A Review of E-Commerce: The Influence of Post-Purchase Factors on Relationships between Customer Loyalty and Perceived Risk

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Introduction

The popularity of the Internet has made shopping on online common (Ming-Tsang Hsieh, 2014) and promoted the rise of several giant online retailers, such as Amazon. When many managers consider how shopping environment changed, the main factors are the low price of product and convenient web searching (Babur, Ali and Wildenbeest, 2012). However, it always has the case that the two factors that boost the promotion of online retailers only ignore the steps to reduce the risk perception of customer. Ability of a company to control its customers' perceived risk is vital to its success of company performance (Ramanathan, 2011). Low perceived risk leads Amazon to be one of the biggest online retailers. The internet giant offered everything from art supplies to zombie survival kits, its own express and prime service, payment in cash on delivery, and no fee for product's return. These make customer feel comfortable and consider Amazon convenient and reliable.

There are many types of risks in online shopping. Finding out those types of risks gives us the way to study online retail. Hofacker (1999), as mentioned in Ramanathan (2011), enumerates five risks, named time risk, security risk, brand risk, privacy risk, and vendor risk, in online shopping. Time risk equals to customer's risk of wasting valuable time in searching product and waiting for an uncertain delivery. Security risk is delineated as customer's risk of loss of inestimable information, such as credit card information and website account number. Brand risk is customer's risk of receiving specific product with poor quality, such as fake product information. Privacy risk is customer's risk that the private information is divulged to other retailers. Vendor risk is that online vendors may be undependable and deceive customer.

Obviously several factors contribute to the risk perception. On-time delivery will satisfy customer, which will decrease time risk and vendor risk. But most websites manage their financial transactions depending on Visa Checkout, Paypal, and other third-party secure websites. This will increase security risk and privacy risk (Ramanathan, 2011). As customer cannot see and touch the product before buying and receiving it, s/he will feel being defrauded in case the product is not compatible with what s/he saw in the website. This will augment the brand risk. The factors mentioned above could be classified as post-purchase factors.

Several Post-purchase factors, such as convenience of tracking order, on-time delivery and ease of customer service, play vital roles in influencing customer loyalty, mentioned in Ramanathan (2011), as Otim and Grover (2006) studied. Excellent order-tracking support let customer clearly know where the product is. On-time delivery make customer realize that the retailer is effective. Customer service support, easy return, free of charge replacement and maintenance management may give buyers a pleasant surprise when they want to exchange a product. These three factors may increase customer loyalty. The customer loyalty seems to be largely established at the stage of post-purchase. But research in this area is limited. This conceptual paper investigates relationships in the midst of post-purchase factors and customer loyalty. Propositions were also developed on how customer loyalty and perceived risk will vary, depending on post-purchase factors in e-commerce.

The literature is rich in terms of how e-commerce factors influence risk perception before purchase. Website browsing, site-map, convenient online chat and order-tracking play significant roles in fascinating the customer (Ramanathan, 2011). Credible financial transaction is also important to provide adequate privacy (Odom and Saunders, 2002). But there is little research has been done on how post-purchase factors as mentioned above influence customer loyalty and perceived risk among the existing customers of an online company. The post-purchase factors are expected to play a significant role in influencing perceived risk after purchase (Ramanathan, 2011). On-time delivery is a very important component towards customer satisfaction. Customers' dissatisfaction will increase as the item is not delivered on time or not arrive at all. At the same time, will customer loyalty influence the perceived risk after purchase? For example, late delivery will likely to dissatisfy a customer, leading to the decreasing of the customer's reliance or the repurchase rate. If multiple customers go through the same experience frequently, the company's sales risk is going to increase.

The literature review emphasizes a significant gap. The previous findings have studied post-purchase factors, perceived risk, and customer loyalty individually in detail. Also they have analyzed various types of post-purchase factors with perceived risk and studies that attempted to study whether customer loyalty has positive or negative influence on perceived risk or the two factors have reciprocal effect. But there are few studies that particularly refers to the relationship between customer loyalty and perceived risk considering post-purchase factors.

This study attempts to explore and analyze post-purchase factors, customer loyalty, and perceived risk built on the extent literature. Specifically, the objective of this paper is (1) to analyze how post-purchase factors individually impact customer loyalty and perceived risk; (2) to explore the relationships between customer loyalty and perceived risk, how customer loyalty has an impact on risk perception after purchase; and (3) to investigate how post-purchase factors such as product availability, timeliness of delivery, ease of return, and secure payment influence the relationships between customer loyalty and perceived risk.

Post-Purchase Factors in E-Commerce

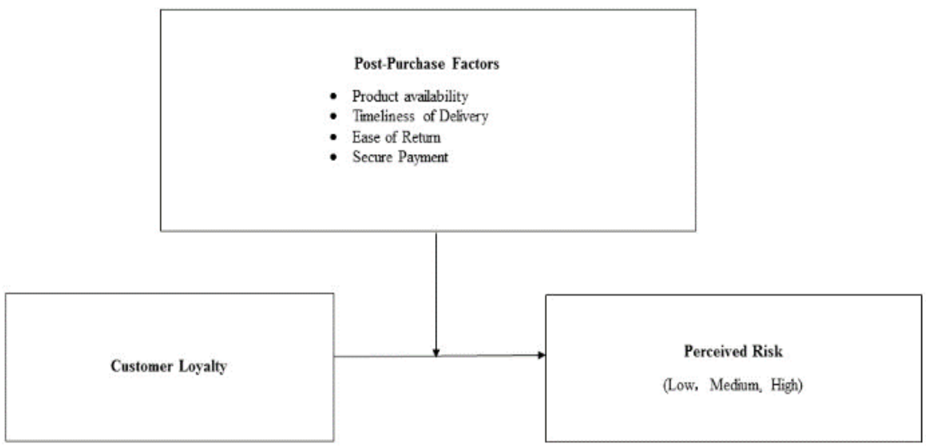
Post-purchase factors, customer loyalty, and perceived risk were often examined when researchers studied online shopping, especially in the context of low perceived risk having a positive impact on customer loyalty. Post-purchase factors are the reflection of the transaction and may influence customers' future purchase (Grewal, Iyer, and Gotlieb et al, 2007). Heim and Field (2007) identifies customer loyalty as the indicator of the possibility of customers' repurchase.

Perceived risk is described as the determining factor influencing the consideration of different signals when customers constitute their feelings towards online grocery websites (Martin and Camarero, 2008). Ramanathan (2011) explored product returns and their significant impact on customer loyalty. Gefen (2002) found that increased perceptions of risk negatively influenced customer loyalty. Furthermore, Grewal, Iyer, and Gotlieb et al (2007) studied the relationship between perceived risk and post-purchase intentions. They identified the concept of *perceived control* which was defined by Thompson (1981) as the customers' belief that they would have ways of controlling the consequences of any situation. *Perceived quality*, another concept they discussed, was the customer's assessment of excellence of the service providers (Gotlieb, Grewal, and Brown, 1994). They discussed that perceived control and the perceived quality of the retailers' service negatively influenced post-purchase perceived risk.

In this paper, a conceptual model about the relationship between post-purchase factors, customer loyalty, and perceived risk is proposed (Figure 1). This study aims to identify the relationship among the three variables. The study also supposes that the relationship between online loyalty and risk perceived by consumers is moderated by post-purchase factors, such as product availability, timeliness of delivery, ease of return, and secure payment. The rest of the paper investigates existing literature to understand and build on these three concepts better.

Post-purchase factors are the factors that are experienced by customers after they complete transactions (Ramanathan, 2011). Customers use product availability, timeliness of delivery, ease of return, and secure payment to estimate the capability of online retailers. These factors are classified as post-purchase factors (Heim and Sinha, 2001; Heim and Field, 2007). Now let's look at each of those factors below.

Figure 1: Conceptual Model of the Moderating Role of Post-Purchase Factors on the Relationship between Customer Loyalty and Perceived Risk



Product Availability

Product availability considers whether the product is available on online store at the time of search and purchase. It is considered as the factor that impacts customers' degree of participation and customers' purchase intention (Goldsmith 2002; Moutinho and Bian 2011). Customers will be delighted to purchase products when they are available. Thus many researchers maintain that product availability positively influence immediate purchase intentions. This perception is along with a common thought that the customers' degree of participation stems from product availability stated by Apslar and Sears (1968) and mentioned in Steinhart (2013). They also found that lacking product will decrease not only the purchase rate but also involvement levels. Involvement is a significant concept on which the judgment depends (Johar, 1995; Zhang and Markman, 2001; Steinhart, Mazursky, and Kamins, 2013).

Sufficient product availability will influence purchase intentions via perceived feasibility. Lacking or inadequate, product supply increases the perceived risk, as customers need to consider more factors like perceived feasibility. For example, a customer browsed an online shop to buy some products. But after completing the transaction, s/he found out that the ordered products were not currently available and in back order. Because all those factors should be "post-purchase" factors, the customer would only know whether the products s/he wanted were available after paying for her/his order. This will make him/her feel uncomfortable and unwilling to repurchase in the same online shop. The perceived risk of online retailer will increase.

Proposition 1: Frequent lack of products will likely to increase risk perception among loyal online shoppers.

Timeliness of Delivery

How do customers know whether the quality of delivery is good or bad before purchase, when they shop on a website for the first time? The concept of stimulus generalization is in play for this occasion. Steven, Osselaer and Chris (2010) found that first time online purchasers set the delivery expectations based on how good the website looked. A good website, containing beautiful site-map and convenient links of online chat and other contact information, will attract customers through good experience when they search and purchase products on the website (Ramanathan, 2011). Then, they assumed that the e-tailer will deliver equally efficiently and effectively.

Lin (2007) points out that customer will have the perception of retailers' friendliness via good website quality when they search on the website. Meanwhile the risks which are detected by customers can be reduced by online service quality assumed by the look of the website (Ming-Tsang Hsieh, 2014). Consumers always decide to purchase a product subjected to information afforded by online retailers, such as policies about return of product (Petersen and Kumar, 2015). Conversely, customers may prefer not to purchase a product if they sense higher shopping risk (Davis, Gerstner and Hagerty, 1995). Customers may set this kind of assumption based on irrelevant cue.

Customers' level of perceived risk presents opposite results due to late arrival of the product or on time delivery. Their dissatisfaction arises because of late delivery or non-arrival of the product (Ramanathan, 2011). It may result in consumer's willingness to return the goods (Bechwati and Siegal, 2005), increase their perceived risk, and cause their non-repurchase in the same site. Frequently consumers may find themselves locked in the transaction without an option of canceling it and receiving a reimbursement. Physical settlement plays a pivotal role in the last stage of electronic commerce. (Lee and Whang, 2001; Rabinovich and Bailey, 2004). However, if the delivery is on time, the post-purchase intentions will increase. The post-purchase intentions is the intentions of customers' repurchasing goods from previous vendors and of their propagation among friends (Zeithamal, Berry, and Parasuraman, 1996; Wang, Pallister, and Foxall, 2006). Repurchase intentions, equaling to customer loyalty, is a crucial factor which determines online retailers' success (Kim and Son 2009; Zhang, Fang, Wei, and Ramsey et al, 2011). On time delivery plays a pivotal role in lower perceived risk.

Reliable and efficient delivery makes customers feel comfortable and decreases perceived risk. Keeney (1999) maintains that consumer prefers perfect services. They want more product availability, shorter shipping time and assurance of physical settlement. If consumers can choose more different ways of delivery offered by vendors, they will be satisfied (Heim and Field, 2007). This means the retailers should offer flexibility of changing the delivery time for the customer. Timely delivery does not mean early delivery. Unexpected early delivery may be as unsatisfying as late delivery. For example, a customer ordered a brunch of roses for his or her mother, and s/he want the roses to arrive on Monday. But the roses reached at Saturday, when she is not at home. As the roses will stay out for one or two days, they will wilt. If the delivery does not arrive at a customer specified time or some other shipping errors occur, customers will be disappointed and not repurchase, which increase the online dealer's sales risk.

Proposition 2: Frequent failures in timely delivery will likely to increase risk perception among loyal online shoppers.

Ease of Return

Consumers are always affected by the risk they perceive after purchasing. For example, customers may obtain contradicting post-purchase information which may provoke their willingness to return goods (Bechwati and Siegal, 2005). When customers want to return a product, what they want is an easy and comfortable return process. Keeney (1999) argues that customer can benefit from convenient return processes. Sometimes retailers will offer humanized customer support such as planning, training, maintenance of the product. Based on this, consumers can also acquire profit from procedures which will give them some helpful suggestions by which they will avoid making deficient decisions like meaningless purchases and disappointing services. The exiting researches noted that consumers' risk perception is negatively affected by both vendors' capability of managing product returns to the satisfaction of the customer and the customers' overall experience with the returning processes. Then lower perceived risk will increase level of assurance for customers and decrease level of liability for retailers (Selnes, 1998); hence it will promote the probability of repurchase. This brings the following proposition:

Proposition 3: Negative experiences with return procedures will likely to increase risk perceptions among loyal online shoppers.

Secure Payment

When examining the secure payment in online retailing, process and customer trust need to be considered. The most arduous part when designing a website may be the online payment system. Keeney (1999) presents some factors, connecting to payment system, about which customers are concerned. For example, customers may hope online retailers to offer more accessible procedure of purchase, more convenient payment process, more assured credit card transaction system, and lesser fraud and errors. Though different websites use disparate technologies (e.g. Secure Sockets Layer), the purposes of these technologies are to developing secure payment processes. But these technologies require more influential computing resources to develop secure payment connections more easily (Heim, 2007). Otherwise, some websites will use third party websites such as Visa Checkout and ApplePay to perform the credit card payment. If the payment progress makes errors frequently, it will dissatisfy a customer and increase the security risk.

Customer trust, studied in detail by previous research, reduces the perceived risk. Ho and Ng (1994) delve the situation about customer risk perception of e-payment systems especially the major one, Electronic Fund Transfer (EFT) systems. Yousafzai, Pallister and Foxall (2003) developed a conceptual model of trust based on two factors, perceived security and perceived privacy. Customer trust is significantly influenced by the factors in electronic banking. Bélanger and Carter (2008) first investigated how customer trust and perceived risk influence consumers' inclination to using electronic government services. Then customer trust, interpreted as an exogenous variable, has a negative impact on customer risk perception. This variable shows the fourth proposition:

Proposition 4: Payment security issues will likely to increase risk perceptions among loyal online shoppers.

Customer Loyalty

Customer loyalty is the factor which impacts consumer's positive assessment of an e-business and brings out buyer's repeat purchasing behavior (Anderson and Srinivasan, 2003). It is the major challenge that online retailers face. Harris and Goode (2004) maintain that developing loyal customer for internet vendor becomes more arduous and more significant than that for brick and mortar. The high importance placed on online loyalty comes from the competitive online marketing and the constantly growing number of online vendors defying geographical boundaries (Rafig, Fulford and Lu, 2013). Toufaily, Line and Jean (2013) identified several variables impacting customer loyalty and classified them in five categories: product/service attributes, the customer's characteristics and perceptions, the company's characteristics, the website's characteristics, and environmental influence. Wallace, Giese and Johnson (2004) acclaimed that product/service attributes, the quality of product or service and price, have impact on customer loyalty on online shopping. Moreover, customer satisfaction, as related to the characteristics mentioned above, consequently improves customer's loyalty (Oliver, 1999; Bauer, Grether and Leach, 2002).

Research indicated that the reliability of the virtual company greatly influences customer loyalty as well (Bergeron, 2001; Parasuraman and Grewal, 2000). Consumers have *internet relationships* with e-tailors (Bergeron, 2001; Parasuraman and Grewal, 2000). The internet relationship means that website obliges to protect personal privacy, provide product information, and social interaction (Chaston and Mangles, 2001). Considering the environmental characteristics, Cheung, Chan, and Limayem (2005) argue that the structural factors play vital roles based on e-commerce environment and global issues. The dimensions of customer loyalty help to show how loyalty develops and what consequences it creates. Several studies show that customer loyalty will increase customer profitability, customer's online purchase frequency, willingness to pay more, and customer retention (Donio, Massari and Paaiante, 2006; Wang, Pallister, and Foxall, 2006; Srinivasan, Anderson and Ponnavolu, 2002; Liang, Chen, and Wang, 2008). Loyal customers have low price sensitivity and willingness for searching of alternatives (Choi et al, 2006; Srinivasan, Anderson and Ponnavolu, 2002).

The research on how customer loyalty influence perceived risk is limited. Schneider and Bowen (1999) stated that customer loyalty is related to customers' assessment of a service provider. They found that consistent policies and procedures, and improved service efficiency increased level of loyalty as well as likelihood of repurchasing. So, ensuring customer loyalty is significant. When buyers have low loyalty towards an online retailer, s/he will not repurchase any product and even s/he will engage in negative words of mouth communication about the retailer. This will increase perceived risk and eventually cause low financial performance. Among the studies, Gefen (2002) argues that customer trust has an important influence on customer loyalty, but does not show significant results in the linkage between loyalty and perceived risk. Consequently, the relationship is developed in the following proposition.

Proposition 5: Loyal online shoppers will likely to have low risk perceptions about their favorite online retailers.

Perceived Risk

Previous researches always argue that perceived risk refers to multidimensional constructs (Mitchell and Harris, 2005; Crespo, Del Bosaque, and Sanchez, 2009); and several types of perceived risk are discussed with online shopping (Bhatnagar and Ghose, 2004). Product risk means that the deficient brand or product which does not turn out as expected (Ming-Tang Hsieh and Wen-Chin Tsao, 2014). Bhatanagar, Misra, and Rao (2000) point out that customer cannot accurately assess the quality of a product before purchasing. In case of services, this statement becomes even more prominent.This makes product risk a vital factor.

Conversely, Internet can balance the information of e-commerce. It also minimizes information asymmetries (Matthew, 2013). Since the information is ever-increasing parity, the market where price, product and supply information is available to public contains minor product risk (Draper, 2012).

Time risk is used to evaluate how long it takes for a customer to receive the purchase receipt and the wasting time due to inconvenient website and purchase processes (Lim, 2003; Forsythe and Shi B, 2003; Crespo, Del Bosaque and Sanchez, 2009). Financial risk refers to monetary loss in purchase and insecure payment alternatives (Lim, 2003; Forsythe, Shannon and Gardner, 2006) in website or the third party websites.

There does not seem to have much studies about the impacts of risks after purchase. Perceived risk equals to the risk that customer perceives the dubiety and contrary situations when buying products or services (Hsieh and Tsao, 2014). Forsythe and Shi (2003) point out that perceived risk negatively influence online purchase. Previous studies show that there are two components of risk: one is uncertainty and the other is costs and consequences (Cox and Rich, 1967; Gefen, Rao and Tracitinsky, 2002; Barnes, Bauer, and Neumann et al, 2007). These components may be associated with an unwillingness to choose online purchasing (Choi and Lee, 2003). Gefen, Rao and Tracitinsky (2002) argue that there are some controversies about definition of perceived risk. Some scholars treat risk as positive and negative capricious consequences of decisions, and others think that risk only refers to negative outcomes of decisions. Some procedures, offered by online vendors, for secure payment and post-purchase assessment may serve as negative factor relating to perceived risk. These procedures can provide help to customers to minimize dubiety when shopping on the website (En-Chi Chang and Ya-Feng Tsang, 2013).

There, however, exists many researches on how perceived risk influences customer loyalty. Hsieh and Tsao (2014) have noticed that electronic service can minimize customers' risk of perception. This can also increase customer's loyalty. But this study just takes only website quality into consideration. Another study performed by Ramanathan (2011) explores how perceived risk, united with product characteristics, impacts the linkage between customer loyalty and product return policy. But it considers only product return procedures or refunds and takes the risk to be a variable. Post-purchase perceived risk is studied by Grewal, Iyer, and Gotlieb, et al. (2007). They show the definition of level theory, defined by Helson (1964) and mentioned in Grewal, Iyer, and Gotlieb, et al (2007), that perception of environmental stimuli can influence the sense of other motivators because of context's determining internal standard which evaluates characteristics. The research also shows that the model stemming from level theory is particularly appropriate for evaluating how perceived risk and behavioral intentions, which is the perceived probability of participating a given behavior, influence an online transaction. However, it does not take the customer loyalty into account.

Future Research Avenues

This research proposition is going to fill the gap and takes customer loyalty, perceived risk, and post-purchase factors into consideration. The literature review also provides studies on the relationship between post-purchase factors and perceived risk, and between perceived risk and customer loyalty. However, to the best knowledge of authors, there are few studies that particularly analyze the relationship between customer loyalty and perceived risk considering post-purchase factors, such as product availability, timeliness of delivery, ease of return, and secure payment. This paper explores and analyzes the relationship and proposes a conceptual model.

There are multiple opportunities to empirically investigate the proposed relationships, one of which may be using existing data on online ratings. It would collect data from rating websites such as www.bizrate.com and www.epubliceye.com, and identify the four post-purchase factors as moderation in influencing customer loyalty and perceived risk. Then, the study would analyze the relationship based on the influence of post-purchase factors on both customer loyalty and perceived risk.

Another future study may explore the relationship between customer loyalty and perceived risk considering pre-purchase factors, such as website browsing experience, site map, customer support, and product information and price. The influence of pre-purchase factors would be compared with that of post-purchase factors to identify which type of factors would have greater impact on the linkage between customer loyalty and risk of perception.

In a different study, an experimental design based on scenarios may help to differentiate post purchase factors and risk perceptions of loyal and non-loyal customers of a specific product or a service. In each scenario, a different post purchase factor can be investigated. Then moderating role of factors can be studied individually and collectively.

Once the relationship between customer loyalty and perceived risk is clarified, other consequence and antecedent variables can be added. For example, as Wu and Ke (2015) stated perceived cost and enjoyment had to be explored in the future study together with perceived risk, individual playfulness, and financial risk on online shopping settings. Rafig, Fulford and Lu (2013) also mentioned that involvement and relationship proneness have to be studied when investigating customer loyalty.

In addition, still another future study may add other factors to enhance the proposed conceptual model such as customer trust. A new model would analyze how customer trust influences customer loyalty, and examine the correlations among customer trust, loyalty and perceived risk in the presence of post purchase factors. Finally, future explorations may consider different contexts, such as the influence of regions, cultures/subcultures or generations (e.g. Baby Boomers, Generation X, the Millennials, and Generation Z).

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Keywords: post-purchase factors; customer loyalty; perceived risk; E-commerce

Relevance to Marketing Educators, Researchers, and Practitioners: This paper aims to explore how post-purchase factors individually affect customer loyalty and perceived risk; to analyze how customer loyalty has an impact on risk perception after purchase; and to investigate how the relationships between customer loyalty and perceived risk are influenced by post-purchase factors such as product availability, timeliness of delivery, ease of return, and secure payment.

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