

## Quality of E-Tail Websites, Outcomes and Moderating Effects of Demographic Factors

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### Abstract

Due to wide spread of internet technology and digital marketing, online shopping and exchange of information through e-tailing websites has become very imperative. The purpose this research is to explore the direct influence of website quality on perceived risk, its impact on purchase intention and moderating effect of demographic variables (Gender, Education) on these relationships. To investigate the relationships, survey methodology has been adopted and a representative sample of 578 students of Liaoning Technology University, China was considered. For data analysis, variety of sophisticated analysis including SEM was deployed. It was revealed from results that there is negative relationship between e-retail website's quality and perceived risk, which is negatively affect the purchase intention. Moreover, it has been found that demographic factors moderate these relations. Findings of this study enrich existing literature of web based marketing and also help to understand how demographics could impact on these relationships. Finally, limitations of this research are presented and guidelines are proposed for future studies.

**Keywords:** E-tailing; Website quality; Perceived risk; Intention to purchase; SEM

### Introduction

Generally, retaining existing customers and obtaining new ones is the main objective of company's business website. In concept of World Wide Web (WWW), the quality of web site is assumed to be playing an imperious role. To what extent a website fulfill visitor's goal and their intention to revisit the same website on an ongoing basis is assessed by quality of website [1]. Furthermore, the reliability and credibility of online business is highly affected by the quality of website [2], which consequently directly linked with buyer's intention to purchase a product online through the website [3].

In present age of technology, it's very easy and low cost for customer to switching a competitor's website, therefore retaining and attracting customer has become challenging task for business organization and companies [4]. It has been found that business websites have greater impact on customer's perceived risk; moreover many researches have concluded that high-quality of website increase significant chances of retaining customer [5,6]. The characteristics of the website that adds values to the customers also referred as quality of website [7]. There are many factors like as quality of information, easiness of usability, self-explanatory, layout, trust and emotional appeal etc. are considered as measurements and dimensions for website quality by researchers and web developers [8]. Numerous studies have concluded that in e-shopping environment quality of website impact significantly on purchase intention [9]. On contrary, there are some researchers who have explored that there is positive significant relationship between the company's trust and website quality [10]. Since website play role of communication between customers and vendors in internet-shopping, therefore it is immense important to evaluate the properties of quality of website, which in turn also helpful to find the requirements of existing and potential visitors [11].

Currently, in field of web based e-shopping, many researchers have explored the important features, display format and functions of website that impact on purchase decisions and essential to measure the website quality. Review of digital marketing literature suggests that, System quality means website design and interactivity, while information quality is combination of informative content and security.

Similarly openness, trust and empathy together make service quality [12]. According to Hsu et al., [13] the evaluation of website quality is based on three important features: Information, System and service quality. In another study, Chang and Chen stated that website quality design is defined as "Layout of website, easiness, usability, interactivity and customization" [14]. Furthermore, Kim and Lenon described that quality of website mainly deals with its structure, customer service, responsiveness, accuracy and completion as well security/privacy [6]. In nutshell, on the bases of discussion made above, this study considers three main dimensions of website quality: Information quality, System and Service.

The foremost and important feature, we have used in this study to measure website quality is information quality. According to Rai et al., [15] to attract potential visitors, encourage existing customer to make purchase and to have the customer return back frequently, information given on website has to be precise, update, custom-made and easy to understand [15]. Since in online businesses, website play a mediator role between customer and marketers, it also have substantial effect on purchasing behavior, therefore to make shopping experience enjoyable and shopping deal easy, information given on website matter a lot [16].

In internet setting, system design defined by system quality and it refers to easiness of use [17]. In the same fashion, Kiakowski et al. [18] stated that the perception of user regarding easiness, trustworthy and the interface interaction of website are called perceived system quality. On the other hand, it has been observed that usage pattern of system may vary individually. When a user found poor system i.e., system have

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**Received** September 19, 2018; **Accepted** October 04, 2018; **Published** October 11, 2018

**Citation:** Rafiq MY, Azad MD, Shichang L (2018) Quality of E-Tail Websites, Outcomes and Moderating Effects of Demographic Factors. Arabian J Bus Manag Review 8: 364.

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absence of openness, convenience and trustworthy, then user might be reluctant from making online shopping using business website, which ultimately become cause of lower in sale and demand. Furthermore, security is another important issue regarding the system quality [19].

To evaluate the website quality, the third factor considered in this study was service quality. The level to which a website is complaisant, responsive, and proficient is known as service quality. In addition to this, service quality also includes overall customer assessment, their opinions, complaints and suggestions about the service provide through the website [20]. Zeithaml explained that service aspect of website should be key feature of website; companies' websites should focus on service aspect instead of exchanges and transaction procedure. This may be helpful not only to increase purchase intention of customers but also improve e-loyalty, e-satisfaction which leads to expansion of online business and eventually profits which is ultimate goal of all companies and organizations [21].

How much customer believes about negative outcome or uncertainty with an online transaction is known as Perceived risk [22]. In addition to this, it also indicates the customer's point of view regarding ambiguity and hostile concerns in e-shopping [6]. Along with purchase intention and behavior, the customer's perceived usefulness of website is also adversely affected by perceived risk. Therefore, Perceived risk impact on web shopping in many ways like, negative image of website, adverse negative effect on purchase frequency and more importantly it increase odds that visitors will write bad comments in website reviews. Ultimately, these negative comments effect the customer's choice [5]. Sometime, it happened that a single bad comment or negative review on business website become cause of switching customer to competitor company's website. Therefore, in order to avoid from negative reviews and discontent, quality of business websites should enhanced and improved frequently [23].

### Significance/contribution/value of research

Previous studies have identified that the key features of quality of website are: information, service and system, while a few researchers have examined relationship between them [3,6,12]. Also it has been observed that, there is difference in customer's opinions, attitudes, beliefs, values, behaviors and moreover variations in understanding of different constructs also observed, so there is likelihood that effect of influences for each group may be not similar [24]. Therefore, in the view of research gaps, the aim of this research is to explore the relationship between quality of website and perceived risk, its impact on purchase intention especially in Chinese online consumer context. Furthermore this study is also determined to find the strength of interrelationships among mentioned variables in the presence of demographic moderator (Gender and Education) which has not yet been examined. We have carried out this research using survey methodology.

### Literature Review

Typically quality of a product means its characteristics. Due to rapid increase of use of technology in online shopping, numerous scholars have conducted researches in order to examine the relationship between effects of website quality and buyers' satisfaction [25]. In spite of presence of various studies on topic of website quality, customer's satisfaction, e-trust, e-loyalty and intention to purchase and re-purchase, still there is lack of conclusive results regarding website quality factors [13,26]. Some related studies are presented below.

Hsu et al., [13] used a conceptual framework of stimulus, organism and response to determine the effect of quality of website on customer

purchase. They have proposed that quality of website is combination of five factors: service quality, system quality, information quality, customer perceived flow and perceived playfulness. It has been revealed from results that purchase intentions of customers and their likings are highly influenced by e-service quality features. In another similar type of study, Chang et al. [7] tried to examine how website quality and perceived trust effect on visitor's purchase intention. They have conducted their research in tourism sector and observed influence of website brand and perceived value on the customer purchase intention. A web-based survey was used to collect data and Structural Equation Modeling (SEM) technique was applied to obtained results. It has been revealed from output that hotel purchases and orders were noticeably increased with website brand, in addition to this, it was found that for the customer who perceived superior website brand, there was strong relationship between website quality and perceived trust. Moreover, high service value found significant moderator for the relationship between perceived trust and purchase intention.

Researchers have also tried to explore the connection between consumer's trust and loyalty with quality factors in online businesses. For instance, Winnie [27] concluded that customer's trust is foremost component for success of any internet based selling. In the same way Liang and Chen [23], said that ease of use and final fulfillment are the two basic dimensions of usability of website. On contrary, Swaid and Wigand [28] suggested that in order to get the inside, the quality of website should evaluate by considering other factors like as extent of perceived risk, prompt response, accuracy of information, constancy and customization of website etc.

In some of studies, the scholars have focused on performance of websites and their operational functions. For instance, Chang and Chen [14] examined the influence of visitor's interface quality, their contentment as well as switching cost. In order to measure the consumer's perception, they have conducted survey and analyzed different features of website. The results of analysis have showed that customer's feelings were highly positively affected by professional communication and interaction. In addition, they have found that significant factors which impact on attracting traffic and switching costs are customization, easiness, accessibility and speed of website. Finally, their model's output suggested that e-loyalty is highly influenced by switching costs.

Along with website quality, reputation is another factor which stimulus customer's intention to purchase. For example, Kim and Lennon [6] conducted web-based survey and tried to explore the impact of website's reputation on customer purchase intention. It has been revealed from results that quality of website and its reputation impact positively and negatively on visitor emotions and perceived risk respectively. Furthermore, they have concluded that its emotions and perceived risk which has substantial effect in web-based shopping. Masoud [26] conducted focus group interviews in Jordan from online buyers and examined how perceived risk affects them in e-shopping setting. He narrated that the perceived risk is measured by five different dimensions: time risk, information risk, product risk, delivery risk, privacy risk and financial risk. Furthermore, it was found that all these dimensions have direct impact on online shopping.

Some researcher used modeling approach to determine the ways of reducing perceived online shopping risks. Hsieh and Tsao [22] collected data from online shoppers and developed measure for their satisfaction. They asked questions from consumers, has taken their feedback and interviews and observed website traffics etc. to establish four dimensions of satisfaction. Their results have explored that bad

service has more negative impact on customer's intention to purchase and perceived risk as compare to system and information quality. Moreover, they have found that online trust of consumers is negatively affected by perceived risk. Finally, it was observed that negative effect of perceived risk is stronger in case of C2C business, instead of B2C business.

Bai et al. [3] carried out research in China and examined the relationship between direct effects of information content on purchase intention of website visitors. Their findings suggest that sale of web-businesses are directly inclined by flow of information as well as nature of content. A survey was conducted to investigate the effect of website quality on customer satisfaction and purchase intention. It has been revealed from output of study that website quality positively affects customer's satisfaction which ultimately leads increase in purchase intention that become cause increase in sale and profit of an organization.

In some of studies, researchers tried to establish relationship by considering service qualities and customer's satisfaction using various modeling techniques. For instance, Gregg and Walczak [5] develop model using different dimensions of website quality, price premiums at various online auctions and e-trust. In order to compare price premiums of almost two similar types of online auction websites (one with perceived high quality and other with perceived low quality) an online was conducted among e-Bay users. There were 701 users participated in this study. It was revealed from responses that the perceived high quality of website significantly impact on intention to transact and price premium of users. Similarly, He et al. [29] showed with the help of empirical data that in e-businesses the usability functions of website highly influenced, not only purchase intention but also re-purchase intentions.

On the basis of above discussions and previous studies available in this area, it is concluded that there is strong connection between website quality and purchase intention. Moreover, the perceived risk play a vital role as mediator between website quality and purchase intention. However, the impact of moderating demographic variables

like as gender, education, income, experience etc. on the above mention relationship has not yet been studied. Therefore, there is need to carried out research to find role of moderators in relationship between website quality, perceived risk and purchase intention of online shoppers.

### Development of research model and hypothesis of study

On the basis of previous discussion, we have proposed advanced and comprehensive model for quality of (e-retailing or e-tailing) websites. The purposed model is shown in Figure 1. It has been hypothesized that there is relationship between dimensions of website quality (information, service and system quality) and perceived risk, moreover this perceived risk influence purchase intention of visitors in online shopping. In addition to this, the other objective of this study is to investigate the moderating effect of demographics variables (Gender and Education) for above said relationships.

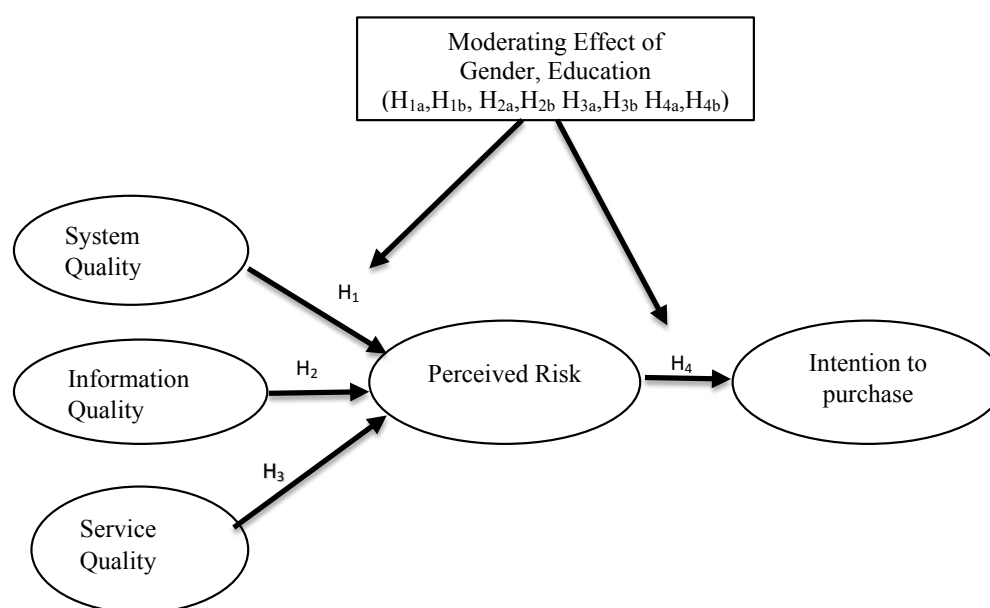
Three vital dimensions of e-retailing website quality are: information, service and system quality. Information quality refers to extent which website visitor feel that website is stress free, easy approach, accurate, flexible for use and more importantly interface is highly consistent related to purchase intention. Moreover, information quality play significant role and contribute to customer's first and subsequent purchase. Also, quality system has encompassed security features of website [25]. It has been noticed that, in online shopping environment, a visitor prefer that vendor whose website has high perceived information quality as compare to another marketer, even the price or quality of product provided by both vendors are same [12]. Thus the following is purposed:

H1: There is significant negative relationship between information quality and perceived risk.

H1a: The relationship between information quality and perceived risk is moderated by gender of visitor/online shopper.

H1b: The relationship between information quality and perceived risk is moderated by education of visitor/online shopper.

Palmer [20] stated that a website which is well-organized, responsive



**Figure 1:** Conceptual model of quality of e-tail website, outcomes and moderating effects of demographic factors (gender, education).

and complaisant is supposed to be service quality website. In addition to this, its service quality of website that encourage visitors or potential customers to become customers and make repurchase frequently from same seller. Zeithmal [21] recommended that as compare to execution of transaction, the role of service quality is more important. Therefore, it is responsibility of developers to make e-tailing website more friendly-user, self-explanatory and more secure regarding privacy issues of visitors. Therefore, following is hypothesized:

H2: There is significant negative relationship between service quality and perceived risk.

H2a: The relationship between service quality and perceived risk is moderated by gender of visitor/online shopper.

H2b: The relationship between service quality and perceived risk is moderated by education of visitor/online shopper.

Not only first but subsequent purchases are also highly influenced by system quality of e-tailing website. It is recommended that a marketer should develop quality website having such characteristics by which an online shopper receive high value while purchasing is done. Moreover, it has been observed that there more odds that a customer shift/change loyalty because of negative comments on e-commerce website given by other visitors [10]. Thus resultantly, we have suggested following:

H3: There is significant negative relationship between system quality and perceived risk.

H3a: The relationship between system quality and perceived risk is moderated by gender of visitor/online shopper.

H3b: The relationship between system quality and perceived risk is moderated by education of visitor/online shopper.

In conventional or digital shopping, customer loyalty is always come from initial purchase [30]. Chang et al. [7] stated that the first purchase may be by chance or for sake of experience, by converting a visitor or potential customer into regular customer, the loyalty of buyers can be achieved in both conventional and online setting. By providing useful information regarding needs of buyers and promising them to provide good quality product on the website, the potential customers can be nurtured and influence them to purchase or repurchase. No doubt, quality information available on website always nurture and encourage customer to buy product, however on the other hand any sort of risk discourage a shopper making any purchase. The potential undesirable results which may a buyer have after online transaction is referred as perceived risk [22]. According to Masoud [26] perceived risk may be related to carriage, product, time of delivery, price, and information etc. Bai et al. [3] suggested that a buyer who is unclear or ambiguous has fewer chances to make first purchase or even succeeding purchases. Therefore, following same reasons discussed above, it can be hypothesized that:

H4: There is significant negative relationship between perceived risk and intention to purchase.

H4a: The relationship between perceived risk and intention to purchase is moderated by gender of visitor/online shopper.

H4b: The relationship between perceived risk and intention to purchase is moderated by education of visitor/online shopper.

Proposed conceptual model of impact of quality of website on perceived risk, purchase intention and moderating effect of demographic is presented in Figure 1.

## Research Methodology

### Sample, data collection and measurement

A highly structured questionnaire comprises of two sections was developed. First part of questionnaire was about demographics of participants, while the second section includes constructs included in proposed model. As mentioned earlier, website quality is measured by three factors: information quality, service quality and system quality. Website quality is measured from overall total 16 items. The measurement of information quality contains 4 items which were modified from a study by Hsu et al. [13] service quality construct consist of 4 items which were altered from the previous studies [12,13,23], similarly measurement of system quality includes 4 items, these were modified [12,13]. Perceived risk was adopted and adjusted [6], it contains 3 items. The measurement of Purchased intention assume 4 items, were modified [6,31]. Consequently, there were total 23 items were examined, using five-point likert scale ranging from "1=strongly disagree" to "5=strongly agree". Details of constructs and their respective items have been shown in Appendix A.

Since original items were in English, therefore after English-Chinese translator and mutual discussion, a modified and precise Chinese version of questionnaire was formed to collect the information. The developed questionnaire was pre-tested by taking feedback from 25 respondents, the results showed that questions and instructions were well understood, however wordings of some statements was altered on the recommendations and suggestions from participants. Then final questionnaire was uploaded on professional online survey website Sojump (<http://www.wenjuan.com>). Numerous studies considered students as participants for such related research, since they are true and highest share of online buyers and internet users of Chinese community [32], therefor it would be more rational to conduct this research by collecting data from university students. About 1000 students of Liaoning Technical University, China filled out questionnaire. After elimination of invalid and incomplete forms, 978 valid questionnaires were used for analysis.

### Summary of demographic profile

As mentioned earlier, in order to meet objectives of this research data has been collected from students of Liaoning Technical University, China. In total, 578 valid questionnaires were considered for analysis purpose. Among them, male and female were recorded 254 (43.97%) and 324 (56.03%). Majority of students have age greater than 20 Years i.e., 235 (59.41%). Moreover, there were 281 (48.57%) students whose degree program were undergraduate, while there were 397 (51.43%) students who were perusing their graduation degree took participate in this study. In addition to this, Maximum number of students 363 (62.78%) had experience of using internet experience more than 3 years. Finally, it has been found that there were almost half of the students 273 (47.24%) who made shopping online twice in month (Table 1).

### Data Analysis

We have used smartPLS-3 to perform data analysis, since this software has been widely used in lot of research areas like as Marketing [33], information systems [34] and others. Results of analysis are presented in two subsequent sections: First is related with evaluation of Measurement Model while the other is concerned with assessment of structural model along with interpretation of path co-efficient,  $R^2$  and other related measures.



Factor	Variable	Frequency	Percent
Gender	Male	254	43.97
	Female	324	56.03
Age	20 Years ≤	235	40.59
	20 Years>	343	59.41
Degree program	Undergraduate	281	48.57
	Graduate	397	51.43
Experience of internet usage	3 Years ≤	215	37.22
	3 Years>	363	62.78
Frequency of online shopping	Once in month	211	36.50
	Twice in month	273	47.24
	More than two times	94	16.26

Table 1: Demographic profile of students.

		β	t-value	CCR	α	AVE
Information Quality (INFO)	INFO1	0.796	23.413	0.836	0.821	0.714
	INFO2	0.871	31.549			
	INFO3	0.823	45.657			
	INFO4	0.856	39.678			
Service Quality(SER)	SER1	0.862	8.674	0.8153	0.769	0.654
	SER2	0.837	16.195			
	SER3	0.786	7.632			
	SER4	0.848	5.987			
System Quality (SYS)	SYS1	0.617	13.654	0.789	0.758	0.736
	SYS2	0.793	9.861			
	SYS3	0.685	17.365			
	SYS4	0.723	23.547			
Perceived Risk (PR)	PR1	0.847	6.487	0.859	0.851	0.673
	PR2	0.826	9.605			
	PR3	0.798	4.557			
Purchase Intention (PI)	PI1	0.906	3.889	0.878	0.778	0.668
	PI2	0.884	9.647			
	PI3	0.867	5.913			
	PI4	0.891	7.064			

Table 2: Results of confirmatory factor analysis.

## Assessment of measurement model

To check the reliability and validity of scales used in development of the latent construct and their manifest variables, it is very necessary to evaluate the measurement model [35]. The assessment of measurement model includes various steps: Initial step is to perform exploratory factor analysis then followed by measurement of convergent and discriminant validity and finally evaluation of measure's reliability.

## Reliability and validity of measurement scale

The stability of the measures adapted or adopted in the model can be checked by employing reliability [36]. Generally, it is suggested that construct reliability is assessed using composite and Cronbach's alpha [37]. The threshold value for satisfactory reliability is 0.70, CR value exceed than 0.70 suggest that construct is reliable, similarly for the internal consistency of measures, the overall result should be more than 0.50. Table 2 demonstrate that results meet the requirement and construct used in our purposed model are satisfactory. Convergent validity can be achieved if the measurements are loads highly or found very significant with their respective construct. Moreover, there are two criteria for achieving the Discriminant validity: Firstly, the measured items should have very high/strong relationship with their related construct instead of other construct in the CFA. Secondly, the square root of AVE of each construct must larger than its correlation with other constructs. The values of AVE of each construct and its correlations are shown in Table 3. Based

on the results presented in table, it showed a reasonable level of reliability and validity of constructs. Also value of Variance Inflation Factor (VIF) demonstrated that there is no problem of multi-collinearity, as value of VIF for specific construct does not exceed cut-off value 0.50.

## Structural Equation Model (SEM)

After assessment of measurement, next phase is to develop the Structural Equation Model. In order to support or reject our formulated hypothesis, we have examined the co-efficient of causal relationship between construct in our proposed model. The path co-efficient along with their t-values as well as the values of co-efficient of determination for dependent construct are presented in Table 4.

Given the resultant statistically significant structural co-efficient, It is obvious that information quality and Service quality has negative relationship with perceived risk i.e., if information quality and service quality is high the perceived risk will be low and vice versa. Service quality found most important predictor of perceived risk, followed by Information Quality. Furthermore, it was examined that the system quality impact positively on perceived risk, but this relationship is insignificant. In addition to this, the variance in dependent variable; perceived risk due to independent variables: information quality, service quality and system quality is accounted for 47.90%, which is supposed to be moderately high. Finally, perceived risk and purchase intention was examined negatively and significantly related with each other, while the value of R<sup>2</sup> recorded for this relationship is 36.90%.

In order to measure the differences between groups of participants in term of moderating variable, the most commonly used method is multi-group analysis (PLS-MGA) [38,39]. Moreover, in order to evaluate measurement invariances, the MICOM procedure has been adopted. Therefore, MGA analysis was performed to test the differences of gender and education group by considering all path levels i.e., (H1a-H1b, H2a-H2b, H3a-H3b, H4a-H4b). It was revealed from results that groups along Information and service quality influencing perceived risk at level p<0.01 and p<0.05 respectively, indicating that there is existence of significant moderating effect of gender and education. However, for perceived risk influencing purchase intention path, moderating effect of gender was found at level p<0.001 but there is no moderating effect of education exist at all i.e., for both education level undergraduate and graduate it remains same. The results regarding all tested hypothesis are presented in Table 5 and 6.

	INFO	SER	SYS	PR	PI	VIF
INFO	0.845					0.301
SER	0.421	0.809				0.252
SYS	0.358	0.038	0.805			0.354
PR	0.184	0.164	0.381	0.820		0.108
PI	0.511	0.45	0.247	0.342	0.0.817	0.237

Table 3: Measure of discriminant validity and VIF.

Hypothesis	Path co-efficient β	t-Statistic (p-Value)	R <sup>2</sup>
H <sub>1</sub> : Information Quality → Perceived Risk	-0.259	7.581 (0.000)	0.479
H <sub>2</sub> : Service Quality → Perceived Risk	-0.117	3.391 (0.004)	
H <sub>3</sub> : System Quality → Perceived Risk	0.014	1.123 (0.732)	
H <sub>4</sub> : Perceived Risk → Purchase Intention	-0.168	4.361 (0.000)	0.369

Table 4: Output of standardized path co-efficient, significance value and co-efficient of determination.

	Path co-efficient diff. ( Boys-Girls )	p-Value ( BoysVsGirls )	Path co-efficient diff. ( Undergrad.-Graduation )	p-value ( Undergrad. Vs Graduation )
INFO → PR	-0.104	0.000***	-0.123	0.031*
SERV→ PR	-0.083	0.025*	-0.045	0.001**
SYS → PR	0.132	0.106	0.094	0.078
PR → PI	-0.347	0.000***	-0.261	0.061

Path marked with \*\*\*, \*\* and \* are significant at  $\alpha=0.001$ ,  $\alpha=0.010$  and  $\alpha=0.050$  respectively.

**Table 5:** Result of multi analysis (MGA group).

Hypothesis	Description	Result
H1	There is significant negative relationship between information quality and perceived risk.	Supported
H1a	The relationship between information quality and perceived risk is moderated by gender of visitor/online shopper.	Supported
H1b	The relationship between information quality and perceived risk is moderated by education of visitor/online shopper.	Supported
H2	There is significant negative relationship between service quality and perceived risk.	Supported
H2a	The relationship between service quality and perceived risk is moderated by gender of visitor/online shopper.	Supported
H2b	The relationship between service quality and perceived risk is moderated by education of visitor/online shopper.	Supported
H3	There is significant negative relationship between system quality and perceived risk.	Rejected
H3a	The relationship between system quality and perceived risk is moderated by gender of visitor/online shopper.	Rejected
H3b	The relationship between system quality and perceived risk is moderated by education of visitor/online shopper.	Rejected
H4	There is significant negative relationship between perceived risk and intention to purchase.	Supported
H4a	The relationship between perceived risk and intention to purchase is moderated by gender of visitor/online shopper.	Supported
H4b	The relationship between perceived risk and intention to purchase is moderated by education of visitor/online shopper.	Rejected

**Table 6:** Details of tested hypothesis along with their results.

## Discussion

The primary objective of this study was to examine the influence of different website dimension's quality on perceived risk, then its impact on purchase intention and finally moderating effect of demographics (Gender and Education) on these relationships. The results have shown that information quality and service quality impact negatively on the perceived risk, means that higher the information and service quality, there will be less perceived risk. Similarly, the relationship between perceived risk and intention to purchase was found negative, accordance with expectations as based on similar previous results. The results obtained related to relationship between dimensions of website quality (Information, service, system) and perceived risk have demonstrated novel findings.

Moreover, gender of student moderate the relationships of Information quality and Service quality with perceived risk, therefore we reject the hypothesis regarding demographics. No difference between boys-girls and undergraduate-graduate students, regarding the moderation of system quality and perceived risk. However, the relationship between perceived risk and purchase intention is moderated by gender and as well as education. Therefore, the results might be seen as novel insights, and greatly enrich the existing literature. The tested hypotheses along with their conclusion are presented in Table 6.

## Limitations and Future Research Recommendations

Beside contributions, this study also has some limitations. Firstly, we just focus only on three dimensions (information, system and service) to measure the quality of website, however further research might include other attributes like as usability, security, reliability, performance, portability, accessibility and conformance to measure the quality of website. Secondly, instead of taking perceived risk as moderator between website quality and purchase intentions, further research might consider switching cost, reputation, method of payment and after-sale risk as moderator. Finally, the population universe consists for this study was university students therefore it cannot generalized to other online shoppers like as household and professional

consumers. In addition to this, future research could focus on our proposed model with some additional personal, situational or cultural features and can test this on specifics products/services/industries.

## Acknowledgement

I would like to thank my class mates Liu Qing and Huang Hongmei for helping me to develop Chinese language version of questionnaire and in data collection, without their assistance it was really very difficult to accomplish this task.

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