

# Evidence of Effect of Perceived Risk on Online Shopping Cart Abandonment

Krithika.M<sup>1</sup> and G. Rajini<sup>2\*</sup>

<sup>1</sup>Assistant Professor, Saveetha School of Engineering, Saveetha University, Chennai, India. Email: kavibarshini5@gmail.com

<sup>2</sup>Corresponding Author, Associate Professor and Head MBA (Integrated), Department of Management Studies, Vels Institute of Science, Technology and Advanced Studies, Vels University, Chennai, India. Email: rajini.sms@velsuniv.ac.in

## ABSTRACT

The purpose of this study is to examine the moderation effect of perceived risk in online shopping cart abandonment. Data were collected through online. The respondents of this study were chosen on the basis of their online shopping cart abandonment experience. The sample consists of customers who had experience on online shopping and abandon their cart.

The results show that hedonic motivation is the major predictor for online shopping cart abandonment. Utilitarian motive seems to be lack of significant towards online shopping cart abandonment. It was also found that Perceived risk had a complete moderating effect on cart abandonment.

This study constitutes a preliminary effort to examine the moderating effect of perceived risk on online shopping cart abandonment and provides significant contributions for online retailers, Scholars and practitioners. Theoretically, this study proceeds with the fact by recognizing the crucial consumer motivations of online cart abandonment. The paper investigates the uncharted area of consumer behavior; hence it is the preliminary step to fill the gap.

**Keywords:** Online shopping, Perceived risk, Hedonic motivation, Utilitarian motivation, Cart abandonment, Hierarchical regression.

---

## 1. INTRODUCTION

Shopping cart is an essential gizmo for online shopping. A widespread crisis in India online retailing is that 73% of online consumers abandon the products in their shopping cart, resulting in the last-minute loss of a transaction opportunity (Octane 2015 - 2016); consequently, understanding how to diminish cart abandonment is precedence for online retail businesses.

The authors construct a structural model of cart abandonment, and concluded that entertainment value, use of the cart as a research and organizational tool to sort items of interest as part of a purposeful search, and waiting for a sale directly influenced cart abandonment, and concern about costs indirectly influenced cart abandonment (Kukar-Kinney & Close, 2010).

To illustrate the process, we constructed a model of cart abandonment, with the aim of determining the moderating effect of each shopping stage on cart abandonment.

## **2. LITERATURE REVIEW**

### **2.1. Hedonic & Utilitarian Motivation**

In addition to comprehend the motivation behind online shopping cart abandonment, we have to take in depth exploration into what drives them to shop online. Beyond Perceived ease of use and usability consumer acceptance is a pre-condition of online shopping (Ha and Stoel, 2009)

According to study by Bridges and Floreshim 2008, several electronic retailing literature also acclaimed that consumer online shopping was triggered by the hedonic and utilitarian motivations.

Likewise, hedonic and utilitarian motive for using the online shopping such as, Information search, Entertainment purpose, convenience. ( Papacharissi and Rubin, 2000)

Babin et al., (1994) Hedonic motivations are defined by the consumer's purchasing decision based on the satisfaction and sacrifices, as consumers may purchase products for experience over finishing the task. Arnold and Reynolds,(2003) pinpointed various types of Hedonic motivations are linked to online shopping such as gratification shopping, idea shopping, adventure shopping and value shopping.

Adventure shopping refers to the consumers shop for the thrilling experience ,value shopping referred as a pleasure of looking for sale and discounts, role shopping is shopping for friend or family, Idea shopping is to maintain with the latest trends in market. Social shopping mentioned as entertainment of socializing while shopping online. Gratification shopping refers to do shopping to relive stress.

According to Childers et al. 2001, utilitarian motives can be top assisted by online retailing and hedonic motives can be served excellent by offline retailing. Though literature also discussed twin motivations, which suggest that the both motivations can be there at the same time.

Wolfenbarger and Gilly (2001) accredited that 60 up to 80 percent of the online shopping was more ambitious and also added that consumers shop in a different way based on their motivations. Alba et al (1997) acknowledged that e-retailing provides most favorable things to attract utilitarian motivations such as product features, product availability, comparison of products and reducing consumer search cost. Rigby (2011) also revealed that conveniences, fast check- out, 24X7 shopping are more related to utilitarian motives.

Chen & Lee (2008) observed that consumers who identify high utilitarian values will have higher level of trust in online shopping. Childers et al. (2001), this was contradictory while looking for higher hedonic values. They disagree that online marketers have influential media which accomplish hedonic motives such as, videos, high quality pictures, animations which makes online shopping more pleasurable experience.

## 2.2. Perceived Risk

Risk is an individual's discernment of the ambiguity and undesirable outcomes of engaging in an activity. Dowling & Staelin, (1994) and perceived risk in online shopping is quite often associate to research behavior. Chang & Tseng,(2013).

Even though there is wide utilization of the Internet, online shopping is still alleged risky due to the potential financial loss and theft of personal information (Park and Stoel, 2002).

Those risks play a crucial role in online consumer behavior because of the real sting accompanied with contrary outcomes and uneasiness experienced by the consumers (Salam, Rao and Pegels 1998).

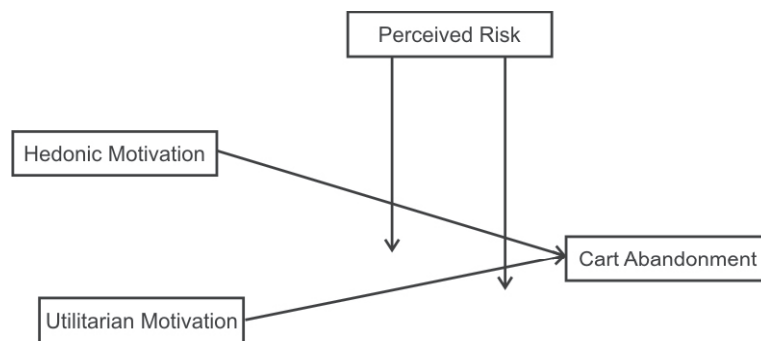
Cho, Kang, and Cheon (2006) studied that perceived uncertainty has an effect on online shopping cart abandonment. According to Kukkar – Kinney and Rajamma et.al,(2009),states that if consumers become more conscious about making a purchase when they feels that the risk of purchasing a product is high. Thus, more organization and information search of products in the cart will follow.

## 2.3. Cart Abandonment

Angeline Close and kukkar-Kinney (2010) investigated the factors influencing electronic cart use of online consumers and state that price promotions, entertainment purpose and current purchase intention had a significant effect on cart usage and waiting for sale is directly affects the cart abandonment and concern about price was indirectly affect cart abandonment.

Study by Rajamma et.al (2009),sates that perceived waiting time ,perceived risk and perceived transaction inconvenience had an impact on cart abandonment . As an addition to previous studies , in this studies this study tries to find out the effect of perceived risk on online shopping cart abandonment.

The given below Figure 10.1 is to demonstrate, we construct a model of cart abandonment with the purpose of ascertaining the effect of perceived risk on online shopping cart abandonment.



**Figure 10.1: Authors Own Model**

## 2.4. Hypothesis

The primary objective of this study is to examine the moderating effect of Perceived risk towards online shopping cart abandonment.

**H<sub>1</sub>:** There is a strong relationship between hedonic Motivation and cart abandonment.

**H<sub>2</sub>:** There is a strong relationship between utilitarian motivations and Cart Abandonment.

**H<sub>3</sub>:** Centered Hedonic motivation X centered perceived risk (Interaction Term) has an effect on cart abandonment.

**H<sub>4</sub>:** Centered utilitarian motivation X centered perceived risk (Interaction Term) has an effect on cart abandonment.

### 3. METHODOLOGY

With regard to the nature of this study, online questionnaire methods were chosen to collect the data from the respondents. To reflect the uniqueness of the overall Indian population, the researchers selected the survey participants through an Indian email database. The respondents who shop online and have abandoned their online shopping cart for the past two months. The instrument included demographic details, internet usage, online shopping frequency, hedonic motivations, utilitarian motivations, Perceived risks followed by online shopping cart abandonment frequency. Snowball sampling technique was used to collect 190 samples. The online questionnaires were sent to more than 200 online shopping customers.

### 4. RESULTS AND FINDINGS

#### 4.1. Correlations

**Table 10.1**  
**Partial Correlation**

<i>Control Variables</i>			<i>Hedonic Motivation</i>	<i>Utilitarian Motivation</i>
Hedonic Motivation	Correlation		1.000	.260
	Significance (2-tailed)		.	.000
	<i>df</i>		0	190
Perceived risk	Correlation		.260	1.000
	Significance (2-tailed)		.000	.
	<i>df</i>		190	0

Partial Correlation was run to determine the relationship between hedonic motivation and Utilitarian motivation whilst controlling for perceived risk.

The relationship between the hedonic motivation and utilitarian motivation, controlling for Perceived risk is done using the partial correlation and the correlation value is 0.260 and level of significant value is 0.000 which is < 0.000, so perceived risk had influence in controlling the relationship between Hedonic and utilitarian motivation.

#### 4.2. Multiple Regressions : Coefficients (a)

**Table 10.2**  
**Multiple Regressions**

Independent Variable	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	
	B	Std. Error	Beta	B		Std. Error	
(Constant)	5.222	.853				6.119	.000
Hedonic Motivation	.065	.017	.286		.286	3.932	.000
Utilitarian Motivation	-.034	.051	-.048		-.048	-.662	.509

**(a) Dependent Variable : Cart Abandonment :** Multiple Regression Analysis was run to evaluate the degree to which the hedonic and utilitarian motivation was associated with cart abandonment frequency. Table – 10.2 Shows the multiple regression results of hedonic motivation against cart abandonment frequency hedonic motivation co-efficient was frequency. Hedonic motivation co-efficient was positive and significant having the strongest influence over the cart abandonment. This analysis demonstrated that impulsive cart abandonment frequency is quite higher under hedonic motivation, which was not associated with cart abandonment frequency was initiate to be an important predictor of cart abandonment frequency.

#### 4.3. Moderated Regression Analysis

**Table 10.3**  
**Hierarchical Regressions**

Variables	Step-1			Step-2			Step-3		
	B	t	p	B	t	p	B	t	p
Hedonic Motivation	.286	3.932	.000	.287	3.943	.000	.275	3.740	.000
Utilitarian Motivation	-.048	-.662	.509	-.052	-.708	.480	-.104	-1.386	.167
Perceived Risk				-.039	-.549	.583	-.041	-.576	.565
Hedonic*Perceived Risk							.107	1.277	.203
Utilitarian*Perceived Risk							-.218	-2.607	.010
Constant		6.119	.000		5.333	.000		5.804	.000
R <sup>2</sup>		0.077			0.078			0.111	
Adjusted R <sup>2</sup>		0.067			0.064			0.087	
F		7.797			5.279			4.608	

#### 4.4. Moderated Effects

The objective of this study is to explore the moderating effect of consumer’s perceived risk. To test the effect author ran hierarchical regression results are shown in Table - 10.33 Entering the independent variables, the moderator and the interaction terms in the multiple regression analysis using SPSS.21.

A three stage hierarchical multiple regression was conducted with cart abandonment frequency as the dependent variable. Both independent variables, Hedonic Motivation and Utilitarian Motivation was entered at first stage of the regression to control for Perceived risk .The moderating variable perceived risk was entered at second stage , Interaction variables were reported in regression statistics at the final stage.

In model -1 hedonic motivation contributed significantly to the regression model ( $F = 7.797$ ,  $p < 0.05$ ) and utilitarian motivation seems to be statistically insignificant. ( $p > 0.05$ ).

In the model -2 , author introducing the moderating variable perceived risk, The relationship between perceived risk and utilitarian motivation was not statistically significant. ( $t = -0.549$ .  $p = 0.583$ ). Although perceived risk was negatively associated with Utilitarian motivation. The results suggest that effect of perceived risk on hedonic motivation is different from its effect on utilitarian motivation.

In Model -3, it was hypothesized that perceived risk would moderate the relationship between hedonic and utilitarian motivations and cart abandonment frequency. As shown in Table – 10.3 the interaction term of mean centered utilitarian motivation and perceived risk was found to affect the utilitarian motivation relationship. However the insignificant co-efficient showed that after entering the interaction term the predictor and moderator are not significant then it assumes that complete moderation occurred.

#### 4.5. Slope Test

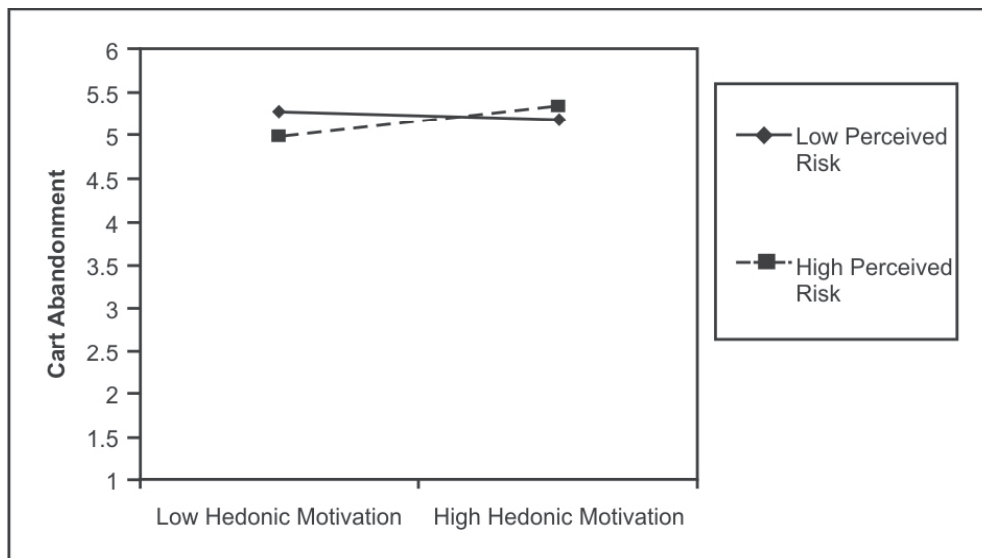


Figure 10.2

From the above figure, it is obvious that for the plotted values, the value of cart abandonment for a given value of hedonic motivation is higher at high perceived risk than it is at low perceived risk.

Increase in both Hedonic motivation and perceived risks were associated with increased values of cart abandonment, but the influence of either independent variable on cart abandonment decreased as the other independent variable increased.”

#### 4.6. Slope Test

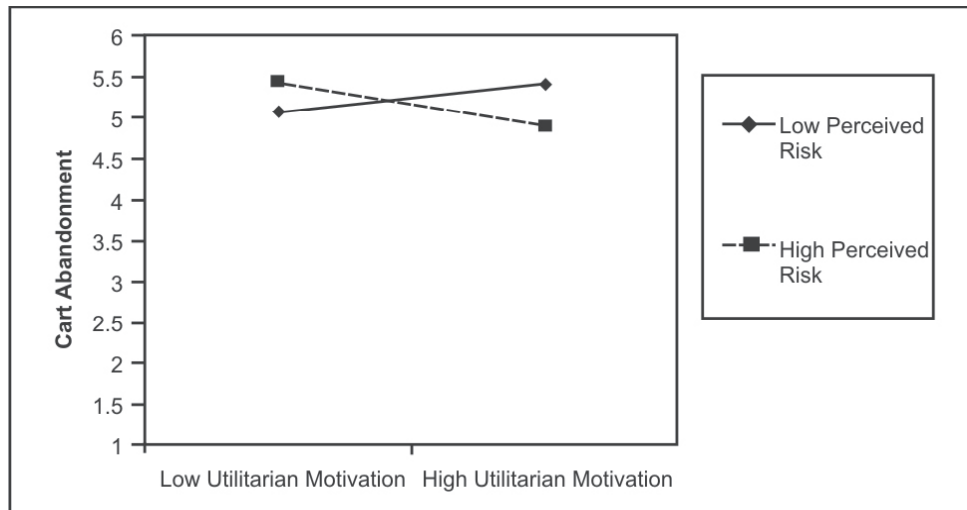


Figure 10.3

From the above figure, it is obvious that for the plotted values, the value of cart abandonment for a given value of Utilitarian motivation is higher at high perceived risk than it is at low perceived risk.

Increase in both Utilitarian motivation and perceived risks were associated with increased values of cart abandonment, but the influence of either independent variable on cart abandonment decreased as the other independent variable increased.

### 5. CONCLUSIONS & IMPLICATIONS FOR THEORY AND PRACTICE:

While the findings of this study supports most of the proposed hypotheses, there are few exclusion, First one is there is lack of significant effect of utilitarian motivation on cart abandonment. But after introducing the interaction terms the predictor and moderating variable becomes insignificant. It clearly shows that the complete moderation occurred between predictor variables and dependent variable.

Results shows that hedonic motivation and utilitarian motivation has an impact on cart abandonment with the moderating effect of perceived risk. Perceived risk is a major hindrance in the online purchase process which often leads to online shopping cart abandonment. The authors suggest the online retailers to assure customers by displaying security and privacy information in the Home page itself.

This study constitutes a preliminary effort to examine the moderating effect of perceived risk on online shopping cart abandonment and provides significant contributions for online retailers, Scholars and practitioners. Theoretically, this study proceeds with the fact by recognizing the crucial consumer motivations of online cart abandonment.

### References

Alba, J. & Lynch, J. (1997). Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces. *Journal of Marketing*. 61(3), 38-53.

- Arnold M., and Reynolds, K. (2003), "Hedonic shopping motivations," *Journal of Retailing*, 79(2), 77-95.
- Babin, B. J., Darden, W. R. & Griffin, M. (1994), Work and/or fun: measuring hedonic and utilitarian shopping value. *Journal of Consumer Research*. Vol. 20, No.4, PP. 644-56.
- Bridges, E., & Florsheim, R. (2008). Hedonic and Utilitarian Shopping Goals: The Online Experience. *Journal of Business Research*, 61, 309-314.
- Childers, T.L., Carr, C.L., Peck, J. and Carson, S. (2001), "Hedonic and utilitarian motivations for online shopping behavior", *Journal of Retailing*, Vol. 77, pp. 511-35.
- Chen, S. H., & Lee, K. P. (2008). The Role of Personality Traits and Perceived Values in Persuasion: an Elaboration Likelihood Model Perspective on Online Shopping. *Social Behavior and Personality: an international journal*, 36(10), 1379-1399.
- Chang, E.-C., & Tseng, Y.-F. (2013). Research note: E-store image, perceived value and perceived risk. *Journal of Business Research*, 66, 864–870. <http://doi.org/cgbm4r>.
- Cho, C.-H., Kang, J., & Cheon, H. J. (2006). Online shopping hesitation. *CyberPsychology & Behavior*, 9, 261–274. <http://doi.org/frvb8j>.
- Close, A. G., & Kukar-Kinney, M. (2010). Beyond buying: Motivations behind consumers' online shopping cart use. *Journal of Business Research*, 63, 986–992. <http://doi.org/bj7ptz>.
- Dowling, G. R., & Staelin, R. (1994). A model of perceived risk and intended risk-handling activity. *Journal of Consumer Research*, 21, 119–134. <http://doi.org/dccf2c>.
- Ha, S., & Stoel, L. (2009). Consumer e-shopping acceptance: Antecedents in a technology acceptance model. *Journal of Business Research*, 62, 565-557.
- Papacharissi Z., and Rubin, A.M. (2000) "Predictors of Internet Use," *Journal of Broadcasting and Electronic Media*, 44(2): 175–196.
- Park, J., Lennon, S.L. and Stoel, L. (2005), "On-line product presentation: effects on mood, perceived risk, and purchase intention", *Psychology & Marketing*, Vol. 22 No. 9, pp. 695-719.
- Rajamma, R., Paswan, A., & Hossain, M. (2009). Why do shoppers abandon shopping carts? Perceived waiting time, risk, and transaction inconvenience. *Journal of Product & Brand Management*, 18, 188–197. <http://doi.org/fn996d>.
- Rigby, D. (2011). The Future of Shopping. *Harvard Business Review*, Dec 2011. 65-76.
- Wolfinger M., and Gilly, M.C. (2001), "Shopping Online for Freedom, Control and Fun," *California Management Review*, 43(2), 34-55.