

## The Effect of Perceived Risk on Online Shopping in Jordan

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### Abstract

Consumers' perceived risk has been considered as a fundamental concern of decision making process during online shopping. For the purpose of this study, perceived risk is defined as the potential for loss in pursuing a desired outcome from online shopping. The study aimed to examine the effect of perceived risks (financial risk, product risk, time risk, delivery risk, and information security risk) on online shopping behavior in Jordan. To investigate the hypotheses of the research, data was collected from online shopping users; a survey was conducted with a sample size of 395 online shoppers among consumers who previously purchased online and mainly from the main popular online stores in Jordan, methodology was done using SPSS 17 and Amos 18. The study revealed that financial risk, product risk, delivery risk, and information security risk negatively affect online shopping behavior. The results also showed that the other two dimensions, perceived time risk, and perceived social risk have no effect on online shopping. The study has an important managerial implication; it provides marketers with the importance of consumers risk perception in order to adopt adequate risk-reduction strategies in the internet shopping environment.

**Keywords:** Perceived Risk, Risk Dimensions, Online Shopping, Electronic Commerce, Jordan.

### 1. Introduction

Development of the Internet has strongly impacted the worldwide marketing environment and the Internet has provided companies with the ability to expand their business reach through e-commerce (Alkailani and Kumar, 2011). The Internet is becoming an increasingly popular medium to facilitate information search, choice, and purchase. Business-to-consumer (B2C) electronic commerce involves the use of the Internet to market and sell products and services to individual consumers. These technologies offer consumers an additional channel for information, service and purchasing, as well as potentially increased choice, convenience, among retailers and cost savings (George, 2002). Reasons for shopping online have been cited for time efficiency, avoidance of crowds, and 24 hour shopping availability (Karayanni, 2003). Online shopping has become a viable threat to traditional shopping channels, such as retail stores and catalogs in certain product areas (Lohse & Spiller, 1998). Furthermore, the Internet makes an unlimited range of products and services accessible for consumers all around the world, people can buy or sell virtually anything, at anytime, from anywhere, through online shopping (Quelch and Klein, 1996). The degree to which shoppers are now turning to the Internet as a shopping channel underscores the need to better understand and predict consumers' online shopping behaviors in order to design and support effective retail Web sites that match the preferences of their target market (Vijayarathy and Jones, 2000). Previous research has noted that clearly understanding what motivates consumers to shop online can inform strategy, technology, and marketing decisions, as well as web site design (Wolfenbarger & Gilly, 2001). Despite the significant growth and the optimistic future growth of online shopping, negative aspects are also becoming more frequently associated with this alternative shopping method. In an online environment, in contrast to a physical one, greater risk and less trust are expected due to the fact that there is major difficulty in evaluating a product or service as there are no visual or tangible indications about the quality of the product nor face-to-face interaction with sales staff, and the purchase is affected by security and privacy issues (Laroche *et al.*, 2005). Therefore, it is assumed that people may feel a certain degree of risk when purchasing a product through the Internet. For example, consumers are worried that the Internet still has very little security with respect to using their credit cards and disclosing personal information or concerned about purchasing a product from sellers without physically examining the products (Pallab, 1996). There have been intensive studies of online shopping attitudes and behavior in recent years. Most of them have attempted to identify factors influencing or contributing to online shopping attitudes and behavior. These studies have all made important contributions to our understanding of the dynamics of online shopping field. Businesses in Jordan are starting to adopt e-commerce business models and sell their products online. However, there is a lack of coherent understanding of the impact of perceived risks on online shopping in Jordan. The researcher aimed to in depth focus on perceived risks dimensions

which are identified by prior studies, and incorporate these dimensions of perceived risks into a research model, and identify their effect on online shopping.

## 2. Literature Review

### 2.1. Perceived risk

Despite the benefits of online commerce over traditional commerce and optimistic predictions for future growth of online shopping, negative aspects associated with this shopping method are also becoming critical (Ko *et al.*, 2004). Risk plays an essential role in consumer behavior, and it makes a valuable contribution towards explaining information-searching behavior and consumer purchase decision making, there are two theoretical perspectives about risk: one that is centered on a decision result's uncertainty and another centered on the costs or consequences of such results (Barnes *et al.*, 2007). Even though consumers perceive the Internet as offering a number of benefits, the Internet tends to magnify some of the uncertainties involved with any purchase process. Consumers perceive a higher level of risk when purchasing on the Internet compared with traditional retail formats (Lee & Tan, 2003). Perceived risk is defined as the potential for loss in pursuing a desired outcome while engaged in online shopping; it is a combination of uncertainty with the possibility of serious of outcome (Ko *et al.*, 2010). The idea of perceived risk has been captured through the use of various scales by measuring the perception of dangerous events occurring (Featherman and Pavlou, 2002). Perceived risk reduces the willingness of consumers to buy goods over the internet (Barnes *et al.*, 2007). Greater perception of risk on the part of consumers' acts as a deterrent to their purchase intentions. Several authors have observed that the perceived risk in E-commerce has a negative effect on shopping behavior on the Internet, attitude toward usage behavior and intention to adopt E-commerce (Zhang *et al.*, 2012). In E-commerce the retail channel is the internet. The risk linked to the channel is usually greater than the risk linked to the seller in online shopping. Online buying may be associated with negative results that are not found in traditional commerce, such as consumer's inability to value the quality of the product directly, the lack of personal contact with a salesperson, the costs of learning how to use the internet or site, the change from other channels to the electronic one, the generation of anxiety and stress for consumers who don't feel comfortable using the internet, the absence of interaction and social contact with other people, and security of payment and personal (Salo and Karjaluoto, 2007; Zhou *et al.*, 2008). Consumers, on the Web, may fear providing credit card information to any commercial Web provider and those consumers simply do not trust most Web providers enough to engage in exchange relationships involving money. This perceived risk among consumers translates into their reluctance to use credit card information over the Internet resulting in their disengagement from electronic transactions (Hoffman *et al.*, 1999). However, the perception of risks and costs is not identical for all consumers. While some buyers perceive electronic commerce as a risky and expensive way of buying, others value the advantages of e-commerce, such as the ease of information searching and of comparing products and prices. In any case, it can be supposed that the perceived risk will lead consumers to consider different signals when forming their attitude and feelings towards a web site (Martin and Camarero, 2009). Forsythe and Shi (2003) proposed that private risk, product risk and the risk of unknown origin would impact on the online shopping and could explain the barriers of online shopping. Previous studies have argued that the following types of risks are usually involved in purchase decisions: financial risks, product risk, convenience risk, health risk, quality risk, time risk, delivery risk, after-sale risk, performance, psychological, social, and privacy risk, website design style and characteristics, and trust in the web site affect significantly online consumers' purchasing behavior (Martin and Camarero, 2009; Tasi and Yeh, 2010; Almousa, 2011; Javadi *et al.*, 2012; Zhang *et al.*, 2012). This research purposes six important perceived risk variables such as (financial risk, product risk, time risk, delivery risk, social risk, and information security risk), affecting purchasing behavior were chosen in this research model according to traditional literature on them, and the empirical evidence obtained from online stores experts and customers.

### 2.2. Financial risk

Despite the significant growth and optimistic outlook for the future growth of online shopping, negative aspects are also becoming more frequently associated with this alternative shopping method. For example, consumers are worried that the Internet still has very little security with respect to using their credit cards and disclosing personal information (Pallab, 1996). Financial risk is the perception that a certain amount of money may be lost or required to make a product work properly. Also, it is defined as potential net loss of money, and includes consumers' sense of

insecurity regarding online credit card usage, which has been evidenced as a major obstacle to online purchases (Maignan & Lukas, 1997).

### 2.3. Product risk

The Internet, just like any type of non-store shopping, makes it difficult to examine physical goods; consumers must rely upon somewhat limited information and pictures shown on the computer screen (Jarvenpaa and Tractinsky, 1999). Product risk is the perception that a product purchased may fail to function as originally expected (Kim *et al.*, 2008). And it is the loss incurred when a brand or product does not perform as expected, is largely due to the shoppers' inability to accurately evaluate the quality of the product online (Bhatnagar *et al.*, 2000).

### 2.4. Time risk

Time risk is the perception that time, convenience, or effort may be wasted when a product purchased is repaired or replaced Hanjun *et al.*, (2004). Time risk includes the inconvenience incurred during online transactions, often resulting from difficulty of navigation and/or submitting orders, or delays receiving products (Forsythe *et al.*, 2006).

### 2.5. Delivery risk

Potential loss of delivery associated with goods lost, goods damaged and sent to the wrong place after shopping (Dan *et al.*, 2007). Consumers fear that delivery will be delayed due to various circumstances; the delivery company won't deliver within the time frame agreed with customers, or consumers fear that the goods may be damaged when handled and transported, or no proper packaging and handling during transportation (Claudia, 2012).

### 2.6. Social risk

Social risk refers to the perception that a product purchased may result in disapproval by family or friends (Li and Zhang, 2002). It also refers to the potential loss of status in consumer's social group due to either the inappropriateness of the product or disapproval of using internet as a shopping channel (Stone and Gronhaug, 1993). Usually, consumers try to obtain advice or consent from others in their social group in order to reduce social risk.

### 2.7. Information security

Consumers can learn about the value of products through website features such as product information quality, transaction and delivery capability, and efficiency service quality; however, if there is no information security mechanisms in place, purchase intention will be adversely affected. This information security factor can be exploited sufficiently depending on Internet retailers' ability to meet customers' expectations in the virtual shopping environment (Chang and Chen, 2008). Youn (2009) mentioned that information security and privacy are related to the uncertainty associated with how personal information is handled by online establishments and who has access to it. Kayworth and Whitten (2010) also mentioned that consumers avoid websites that require personal data for registration, leading some people to falsify or provide incomplete details. Many scholars emphasize that website security and privacy should encompass confidentiality of information, information integrity, and communication of non-repudiation, authentication security, IT effectiveness, and protection of personal privacy, all of which relate to website characteristics (Shin, 2010).

### 2.8. Online Shopping

Online shopping behavior (also called online buying behavior and Internet shopping behavior) refers to the process of purchasing products or services via the Internet. The process consists of five steps similar to those associated with traditional shopping behavior (Liang and Lai, 2000). Many E-commerce studies have shown that consumer intentions to engage in online transactions are a significant predictor of consumers' actual participation in E-commerce transactions, the relationship between intention and behavior is based on the assumption that human beings attempt to make rational decisions based on the information available to them (Pavlou and Fygenson, 2006). Today online consumers have more control and bargaining power than consumers of physical stores because the Internet offers more interactivities between consumers and product providers as well as greater availability of information about products and services. Compared to physical stores, online stores have many advantages: They are convenient and time saving and no more traveling and waiting in lines is needed. They are open in all time and they are accessible anytime and anywhere. However, online stores also have disadvantages compare to physical stores. In online stores customers can't have any sense about the product they see in the internet (seeing, touching, tasting, smelling, and hearing) as they search for and purchase products. In online stores, consumers may develop low trust

and perceive elevated risk highly because of the lack of face-to-face communication. Given that online shopping is a relatively new type of shopping method, significant changes must occur in order to encourage more consumers to shop online. For this to happen, consumers must recognize that they could obtain a better deal from online shopping than from traditional shopping channels (Keeney, 1999).

### 3. Background of Research

Zhang *et al.* (2012) aimed to explore the dimensions of consumers' perceived risk, and investigate their influence on online consumers' purchasing behavior. The results showed that there are five independent dimensions, perceived health risk, perceived quality risk, perceived time risk, perceived delivery risk and perceived after-sale risk affect significantly online consumers' purchasing behavior. While the other three dimensions, perceived privacy risk, perceived social risk and perceived economic risk are the less relevant factors. Javadi *et al.* (2012) aimed to analyze factors affecting on online shopping behavior of consumers, and how perceived risks (financial risks, product risk, convenience risk and non-delivery risk) impact attitude toward online shopping. To investigate the hypotheses of the research, 200 questionnaires dispersed among online stores of Iran. Respondents to the questionnaire were consumers of online stores in Iran which randomly selected. The study identified that financial risks and non-delivery risk negatively affected attitude toward online shopping, and no significant effect of product risks and convenience risk on attitude toward online shopping. Results also indicated that domain specific innovativeness and subjective norms positively affect online shopping behavior. Furthermore, attitude toward online shopping positively affected online shopping behavior of consumers.

Almoussa (2011) aimed to examine the influence of six perceived risk dimensions including, performance, psychological, financial, social, time, and privacy risks, associated with apparel online shopping on purchase intention among Saudi consumers. Results indicated that risk perception has a strong negative influence on apparel purchase intention. Nevertheless, differences are observed between different risk dimensions, where consumers perceive more performance and time risks in apparel internet shopping. Moreover, consumers perceive privacy and social risks with a lesser significance than performance and time risks on apparel internet shopping. Alkailani and Kumar (2011) aimed to investigate factors impacting Internet buying in three cultures: USA, India, and Jordan, and to understand the particular nature of differences in consumer characteristics impacting internet buying in different countries and cultures. Results indicate that in cultures where uncertainty avoidance is high, perceived risk with internet, buying is also high, and this impacts internet buying negatively. Cultures where perceived risk is high, it impacts internet buying negatively. Results also provide valuable insights into the nature of internet buying and the factors that limit Internet-buying acceptance across cultures.

Tasi and Yeh (2010) aimed to study the effect of website quality specifically product quality information, efficiency service quality, website design style and characteristics, and transaction and delivery capabilities-on perceived risk of information security and privacy and its relationship with purchase intention. The results show that consumers who purchase environmentally sustainable products pay attention to the quality of the websites from which they purchase those products. Also, the results showed that perceived risk of information security and privacy involves two dimensions: perceived ease of use and perceived usefulness. Martin and Camarero (2009) suggested a model that reflects the determinants of trust in the web site which include web site cognitive and experiential signals, firm reputation, bricks-and-mortar experience, and consumer satisfaction, taking into account the moderating effect of consumer-perceived risk when buying online. Results showed Internet users who buy online more frequently can trust a web site only based on their previous satisfaction, whereas users who perceive more risks need to perceive that the firm has a good reputation and bricks-and-mortar experience apart from other signals such the quality of the service.

Kim *et al.* (2008) investigated how trust and risk affect an Internet consumer's purchasing decision. The results of the study show that Internet consumers' trust and perceived risk have strong impacts on their purchasing decisions. Consumer disposition to trust, reputation, privacy concerns, security concerns, the information quality of the Website, and the company's reputation, have strong effects on Internet consumers' trust in the Website. Also, consumer's trust has a strong positive effect on the purchasing intention as well as a strong negative effect on a consumer's perceived risk. This study also provides evidence that a consumer's perceived risk reduces the consumer's intention to purchase, whereas a consumer's perceived benefit increases the consumer's purchasing intention.

Forsythe *et al.* (2006) aimed to investigate the perceived benefits and risks of online shopping; and to develop scales to measure the perceived benefits and risks associated with online shopping. The findings revealed that those shoppers who shopped more frequently and spent more money online perceived greater benefits and less risk to be associated with Internet shopping. Furthermore, perceived benefits were determined to be a positive predictor of future intentions to visit and purchase online, while perceived risks related negatively to future intentions to purchase online. Garbarino & Strahilevitz (2004) aimed to examine how men and women differ in both their perceptions of the risks associated with shopping online and the effect of receiving a site recommendation from a friend. The first study examines how gender affects the perceptions of the probability of negative outcomes and the severity of such negative outcomes should they occur for five risks associated with buying online (i.e., credit card misuse, fraudulent sites, loss of privacy, shipping problems, and product failure). The second study examines gender differences in the effect of receiving a recommendation from a friend on perceptions of online purchase risk. The third study experimentally tests whether, compared to men, women will be more likely to increase their willingness to purchase online if they receive a site recommendation from a friend. The results showed that women perceive a higher level of risk in online purchasing than do men. In addition, having a site recommended by a friend leads to both a greater reduction in perceived risk and a stronger increase in willingness to buy online among women than among men.

Hanjun *et al.* (2004), in their research investigates the differences in perceived risk between online shoppers and non-online shoppers, as well as online shoppers' perceived risk relating to two culturally different countries (i.e., Korea and the United States). The study showed a significant difference in the perceived risk of online shopping between online shoppers and non-online shoppers, and a higher level of perceived risk for those who had not experienced online shopping than those who had purchased a product online. The study also showed that both American and Korean Internet users had a similar degree of perceived risk toward online shopping. Korean online shoppers showed higher risk perception on social risk, while Americans showed higher risk perception on other factors such as time, financial, and psychological risk. On the other hand, product-related risk factors such as performance and physical risk were not significantly different between both countries.

#### 4. Conceptual model

The model which used in this study was developed to examine the effect of perceived risks (financial risk, product risk, time risk, delivery risk, social risk, and information security risk) on online shopping of Jordanian consumers as shown on Figure 1.

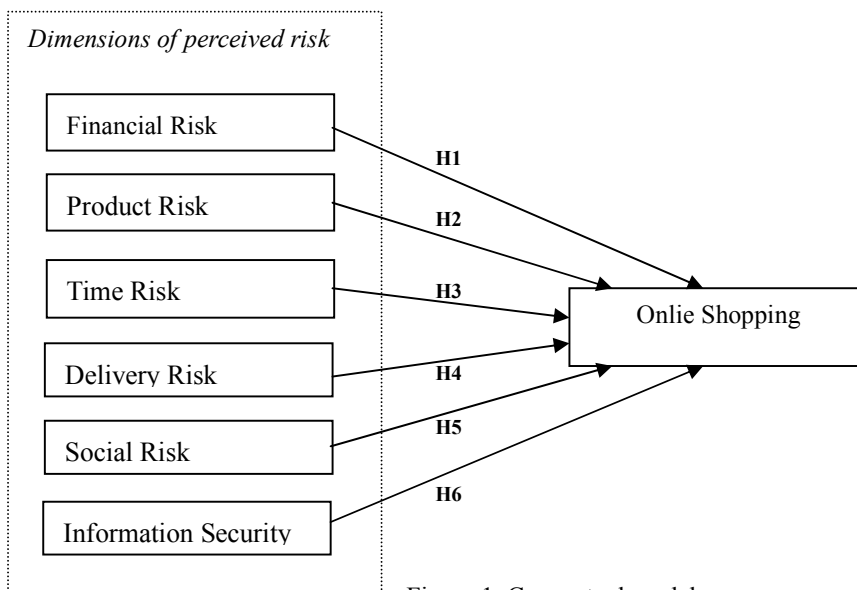


Figure 1. Conceptual model

## 5. Methodology

### 5.1. Measurement

To test the main hypothesis of this research, a multi item scale was constructed to measure perceived risks and online shopping from Jordanian consumers' perspectives (See Appendix A). This questionnaire was adopted and combined by investigating previous researches and experts' suggestions, the questionnaire number of items and references are shown in Table 1. In accordance with the research model, the questionnaires comprised three sections; demographic information, perceived risks, and online shopping. Demographic variables (gender, age, and education) were measured using ordinal scales. The second section includes a list of six risk components was used to measure the degree of perceived risk when purchasing a product online: financial, product, time, delivery, social, and information security risks. The last section includes items measuring online shopping. Responses for the second and third sections were obtained in a five-point Likert scale from "strongly disagree" (1) to "strongly agree" (5).

Table 1. Adoption of questions details and reliability analysis of perceived risk and online shopping

Measured variables	Question item	Source	Cronbach's Alpha
<b>Perceived risk</b>	<b>30</b>		<b>0.901</b>
Financial risk	5	Javadi <i>et al.</i> (2012), Almousa, M. (2011), Forsythe <i>et al.</i> (2006), Hanjun <i>et al.</i> (2004)	.694
Product risk	5	Javadi <i>et al.</i> (2012), Alkailani and Kumar (2011), Forsythe <i>et al.</i> (2006), Hanjun <i>et al.</i> (2004),	.633
Time risk	6	Zhang <i>et al.</i> (2012), Javadi <i>et al.</i> (2012), Forsythe <i>et al.</i> (2006), Hanjun <i>et al.</i> (2004)	
Delivery risk	5	Javadi <i>et al.</i> (2012), Zhang <i>et al.</i> (2012), Alkailani and Kumar (2011)	.853
Social risk	4	Zhang <i>et al.</i> (2012), Almousa, M. (2011), Hanjun <i>et al.</i> (2004), Li and Zhang(2002),	.741
Information security	5	Tasi and Yeh (2010),Martin and Camarero (2009),	.817
<b>Online shopping</b>	<b>8</b>	Javadi <i>et al.</i> (2012), Almousa (2011), Martin and Camarero (2009), Kim <i>et al.</i> (2008), Forsythe <i>et al.</i> (2006)	<b>.832</b>
<b>Total</b>	<b>45</b>		<b>0.921</b>

### 5.2. Instrument Reliability

The assessment of the measurement model includes the estimation of internal consistency for reliability, internal consistency was calculated using Cronbach's alpha. Result showed that Cronbach's alpha for perceived risk (independent variables) = 0.901, Cronbach's Alpha for online shopping (dependent variable) = 0.832, Cronbach's Alpha for over all instruments = 0.921, and the Cronbach reliability coefficients of all variables were higher than the minimum cutoff score of 0.60, offering good reliability of the questionnaire.

### 5.3. Model Fit Analysis

Recommended fit indices values from Hair *et al.* (2006) are shown in Table 2. As suggested, the model fit was assessed by several indices: the recommended value of  $\chi^2/df$  should be less than 3; the value of CFI, NFI, and GFI should be greater than .90; and RMSEA should be less than 0.08. In this study, all values were in line with those

recommended. Table 2 shows the results of the study of the SEM model, which tested the hypothesis for the path analysis. The overall fit measures indicated that the hypothesized model is a good representation of the structures underlying the observed data,  $\chi^2/df = 1.81$ , normed fit index = 0.937, comparative fit index = 0.962, goodness of fit index = 0.911, adjusted goodness of fit index = 0.901, and root mean square error of approximation = 0.065, the data revealed that the model has a good fit.

Table 2. Model fit analysis.

Fit indices	$\chi^2/df$	NFI	CFI	GFI	AGFI	RMSEA
Recommended value	<3	>0.9	>0.9	>0.9	>0.8	<0.08
Observed value	1.81	0.937	0.962	0.911	0.901	0.065

#### 5.4. Sampling and Data Collection

Data was collected from online shopping users, 600 questionnaires were randomly distributed among consumers who previously purchased online and mainly from the main popular online stores in Jordan (MarkaVip, Khazanti, and Sukar). Respondents were selected from people who entering the main gate of the big malls in Jordan (Mecca mall, City mall, and Taj mall). Finally 395 questionnaires were usable for analyzing with response rate (65.83%). Respondents were 41.5% female and 58.5% male (see Table 3).

Table 3. Demographic profile of participants (n=395)

Variable	Frequency	Percentage
<b>Gender</b>		
Male	231	58.5
Female	164	41.5
<b>Age</b>		
Less than 25	135	34.2
25-39	181	45.8
40-54	63	15.9
55 and above	16	4.1
<b>Education</b>		
high school or lower	57	14.4
Diploma	67	17.0
Bachelor's degree	237	60.0
Master's degree or higher	34	8.6

## 6. Data Analysis and Results

In order to test the study's hypotheses, path analysis was used to analyze the relationships between perceived risk (independent variables) and online shopping measures the dependent variable. The hypotheses and results are as follows:

**Hypothesis 1:** The perceived financial risk has a negative effect on online shopping.

**Hypothesis 2:** The perceived product risk has a negative effect on online shopping.

**Hypothesis 3:** The perceived time risk has a negative effect on online shopping.

**Hypothesis 4:** The perceived delivery risk has a negative effect on online shopping.

**Hypothesis 5:** The perceived social risk has a negative effect on online shopping.

**Hypothesis 6:** The perceived information security risk has a negative effect on online shopping.

Table 4 shows the results of the study of the SEM model, which tested the hypothesis for the path analysis. Among perceived risks, effects of financial risk, product risk, delivery risk, and information security risk on online shopping were significant at the 0.05 level. Thus, *H1*, *H2*, *H4*, and *H6* are fully supported, but *H3* and *H5* were not significant at the 0.05 level and are not supported, so there was no effect of time risk, and social risk on online shopping.

Table 4. Path analysis and hypotheses test.

Path	Hypothesis	Estimate	S.E	C.R	P	Results
FR → OS	H1	-.945	.013	-70.448	0.000***	Supported
PR → OS	H2	-.062	.019	-3.234	.001***	Supported
TR → OS	H3	-.020	.013	-1.521	.128	Not Supported
DR → OS	H4	-.042	.014	-2.876	.004**	Supported
SR → OS	H5	.016	.016	.999	.318	Not Supported
IR → OS	H6	-.035	.012	-2.788	.005**	Supported

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . (FR = financial risk, PR = product risk, TR = time risk, DR = delivery risk, SR= social risk, IR= information security risk, OS = online shopping)

## 7. Discussion

The results showed that *H1*, *H2*, *H4*, and *H6* are significantly supported. Thus, financial perceived risk such as fear of losing money and probability of disclosing credit card information has negative effect on attitude toward online shopping, this finding is compatible with the findings of (Forsythe and Shi, 2003; Almousa, 2011; Javadi *et al.*, 2012), in these studies, financial risk is an important factor for not shopping online. The study results of product perceived risk such as the difficulty of quality judgment of product over Internet, or touching and examining the actual product over Internet, are consistent with the findings from the previous studies (e.g. Hanjun *et al.*, 2004; Forsythe *et al.*, 2006; and Javadi *et al.*, 2012) where perceived product risk is important significant risk factor for not shopping online. Also the fear of non-delivery of order will have negative influence on attitude towards shopping online. It indicates that the perceived delivery risk is a significant factor for affecting attitude and hence behavior towards shopping online (Zhang *et al.*, 2012; Alkailani and Kumar, 2011). People do not tend to shop online because they are not sure whether the ordered merchandise will be delivered or not and lack of seriousness and efforts towards building trust by the retailers makes it a significant reason. The results showed that perceived risk of information security has a significant negative effect on online shopping; this finding is compatible with the findings of (Tasi and Yeh, 2010). This shows that when users want to purchase products online, they select those products through a particular website because they do not have to worry about leakage of personal information, so sellers need to improve their IT systems to enhance the safety awareness of buyers that will affect consumers' willingness to buy online. Finally, results of testing the hypotheses *H3* and *H5* indicated that perceived time risk and perceived social risk have no effect on online shopping, in contrast with the findings of the previous studies (e.g. Hanjun *et al.*, 2004; Forsythe *et al.*, 2006; Almousa, 2011; Zhang *et al.*, 2012) where time and social risk are important significant risk factors for not shopping online.

## 8. Conclusion and Managerial implications

Online perceived risk is an important issue in e-commerce. This study showed that online shopping is still considered a risky proposition in spite of its numerous benefits. To reduce online consumers' perception of risk and to increase the possibility of purchase, e-marketers and e-retailers involved in an online shopping business should know which risk dimensions are of greatest concern to consumers in Jordan. The analysis for dimensions of consumer perceived



risk in online shopping is a necessary step to know the contents and types of consumer perceived risk, which is considered to be one of the important factors that impact on consumer online shopping decision-making, and to provide e-marketers with useful information concerning their customers. The study examined six dimensions of consumers' perceived risk, four of them such as financial perceived risk, perceived product risk, perceived delivery risk and perceived information risk have negatively influence on online consumers' purchasing behavior, and there was no effect of time risk, and social risk on online shopping.

Based on the results and findings, this study identifies the following managerial implications. First, it provides marketers with the importance of consumers risk perception in order to adopt adequate risk-reduction strategies in the internet shopping environment. Second, because of financial perceived risk and information security policy considerations, payment and information security should paid attention; online retailers should introduce a mechanism that would improve safety and privacy to motivate people to buy online, or encourage customers to use special type of credit card for online shopping only separated from the consumer banking account, or using other payments method that doesn't require disclosure of credit card information such as payment on delivery, so customers should not be worry about losing their financial details and their credit card information. Third, marketers should be encouraged to minimize the perceived product risks, particularly in their efforts to propose more information about products to cope with the uncertainty associated with consumers' inability to handle the product, such as using virtual views of 3D images to illustrate product features, providing sizing charts, material components and providing product comparison. This information enables buyers to develop a more complete idea of the quality and outward appearance of the product. Finally, consumers were worried about delivery of their orders, they fear that the products may be damaged while being handled and transported or receiving a faulty item or an item that doesn't correspond to its specifications. Online retailers should deal with the best and most trusted shipping service providers, to avoid delay or damage during delivery of the goods.

## 9. Limitations and Directions for Future Research

This study has some limitations that need to be considered. First, because of time constraints this study clearly did not include all variables might be related to Internet perceived risk. In this study, the researcher just discussed consumer perceived risks (financial risk, product risk, time risk, delivery risk, social risk, and information security risk). However, other variables such as: health risk, quality risk, after-sale risk, performance, psychological, website design style and characteristics, and trust in the web site can be examined in future researches. Second, this study didn't examine the moderating effect of buyer traits and experience in the relationship between perceived risks and online shopping. Finally, some findings of this study are different from those of previous studies. For example, there was no effect of time risk, and social risk on online shopping. In contrast, studies conducted in countries other than Jordan (e.g., Zhang et al., 2012; Javadi et al., 2012) indicates that time risk and social risk have significant impact on online shopping. These differences could be explained due to Jordan cultural differences. Therefore, further investigation is necessary to provide empirical justification, thus allowing a better understanding of the reasons for these differences. Besides, this study shows the need to attempt future studies, to consider the influences of individual characteristics of the respondents such as gender and experience on the composition of perceived risk dimensions and analyze their different influences on online consumers' purchasing decision makings.

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## Appendix A

### Proposed Measurement Items for Constructs

Constructs	Items	Measurement items	Mean	Std. Dev.
<b>Financial risk</b>	<b>FR</b>		<b>3.6457</b>	<b>.71533</b>
	FR1	Shopping online can involve a waste of money	3.6730	1.01474
	FR2	I feel that my credit card number may not be secure	4.2582	.90355
	FR3	I might get overcharged if I shop online	3.0619	1.18852
	FR4	I may not get the product I want	4.0101	.86082
	FR5	I can’t trust the online company	3.2254	1.15282

<b>Product risk</b>	<b>PR</b>		<b>3.8553</b>	<b>.58880</b>
	PR1	I might not get what I ordered through online shopping	3.4308	1.11072
	PR2	It is hard to judge the quality of product over Internet	4.2506	.73432
	PR3	I can't to touch and examine the actual product	4.0600	.85739
	PR4	Size may be a problem with clothes	3.8040	.88387
	PR5	I can't try on clothing online	3.7311	.99289
<b>Time Risk</b>	<b>TR</b>		<b>3.2957</b>	<b>.89042</b>
	TR1	Buying a product online can involve a waste of time	2.8886	1.30223
	TR2	Difficult to find appropriate websites	3.1201	1.27540
	TR3	Finding right product online is difficult	3.0259	1.28315
	TR4	If I shop online I cannot wait till the product arrives	3.6792	1.06554
	TR5	Too complicated to place order	3.4419	1.03719
	TR6	Communicating with the seller may require a lot of time.	3.6182	1.03637
<b>Delivery risk</b>	<b>DR</b>		<b>3.5011</b>	<b>.76019</b>
	DR1	I might not receive the product ordered online.	3.1496	1.14135
	DR2	Delivery may be sent to the wrong place.	3.2438	1.15930
	DR3	Sellers may not be timely delivery.	3.4784	1.13436
	DR4	It is not easy to cancel orders when shop online.	3.8398	.96787
	DR5	The goods returned may be waiting a long time.	3.7904	1.00524
<b>Social risk</b>	<b>SR</b>		<b>3.1904</b>	<b>.68878</b>
	SR1	product purchased may result in disapproval by family	3.3189	1.11145
	SR2	Online shopping may affect the image of people around me.	3.2671	1.14114
	SR3	Online products may not be recognized by relatives or friends.	3.2986	1.12880
	SR4	Online shopping may make others reduce my evaluation.	2.8772	1.03347
<b>Information security</b>	<b>IR</b>		<b>3.6672</b>	<b>.75829</b>
	IR1	This website will protect my private information	3.8725	.98931
	IR2	I have security on this website	3.5224	1.04482
	IR3	This site make me feel comfortable	3.6358	1.02777
	IR4	This website provides me with complete information	3.6257	.97676
	IR5	I trust this website for purchasing products	3.6886	.96111
<b>Online shopping</b>	<b>OS</b>		<b>3.9562</b>	<b>.59861</b>
	OS1	Using Internet for online shopping is easy	3.9366	.87754
	OS2	I shop online as I do not have to leave home for shopping	3.7723	.91326
	OS3	I shop online as I can get detailed product information online	4.2041	.77085
	OS4	I shop online as I get broader selection of products online	3.9520	.86101
	OS5	Online shopping gives facility of easy price comparison	4.1294	.89895
	OS6	I shop online as I can take as much time as I want to decide	3.8095	.98296
	OS7	I find online shopping compatible with my life-style	3.7313	.91065
	OS8	I use online shopping for buying products which are otherwise not easily available in the nearby market or are unique (new)	4.1144	.92600

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