

# Factors influencing customers' choices of online merchants

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# Factors influencing customers' choices of online merchants

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## **ABSTRACT**

### **Objectives of the Study**

The aim of the research is to define and assess the importance of the factors that influence online shoppers' choices of merchants. The previous literature mainly focuses on loyalty of users to websites and online purchase decision-making process within one website. No literature studies the situation under which the customer has already decided the item to purchase and needs to compare different merchants selling the same item. Since this situation is very common in online shopping, it is quite valuable to find out the dominant factors that make customers choose one merchant over the others.

### **Academic background and methodology**

We will review previous literature relevant to consumer's preference to online vendor. We examine the web experience and e-loyalty theories and define the influencing factors. Then we analyze the user feedback from a price comparison tool of Chinese online vendors. We then collect more factors that influence consumers choice. To assess the importance of the factors, we design a questionnaire survey to collect consumers' opinions of the importance of each factor. We let respondents to rate from 1 to 7 regarding how important is each factor. The average score of each factor represents the importance of it.

### **Findings and conclusions**

After reviewing the literature and examining the user feedback, we get the 7 important influencing factors including reputation and trust, web quality, stickiness to website, order fulfillment performance, price, sales volume, reviews and ratings. We then collect and analyze the results of the questionnaire survey. The importance of each factor orders in the following way: reputation and trust, order fulfillment performance, ratings and reviews, web quality, sales volume, stickiness factor. However, the reputation factor and price factor are quite close and therefore can be considered as at the same level. Meanwhile, order fulfillment performance factor and ratings and reviews factor are also at the same level.

### **Keywords**

Online shopping, online consumer behavior, purchase decision making, multi-vendor

## **ACKNOWLEDGEMENTS**

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# **1. INTRODUCTION**

## **1.1. Background for the research**

Electronic commerce (E-commerce) has significantly changed the business world and consumers shopping and buying behavior. Consumers have got familiar and learn to adapt to the ever-changing e-commerce market place. Similar to any other innovation, consumers learn how to take advantage and maximize their own benefits in the new business section and the consumer behavior shaped (Zhaobin Chen, 2005). Besides, technology is updating everyday, and enables better user experience, more interactive functions of websites. Development of Internet infrastructure such as telecommunication bandwidth give access to more consumers to online shopping. Technical limitations may include E-commerce system, system security, reliability, telecommunication bandwidth; and non-technical limitations include issues such as trust, user resistance, and privacy. All these limitations are conquered day by day. For many consumers, shopping and buying online have become part of their daily lives. As more and more organizations entering this business, consumers have more choices of online shopping sites. To buy a certain product, a consumer may find many online vendors selling it. The consumer needs to make a decision to purchase at one of the websites while they sell identical products. What factors can explain the differences in online buyers' choice-making among Internet users? Our purpose in this study is to identify what factors determine that users choose particular websites over the others.

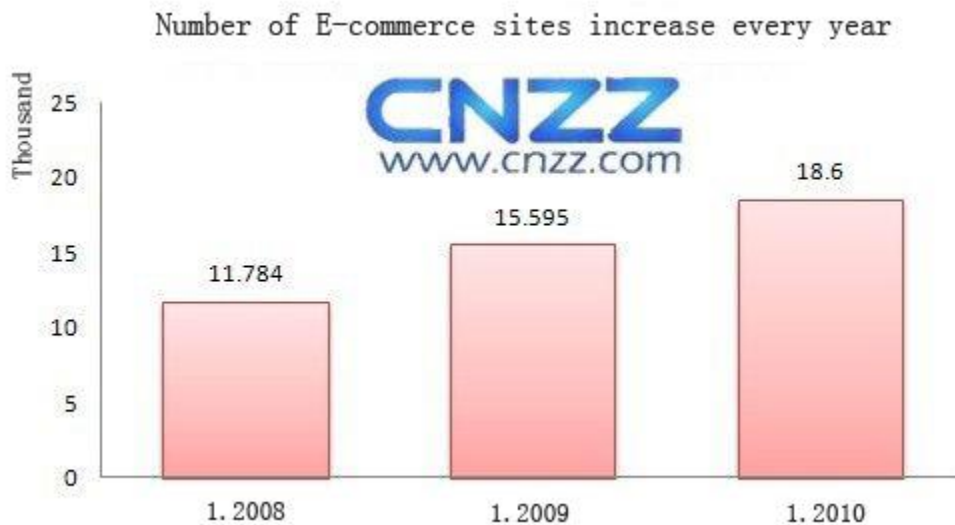
As more and more online stores emerged, people have quite many options of purchasing a particular product. In Europe, there are many mature online stores. People even need to choose among several options of price comparison tools. While most people tend to choose most popular sites, some people with shopping savvy prefer to small vendors for better deals. In the huge emerging market China, many local B2C sites appeared in recent years, competing with the dominant C2C platform as well as international companies such as Amazon and eBay. Many of



the new companies want to take a share of the market by providing fast delivery and cheaper price. For consumers, this is obviously good news since they have more options and are able to purchase products with cheaper price and more convenience. However, the decision-making of consumers becomes harder as so many options and factors should be considered.

Understanding consumers' decision-making behaviour can significantly help online stores and e-commerce search engines to improve service, readjust operation strategies in order to satisfy consumers' needs better and thus stimulate sales volume or site traffic.

**Figure 1: Number of E-commerce sites in China**



Source: (CNZZ, 2011)

## 1.2. Previous research

The first step to conduct this research is to decide which major factors are taken into consideration by consumers during the process of selecting online vendors. The previous literature mainly focuses on user behaviour and decision making influencers within one website or e-loyalty of users to particular websites. The literature primarily targets on finding out the

factors that increase users loyalty to e-commerce websites such as vendor reliability and website usability, or the factors that influence users purchase decision making such as product reviews and recommendations.

### **1.3. Goals of the research**

Consumers purchase attempts differ from case to case. Sometimes consumers simply browse on website to explore items while sometimes they are already very clear about what item to buy. For the situation that consumers searching for target products on a particular online shopping site, the previous literature matches it quite well. However, it is also quite common nowadays that the consumer has already decided to purchase particular products and has to choose one website over others to buy the product. In this case, the loyalty to one website may battle against lower price or larger sales volume during the consumer's decision making process. The consumer may switch to a new website from his/her familiar websites due to price and other factors. The consumer may also insists to buy the product on the familiar websites even though there are cheaper options. Therefore, it would be very interesting and useful to find out the factors and the importance of the factors that influence consumers choices under such a situation.

However, the previous studies that focus on loyalty and buying behaviour factors are helpful in the topic of this research since the factors that influence consumers loyalty can also be the factors the influence consumers' choices of online shopping sites. And the factors influencing consumers' choices of online vendors also include the attributes related to the particular products such as the products' price and sales volume as well as the websites' attributes. E-commerce/Internet companies are constantly conducting research about consumer behavior and user requirements in order to design service to satisfy users' needs better and thus gain more loyal users. Understanding consumer's decision making process of selecting online shopping sites can give operational suggestions to e-commerce companies as well as hints for e-commerce related products to deliver more innovative services.

#### **1.4. Structure of the research**

The study will start with literature review on online consumer behavior, e-loyalty, website ethics reaching from 2004 to 2012. The research defines the key factors that influence consumers' preferences to websites, and studies online consumer behavior and purchase decision making process.

Next, the study add more factors that influence consumer choice of online shopping sites based on analysis of feedback from users of a e-commerce price comparison tool. After defining all the factors to be studied, the research then assess the importance of those factors.

To assess the importance of each factor and comprehend the degree of influence of each factor to the consumers, the study uses a questionnaire survey to collect data from online shoppers. After analyzing the data of the survey, the study defines the importance of each factor regarding the influence on consumer choice of online shopping sites.

Finally, the thesis proposes practical suggestions that relevant stakeholders such as online shopping sites and shopping assisting tools can take advantage of.

## **2. LITERATURE REVIEW**

The factors that influence consumer's choice studied in this thesis can be divided into two categories: factors related to the shopping sites and factors related to the item to be purchased. Consumer make decision based on both item factors such as price and sales volume, and his/her preferences to the shopping sites. The literature review focuses on consumers' preferences to online vendors.

The literature review covers research done in online consumer behavior, e-loyalty, website ethics which are the major concepts related to consumer preference to online vendors reaching from 2000 to 2012. It first reviews studies about online consumer behavior influencers. And then it moves to previous studies of e-loyalty as well as website ethics. All these features together can decide consumer preference to a certain shopping website itself. However, when consumer selects online vendor for a particular purchase, he/she also needs to consider the attributes of the particular product sold on a website. There are overlapped factors within the different theories. Then this thesis will summarize the factors found into several categories.

### **2.1. Web experience**

Most researchers and industry experts agree that demographic, social, economic, cultural, psychological and certain individual factors, play significant role in shaping consumer buying behavior and decision making process, and is out of the range that the business players can take under control. (Czinkota et al., 2000; Czinkota and Kotabe; 2001; Solomon and Stuart, 2003). Even though the business can hardly make any difference to those factors, they nevertheless, can invest more on other factors taking advantage of marketing tools, to influence consumer's purchase decision making process. The concept of marketing mix refers to powerful marketing tool which is formed of product, price, place and promotion, also known as 4Ps. (Borden, 1964;

McCarthy, 1964). Then in 1986, two more elements, political power and public relations were added to the 4Ps theory, extending marketing mix to 6Ps (Philip Kotler, 1986).

However, when shopping switches to online platform, the 4Ps may not be applied to anymore. Some researchers and practitioners have identified the “online shopping experience” or “virtual experience” as a crucial e-commerce marketing issue. Tamimi et al. (2003) defined online shopping experience as four continuous steps of the purchase on Internet across the different stages. From (Cho and Park, 2001), online consumer is different from traditional customer visiting a physical store since the consumer is also an Internet user. This fact brings more complexity to online shopping experience. The web experience can be described as the total perceptions and impressions of the online shopping firm based on the consumer’s experience interacting with the marketing elements on the website. Therefore, the business practitioners have the possibility to influence the consumer’s behavior and purchase decision making process, controlling and enhancing certain elements of the online shopping website (Constantinides, 2002).

Efthymios Constantinides (2004) conducted a research on the controllable factors of web experience on the online buying decision making process. In his research, results of 48 selected articles related to web experience are studied. The research identifies the controllable factors as influencing online buying behavior and groups them into three main categories and five sub-categories. And each category includes several of the factors. The categories are functionality factors, psychological factors and content factors. The functionality factors can be divided into usability and interactivity factors. The psychological factors can be interpreted as the trust of consumers to the particular website. And the content factors are divided into two sub categories which are aesthetics and marketing mix.

The table below shows building blocks of web experience and the categories.

**Table 1: Main building blocks of Web experience and their sub-categories**

Usability	Functionality factors		Content factors	
	Interactivity	Psychological factors	Aesthetics	Marketing mix
Convenience	Customer service/after sales	Trust	Design	Communication
Site navigation	Interaction with company personnel	Transaction security	Presentation quality	Product
Information architecture	Customization	Customer data misuse	Design elements	Fulfillment
Ordering/payment process	Network effects	Customer data safety	Style/atmosphere	Price
Search facilities and process		Uncertainty reducing elements		Promotion
Site speed		Guarantees/return policies		Characteristics
Findability/accessibility				

Source: (Efthymios Constantinides 2004)

The author reviews the relevant literature related to each of the building blocks and analyzes the number of references to each of them. According to the study, usability and trust are the issues more frequently found as influencing factors of online consumers' behavior. However, there's no clear implications of the importance of each of these factors. The factors should be taken into consideration as a complete group that influences the user experience of certain shopping websites.

### **2.1.1 Functionality factors**

Usability and interactivity are frequently referred to in the previous studies as very important to the user experience and thus influence the overall performance of the website. Nowadays most of the Internet companies set up user experience department and user experience designer becomes a popular emerging profession, as people start to realize that user experience is a key factor of the success and failure of the companies. Confusing information architecture or poor designed interface can directly make people switch to competitors' services, as switching cost for online consumers is extremely low.

Usability-Nah and Davis (2002) define Web usability as “ the ability to find one's way around the Web, to locate desired information, to know what to do next, and, very importantly, to do so with minimal effort. The elements of usability include (1)convenience: the ability of the shopping website to enable consumers to perform tasks on the site smoothly, for example,

browsing items and make payment online with minimum efforts. (2)Information architecture and navigation: online users want to reach the useful information easily, via site navigation or search engine. Poor designed navigation and information architecture can make users lose directions and unable to find information easily and thus give poor impressions to users. Online consumers are searching for items they are interested. If the findability of the site is not perfect, the consumers may overlook some items which may lead to potential purchase. (3)Findability and accessibility: a website should be search engine friendly so that consumers could find the site or the items sold on the site. Websites should also be accessible to different types of browsers. However, this factor is not applicable to this research topic since the situation being studied here is that consumers choose one website over others. The websites are only considered when consumers can access them. (4)Site speed: websites with slow loading and responds lose users all the time as online users are not so patient and switching cost is low. The consumers could close the website and switch to other sites easily after several seconds of waiting. (5)Ordering/payment process: consumers expect online shopping to be more efficient than traditional shopping. If the website can not make purchase process smooth, it will lose consumers for sure.

Interactivity-as technology proceeds fast, e-commerce websites enable more and more interactions within the sites. The Constantinides' study (2004) divides interactivity in two categories as interactivity with the online vendor and interactivity with other web users. To be more specific, they may include customer service after sales, interaction with the online firm's personnel, customization, as well as network effects. Nowadays, interactivity is quite common on e-commerce sites, for example, consumers can consult about the items online or post reviews of items. Interactivity can definitely improve user stickiness for a website and assist consumers' purchase.

### **2.1.2 Psychological factors**

Psychological factor: online trust-Online trust is one of the factors that researchers regard as key influencing factor to online vendors success or failure. And it's also one of the biggest issues that consumers are concerned about online shopping. Harris Interactive (2001) stated in a study that

more than 70 percent of the Internet service users in the US have serious anxiety about their personal information safety, online transaction security and misuse of consumer data by Internet firm. Besides, there are other serious concerns such as hacking, online fraud, spam, online scams and so forth, as people hear about relevant news often. All these elements may increase mistrust in online environment. This is also similar all over the world. The elements of the online trust can be divided into 5 categories. (1)Transaction security and customer data safety are principal concerns of online customers purchasing products or services online. Financial loss is the primary concern for most online consumers. Hacking, Trojan and exposure of personal information would make consumers leave the website forever. (2)Clear ordering, payment and refunding procedures as well as concrete customer policies, good communication and strict security can provide more confidence for consumers in online shopping (Efthymios Constantinides 2004). (3)Customer data abuse: Another concern of many consumers is whether their personal data is used by online firms against their willingness. Some online firms use consumers' data for commercial purposes, sell the data to third parties, or use the data for promotions without informing the consumers. These activities usually annoy consumers and lead to poor website image. (4)Guarantees and return policies: guarantees of the products can reduce uncertainty and hesitation of consumers and gain trust for the online firm. Clear return policies and smooth return procedure can give consumers more confidence to make purchase on the site, and it is also a great way to make up for dissatisfying purchase and keep consumers coming later. (5)Uncertainty reducing elements: The tools that can reduce uncertainty include "frequently asked questions"(FAQs) and complete agreements and policies. Consumers should be able to access this kind of information so that they may gain more confidence when making purchase on the site. All of the above elements are crucial to online trust and the psychological relationship between a shopping site and consumers. The online trust can significantly affect consumers behavior and usually directly relate to purchase decision. However, trust is not that steady and is affected easily. In online circumstances, it is even harder to build trust between consumers and firms, and rebuilding trust can be extremely challenging. Therefore, maintaining trust and managing it is a crucial issue for online shopping firms.

### **2.1.3 Content factors**

*Content elements*-The content factors are divided into two categories: *aesthetics* and *marketing*



*mix*. Special attention must be paid to aesthetics, not only because aesthetic elements are often important indicators of online vendor quality (Vrechopoulos et al., 2000) but also form the main clue of vendor and Web site credibility for the majority of Web users (Fogg et al., 2002).

For *aesthetics*, there are several elements that matter. Design and style/atmosphere of the website are very important for the whole user experience of online shopping site. The interface design is directly related to consumers. A poor designed interface affects consumers' mood during shopping process. Besides, if the interface design is poor and rough, the consumers tend to believe that the online firm does not have the competence to hire professional designers and thus question the credibility of the vendor. The colors and page layout as well as domain name can all influence users' attitudes towards the website. According to Constantinides (2004), design elements are frequently mentioned in previous literature as crucial factors influencing web experience. As mobile shopping is getting popular now, the aesthetics of mobile shopping apps are as important as PC websites.

Some researchers have also focused on *Marketing mix* as having considerable impact on user behaviour. *Communication*: as online consumers can not physically contact the items before making purchase decisions, proactive communication of the online vendor can help consumers gain more information and thus reduce uncertainty. *Logistics*: the purchase fulfillment is one of the most important issues that consumers are concerned about. For most products that have physical form, the final deliver has to delay as the shipment always takes time. And deliver time and deliver service quality can influence consumers' overall experience of the purchase as well as the item itself. Fast delivery, flexible delivery options and convenient order tracking are important factors influencing website's image. *Product elements affecting the Web experience are the online brands and product assortment, product features and product presentation* (Constantinides 2004). Product presentation can provide more details of the item to consumers so that they can make better purchase decisions. Effective and more interactive way of product presentation can considerably improve user experience. According to the researchers, the marketing mix mentioned before are important factors to the web experience. *Price*: in previous literature, the price factor means the overall price level of a website. Website with lower price level and more discounted items attract more consumers to frequently visit. However, in this

thesis, we aim to study how consumers choose one website to purchase a particular item over other websites, the price level of the website is not as important as the price of the particular item itself since the latter one directly affects consumers' decision making. *Promotion*: free extra services such as free delivery, sales promotions and incentive programs can also enhance web experience according to the literature.

To sum up the web experience factor, functionality factors, psychological factors and content factors are three major parts that influence consumer behaviour on shopping websites. Web experience is a factor that influence a consumer's choice of online vendor to purchase a particular item.

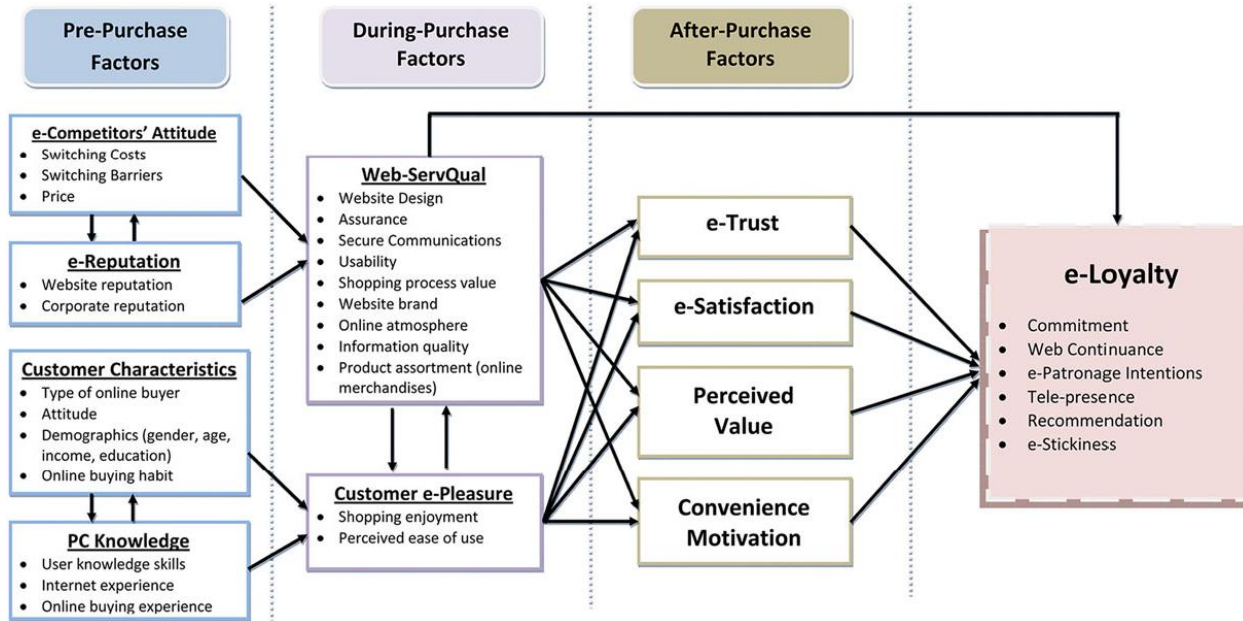
## **2.2. E-loyalty**

Brand loyalty has been a popular topic in business world for very long time. For e-commerce and Internet firms, they have the same motivation to build customer loyalty as traditional business, since they also want to attract and maintain customers using the powerful brand image and make long-term profits. Nowadays, the notion of brand loyalty has been extended to include online loyalty (also known as e-loyalty or website loyalty). The online shopping world has totally changed the relationship between customers and retailers. The minimum cost to a customer to switch brands (compared to the high costs for companies to acquire new e-customers) makes the motivation for online retailers to create a loyal customer base, as well as to monitor the profitability of each segment in order to avoid unprofitable customer relationships during the initial years of online operation. Moreover, Reichheld et al. and Day have indicated that the notion of e-loyalty is the most important factor affecting online business performance. Therefore, it is also a key factor for consumers to choose online vendors. E-loyalty is "the customer's favorable attitude towards an electronic business, resulting in repeat purchasing behaviour" (Anderson, and Srinivasan, 2003).

For e-loyalty, all studies included in the present review have demonstrated some association with pre-purchase, during-purchase, and after-purchase factors. Pre-purchase factors are considered as initial factors that are to some degree interrelated and directly affect during-purchase factors, but

can't directly affect loyalty. During-purchase factors are in general related attitudinal concepts that can affect loyalty both and through after-purchase factors. Finally, after-purchase factors are behavioral and attitudinal concepts that are directly related to e-loyalty, and their alteration can have pervasive effects on e-loyalty (Valvi and Fragkos, 2012).

**Figure 2: Conceptual Framework of antecedents leading to e-loyalty**



Source: (Valvi and Fragkos, 2012)

### 2.2.1 Pre-purchase factors

Before consumers' purchase, there are factors affecting their loyalty to a particular website. The factors include general external factors such as competitors' attitudes and reputations. Secondly, there are also customers' specific and unchangeable characteristics, such as the consumer characteristics factors and PC knowledge factors. Valvi and Fragkos (2012) categorized pre-purchase factors into four categories which are e-competitors' attitudes, e-reputation, customer characteristics and customer PC knowledge, covering most major factors. The third and fourth categories can actually be combined into one since PC knowledge is part of customer attributes.

Website ethics is very important to consumer's evaluation of the vendor before purchase, reducing anxiety and building trust, so I add it to the pre-purchase category.

#### *E-competitors' attitudes:*

For consumer to make a purchase decision, the competitors of the target vendor are crucial factors to support decision making in both traditional industry and online shopping market. The factors included are switching costs, switching barriers, and price variations and competitors' knowledge. Positive direct association between switching costs, switching barriers to e-loyalty has been found by researchers Fuentes-Blasco (et al) and Yen (2010).

Price is a factor that influences consumers' loyalty in an complex way, though many research discussed the price as a possible determinant of e-loyalty. For example, Jiang and Rosenbloom (2005) examined the role of price on customer retention and found a positive direct, but weak, association between favorable price perceptions and customer intention to return. There are also other research that considered lower price to have positive association with e-loyalty. However, the study by Wang et al. (2009) on 491 Chinese online customers uncovered a non-significant negative association of e-loyalty with price, contradicting the previous findings. The conclusion was explained as a consequence of the premature stage of Chinese B2C e-commerce market, since most consumers give more importance to service quality than price.

#### *E-reputation:*

Reputation is generally regarded as "the current assessment of a firm's desirability, as seen by some external person or group of people" (Valvi and Fragkos, 2012). E-reputation is very relevant to e-competitors' attitudes, as it is very crucial to gain competitive advantages for a online vendor. Many customers have difficulty remembering even prominent websites and are reluctant to pay for products from online retailers they know little about. Thus, a strong corporate reputation can be a major asset to online retailers (Caruana, A. and Ewing, M. T. 2010). In their research, they confirmed the hypothesis by noting a strong positive association leading to e-loyalty from their own survey. Yang and Jing (2009) suggest that reputation leads to loyalty

through the development of trust. This indicates that reputation factor is corresponding to the “psychological factor-trust” factor mentioned previously in web experience theory.

#### *Website ethics:*

Ethics of an online vendor also plays significant role affecting consumers’ trust. Ethics factor is different from the factors above, since ethics can be also reflected by the vendor’s behavior Ming et al. (2009) analyzed total of 238 valid responses of the questionnaire and resulted in conclusion that the ethical performance of a particular online store is considerably important to consumer’s impression of it. Besides, the ethical performance of an online store can help build the trust of consumers in the shopping site. The study reproved that trusting belief can lead to trusting intention, furthermore, trusting belief affects the relationship between the online store’s ethical performance and consumer’s trusting intention. Next, consumer’s demographic characteristics may affect the relationship between online store’s ethical performance and consumer’s perception. Among the factors, education is the only one that considered as significant, though religion and gender are also quite important influencing factors (Ming et al., 2009). Website ethics factor has overlapped part with both e-trust factor and e-reputation factor. Ethical problems may make consumers concerned about shopping safety, and also result in poor reputation of the shopping site.

#### *Customer characteristics:*

Demographics of the online consumers include the type of online buyer and personal attitude, online buying habits, and general demographic characteristics, such as gender, age, income, and education level. Kim and Kim (2004) examined the effect of certain demographic variables (gender, age, income, education, and number of children) on online purchase intentions and showed that gender, income, and number of children had significant direct effects, while education had an indirect effect. Computer skills have also been a frequently examined factor. As online shopping, especially choosing online vendor among many options requires certain amount of Internet know-how and computer skills, PC knowledge is very important demographic factor of online consumers. Computer literacy is defined as the ability to use and Internet-connected

computer and Internet applications to accomplish practical tasks (Dinev and Hart, 2005).

Zhang et al. (2006) investigated the factors that influence e-service satisfaction by using a sample of 704 university students. Their results indicated that a user's computer skills and previous Internet experiences can directly affect the user's intention to use e-service. In addition, Lee et al. (2000) conducted a research examining the relationship between computer self-efficiency and computer anxiety and repurchase intention in a sample 274 online buyers. The results of this study showed that the influence of website information satisfaction on efficiency is much bigger for people with low computer self-efficiency than for those on the contrary side.

Hairong et al. (1999) have gained findings of the effect of shopping orientations on consumer's online shopping behavior and thus had some implications. One of the conclusions indicates that online buyers are not, as previously regarded as, more price sensitive than consumers who never shop online. Many people believe that using online shopping search engine to compare price is very convenient and attractive to price sensitive consumers, however, there is still no satisfactorily efficient search engine can compare price throughout Internet. Price comparison is still quite consuming online and the price differences are not that large. Nowadays, online shopping firms gain competitive advantages from differentiating service and products rather than just lowering price.

### **2.2.2 During-purchase factors**

During purchase process, consumers complete the tasks such as putting item into cart, filling up shipping form and making payment on the website. In this steps, consumers purely interact with the website and the web experience is the major factor that influences their satisfaction. In E-loyalty literature, the during-purchase factors have significant overlap with the previously mentioned web experience theory, nevertheless, also have some different factors studied. The during-purchase factors can be divided into web quality and customer e-pleasure. Web quality includes website design, assurance, secure communications, usability, shipping process value, website brand, online atmosphere, information quality and product assortment. Customer e-pleasure category includes shopping enjoyment and perceived ease of use (Valvi and Fragkos,

2012).

#### *Web quality:*

Web quality can be defined as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery of products and service (Zeithaml et al., 2002). Semeijn et al. (2005) conducted a survey of 150 online consumers, and found a direct association between assurance and loyalty. Besides, there are also researchers found indirect association between web atmosphere and online purchase intentions. Thus, web quality can influence loyalty directly or indirectly with other factors.

#### *Customer e-pleasure:*

Pleasure is thought to be a feeling of enjoyment and entertainment, contrasted with things done out of necessity (Russell, 2003). For e-commerce, customer e-pleasure includes shopping enjoyment and perceived ease of use, concepts linked together with their common roots in enjoyment and lack of uneasiness (Chiu, 2009). These attitudes and emotions are closely related to service quality as a during-purchase factor, because if customers' expectations for quality are met and surpassed, an immediate reaction of pleasure occurs during the purchase process (Cyr et al., 2009). Chiu et al. (2009) conduct a research and reach a conclusion that perceived ease of use, perceived usefulness, and enjoyment are significant and positive indicators of consumers' repurchase intentions. Therefore, e-pleasure as an emotional factor is very important one that forms consumers' loyalty towards a website. This factor also indicates that the previous web experience factors are corresponding to emotional factors that result in consumers' satisfaction of a particular shopping site.

### **2.2.3 After-purchase factors**

After-purchase factors primarily include the perceptions and satisfaction level following the purchase of a certain item from the online vendor. These involve trust, satisfaction, perceived value and convenience motivation. This part is a very important supplement to the web

experience theory since the previous mentioned theory focuses on the process of interacting with the website. But the after-purchase perceptions, also interpreted as purchase experiences are also essential for buyers' choice of online vendor. After-purchase factors can be divided into several categories which are e-satisfaction, e-trust, perceived value, convenience motivation and order fulfillment (Valvi and Fragkos, 2012).

#### *E-satisfaction:*

Satisfaction is considered to be the most discussed factor in the literature that leads to e-loyalty. Satisfaction is defined as “the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with a consumer’s prior feeling about the customer experience” (Oliver, 2010). To extend this definition, e-satisfaction is the psychological state with respect to the online purchasing experience from an online vendor. Thus, the e-satisfaction from previous purchase experience from a particular online vendor can influence consumer e-loyalty towards this vendor and thus influence the consumer’s choice of vendor during the next purchase decision making process.

The positive relationship between satisfaction and e-loyalty has been investigated by a large number of studies. Almost all of these studies found a significant positive link between loyalty and satisfaction, which is frequently very strong. A frequent finding is that satisfaction is positively related to loyalty, and the inertia, convenience motivation, and purchase size may be the moderators of this relationship. These findings have little differences in different regions and cultures (Valvi and Fragkos, 2012).

The e-satisfaction is the overall emotional perception of the purchase rather than the perception of the web experience itself. Thus the e-satisfaction factor is a critical one to supplement the web experience theory which focus more on the shopping website’s attributes.

#### *E-trust:*

Trust is another significant factor influencing a consumer’s intention to purchase or repurchase



from a particular online vendor. It overlaps with the “psychological factor-trust” in web experience. However, in e-loyalty theory, researchers summarize the factors of e-trust from slightly different perspectives. Many e-commerce studies have already shown a positive association between e-trust and e-loyalty. For example, Lee et al. (2000) conducted a study of 289 online consumers and identified the key design factors for customer loyalty, and they reached a conclusion that trust had strong impact on customer loyalty. There are many other researchers had similar findings which strongly support the positive association between trust and e-loyalty.

However, some researchers have found slight or even no association between trust and loyalty. The reasons for this lack of association could be the different approaches used regarding trust, as many consider trust to be the credibility of services or reputation or even whether a customer trusts the corporation in general. Also, the customer’s experience with online shopping affects the level of trust, illustrating that trust is a complex concept and demands caution when being studying (Valvi and Fragkos, 2012). It is possible that demographics and other elements influence that association between trust and loyalty. But the majority of research and empirical experience of consumers’ behaviour indicate the positive association between e-trust and e-loyalty.

#### *Perceived value:*

In the marketing literature, the notion of perceived value has been extensively examined as an antecedent and mediator of e-loyalty. Perceived value has been examined through similar concepts such as perceived usefulness, benefits, and usability (Valvi and Fragkos, 2012). Perceived value contributes to e-loyalty towards an online vendor by reducing the consumer’s need to seek for alternative vendors. The consumer who perceives a higher value from the purchase from an online vendor has less motivation to seek for another vendor for the next purchase. In contrast, when the consumer feels that he/her is not getting the best value for the money paid, he/she will begin searching for alternatives, and thus the e-loyalty of the consumer declines significantly. Like e-trust, perceived value also is considered to have positive association with e-loyalty by many researchers in their studies. After analyzing a sample of 180

e-service consumers, Luarn and Lin (2003) found that perceived value is associated with e-loyalty both positively and directly. Besides, no literature is found to indicate that the association is not existing. Therefore, perceived value of the purchase from a vendor can influence a consumer's next purchase decision towards the vendor.

*Convenience motivation:*

It is difficult to give concept to convenience motivation as it depends highly on customers' motivations, which can be very personal. Different consumers may define convenience in different ways. Some define convenience as easiness to gather information while others define it as shipment flexibility. However, many studies have proven a positive association between convenience motivation and e-loyalty, in either direct or indirect ways. Wang et al. (2009) measured the dimension of convenience in their research using a certain model, and reached conclusion that convenience is directly and positively associated with loyalty. They suggested that retailers can build competitive edge from customization and contact interactivity in order to improve customers' convenience and satisfaction, which will turn new users into repetitive and loyal customers.

*Order fulfillment:*

Order fulfillment is another major one of the after-purchase factors. It includes options of shipment, delivery time and flexibility etc. From empirical experience, order fulfillment is very important to overall purchase satisfaction and thus to e-loyalty, since poor fulfillment like late delivery often lower consumers' satisfaction significantly.

Order fulfillment factors, especially on-time delivery, are dominant influencing factors to consumer satisfaction and perceptions. The importance of the other factors related to online shopping sites has changed around 2004 since certain differences are found (Ruby and Miao, 2010). The authors also suggest that online shopping firms should bring order fulfillment factors to strategic level. To compete with other online stores, an e-commerce firm can copy factors such as "shipping options" relatively easily, however, it is hard to copy attributes like "on-time

delivery”. And this indicated that no matter how innovative and fancy a website is, order fulfillment and consumer support performance can not be compensated by other means.

### 2.3. Re-sort web experience and e-loyalty factors

Web experience and e-loyalty are two primary theories that explain consumers’ preferences to online vendors. By studying these factors, we can know what are the variables that influence consumers’ choice of vendor when they are planning to purchase an item. Now we will summarize the factors into fewer categories, since there are many factors referred to and also a lot of overlaps.

The e-loyalty theory provides the factors influencing consumer’s preference to online vendor by examining the stages of online shopping. It covers relatively complete set of factors throughout online purchase process. However, the theory does not cover many web experience factors. As the platform where major online shopping stages happen, the website’s user experience deserves more attention and study. The theory does not cover factors such as website’s trust and security as well as customer service etc. Therefore, the thesis adopts web experience theory to compensate the e-loyalty factors. Taking both theories into consideration, we can have relatively sufficient influencing factors of online vendor selection. To make the factors clear to examine, now we will list them out:

**Table 2: Web experience factors and e-loyalty factors**

<b>Web experience factors</b>		
<b>Functionality factors</b>	<b>Psychological factors</b>	<b>Content factors</b>
<b>Usability</b> Convenience, Information architecture and navigation, findability and accessibility, site speed, ordering/payment	<b>Transaction security</b> <b>Customer data misuse</b> <b>Customer data safety</b> <b>Uncertainty reducing</b>	<b>Aesthetics</b> Design, presentation quality, design elements, style/atmosphere

<p>process</p> <p><b>Interactivity</b></p> <p>Interactivity with online vendor, interactivity with other users</p>	<p><b>elements</b></p> <p><b>Guarantee/return policies</b></p>	<p><b>Marketing mix</b></p> <p>Communication, fulfillment, product elements, price, promotion</p>
<p><b>E-loyalty factors</b></p>		
<p><b>Pre-purchase factors</b></p>	<p><b>During-purchase factors</b></p>	<p><b>After-purchase factors</b></p>
<p><b>E-competitors' attitudes</b></p> <p>Switching cost, switching barrier, price</p> <p><b>E-reputation</b></p> <p><b>Website ethics</b></p> <p><b>Customer characteristics</b></p> <p>Type of buyers, attitudes, demographics, buying habits, PC skills</p>	<p><b>Web quality</b></p> <p>Design, usability, information quality, assurance, online atmosphere etc.</p> <p><b>E-pleasure</b></p> <p>Shopping enjoyment, perceived ease of use</p>	<p><b>E-trust</b></p> <p><b>E-satisfaction</b></p> <p><b>Perceived value</b></p> <p><b>Convenience motivation</b></p> <p><b>Order fulfillment</b></p>

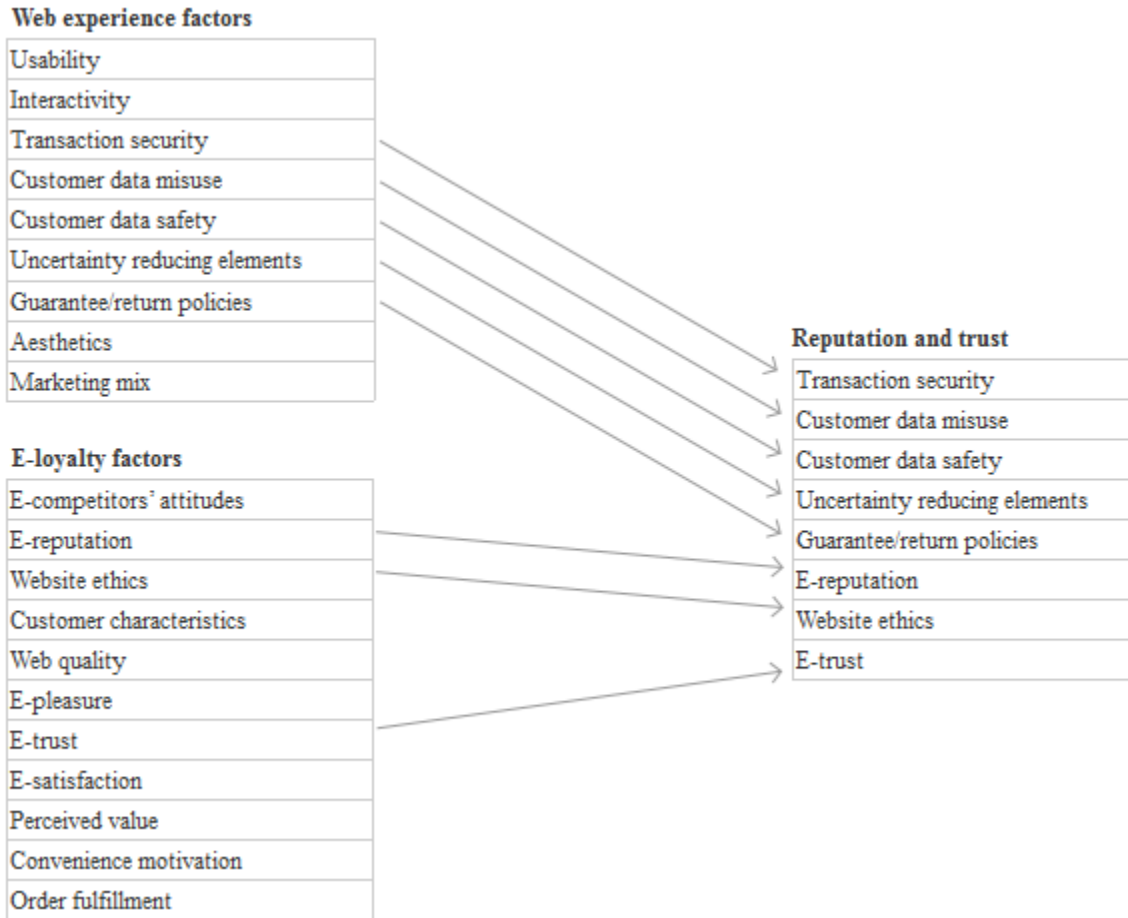
To summarize the factors and divide them into fewer categories, we will conduct empirical analysis of the factors.

The two theories that explain online consumers' preferences to online vendors, the web experience theory and e-loyalty theory overlap, nevertheless, they are also supplementary. The web experience theory focuses more on the user experience of the website than the other commercial and emotional factors that influence consumers' preferences. In the other hand, e-loyalty theory covers wider range of elements that result in consumers' preferences, nevertheless, examines few factors regarding the interface where consumers perform the purchase tasks, and that is the website itself.

Moreover, the situation being studied in this thesis is when consumer choosing one online vendor to purchase a particular item. Thus, the influencing factors are those that affect one-time choice rather than long-time relationship with particular vendor. The factors that influence consumer's choice of online vendor during a particular purchase can be divided into following categories. These categories cover all the factors mentioned above and do not overlap with each other.

### 2.3.1 Reputation and trust

**Figure 3: Reputation and trust factors**



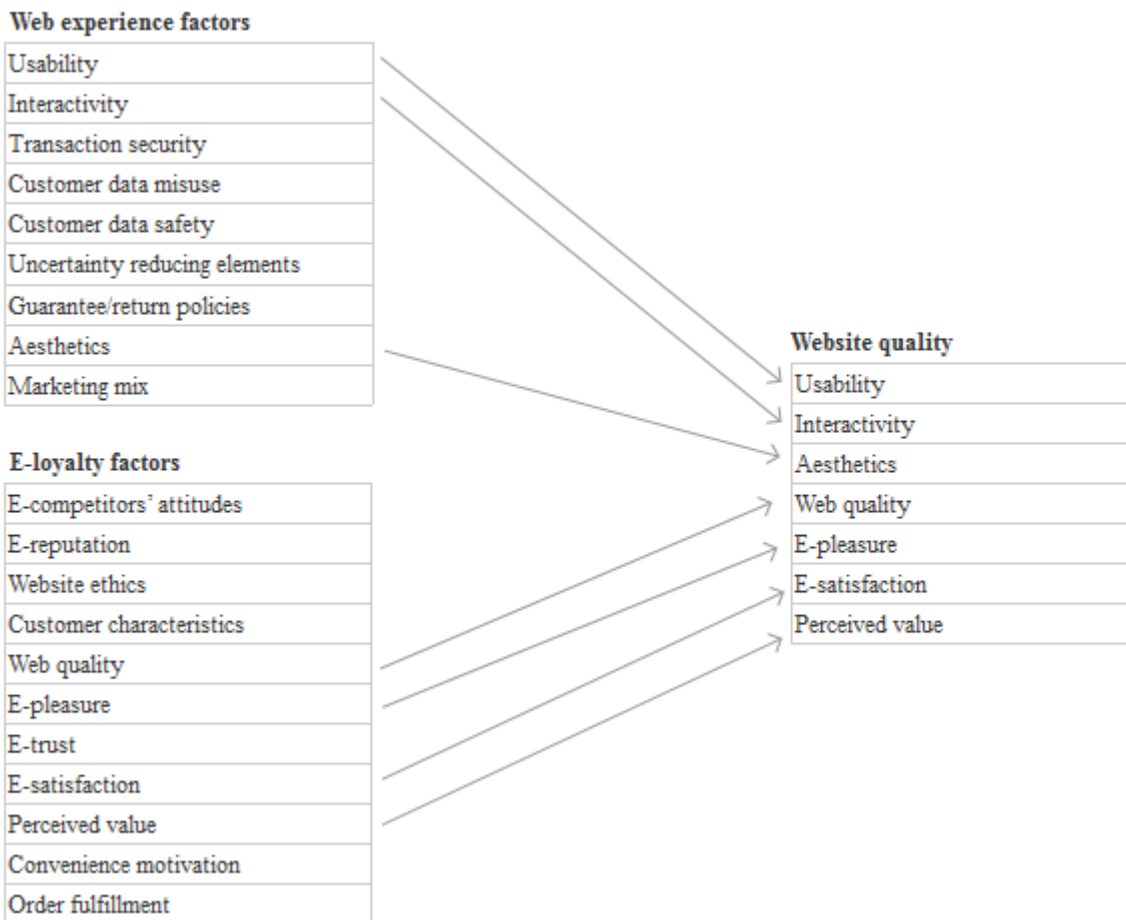
To sort all the factors out, we find that both theories include the concept of e-trust. E-trust can influence both re-purchase consumers and new consumers, since trust factors can be reflected from past purchase experience and website itself. Trust is a crucial factor that influence consumer's choice of online vendor, proven by previous literature review. Consumer takes it into consideration either based on past purchase experience on the website or the current experience using the website. Strong trust in a particular online vendor may lead to a purchase even other vendors have other advantages. As mentioned above, transaction safety, customer data safety, uncertainty reducing and guarantee/return policies are all important factors that influence consumers' trust.

Besides, reputation is highly relevant to trust, and positively associated with it. Especially for

new customers, the most common way to build trust in a particular vendor is by its reputation. A good reputation tends to lead to more trust while negative reputation can lead to suspect. In the other hand, trust by consumers, formed through the use of the vendor's service, can also result in positive reputation. Moreover, business ethics is also a factor that interrelates to e-trust and reputation. A consumer's trust in a particular online vendor can be influenced by the vendor's overall ethical performance even though he/she is never involved in ethical issues with the vendor. Reputation and trust is considered to be a very important factor that influences consumer's preferences according to the literature as well as empirical experience of online shopping.

### 2.3.2 Website quality

**Figure 4: Website quality factors**

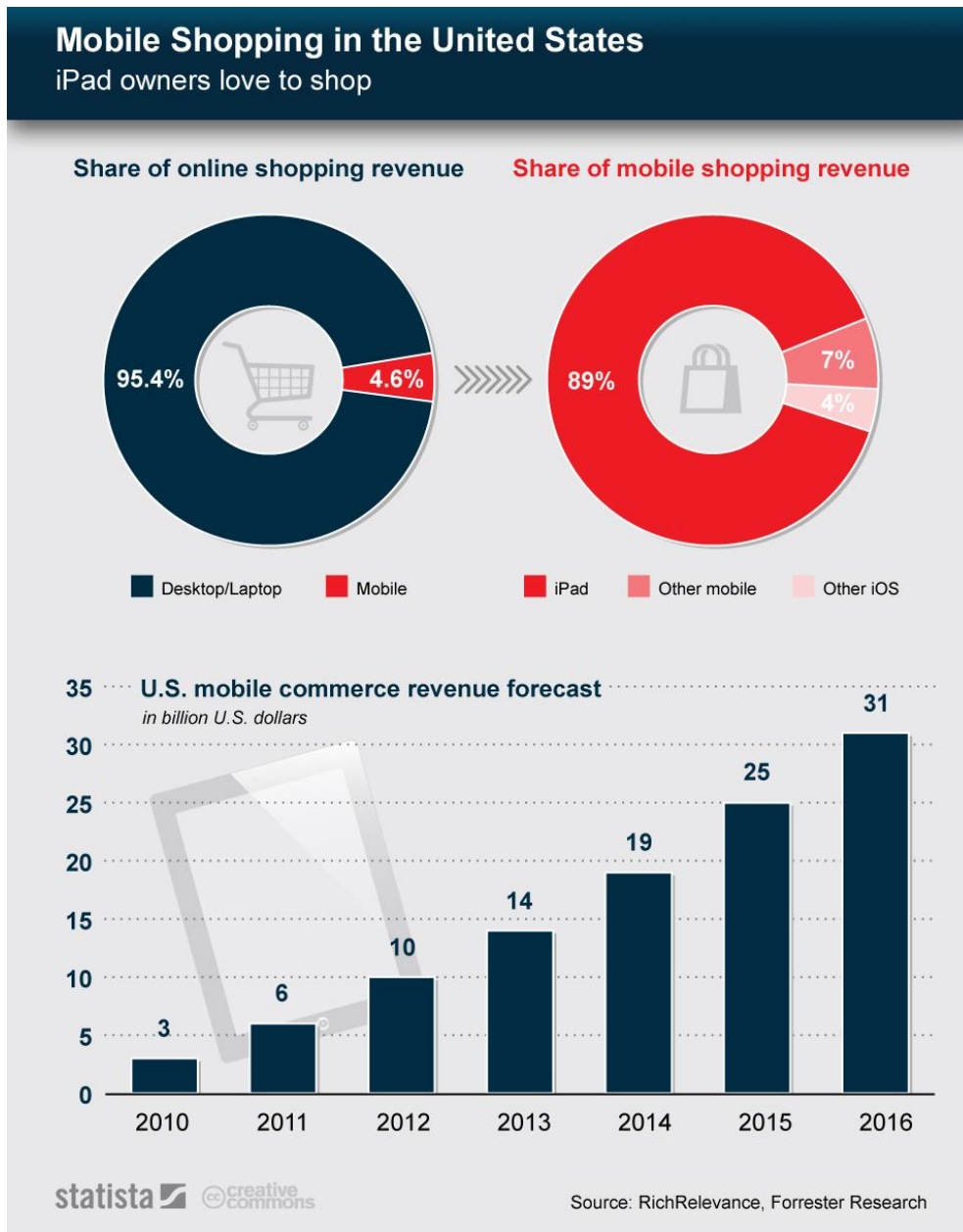


Website quality is another major factor that is valued by both of the two theories. In web experience theory, it extends the concept to a much wider range while in e-loyalty theory, the website quality is limited to the website itself as the purchase interface. As the web experience theory involves trust and content factors which can be included in other categories, the website quality here only refers to the quality of the website as the interface to complete purchase tasks. The factors include usability, interactivity, website design, online atmosphere, ease of use, information architecture, findability and site speed. The factors are more related to technical elements such as user interface design, interaction design and website programming than commercial elements. As most of the Internet or e-commerce companies set up a user experience department, it is quite clear that industry has already realized the importance of website quality as influencer to consumers' preferences.

Moreover, the mobile Internet industry has been emerging for years already, there are already considerably large number of people who complete shopping process on mobile platforms.



**Figure 5: Mobile shopping in the United States**



Source: RichRelevance, Forrester Research

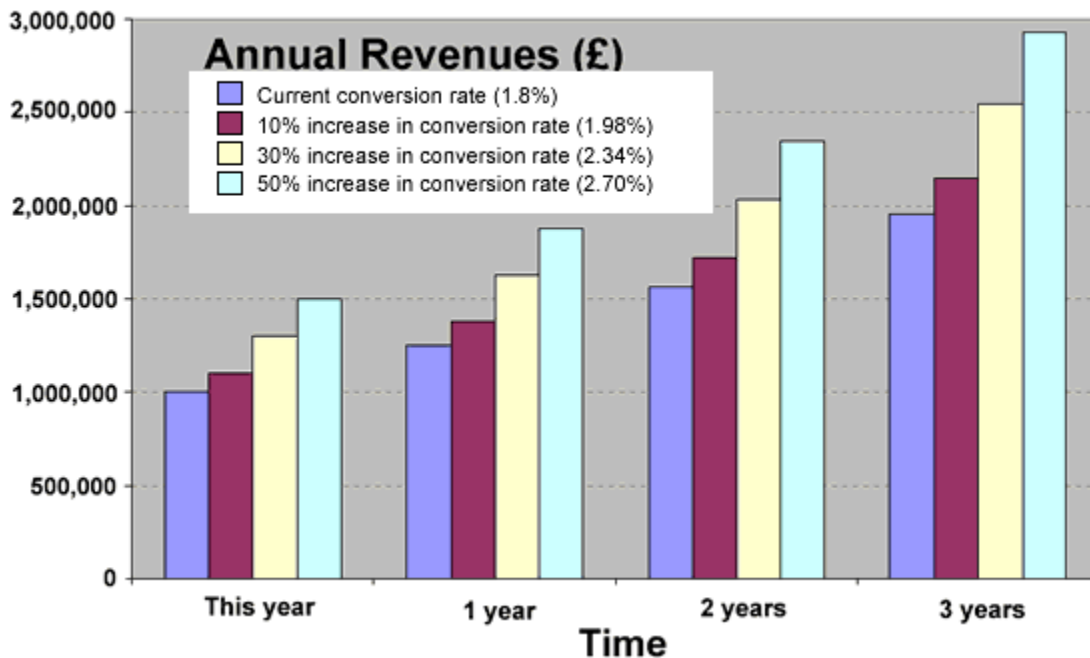
Therefore, mobile shopping is a part of online shopping already, and it's importance tends to increase significantly in the future. Thus, the concept of website quality refers to both traditional

PC website quality and mobile website or mobile application quality.

For online shopping firms, unsatisfactory user experience can directly result in lost of profits. Some studies showed that almost 40% of the consumers' purchase intentions on Internet end up in failure, and the rate of items abandoned at shopping cart is quite high, with poor user experience being the primary reason. As Figure 3 indicates, the conversion rate of online store is extremely important for the firm's profitability. The figure starts with the average conversion rate in the e-commerce industry which is 1.8%, and an annual growth rate of 25% is assumed. We can see the influence of usability on the improvement of profitability.

Therefore, website quality is an extremely crucial factor that influence consumers' choice of online vendors, as they indicate this by their behavior shown above.

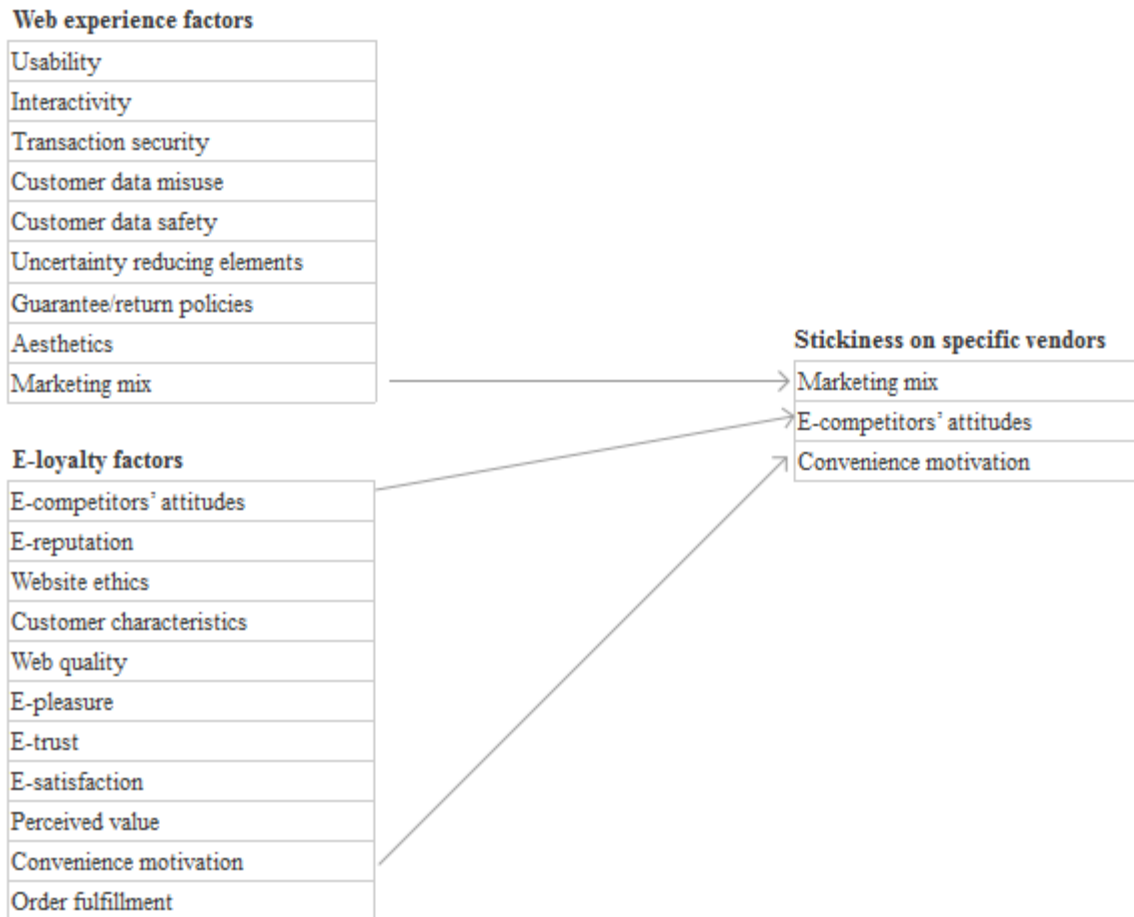
**Figure 6: Conversion rate and revenue**



Source: uservision.co.uk

### 2.3.3 Stickiness on specific vendors

**Figure 7: Stickiness factors**



Stickiness is the tendency of consumers to stay longer on and to come back to a website. It focuses on tools that online vendors use to maintain consumers rather than emotional elements, and thus it is different from e-loyalty. It highly related to factors such as switching cost and marketing mix. In e-commerce world, consumers are considered to have relatively low switching cost, since switching to another vendor online is much easier than in traditional offline stores. However, online vendors have been working on creating switching cost and barriers for consumers to increase stickiness of consumers to the website so that the vendor can increase long-time revenue from the consumers.

In the web experience theory, the marketing mix factors are related to stickiness. When consumer chooses a vendor for the purchase of a particular item, only the price and promotion activity of the item influence consumer's choice, the overall price level and promotion frequency are not influencing. However, many online stores nowadays use the tools such as coupon and membership points to motivate consumers to repurchase on the website. Thus, if a consumer has unused coupons or intends to increase his/her membership points for other benefits, his/her tendency to purchase on this website will increase.

In e-loyalty theory, switching cost and barrier, the perceived value and convenience motivation factors also result in stickiness. The expiring coupons and membership points increase consumers' switching cost as they may give up the benefits if they choose other vendors. When a consumer perceives satisfying value out of a purchase, he/she tends to repurchase on the same website, proven by previous literature. Convenience motivation factors affect consumers' choice in the same way as switching cost and barrier, as they may encounter inconvenience which is a type of cost for switching online vendors.

When the consumer's stickiness to a particular website increases, his/her willingness to switch vendor tends to decrease. Therefore, the stickiness factors play an important role influencing consumers' choice of online vendors.

### 2.3.4 Order fulfillment

**Figure 8: Order fulfillment factors**



The web experience and e-loyalty theories both studied about order fulfillment factors. However, the two theories define the factor as the overall performance of order fulfillment of the vendor. In this thesis, we aim at defining the influencing factors of consumers' choice of online vendor during a particular purchase. Thus, the order fulfillment here focuses on the delivery of the particular item. Though most B2C websites have uniformed order fulfillment policies, in some cases, the policies do differ based on item categories. Besides, on C2C platforms, the order fulfillment performance varies from vendor to vendor.

Order fulfillment focuses on the stage after completing tasks on the website which is not covered

by previous three categories. Compared with traditional business, e-commerce transaction is far from end after payment, since the final delivery or return can also impact the transaction. The two major disadvantages of online shopping against traditional are delivery time and physical contact before purchase. Therefore, a fast delivery and flexible delivery options are important factors influencing consumer's decision making. Lack of physical contact pre-purchase may lead to return of item, and thus efficient return process is a key factor for the success of online vendor. As mentioned in previous section, order fulfillment factors, especially on-time delivery, are dominant influencing factors on overall customer impressions and satisfaction. The statistical importance of other e-commerce firm elements, nevertheless, has changed between 2003 and 2004 as differences have been found (Ruby and Miao, 2010). Thus, the order fulfillment performance of an online vendor can significantly influence consumers' preference to it.

In sum, the primary categories of factors that influence consumers' preferences to online vendors are *reputation and trust, website quality, stickiness to website, and order fulfillment performance*. One factor which is customer characteristics is not included into the four categories. Because the factor is not an attribute of the online vendor which influences customer's preference. The demographic characteristics of consumers naturally deserve study and we will try to observe the factor's effect later in the study.

**Table 3: Influencing factors of consumers' preferences to online vendors**

<b>Reputation and trust</b>	<b>Website quality</b>	<b>Stickiness</b>	<b>Order fulfillment</b>
Reputation.	Usability.	Marketing mix.	Marketing mix.
Ethics.	Interactivity.	Membership points.	Delivery time.
Transaction safety.	Aesthetics.	Convenience	Delivery flexibility.
Customer data safety.	E-pleasure.	motivation.	Return policy.
Uncertainty reducing.	E-satisfaction.	Switching cost/barrier.	Return efficiency.
Guarantee/return policies.	Perceived value.		
	Web quality.		

### **3. METHODS**

This section will describe the methods and tools applied for defining and assessing the importance of the factors influencing consumers' choices of online vendor for a particular purchase. We used literature review to collect primary influencing factors of consumers' preferences to online vendors in the previous chapter. When a consumer chooses a vendor for a particular purchase, he/she considers both the online vendor and the item's attributes of each of the alternative vendors. The preference to a vendor can not lead to a final purchase, the attributes of the item such as price and sales volume should also be considered by the consumer as well to make a final decision.

First step on this stage is to define the final influencing factors related to the item attributes. We will use empirical study to define the factors. Empirical study processes feedback from the users of a online price comparison tool. By examine the feedback, we will collect users' concerns and requirements about vendor selecting. The users adopt the online price comparison tool to select better choice of vendor to purchase a certain product, since the tool provides alternative vendors when the consumer is browsing an item on a website. The situation the consumer uses the tool is exactly the same as the situation being studied in this thesis. Therefore, the user feedbacks of this price comparison tool is quite valuable to define factors being examined here.

We will randomly select a pool of qualitative data which includes 300 pieces of user text feedbacks out of a range of about . Next, we will select feedbacks only related to vendor selection requirements which are relevant to the research. Feedbacks related to topic such as search engine performance and tool interface will be excluded since they are not relevant. 700 pieces of feedbacks are collected during 2012 first quarter from online shopping search engine Koudai.com in China. The users are all Chinese online consumers using the search engine and vendor comparison service. Furthermore, we will exclude feedbacks related to the factors covered above in literature review, because those factors have already been determined to be

important and included in later study. The invalid feedbacks which are not relevant to any vendor selection factor are also screened out. Then we have 48 pieces of valid feedbacks related to several factors. We will have the most frequently mentioned factors as the results of the empirical study. After empirical study, we will gain the influencing factors much more closely related to item attributes.

### **3.1 Adopt the methodology to assess importance**

After having all the major factors to be studied, we will then assess the importance of the factors. To decide which methodology to adopt for the study, we will analyze the purpose of the study and possible methodologies. To choose the appropriate methodology to conduct an online user research, there are three dimensions to consider:

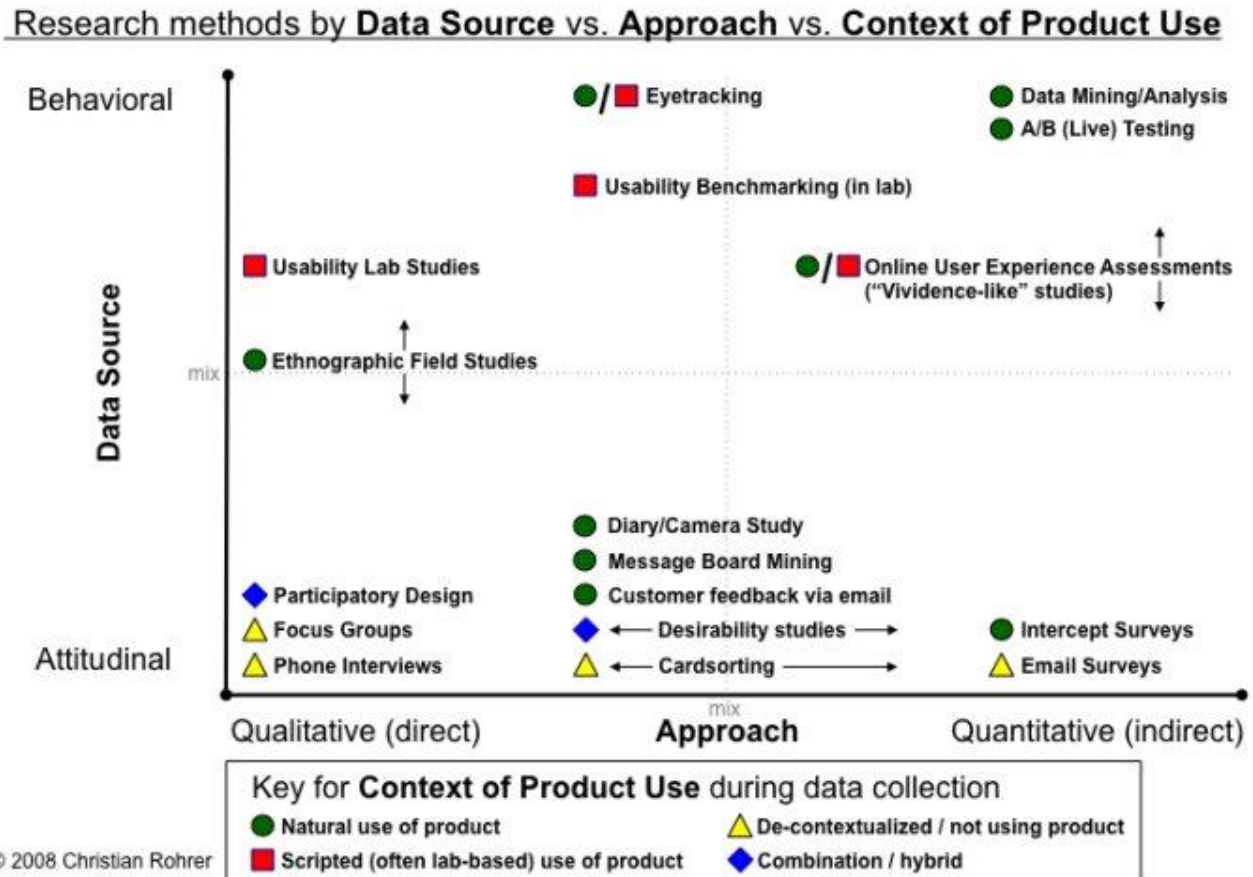
Attitudinal vs behavioral

Qualitative vs quantitative

Context of website or product use.



Figure 9: Research methods by dimensions

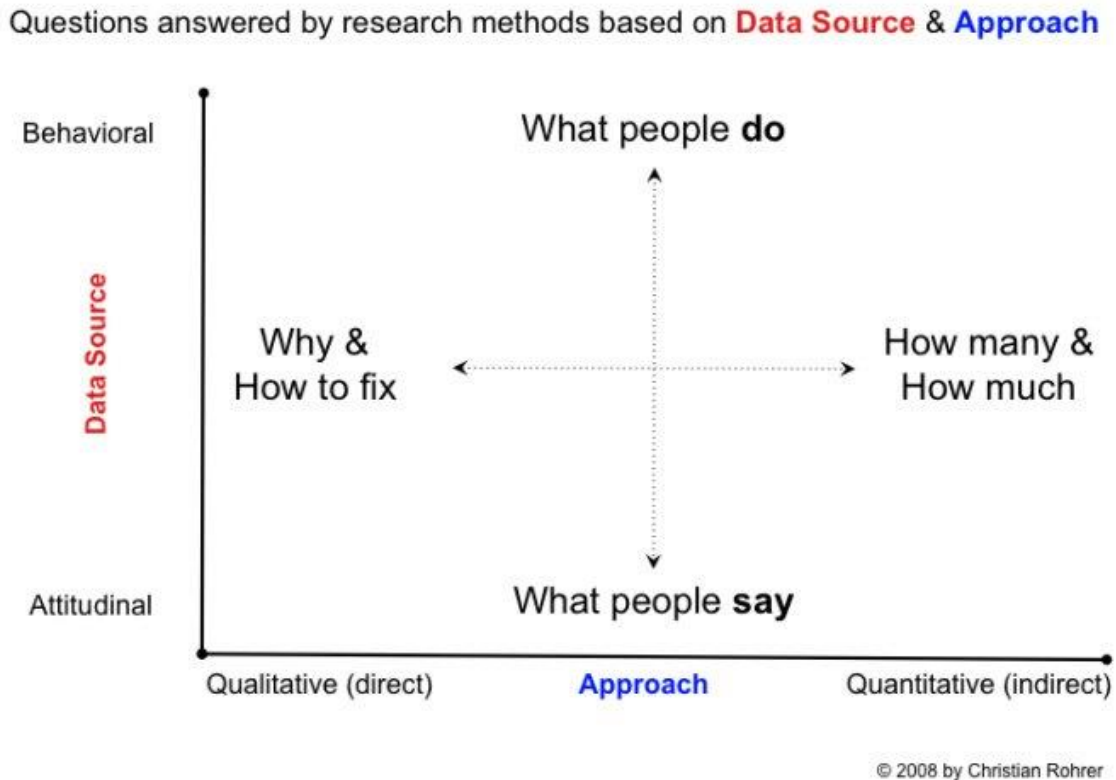


Source: (Christian Rohrer, 2008)

As shown in figure 5, there are methodologies proper for different purposes. As our purpose is to understand online consumer's perceptions of importance of the 7 factors, a more attitudinal method is appropriate. Because it is very difficult to gain the results from consumer's behavior, as the 7 factors combine together to affect consumer's purchase choice, we may not figure out how much of each factor affects consumer's choice based on their real life purchase behavior. The best way is to conduct attitudinal study to understand consumer's mentality towards the influencing factors. For the context of product use, while we conduct this study, the consumers are not using the product, and we will only collect their attitudes based on their general

preferences.

**Figure 10: Questions answered by research methods based on Data Source & Approach**



Source: (Christian Rohrer, 2008)

As figure 6 indicates, we will define our purpose as to know “what people say”. Therefore, a questionnaire survey would be appropriate under this situation.

Therefore, the survey methodology adopted in this study tends to result in reasonable data.

After defining all the influencing factors, we will then assess the importance of them. To conduct the assessing work, we will apply a quantitative methodology of questionnaire. We will let respondents rate the importance of each of the factors we get. The scale is from 1 to 7, with 1 to

be not important and 7 to be extremely important. The reason we adopted 7 point scale will be explained next. This situation is considered as choosing Likert scale for each item rated. The choices should be symmetric or balanced and thus we will use an odd number of choices. The most common rating scales are 5 and 7 point scales. The 7-point scales are a little better than 5-points—but not by much. The psychometric literature suggests that having more scale points is better but there is a diminishing return after around 11 points. Seven points tends to be a good balance between having enough points of discrimination without having to maintain too many response options (Sauro, 2010). Next, we will also give the range of each factor to make sure the results are meaningful. Besides, we define the buying circumstances and the item's category since consumer's ratings can greatly differ because of these factors.

The questions are: 1. Consider that you are planning to buy a cellphone online in China, you already decided the brand and model, average market price is \$200. The product is not for urgent use because you are still using the old phone. You need to select an online shopping site to make the purchase.

How important for you is the reputation of the shopping site (compare well-established site vs unknown site) 1=not important at all, 7=extremely important.

2. How important for you are the ratings and reviews of the shopping site (compare 5/5 rating site vs 2/5 rating site) 1=not important at all, 7=extremely important.

3. How important for you is the price of the cellphone on the shopping site (compare 20% less than average market price vs 20% more than average market price) 1=not important at all, 7=extremely important.

4. How important for you is the number of the item sold on the shopping site (compare more than 50 consumers bought the item on the site vs nobody bought the item on the site yet) 1=not important at all, 7=extremely important.

5. How important for you are the membership points and coupons will be gained from the website (compare you will gain some membership points and coupons for future use vs do not gain anything after purchase) 1=not important at all, 7=extremely important.

6. How important for you is the website quality (usability) (compare excellent website quality vs below average quality) 1=not important at all, 7=extremely important.

7. How important for you is order fulfillment performance of the shopping site (compare very convenient-fast delivery and flexibility vs not so convenient-slow delivery, limited options and occasional mistakes) 1=not important at all, 7=extremely important.

The range of each factor is described in the questionnaire. All of the 7 factors are asked about in the same form as above. Therefore, we will add up the total score of each of the factors and the importance of each factor can be assessed based on their total score respectively. The factor with the highest total score is considered as the most important in our research.

We collected 100 responds of the survey. We shared the link address of this survey and made a brief description on Internet, to be specific, on the most popular Microblog website. We then got 100 valid answers from the website users who saw the shared survey request.

## 4. EMPIRICAL STUDY

In this part, we will analyze the users' feedback from a Chinese e-commerce price comparison tool-bijia,koudai.com. The tool automatically finds the other vendors selling the same product when user is browsing a particular product on a website. The crucial influencing factors will derive from the empirical study. We will randomly select a pool of 300 qualitative data-user text feedbacks out of 700 collected during 2012 first quarter from Koudai.com. The feedbacks are chosen randomly without deliberate selection. Then, feedbacks covering topics such as search engine performance and tool interface will be excluded since they are not relevant. The users are all Chinese online consumers using the search engine and vendor comparison service. Furthermore, we will exclude feedbacks related to the factors covered above in literature review, because those factors have already been determined to be important and included in later study. The invalid feedbacks which are not relevant to any vendor selection factor are also screened out. Then we have 48 pieces of valid feedbacks related to several factors. We categorize the feedbacks into several categories based on their relevance to different vendor selection factors. We will have the most frequently mentioned factors as the results of the empirical study. The top 3 factors summarized from the feedbacks are as followed.

### 4.1 Price

We have many user feedbacks mentioning their concerns about price. The typical feedbacks will be shown below.

*This tool is not working, there are vendors selling at lower price of this product, but you did not show those results.*

*The price you showed me is not updated, this vendor is not the cheapest anymore, please make sure your data is precise.*

From user feedbacks, we can find that users are quite sensitive about price. Vendor with lower

price of the same product is very attractive to consumers.

Price is universally accepted as a dominant factor influencing consumer's choice of vendor. Paul Stockford (2008) received 125 completed surveys with price being the most important factor influencing purchase decisions.

## **4.2 Sales volume**

Another important factor defined is the sales volume of the targeting item on each website. People tend to believe that vendor with large sales volume have better services since it became the choice of large number of other consumers. There are also typical feedbacks from the price comparison engine listed below.

*Your results are all vendors with zero sales, how can we use this tool, can't you give us better sellers.*

*It really bothers me that the tool shows so many invaluable results. When I click the links, the websites all have little sales volume. I will not buy from such website even it provides lowest price.*

On many e-commerce website, there are sections of item lists ranked by sales volume. The best sellers tend to have more and more sales over time while items with little volume can be difficult to discover by consumers. This mentality of consumers is one of the reasons that result in popular "long-tail" phenomenon. Though e-commerce firms have been working on long-tail problem and try to sell numerous products with little attention, sales volume is still an essential factor influencing consumer's choice, because consumers regard it as important reference of item's quality.

## **4.3 Reviews and ratings**

Product reviews by other consumers are very valuable references for consumer who plans to

purchase the same item. The ratings give consumer the overall quality of the particular item sold on the website. The reviews can also provide valuable information that the consumer can not acquire by other means.

In a study conducted in 2006, the authors used innovative research design and experimental methodology to find the empirical evidence supporting to previous research which indicates that consumer ratings and reviews may enhance online shopping based on both social and transactional perspectives (Nanda Kumar and Izak Benbasat, 2006).

The typical user feedbacks related to item reviews are listed below.

*Please also show the ratings of the items on results' interface, and thus I do not need to click every result to check myself.*

Customers give reviews not only based on the product but also on the overall service quality of the online vendor. Thus, the reviews or ratings can also reflect the overall performance of a particular vendor and influence other consumers' evaluation of the item sold on this particular online shopping site. Therefore, this factor is very important in the process of online vendor selection.

There are certain amount of feedbacks mentioning consumers' willingness to receive vendor's stock information of the target item. However, this factor is not considered in this research, since consumer can not purchase the item if a particular vendor is out of stock, and thus the choice is not valid anymore. The factors other than these 3 do not appear frequently enough to be regarded as major factors as quite few users mention.

In sum, the factors that influence consumer's choice of online vendor to purchase a particular item include price, sales volume, reviews and ratings. The 4 factors we have from previous part are all factors related to the online vendor's performance. The 3 factors we have from this part are more related to the item consumer's intend to purchase rather than the vendor's attributes. However, all the 7 factors are effective to consumer's choice of vendor during a purchase

decision making process. In addition, the 7 factors do not overlap, and this is the precondition of conducting later study since we will try to assess the importance of each factor so that they must be independent factors influencing consumer's choice.

**Figure 11: Process of analyzing feedbacks from Koudai search engine**





## **5. ASSESS THE IMPORTANCE OF FACTORS**

By far, we have already defined the primary influencing factors that affect consumer's choice of online vendor for a particular item. By reviewing the previous literature and categorizing the factors, we define 4 crucial factors which are reputation and trust, web quality, stickiness to website and order fulfillment performance. Then we conduct empirical study of analyzing 300 feedbacks from Chinese online shopping search engine, and get 3 more factors mentioned most frequently in the feedbacks. They are price, sales volume, reviews and ratings. In sum, there are 7 factors including reputation and trust, web quality, stickiness to website, order fulfillment performance, price, sales volume, reviews and ratings.

Understanding the influencing factors of consumer's behavior in online vendor selection is quite valuable, since the industry professionals can use the information to evaluate the e-commerce website's performance regarding each of the factor and figure out methods to optimize the performance. The industry players would understand which elements they need to gain competitive advantages on, meanwhile, online consumers may receive the benefits of e-commerce firms' better services. The e-commerce firms then can focus on the most important factors or design more effective marketing strategies to attract online consumers based on their purchase behavior and mentality.

However, most e-commerce firms have extremely strong competitors all the time, and the available resources are always limited. Therefore, it is very important to invest resources in the most crucial factors. It is too difficult for any firm to considerably improve the performance in every perspectives. Thus the e-commerce companies need to prioritize the aspects they need to improve, invest time and all kinds of resources to the aspects with high priority at first. It would be valuable to understand how the online consumers value each of the 7 factors above, and how they consider the factors in their online purchases. The next objective of this study is to find out the importance, in other words, the ratings of the 7 factors based on online consumers' purchase behavior.

Next step is to assess the importance of the 7 factors to learn about how consumers weigh each of the factors. In other words, we will let consumers to rate the 7 factors one by one to get the importance respectively. Besides, the target of the study is to learn about the consumer's perception of the importance of the factors, therefore, we will conduct a questionnaire survey to gain consumers' perceived importance of the 7 factors.

## 5.1 Design questionnaire survey

Moreover, in this questionnaire survey, the respondents will be asked certain demographic questions to define their demographic information. It is possible that certain demographic factors would affect the consumer's preferences, in other words, the ratings of the influencing factors. Though the sample of the survey is quite small due to limited number of respondents, and the demographics of the respondents are not considerably different, we will still analyze the demographics to reach certain findings if possible.

The demographic questions are listed below.

1. What is your gender?

Female

Male

2. What is your age?

18 to 24

25 to 34

35 to 50

51 or older

Since people under 18 have averagely limited income to make purchase, the options do not cover this group. We divide people into 4 age groups with range of about 10 years for each group. Since elders, especially in China usually do not shop online, so people older than 50 are included

in one group.

3. How often do you buy products online?

- Never
- Four times or more every month
- Once to three times every month
- Less than once every month

The four options cover all the frequency and do not overlap. The options can effectively represent the typical online shoppers regarding purchase frequency.

Before letting respondents to rate the factors, we will define the range of each factor, as the importance of each factor depends upon the range. Our aim is to define a reasonable range since an extreme range of the factor may make it dominate other factors. For example, an 80% off price would be too much impact on consumer's choice because it is a dominant advantage against other vendors, however, it is an unusual phenomenon as well. Therefore, we need to define a moderate and reasonable range of each factor so that each factor can provide value at the same level, and thus consumers can choose the most important factor out of the seven. Since there is no extreme range of any factor, respondents' results from the questionnaire survey can reflect their real preferences of each factor.

The real questions appearing in the questionnaire are listed in appendix.

#### *Reputation and trust:*

The range of reputation and trust would be the degree of consumer to trust in and be familiar with the online vendor. For most markets, especially the relatively mature markets, there are well-established online shopping sites already, for example, Amazon in the US or Taobao in China. Consumers are familiar with the vendors and since the sites are in large scale, they are more transparent to the public, and thus consumers have more trust in these type of vendors.

Second, there are emerging online shopping sites or relatively small ones, people have little information about the sites. These kind of vendors do not have strong reputation and consumers' trust since consumers have little knowledge about them. People would face certain risk if they choose unfamiliar vendors, but some consumers would still be attracted by other factors of the sites such as lower price. For those shopping sites with negative reputation or history of exposed safety issues, consumers usually do not consider those sites as potential choices since consumers would face serious financial loss or even worse. Therefore, reputation and trust of a shopping website ranges from *well-established* to *unfamiliar*.

#### *Web quality:*

Web quality of different shopping sites can also differ significantly. Though most large-scale e-commerce websites employ user experience designer to guarantee the web quality, consumers still perceive different experience at different sites. For the shopping sites with good quality user interface and usability, consumers can complete purchase tasks easily without making mistakes. Users may also build more trust in the sites because of decent interface style. Although there is no perfect website since there are always trade-offs of every design solution, the industry leader can provide great web quality and user experience with nearly no negative impact on consumers operations on the sites. However, there are shopping sites with relatively low quality in terms of interface design and interaction design. The interface may be perceived as unprofessional to consumers. Besides, the poor interaction design may confuse consumers once in a while when they try to complete certain tasks on the sites. Bugs may exist on these type of websites as well. For those websites with extremely poor usability or unable to use, most consumers may not consider them as options since completing purchase on the sites cost too much effort and they can not build enough trust in the sites. So the web quality factor of a online shopping site ranges from *excellent web quality (easy and smooth to use, comfortable interface)* to *below average web quality (unprofessional interface, below average usability though usable)*.

#### *Stickiness to the shopping sites:*

For the stickiness factor, it is relatively easy to define the range. Stickiness factor refers to the

degree of a consumer's tie to a particular website in the form of membership. Consumer may receive potential benefits from a shopping site if he/she chooses the vendor to purchase the item as the vendor provides membership points or other promotional benefits. Consumer may receive better deals on the website or enjoy certain types of privilege in the future in result of accumulating membership points. Under such situation, consumers may take the stickiness factor into account when choosing the online vendor for a particular purchase. Thus, the range of the stickiness factor will be very clear to define. There are two situations: the consumer will receive membership benefits from the shopping site or the consumer do not receive any benefits for the purchase. Thus the range of stickiness factor, interpreted as membership benefits from a purchase includes yes and no.

*Order fulfillment performance:*

For order fulfillment performance, the main factors may include delivery speed and delivery flexibility etc. Different online vendors have different delivery policies and performance which are very crucial factors for consumers to measure the overall quality of the online vendor. For most products that have physical form, the final deliver has to delay as the shipment always takes time. Waiting the delivery after a purchase online for too long can result in dissatisfaction and anxiety of consumers, which turn into lower perceived value of the purchase from the vendor. Some shopping websites promise extremely fast delivery, for example, the Jingdong e-commerce firm in China promises 1 day delivery for most of the purchase on the site. This also became a very effective marketing tool to attract a large number of consumers. The firm also provides an option of cash payment at the delivery arrival, perceived as a very convenient policy by many consumers. However, not many online vendors can launch the same policy since logistics account for a large portion of e-commerce firms' cost. Fast delivery and flexible delivery options may bring unbearable cost to some vendors, therefore, there are certain number of the online vendors provide relatively weak fulfillment performance. For some firms, the delivery time can be longer and the mistake rate during delivery can be slightly higher than average. All these elements may affect consumer's preferences to the vendor and may motivate consumers to choose the competitors. Since order fulfillment performance is a very important factor for consumer's choice of vendor, a vendor with very poor performance may not be considered as an

option to the consumers. The range of the order fulfillment performance can be from *very convenient (fast delivery and flexibility) to not so convenient (slow delivery, limited options and occasional mistakes )*.

#### *Price:*

Price is globally considered as a major determinant of consumer's buying decision and the most frequently mentioned factor influencing consumer's choice of vendor. In economics theory, it is well-established pattern that consumer's buying motivation is negatively associated with the price of the product. Therefore, it is obvious that the price of a particular item on a shopping website can affect consumer's choice of the vendor. As different online vendors have different inventory channels and operation cost, they may sell products at different price. However, the price difference between different vendors may fluctuate at 20 percent, since a vendor with larger price difference may not operate in a long term. The price of a single item at different online vendors can differ a lot, up to 80% or more for multiple reasons such as inventor-clear discount. However, this price difference may dominate consumer's decision making, and it is not a usual case that reflect consumer's mentality in general. Therefore, we will not consider extreme price difference at unusual situation. The range of the price factor will be from *20% less than average market price to 20% more than average market price*. The average price refers to the average market price of a particular product a consumer is intending to purchase when trying to select an online vendor.

#### *Sales volume:*

Sales volume is another factor that influences consumer's choice of online vendor. As sales volume of a product at one website can indicate it's popularity and possibly reflect the quality of the product as well as the vendor. Sales volume can also bring lower risk since a consumer can share the risk with more people buying the item at the same vendor. Consumers may regard volume as a reference to decide the vendor to choose. Numerous products are on line and not discovered by the consumers. In the long tail theory of online shopping, there are extremely large number of products sold on Internet are not found by consumers. Therefore, it is quite common

that a product is with zero sales volume. In contrast, there are some products with large sales volume on certain websites. People would feel safer to purchase the product on such websites since the large volume can possibly indicate the quality of the product as well as the website. Consumers may have the perception that the product on the website is proven by many other consumers. The range of the sales volume factor will be from *large sales volume to zero sales volume*.

#### *Reviews and ratings:*

Reviews by other consumers are very valuable references for consumer who plans to purchase the same item. The ratings give consumer the overall quality of the particular item sold on the website. The reviews can also provide valuable information that the consumer can not acquire by other means. The ratings are very direct and can enable potential consumers to know the overall value of the deal instantly. The reviews require certain amount of time for consumers to go through to gain valuable information to facilitate the purchase decision making. Anyway, the ratings and reviews together can give consumers valuable and practical information to judge the quality of the particular online vendor. Besides, the ratings and reviews are provided by other consumers that are more objective and trustful than the vendor itself at this occasion. There are items with high ratings, for example, 5 out of 5 points, as well as dominating positive reviews by consumers. The excellent ratings and reviews can possibly generate more sales and result in virtuous cycle. On the other hand, low ratings and negative reviews which may expose the weakness of the product sold by the vendor. These ratings and reviews may significantly impact the willingness of the following consumers to purchase the item on the website. However, the ratings and reviews are not direct attribute of the product, but attribute created by other consumers. So this factor may not influence consumers in the same way as price. If the ratings are 1 or 2, and all the reviews are negative, the consumer may not consider the vendor as an option anymore. Therefore, we will define the range of the ratings and reviews factor from *excellent (5 out of 5 ratings and all positive reviews) to poor (2 out of 5 ratings and some negative reviews)*.

By far, we have defined the range of each factor, therefore, the respondents can rate the

importance for the 7 factors in a reasonable way since knowing the range of each factor is the precondition of rating the importance of the factors.

In the questionnaire, we ask the respondents' demographic questions such as gender, age and online shopping habits such as online shopping frequency. We define the scenario of the purchase to limit the impact of other factors influencing consumer choice. The major importance question is like below.

Consider that you are planning to buy a cellphone online in China, you already decided the brand and model, average market price is \$200. The product is not for urgent use because you are still using the old phone. You need to select an online shopping site to make the purchase.

How important for you is the reputation of the shopping site (compare well-established site vs unknown site) 1=not important at all, 7=extremely important.

The range of each factor is described in the questionnaire. All of the 7 factors are asked about in the same form as above. Therefore, we will add up the total score of each of the factors and the factors can be ranked based on their total score respectively. The factor with the highest total score is considered as the most important in our research.

## **5.2 Analyzing the results**

We shared the link address of this survey and made a brief description on Internet, to be specific, on SNS website. We then got 100 complete answers from the website users who saw the shared survey request. All the responds are valid since all the questions on the questionnaire are mandatory.

Among the 100 respondents, there are 45 male and 55 female.



**Table 4: Number of female and male respondents of the survey**

Answer Choices	Responses	
Female	55.00%	55
Male	45%	45
Total		100

The age level is quite concentrated, as 70 of the respondents have age from 25 to 34, 18 respondents are from 18 to 24 and 12 people are from 35 to 50.

**Table 5: Age distribution of the respondents**

Answer Choices	Responses	
18 to 24	18%	18
25 to 34	70%	70
35 to 50	12%	12
51 or older	0%	0
Total		100

Regarding the frequency of online shopping, 48% of the respondents buy products online less than once every month, 40% buy things online once to three times every month and 12% purchase something online four times or more monthly.

**Table 6: Online purchase frequency of the respondents**

Answer Choices	Responses	
Never	0%	0
Four times or more every month	12%	12
Once to three times every month	40%	40
Less than once every month	48%	48
Total		100

Thus, the demographic background of the respondents is relatively limited, they are mainly from 25 to 34 Chinese online shoppers with moderate frequency of online shopping activities. There is no clear demographic pattern found based on the age since the number of respondents is small and the age of the respondents are not significantly different. Therefore, the results will reflect mainly the attitudes or preferences towards online vendor selection by the consumers with the demographic background mentioned above.

The average, standard deviation and significance level p value of the importance of each of the 7 factors influencing online consumer's choice of vendor are shown below. We will use these indexes to reach the conclusion of the survey.

**Table 7: Average and standard deviation of each factor**

<b>Factor</b>	<b>Average</b>	<b>Standard Deviation</b>	<b>P value with next factor</b>
Price	6.35	0.67	0.039
Reputation and trust	6.16	0.95	0.0001
Ratings and reviews	5.56	1.42	0.696
Order fulfillment performance	5.50	1.28	0.0001
Web quality	4.85	1.14	0.0001
Sales volume	4.27	1.43	0.0009
Stickiness	3.76	1.66	–

Based on previous assumption, the average score represents the relative importance of the factor. Therefore, the 7 factors influencing consumer choice of online vendor rank in the following way: price, reputation and trust, order fulfillment performance, ratings and reviews, web quality, sales volume, stickiness factor.

In addition, the standard deviation should also be considered. We then conducted t test to examine if the difference between the scores of the factors truly reflect difference of consumers'

attitudes towards the factors. As each respondent has rated all the 7 factors, in this situation we need to conduct dependent t test for paired samples and the formula to calculate t is:

$$t = \frac{\sum d}{\sqrt{\frac{n(\sum d^2) - (\sum d)^2}{n-1}}}$$

*D* stands for the differences between the pairs of the variables, *N* stands for the number of sample.

For the first pair price and reputation & trust, we have the null hypothesis that the two factors have no difference regarding their rated importance.

Step1: We got the sum of differences  $\sum d=19$ , sum of squared differences  $\sum d^2=85$ , sample number  $n=100$ . After the calculation according to the formula, we then have the result  $t=2.095$ .

Step2: We checked the t tale taking the degree of freedom as 99 and find out that the t value falls between 2.364 and 1.984 where two tailed p is between 0.02 and 0.05.

Step3: We adopt SPSS to get the accurate p value which is 0.039. We can also calculate the approximate p value using the proportion of our t value between the two t values on both sides.  $P=(2.364-2.096)/(2.364-1.984)*(0.05-0.02)+0.02=0.041$ . The result by software would be more accurate.

**Figure 12: Paired t test results for price and reputation & trust factors**

Paired Samples Test									
		Paired Difference					t	df	Sig.(2-tailed)
		Mean	Std.Deviation	Std.Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	price - reputation trust	.19000	.90671	.09067	.01009	.36991	2.095	99	.039

The conventional significance level is 0.05. Since our p value is smaller than 0.05, we reject the null hypothesis by conventional criteria. As a result, this difference between the averages of price and reputation & trust is considered to be statistically significant.

We will then calculate for other pairs using the same formula. For reputation & trust and ratings & reviews,  $t = 5.010$ , the two-tailed P value equals to 0.0001, by conventional criteria, this difference is considered to be extremely statistically significant.

For ratings & reviews and order fulfillment performance,  $t = 0.392$ , the two-tailed P value equals to 0.696, by conventional criteria, this difference is considered to be not statistically significant.

For order fulfillment performance and web quality,  $t = 5.199$ , the two-tailed P value equals to 0.0001, by conventional criteria, this difference is considered to be extremely statistically significant.

For web quality and sales volume,  $t = 4.037$ , the two-tailed P value equals to 0.0001, by conventional criteria, this difference is considered to be extremely statistically significant.

For sales volume and stickiness,  $t = 3.429$ , the two-tailed P value equals 0.0009, by conventional criteria, this difference is considered to be highly statistically significant.

Based on the t test results, we reached the conclusion. In sum, price is considered to be the most important factor according to online shoppers. The next is reputation & trust, followed by ratings & reviews and order fulfillment performance which are reflected to be at the same level. The following 3 factors order as web quality, sales volume and stickiness based on their importance.

Next, we will collect the results by gender and try to analyze if gender influences consumer's preferences.

**Table 8: Average and standard deviation of each factor from female and male respondents**

Factor	Average	Std-dev	Average	Std-dev
	(Female)	(Female)	(Male)	(Male)
Price	6.22	0.69	6.51	0.63
Reputation and trust	6.15	1.06	6.18	0.81
Ratings and reviews	5.67	1.47	5.42	1.36
Order fulfillment performance	5.44	1.30	5.58	1.27
Sales volume	4.62	1.38	3.84	1.38
Web quality	4.55	1.15	5.22	1.02
Stickiness	4.15	1.66	3.31	1.52

Next, we will conduct t-test to find out if the averages of the two group can indicate real difference of the importance of each factor assessed by female and male. Since it is the comparison between two groups, we will use unpaired independent t test. We start with Levene's test to assess the equality of the variances for the rated scores of the two groups. When the variances are equal, since the group sizes are unequal, the formula to calculate t value is as below:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s_{X_1X_2} \cdot \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

where

$$s_{X_1X_2} = \sqrt{\frac{(n_1 - 1)s_{X_1}^2 + (n_2 - 1)s_{X_2}^2}{n_1 + n_2 - 2}}$$

$N$  stands for the sample size of the group,  $S$  stands for the standard deviation, and  $\bar{x}$  is the average of the respective group.

When the variances are unequal, since the group sizes are unequal, the formula to calculate t value is:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s_{\bar{X}_1 - \bar{X}_2}}$$

where

$$s_{\bar{X}_1 - \bar{X}_2} = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

N stands for the sample size of the group, S stands for the standard deviation, and  $\bar{x}$  is the average of the respective group.

For the price factor, we will first test the homogeneity of variances of male and female groups using Levene's test. The null hypothesis assumes that the variances of the two groups are equal. We run the test on SPSS and the results are shown below. For the Levene's test, we obtain the significance level p value which is 0.714, larger than conventional critical value 0.05, and thus the null hypothesis is not rejected. The variances of the two groups are equal.

Next, we will conduct independent samples t test for the equality of the means of male and female groups. The null hypothesis assumes that the two means are equal. Using the formula for unequal sizes and equal variances, we obtain the t value as 2.210 and the significance level p value as 0.029. Since the p value is smaller than the conventional critical value 0.05, the null hypothesis is rejected. In conclusion, there is statistical difference between male and female respondents' attitudes towards to price factor. Male consumers value price factor more than female consumers.

**Figure 13: Independent samples test for male and female scores of price factor**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Price	Equal variances assumed	.135	.714	2.210	98	.029	.29293	.13257	.02985	.55601
	Equal variances not assumed			2.230	96.784	.028	.29293	.13136	.03221	.55365

Reputation and trust: For the Levene's test, the p value is 0.336, therefore, the variances are considered to be the same. Using the t test formula for equal variances, we have the  $t=0.168$ , the two-tailed p value equals to 0.867, by conventional criteria, this difference is considered to be not statistically significant.

Ratings and reviews: For the Levene's test, the p value is 0.604, therefore, the variances are considered to be the same. Using the t test formula for equal variances, we have the  $t=-0.879$ , the two-tailed p value equals to 0.382, by conventional criteria, this difference is considered to be not statistically significant.

Order fulfillment performance: For the Levene's test, the p value is 0.508, therefore, the variances are considered to be the same. Using the t test formula for equal variances, we have the  $t=-0.546$ , the two-tailed p value equals to 0.586, by conventional criteria, this difference is considered to be not statistically significant.

Sales volume: For the Levene's test, the p value is 0.673, therefore, the variances are considered

to be the same. Using the t test formula for equal variances, we have the  $t=-2.787$ , the two-tailed p value equals to 0.006, by conventional criteria, this difference is considered to be highly statistically significant. Therefore, female consumers consider sales volume of the product more than male as important factor for selecting online vendors.

Web quality: For the Levene's test, the p value is 0.319, therefore, the variances are considered to be the same. Using the t test formula for equal variances, we have the  $t=3.076$ , the two-tailed p value equals to 0.003, by conventional criteria, this difference is considered to be highly statistically significant. Therefore, male consumers value web quality more than female consumers when selecting online vendors.

Stickiness: For the Levene's test, the p value is 0.529, therefore, the variances are considered to be the same. Using the t test formula for equal variances, we have the  $t=-2.647$ , the two-tailed p value equals to 0.009, by conventional criteria, this difference is considered to be highly statistically significant. Therefore, female consumers value stickiness factor more than male consumers when selecting online vendors.

Thus, the results show that male shoppers are more sensitive about price, and web quality. In addition, female shoppers value sales volume and stickiness factors more than male. Female shoppers are more dependent on other consumers' decisions and it's easier to use marketing tools to build long-term relationships with female customers, while male shoppers tend to switch vendors for lower price more easily. Difference was not found between male and female respondents on other factors.



## 6. CONCLUSIONS

By far we have reached to all the primary findings and are able to draw the conclusions. The thesis contributes to online consumer's purchase behavior in terms of defining and measuring the importance of major influencing factors of consumer's choice of online vendor to purchase particular products. As more and more online stores emerged, people have quite many options of purchasing a particular product. Understanding consumers' decision-making behaviour can significantly help online stores and e-commerce search engines to improve service, readjust operation strategies in order to satisfy consumers' needs better and thus stimulate sales volume or site traffic.

While most of the previous literature focused on consumer's purchase behavior within one shopping platform, this research aims at understanding consumer's choice of online vendor for one purchase of a particular item.

### 6.1 Main findings

In our research, we review a number of literature relevant to online consumer's purchase decision making or buying behavior, to be more specific, e-loyalty and web experience factors. We then sort all the factors out and rearrange the factors into several categories which include reputation and trust, order fulfillment performance, stickiness to the website, and website quality. After the literature review, we analyze the user feedback from an online price comparison tool for Chinese B2C e-commerce websites and further define the important factors influencing consumer's choice of online vendor. The factors are price, sales volume, and the ratings and reviews of the shopping site. The factors reflect the attitudes of Chinese online consumers and may not be applied to other demographic consumers.

The 7 factors include *reputation and trust, web quality, stickiness to website, order fulfillment performance, price, sales volume, reviews and ratings*.

There are demographic elements that influence consumers' preferences and attitudes towards websites. This would be an extremely important topic and also very complicated. Consumer's perception of the importance of each factor can be affected by the demographic elements. However, our research do not focus on the demographics influencing the consumer's choice of online vendor. We primarily examined the importance of major factors other than demographics. This thesis will suggest future research on that topic.

We also assessed the importance of each of the 7 factors. We used questionnaire survey to assess the importance. The respondents have similar demographic background which indicates that the results would be limited to the consumer's behavior of this certain group. The respondents are all Chinese online consumers with a concentrated age from 25 to 34. There are not clear demographic pattern of consumer's preferences found during the survey, as mentioned above, because of the focus and design of this particular research. In addition, the respondents' frequency of online purchase is quite concentrated. We could not separate the respondents into different groups in terms of their online shopping frequency.

The rated importance of each factor from top to bottom is in the following order: price, reputation and trust, ratings and reviews, order fulfillment performance, web quality, sales volume, stickiness factor. However, based on the results of t test, order fulfillment performance factor and ratings and reviews factor are not considered to be statistically different and therefore can be considered as at the same level. The differences between all the other factors are considered to be statistically significant and thus reflect their degrees of importance.

Therefore, price, reputation and trust are most important factors for consumer's choice of online vendor. Order fulfillment performance, ratings and reviews are also essential factors following the first tier factors. Web quality, sales volume and stickiness factors are also influential to consumers, nevertheless, have weaker impact on their choice of vendor.

The reputation of online shopping site is one of the most important factors influencing consumer choice, so the integrity, popularity of a website and the trust of consumers in the vendor are the most important elements. Besides, price is also extremely important as always expected. The

order fulfillment is also important to consumers. We also find that other consumers' ratings and reviews can significantly influence a consumer's choice. References from others play important role of judging the quality of a vendor. Web quality is also important but not as much as the previous factors. So the web quality is more like a must-have factor than determinant . Sales volume is not as important as other factors mentioned above, but it is also considerably helpful factor giving consumers the confidence on the vendor. Stickiness factor was assessed to be least important among all factors. Therefore, the membership incentives can help vendors to compete for consumers, however, they can not be used as the major strategies to improve business, because there are many other factors to work on to attract customers.

Comparing female and male consumers, the results show that male shoppers are more sensitive about price, and web quality. In addition, female shoppers value sales volume and stickiness factors more than male. Female shoppers are more dependent on other consumers' decisions and it's easier to use marketing tools to build long-term relationships with female customers, while male shoppers tend to switch vendors for lower price more easily. Difference was not found between male and female respondents on other factors.

**Table 9: Three tiers of factors in terms of assessed importance**

<b>1<sup>st</sup> tier factors</b>	<b>2<sup>nd</sup> tier factors</b>	<b>3<sup>rd</sup> tier factors</b>
Price	Order fulfillment performance	Web quality
Reputation and trust	Ratings and reviews	Sales volume
		Stickiness

## **6.2 Practical implications**

It is very valuable and beneficial to comprehend consumers and to find patterns of consumer behavior since the business stakeholders can adjust themselves to satisfy the consumers better. By understanding the essential factors influencing online consumers choice of vendor, the e-

commerce firms may invest more on the important factors to improve their competitive advantages in those fields, as well as avoid serious shortcomings which may significantly hamper the business. Many e-commerce websites intend to gain competitive advantages by providing lower price. Price battle became unhealthy phenomenon once in a while in some markets. However, there are also many other means to improve business performance and sustain customers in long term.

Low price is still a powerful way to attract consumers, though reputation is as well important. So the vendor may need to build trust and good reputation and promote itself for the long term success. Order fulfillment is also extremely important, so the investment in logistics is considered worthwhile. If the firm is confident about their service and products, they should encourage consumers to give them ratings and reviews since they are very helpful to attract other consumers. The firm may give incentives to consumers who rate or review the site. Though web quality is not ranked at top, it is also significant for consumers' choice of vendor. Easy-to-use website with excellent usability is still necessary. Many e-commerce sites nowadays design membership incentive policies to attract consumers and improve website stickiness. Though many consumers regard it as influencing to their choice of vendor, the factor is not as important as other factors studies in this research. Therefore, our suggestions for the online shopping sites are focusing more on the reputation and basic service, using incentives as a supportive tool to enhance business performance.

### **6.3 Limitations of the research**

This research is limited by a few facts. First of all, to define the factors that influence consumers' choices of online vendors, I reviewed the previous literature and select factors that are considered relevant. And then I included a few more factors using empirical analysis based on observation and industry experience. The selected factors tend to cover a wide enough range, but it is also possible that certain factors are overlooked due to the limitation of previous literature studied and the limitation of researcher's observation and empirical analysis.

Secondly, to assess the importance of the factors that influence consumers' choices of online

shopping sites, I fielded a questionnaire and gained data from a small sample of online consumers. The demographical backgrounds of the consumers indicate that the results may only be applied to the particular regions or countries where the consumers are from.

Moreover, it is always a big challenge to obtain consumers' real preferences and objective results and eliminate the subjective and misleading results. It is possible that the consumers' responds include bias and individual respond styles. For example, some respondents may tend to use high scores due to ratings habit. The individualized respond style can result from personality, gender, culture, and occupation etc. In our study, the respondents are all from relatively specific demographic group, therefore, the difference of respond style from the impact of culture is estimated to be small. However, there are still elements such as gender and personality may influence the results in certain degree. There are 3 main methods to estimate response style bias, using uncorrelated items to estimate response styles, collecting both attitudinal and behavioral information and estimate bias due to its lesser impact on information, and estimating from existing questionnaire items. But all methods have flaws: The first requires a large bank of uncorrelated items from which to draw, the problem of next method is that it is sometimes difficult to develop behavioral measures that directly relate to attitudinal constructs, and that doing so could greatly increase the length of any questionnaire, the last assumes that existing items on a single questionnaire would not share common variation (Chami-Castaldi E. et al., 2008). The first method is potentially feasible for our study, due to the limitation of time and resources, the respond bias is suggested for future study related to this topic. For study carried out in multicultural respondents, we would also suggest the elimination of responds bias in the analysis process.

Finally, the practical suggestions given by this thesis can be debated, as the author's interpretation of the findings and industrial experience can influence the direction and feasibility of the practical suggestions.

## **6.4 Suggestions for future research**

In this thesis, we define the factors and the importance of each factor that influence consumer's

choice of online vendor when purchase a product. There are also opportunities for future research on the same topic. First, the e-commerce world is changing every day, new technology enables better services and innovative business model. The primary factors influencing consumer's choice of vendor or buying decision making process may change as well. There are major changes happened in recent 1 or 2 years also to online shopping, for example, mobile shopping became substantially important and greatly impact e-commerce and consumer's behavior. The literature and business phenomenon related to such topic are not reviewed in this research. Therefore, it is an interesting and valuable direction that future research may choose to follow.

Furthermore, the survey in this research has demographic limitations when defining the importance of each of the 7 factors. The number of respondents is not considered as large enough to define demographic pattern of the study. The respondents are also not vastly different. Many of them are concentrated within similar demographic groups. The future research may focus more on the demographic factors influencing the consumer's choice of online vendor. This topic would be extremely important and valuable to work on. It is also possible to find out the demographic factors that influence the attitude of consumer towards the 7 factors. Because different groups of consumers may have different pattern rating the factors influencing their choice.

The demographic background of the respondents is quite concentrated. The respondents are mainly from 25 to 34 Chinese online shoppers with moderate frequency of online shopping activities. There is no clear demographic pattern found from the results since the number of respondents is small and the demographics of the respondents are not significantly different. Therefore, the results will reflect mainly the attitudes or preferences towards online vendor selection by the consumers with the demographic background mentioned above.

Thus, we strongly suggest further study on this topic focusing on the demographic elements which are not covered by this thesis.

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## **APPENDICES**

### **Appendix 1: Survey questionnaire**

#### **4. What is your gender?**

- Female
- Male

#### **5. What is your age?**

- 18 to 24
- 25 to 34
- 35 to 50
- 51 or older

#### **6. How often do you buy products online?**

- Never
- Four times or more every month
- Once to three times every month
- Less than once every month

**7. Consider that you are planning to buy a cellphone online in China, you already decided the brand and model, average market price is \$200. The product is not for urgent use because you are still using the old phone. You need to select an online shopping site to make**

the purchase.

**How important for you is the reputation of the shopping site (compare well-established site vs unknown site) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7

**8. How important for you are the ratings and reviews of the shopping site (compare 5/5 rating site vs 2/5 rating site) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7

**6. How important for you is the price of the cellphone on the shopping site (compare 20% less than average market price vs 20% more than average market price) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7

**7. How important for you is the number of the item sold on the shopping site (compare more than 50 consumers bought the item on the site vs nobody bought the item on the site yet) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7

**8. How important for you are the membership points and coupons will be gained from the website (compare you will gain some membership points and coupons for future use vs do not gain anything after purchase) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7

**9. How important for you is the website quality (usability) (compare excellent website quality vs below average quality) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7

**10. How important for you is order fulfillment performance of the shopping site (compare very convenient-fast delivery and flexibility vs not so convenient-slow delivery, limited options and occasional mistakes) 1=not important at all, 7=extremely important**

- 1    2    3    4    5    6    7