. After determining a need or want, an online shopper browses through web pages in the online search

stage. As Kinney & Close (2009) refer to Bloch et al. (1986), while some online shoppers search with a motive to buy at that session, for others, the search is part of a purposeful ongoing search. The online shopping behaviour – information seeking and purchasing – can be explained with a five-stage buyer decision-making process (Engel, Kollat, & Blackwell, 1973) (1) awareness, (2) intent, (3) search, (4) selection, and (5) post-purchase behaviour. The awareness and intent are related to the information gathering in the first two phases whereas phase no 3, 4 and 5 are related to online buying behaviour. Further the TPB (Ajzen, 1991) explains the intention to perform an activity and actual behaviour (Pavlou & Fygenson, 2006) is determined by several factors such as attitudes, subjective norms, PBC and intention. The researcher in this study concentrate on the online buying behaviour only. Hence the other parts of online shopping are not considered in the study.

According to TPB, an individual's performance of a certain behaviour is determined by his or her intent to perform that behaviour. At the same time the theory explains that this behaviour is controlled by the perceived behavioural controls. The argument of TPB is therefore, the behaviour of a person can be perceived from intention and perceived behavioural controls. But empirical findings state that there are significant deviations from the expectation and the actual scenario in the online shopping behaviour (Online shopping cart abandonment of immediate purchasing products).

The previous research studies why people go online to buy products. Consumers may shop online with experiential motives as well as goal-oriented motives (Novak et al. 2003; Wolfinbarger and Gilly 2001). Shopping offline or online makes fun to them. The entertainment use of cart is defined as "...the extent to which consumers place items in their online shopping cart for purposes such as to entertain themselves and to alleviate boredom (Kinney & Close, 2009)". Here, the intention to buy online is to enjoy the buying process.

## ***2.2. Online Shopping Cart Abandonment***

Electronic cart abandonment or online shopping cart abandonment is the behaviour of giving up online transaction in the end of the transaction process. According to Egelin & Joseph (2012), there is a lack of a consistent definition of online shopping cart abandonment as it has been defined as occurring when a shopper begins the checkout process but doesn't complete it (Ouellet,

2010), when a shopper puts items in their virtual shopping cart to gather information but decides to abandon the cart before the final purchase stage (Moore and Mathews, 2006), when a consumer visits an internet shop intending to make a purchase but does not complete the transaction and abandons their purchase intention (Cho, 2004), and when a customer hesitates to complete an online transaction and leaves the website (Cho et al., 2006). There are two main consistencies among definitions: 1) products are chosen and 2) the financial transaction is not completed. For the purposes of this study the definition by Moore and Mathews (2006) will be employed: when a shopper puts items in their virtual shopping cart to gather information but decides to abandon the cart before the final purchase stage.

Hurwicz (1999) refers to electronic cart abandonment as “when apparent planned purchases are never completed online”. Hurwicz’s definition implies purchase intention. Intention is a cognitive state that reflects a buyer’s plan to buy in a specified time period (Howard & Sheth 1969). While placing an item in a virtual cart is often a signal of the consumer’s interest in the product, cannot be assumed that consumers do so with an intention of buying it during that shopping session. Thus, it is defined electronic cart abandonment as the situation in which consumers place item(s) in their online shopping cart without making a purchase during that online shopping session. For abandonment to occur, the shopper must have placed one or more items in their cart before abandoning the cart in its entirety.

According to Webtrends Inc (2013), online buyers spend significant amounts of time on web site, view several product pages, select items and place them in a shopping cart. Then they disappear. It happens a majority of the time during the online shopping experience. According to Forrester Research, 87% of consumers abandon carts, and 70% of carts are abandoned just before check-out. Abandoned carts perplex online retailers; they represent missed revenue opportunities, up to \$18 billion a year. While “abandoned cart” is a standard metric, its significance as a measure of lost revenue may be overstated. Perhaps it is more helpful to look at abandoners with a glass-is-half-full perspective. Consider this: Shoppers who place items in a cart are motivated to buy, but the purchase path is a complex one. Most abandoners are still in a consideration cycle—think of them as window shoppers— a

shopping cart of not-yet-purchased items is a natural and necessary part of the customer conversion journey.

The abandonment is occurred in the final stage of buying process. According to Wilson (2010), it had been noted that many visitors to the web site identified products that they intended to buy but then abandoned their shopping carts before final checkout. If online shopping cart abandonment could be reduced, online sales could be increased. Therefore, Eisenberg (2005) offers specific research-based suggestions for reducing online shopping cart abandonment. In the online shopping context, consideration occurs as a shopper places an item(s) of interest into their cart. Then, online evaluation occurs when the online shoppers review the cart contents and analyse the items in the evoked set based on their past experience and unique purchase criteria (Nedungadi, 1990). Ultimately, when consumers begin to enter their personal or financial information online purchase and they decide either to buy or abandon the transactions. The researcher argues here the main cause to abandon the consideration and shopping cart in the final stage is reasonable doubt in the transaction process that it is the lack of trust.

While Sterne (2002, pp. 229-32) provides a discussion of online shopping cart abandonment and how to measure it. These suggestions include reducing the number of steps in the checkout process, including a progress indicator so that visitors know exactly where they are in the checkout process by step number, providing a link back to the product page for each item that has been placed in the shopping cart, and giving the visitor a toll-free phone number to call for information and/or to resolve any further customer service issues. Several modifications were made to the web site to reflect Eisenberg's suggestions, and this series of design changes was used as the independent variable in the first field experiment. The control group received none of the changes and thus was exposed to the original checkout process.

The abandonment behaviour is visible in different stages. Also it is essential to know when this occurs. According to Egelin & Joseph (2012), the first step in evaluating online shopping cart abandonment is establishing the decision points that a customer experiences when they are engaging with an online retailer. According to Wood (2001) there are two decision points in an online transaction: (i) at the point of choosing the product and (ii) at the time of receipt of the product, keep it or return it. Applying this concept to online

shopping cart abandonment in online transactions, suggests that a customer may complete the first step by choosing the product and putting it in the cart but does not financially complete the transaction. Since there is no exchange of merchandise or money, therefore suggesting that a third decision point is necessary to accurately understand online shopping cart abandonment. The addition of the point of decision at the financial transaction will further explain online shopping behaviour and online shopping cart abandonment. Egeln & Joseph, further state Li and Chatterjee (2005) identified a four-stage model: (i) information search, (ii) consideration stage, (iii) evaluation stage, and, (iv) purchase decision. This concept breaks down the stages before placing the product in the shopping cart and does not allow for the decision point at the time of product receipt. But in this study only concerned the transactions reached at the stage (IV). Moreover, this study proposes that there are three decision points in online transactions: (i) at the time of product selection when the product is placed in the shopping cart, (ii) at the point of financial transaction, and (iii) at the time of receipt of actual product, acknowledging that online shopping cart abandonment happens at decision point two.

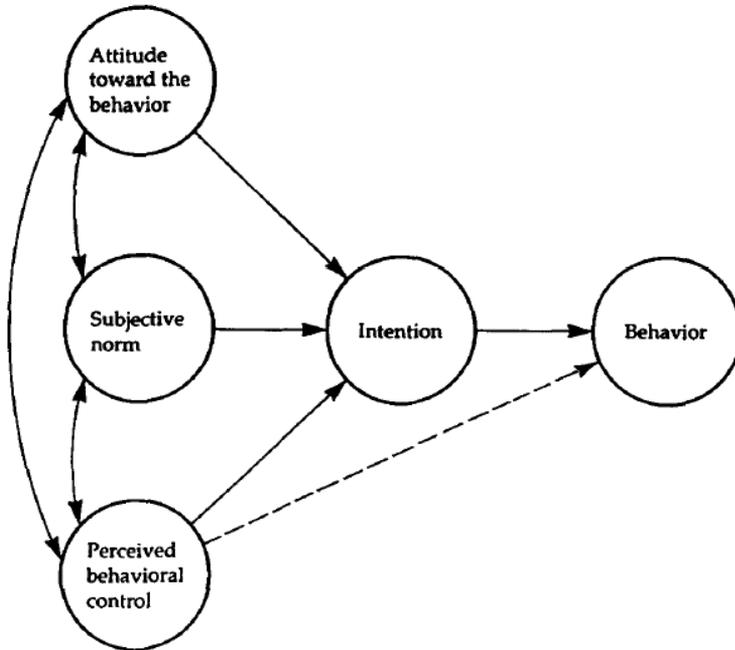
Egeln & Joseph (2012) mention remedies for shopping cart abandonment issues. Accordingly, software programs have been developed to decrease online shopping cart abandonments through email recapturing strategies, including a discount for completing the transaction through the email that was sent, using the information to time multiple follow up emails. But it is still in doubt, the software is able to identify why a customer abandoned the cart and therefore recommend website change strategies to the retailer to change customer's future abandonment intentions. The researcher debates that if the trust of the financial payment process stage can be established, the shopping cart abandonment can be significantly reduced.

### ***2.3.Theory of Planned Behaviour***

This theory is an extension of Theory of Reasoned Action (Fishbein and Ajzen, 1975). According to Ajzen (1991) explaining human behaviour in all its complexity is a difficult task. The behaviour is an act performed by human being that it is very complex and unpredictable. Many researchers have tried to comprehend this unpredictable nature of human behaviour since long time

ago. Ajzen further expresses that the behaviour (act) is determined by intention (motivation) and perceived behavioural controls (ability).

The behaviour is well explained in the TPB in terms of rational decision making. The individual's intention to perform a given behaviour is the main attribute of TPB. TPB has been used in many different studies in the information systems literature (cf. Mathieson, 1991; Taylor and Todd, 1995a, b; Harrison et al., 1997). According to George (2004), TPB (Ajzen, 1985, 1991) is an extension of the theory of reasoned action (TRA) (Ajzen and Fishbein, 1980), made necessary by the latter model's inability to deal with behaviours over which individuals have incomplete volitional control. For TPB, attitude toward the target behaviour and subjective norms about engaging in the behaviour are thought to influence intention, and TPB includes perceived behavioural control over engaging in the behaviour as a factor influencing intention. TRA and TPB have also been the basis for several studies of internet purchasing behaviour (Battacherjee, 2000; George, 2002; Jarvenpaa and Todd, 1997a, b; Khalifa and Limayem, 2003; Limayem et al., 2000; Pavlou, 2002; Suh and Han, 2003; Song and Zahedi, 2001; Tan and Teo, 2000).



**Figure 01: Theory of Planned Behaviour**

*Source: Ajzen, 1992, p. 182*

### 3. Conceptualization

Literature says that abandonment is caused due to several reasons. Those reasons are not sufficient always to explain this abandonment behaviour. The rational decision making process of a person is affected by the intention and the perceived behavioural controls (Ajzen, 1991). Therefore, it is a fact that empirical studies reveal there are other factors having impact on the abandonment and buying behaviour online. Therefore, the researcher brings trust as a moderator to the relationship between the intention to buy online and online buying behaviour.

The hypotheses have been developed based on the TPB (Ajzen, 1991) and other related literature. The intention is the main determinant of the behaviour. Apart from the intention the perceived behavioural controls may have an impact on the behaviour as well. But, the researcher argues that there are other factors not well explained in the theory of planned behaviour that

determine the online buying behaviour. Thus, the hypotheses were developed following the literature and TPB.

### ***3.1.Hypotheses Development***

Previous studies indicate that behaviour is determined by the behavioural intention and perceived behavioural controls (Ajzen, 1991). Also the intentions are assumed to capture the motivational factors that influence a behaviour; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behaviour. As a general rule, the stronger the intention to engage in a behaviour, the more likely should be its performance. Given two individuals with the same level of intention to engage in a behaviour, the one with more confidence in his or her abilities is more likely to succeed than the one who has doubts (Ajzen, 1991). Therefore, since there's a reasonable doubt in the minds of buyers in online buying they tend to abandon the transaction in the middle of the path. Further, because consumers have less at stake when determining to explore different internet sites, they may be more likely to undertake browsing and/or information collecting without having actual purchase intentions (Hsu, Chang, & Chen, 2011). At the heart of TPB is the individual's intention to perform a given behaviour. For TPB, attitude toward the target behaviour and subjective norms about engaging in the behaviour are thought to influence intention, and TPB includes perceived behavioural control over engaging in the behaviour as a factor influencing intention (George, 2004).

Apart from these, various other factors may determine the strength of the intention and behaviour relationship. The significance of the web experience elements can differ depending on the buying situation, the type of online customers targeted by the web site as well as the client's intentions visiting the site (Constantinides, 2004). Constantinides (2004) further argued that potential online buyers consider the transaction security and the fulfilment process much more essential issues than web site visitors who are merely interested in product prices or general company information. Hence the online shopping cart abandonment behaviour is a situation where the behavioural intention is not leading to the behaviour which is against the TPB. The researcher is willing to probe this unexpected situation and find out the

unexplained causes related to this behaviour in the study. Therefore, it is required to further look at the web vendor role in e-commerce activities.

Electronic commerce adoption is broadly described as the consumer's engagement in online exchange relationships with Web vendors. From a consumer behaviour standpoint, getting product information and purchasing products are generally viewed (among other activities) as the two key online consumer behaviours (Gefen and Straub 2000). While most e-commerce studies have largely focused on product purchasing, online consumer behaviour is not monolithic since consumers must first engage in getting product information before purchasing. Choudhury et al. (2001) argue that consumers do not make a single, inclusive decision, but they rather consider two distinct stages: getting product information and then purchasing the product. Gefen and Straub (2000) also distinguish between the two behaviours by arguing that getting information is an activity intrinsic to the IT since the Web system itself presents the product information. Product purchasing, on the other hand, is a task extrinsic to the IT since the Web system primarily provides the means to achieve the purchase.

Getting information involves the transfer of information from the Web vendor to the consumer through browsing the vendor's website. Getting information has been referred to as browsing or window-shopping (Gefen 2002). The value of online information search has been widely acknowledged (Bellman et al. 1999) since it is critical for learning about product specifications and potential alternatives, determining requirements, and gaining sufficient knowledge to make well-informed decisions (Choudhury et al. 2001). Product purchasing refers to the procurement of a product by providing monetary information in exchange for the focal good. In addition to monetary information, product purchasing usually involves providing consumer information (e.g., address information, product preferences).

These two behaviours, getting information and product purchasing, constitute the major part of long-held consumer behaviour models. Engel et al. (1973) describe a five-stage buyer decision-making process that includes problem recognition, information search, and evaluation of alternatives, purchase decision, and post-purchase behaviour. Information search corresponds to getting information and purchase decision to product purchasing. Ives and

Learmonth (1984) propose the customer resource life cycle (CRLF) with three key stages: pre-purchase, during purchase, and post-purchase. Getting information is a pre-purchase activity, while product purchasing corresponds to during purchase activities. Similarly, Kalakota and Whinston (1997) introduce the consumer mercantile model (CMM) that consists of three phases: pre-purchase interaction, purchase, and post-purchase interactions. Pre-purchase interaction consists of product search, while comparison-shopping corresponds to getting information. Choudhury et al. (2001) describe four transaction stages: requirements determination, vendor selection, purchase, and after-sales service. Getting information corresponds to requirements determination, and product purchasing to purchase. In sum, we focus on two behaviours—getting information and product purchasing—that largely determine e-commerce adoption.

Behavioural intentions are motivational factors that capture how hard people are willing to try to perform a behaviour (Ajzen 1991). TPB suggests that behavioural intention is the most influential predictor of behaviour; after all, a person does what she intends to do. In a meta-analysis of 87 studies, an average correlation of .53 was reported between intentions and behaviour (Sheppard et al. 1988). Following TPB, we expect a positive relationship for their two focal behaviours—getting information and purchasing—and their respective intentions.

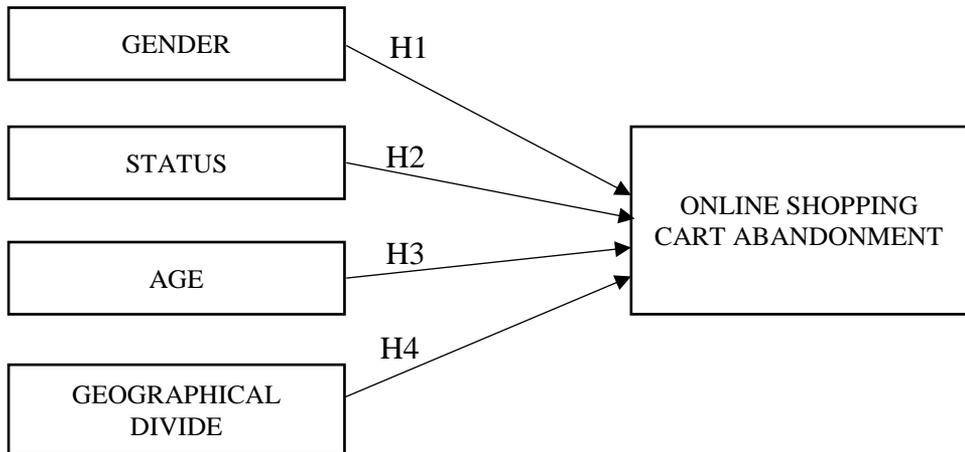
Furthermore, very less studies have been carried out to probe the demographic causes in relation to the online shopping cart abandonment. Therefore, the researcher suggests the following hypotheses in order to check the impact of various demographic factors to online shopping cart abandonment.

- H1:** Gender of online buyers has a relationship with shopping cart abandonment behaviour.
- H2:** Status of online buyers has a relationship with shopping cart abandonment behaviour.
- H3:** Age of online buyers has a relationship with shopping cart abandonment behaviour.

**H4:** Geographical divide of online buyers has a relationship with shopping cart abandonment behaviour.

The derived conceptual framework is as follows.

**Figure 02: Conceptual Model**



*Source: Author*

## **4. Methodology**

### **4.1. Study design**

The study was designed to empirically test and describe what influence the online buyers to involve in online buying. In order to identify the factors to determine the online buyer behaviour the researcher uses the TPB. The intention leading to the behaviour is identified with this TPB and also the abandonment behaviour is not well explained in the theory. This study is a descriptive study. The descriptive studies become essential in many situations (Sekaran & Bougie, 2012). The followings are expected to visualize in this study therefore. (i) Understand the characteristics of the variables, (ii) Construct arguments systematically, (iii) Offer ideas for further studies in the field of online buying behaviour, and (iv) Help the decision makers to identify the problems properly for decision making.

This study describes the relationship between variables and becomes categorical in nature. This also tests the hypotheses. The independent variables as was stated above were demographic factors and the dependant variable of the study is online shopping cart abandonment. Moreover, the measurement process in the study entails the search for indicators. The quality of the data gathered for the research will be tested using the reliability and validity measures. The findings will be on measurement, causality, generalization and replication. The survey method was used in this study to collect data and the sample of 524 representative of the online buyers the population. The coding and data entry will be done using the spread sheet applications and SPSS application. The pilot study also will be carried out and the data gathered will be analysed using the same methods. The survey collected the quantitative data that can be analysed using descriptive and inferential statistics.

The population of the study is online buyers who take rational decisions when buying. The unit of analysis is individuals. Therefore, the online buyers are the elements of the study. This study's main sample comprised 521 internet users drawn from the population. The sample was selected using nonprobability methods. This was decided after carrying out the sampling process. The process consists of five steps respectively; (i) define the population: in this study the population is the online buyers/ buyers who take rational decisions when buying in the online context, (ii) determine the sample frame: in this study the sampling frame is the internet user with an online purchase intention, (iii) determine the sampling design; in this study the convenient sampling method was used, (iv) determine the appropriate sample size; in this study the appropriate sample size was 521 and, (v) execute the sampling process; in this study online and on-paper questionnaires were used to gather data.

#### ***4.2.Measures***

All measurement items were drawn from the literature, and they were then adapted using standard scale development procedures. Buying behaviour was assessed with two (02) categorical (binary) type questions. These two 'Yes/No' questions were adapted from Pavlou & Fygenon (2006) and George (2004). The successful behaviour ('Yes') answers were taken as

positive buying behaviour whilst the failure behaviour ('No') questions were taken as abandonment behaviour. All the demographic factors were assessed with categorical type questions. Gender category consisted of two choices "Male/Female". Status consisted of "Single/Married". Moreover, age categories consisted of age "Below 18/ 18 to 24/ 25 to 34/ 35 to 44/ 45 to 54 and 55 and above". Finally, the geographical divide category again had different categories namely "Asia"/ "Middle East"/ "North America"/ "Africa"/ "Oceania / Australia"/ "Latin America / Caribbean" and "Europe".

### ***4.3. Survey Administration***

Data collection took place in December 2014 and January 2015. The sample was drawn from the population of online buyers. The unit of analysis was individuals involved in the act of buying online. In order to ensure high dependability, reliability and validity it is mandatory to have a high response rate. All respondents were asked either to click on the Web URL link provided in an invitation e-mail message, which linked to an online survey instrument or fill out and send the PDF form attached. The author used multiple methods (online and on-paper surveys) to boost survey response rates as high as possible. But out of 589 respondents who responded, 426 respondents used the online survey and only 163 used the on-paper survey. 68 responses were discarded because; 2 were submitted completely blank, 2 respondents had put the same answers on all the Likert scale items, 12 questionnaires were partially answered and those were related only to demographic factors, and 52 respondents contained less than 0.05 p1 value in the Mahalanobis and were thus removed. The response rate for the on-paper survey was 81.5 percent and the online response rate was 32.8 percent. But the effective rate of the response after removing the ineligible and unreachable respondents from the sample (Saunders, Lewis, & Thornhill, 2011) was 43.9 percent which is beyond the acceptable margin of 33 percent (Nulty, 2008). Unreachability was checked from the accumulated number of bounced emails and unread Facebook messages.

## 5. Analysis and Findings

The impact of the demographic factors was measured with Cross tabulation by the Chi Square test of descriptive statistics with expected counts. The correlation was measured by Pearson R.

### 5.1. Gender

**Table 01: GENDER \* Buying Behavior Cross tabulation**

			Buying Behavior		Total
			Abandon	Buying	
Gender	Male	Count	32	214	246
		Expected Count	55.9	190.1	246.0
	Female	Count	87	191	278
		Expected Count	63.1	214.9	278.0
Total	Count	119	405	524	
	Expected Count	119.0	405.0	524.0	

The expected count of Male to abandon was 55.9 and actual abandonment count was 32 which indicated Males have a less tendency to roll back the transaction due to any reason. But the expected count of Female to abandon was 63.1 and actual abandonment count was 87 which indicated Females have a high tendency to roll back the transaction due to any reason.

**Table 02: GENDER - Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	24.865 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	23.834	1	.000		
Likelihood Ratio	25.764	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	24.817	1	.000		
N of Valid Cases	524				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 55.87.

b. Computed only for a 2x2 table

The Pearson Chi-Square, Continuity Correction<sup>b</sup> and Likelihood Ratio of Gender is significant as the significant factor is less than 0.05. Therefore, there is a significant correlational relationship between Gender and the Abandonment behavior. The correlational coefficients are as follows.

**Table 03: Symmetric Measures**

		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Nominal	Phi	-.218			.000
Nominal by Nominal	Cramer's V	.218			.000
Interval by Interval	Pearson's R	-.218	.040	-5.099	.000 <sup>c</sup>
Ordinal by Ordinal	Spearman Correlation	-.218	.040	-5.099	.000 <sup>c</sup>
N of Valid Cases		524			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Since both the Gender and Abandonment behavior are nominal, Cramer's V correlation value = .218 was identified as the correlation coefficient. Therefore, *Hypothesis 1 is accepted as there is a significant relationship between Gender and Abandonment Behavior.*

### 5.2. Status

**Table 04: Status \* Buying Behavior Cross tabulation**

			Buying Behavior		Total
			Abandon	Buying	
Status	Single	Count	89	239	328
		Expected Count	74.5	253.5	328.0
	Married	Count	28	164	192
		Expected Count	43.6	148.4	192.0
	Other	Count	2	2	4
		Expected Count	.9	3.1	4.0
Total	Count	119	405	524	
	Expected Count	119.0	405.0	524.0	

The expected count of Single to abandon was 74.5 and actual abandonment count was 89 which indicated Singles have a high tendency to roll back the transaction due to any reason. But the expected count of Married to abandon was 43.6 and actual abandonment count was 28 which indicated Married people have a less tendency to roll back the transaction due to any reason.

**Table 05: STATUS - Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.579 <sup>a</sup>	2	.002
Likelihood Ratio	12.910	2	.002
Linear-by-Linear Association	7.778	1	.005
N of Valid Cases	524		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .91.

The Pearson Chi-Square, Continuity Correction<sup>b</sup> and Likelihood Ratio of Status is significant as the significant factor is less than 0.05. Therefore, there is a significant correlational relationship between Status and the Abandonment behavior. The correlational coefficients are as follows.

**Table 06: TATUS - Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Phi	.155			.002
Nominal by Cramer's V	.155			.002
Interval by Pearson's R	.122	.043	2.807	.005 <sup>c</sup>
Ordinal by Spearman	.131	.041	3.029	.003 <sup>c</sup>
Ordinal by Correlation				
N of Valid Cases	524			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Since both the Status and Abandonment behavior are nominal, Cramer's V correlation value = .155 was identified as the correlation coefficient. Therefore, *Hypothesis 2 is accepted as there is a significant relationship between Status and Abandonment Behavior.*

### 5.3.Age

**Table 07: AGE \* Buying Behavior Cross tabulation**

		Buying Behavior		Total	
		Abandon	Buying		
3_Age	18 to 24	Count	48	83	131
		Expected Count	29.9	101.1	131.0
	25 to 34	Count	51	265	316
		Expected Count	72.0	244.0	316.0
	35 to 44	Count	16	48	64
		Expected Count	14.6	49.4	64.0
	45 to 54	Count	4	7	11
		Expected Count	2.5	8.5	11.0
	Total	Count	119	403	522
		Expected Count	119.0	403.0	522.0

The expected count of 18 to 24 to abandon was 29.9 and actual abandonment count was 48 which indicated 18 to 24 have a high tendency to roll back the transaction due to any reason. But the expected count of 25 to 34 to abandon was 72 and actual abandonment count was 51 which indicated 25 to 34 people have a less tendency to roll back the transaction due to any reason. Other two age categories do not have a significant impact over.

**Table 08: AGE - Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.551 <sup>a</sup>	3	.000
Likelihood Ratio	22.566	3	.000
Linear-by-Linear Association	4.554	1	.033
N of Valid Cases	522		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 2.51.

The Pearson Chi-Square, Likelihood Ratio and Linear-by-Linear Association of Age is significant as the significant factor is less than 0.05. Therefore, there is a significant correlational relationship between Age and the Abandonment behavior. The correlational coefficients are as follows.

**Table 09: AGE - Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Nominal by Phi	.212			.000
Nominal Cramer's V	.212			.000
Interval by Pearson's R	.093	.050	2.141	.033 <sup>c</sup>
Interval Spearman Correlation	.120	.049	2.750	.006 <sup>c</sup>
N of Valid Cases	522			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Since both the Age and Abandonment behavior are nominal, Cramer's V correlation value = .212 was identified as the correlation coefficient. Therefore, ***Hypothesis 3 is accepted as there is a significant relationship between Age and Abandonment Behavior.***

### 5.4. Geographical Divide

The researcher identified the countries in regional format.

**Table 10: GEOGRAPHICAL DIVIDE \* Buying Behavior Cross Tabulation**

			Buying Behavior		Total
			Abandon	Buying	
Geographical divide	Asia	Count	51	161	212
		Expected Count	48.1	163.9	212.0
	Middle East	Count	14	31	45
		Expected Count	10.2	34.8	45.0
	North America	Count	15	44	59
		Expected Count	13.4	45.6	59.0
	Africa	Count	5	44	49
		Expected Count	11.1	37.9	49.0
	Oceania / Australia	Count	12	41	53
		Expected Count	12.0	41.0	53.0
	Latin America / Caribbean	Count	9	40	49
		Expected Count	11.1	37.9	49.0
	Europe	Count	13	44	57
		Expected Count	12.9	44.1	57.0
	Total	Count	119	405	524
		Expected Count	119.0	405.0	524.0

The expected count of Asia to abandon was 48.1 and actual abandonment count was 51 which indicated Asia have a high tendency to roll back the transaction due to any reason. Similarly, Middle East, North America, Oceania/Australia and Europe showed the actual abandonment higher than

expected abandonment whereas African and Latin American statistics showed a lesser actual abandonment tendency than as was expected.

**Table 11: GEOGRAPHICAL DIVIDE - Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.169 <sup>a</sup>	6	.306
Likelihood Ratio	7.887	6	.246
Linear-by-Linear Association	1.086	1	.297
N of Valid Cases	524		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.22.

## 6. Conclusion

All the Pearson Chi-Square, Likelihood Ratio and Linear-by-Linear Association of Geographical divide is insignificant as the significant factor is higher than 0.05. Therefore, there is no significant correlational relationship between Geographical divide and the Abandonment behavior. ***Hypothesis 4 is rejected as there is no significant relationship between Geographical divide and Abandonment Behavior.***

The demographic factors - Age, Status and Gender – do have a relationship with shopping cart abandonment behaviour but there is no such relationship between Geographical divide and Shopping cart abandonment. Furthermore, the executives of corporates in the online business and scholars may be benefitted from knowing that Age, Status and Gender has a relationship to shopping cart abandonment behaviour. Therefore, as to penetrate the online markets it is required to consider these demographic factors with much attention than considering the geographical segments (Geographical divide).

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