

A Risk Analysis of Online Shopping Space: A Case of Saudi Arabia Post the Pandemic (Covid-19)

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Abstract

E-commerce has become a significant trend in the business with the emergence of digitalization, where businesses shifted their transactions to online platforms to take advantage of the global market. However, the universal rise of online transactions especially after the pandemic (Covid-19) due to lockdowns, comes with an expected rise in risks and challenges. This research aims to perform a risk analysis of online shopping in Saudi Arabia by examining three risk factors (financial, security, and product/service risks) that affect the online purchasing behavior of customers in Saudi Arabia. A questionnaire was used for data collection, and finally, a quantitative analysis was performed to test the risk behavior hypotheses. The questionnaire's findings showed that financial risk, product/service risk, and security risk have a significant negative impact on the intention to purchase (online). Therefore, online retailers in Saudi Arabia should develop strategies to minimize those risks, especially the perceived security risks as the results showed that it's the highest "negatively" affecting factor in online shopping intentions.

Keywords: Online shopping, Risk analysis, E-commerce, customer behavior.

Introduction

It's evident that the internet has been a fundamental tool for communication and business worldwide. Consequently, Online shopping has been a preference for many consumers. Online shopping has become more popular and attracted an enormous number of customers around the world, especially after the COVID-19 pandemic which has urged consumers to purchase more on the online marketplaces. The business landscape faced rapid transformations during the quarantine period as a result. Ultimately, the corona crisis accelerated the development of the digital commerce (Gu et al., 2021). Online sales in the Kingdom of Saudi Arabia have grown rapidly especially after covid-19 (see figure 1) due to the existence of a favorable environment such as telecommunications, internet especially mobile broadband internet subscriptions, legislation (e.g., commerce laws), and financial services. All these factors have supported e-commerce's advancement which facilitated Saudi consumers' shift from traditional to electronic shopping.

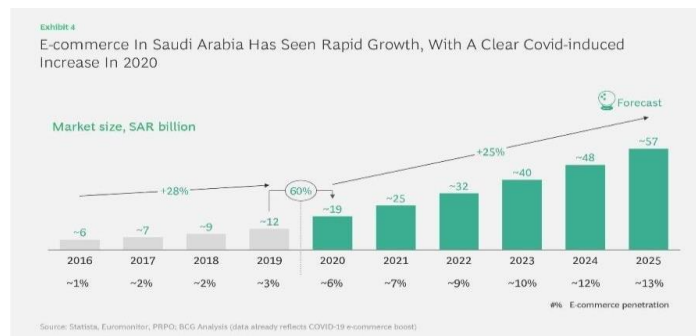


Figure 1: Growth of E-commerce in Saudi Arabia (Pablo Martínez et al., 2021)

The growth of e-commerce globally recently comes with associated perceived risks regarding online shopping which will negatively affect customers’ attitudes toward online purchases, and their attitudes will have a significant impact on the growth of e-Commerce. Consumers’ perceived risks regarding online shopping have been an important topic in research, as consumer behavior in online shopping will be affected by those risks (Kamalul Ariffin et al., 2018). This study aims to examine the relationship between three types of consumer perceived risks and consumer online purchase intentions in Saudi Arabia. Namely, financial risk, product/service risk, and security risk (see figure 2).

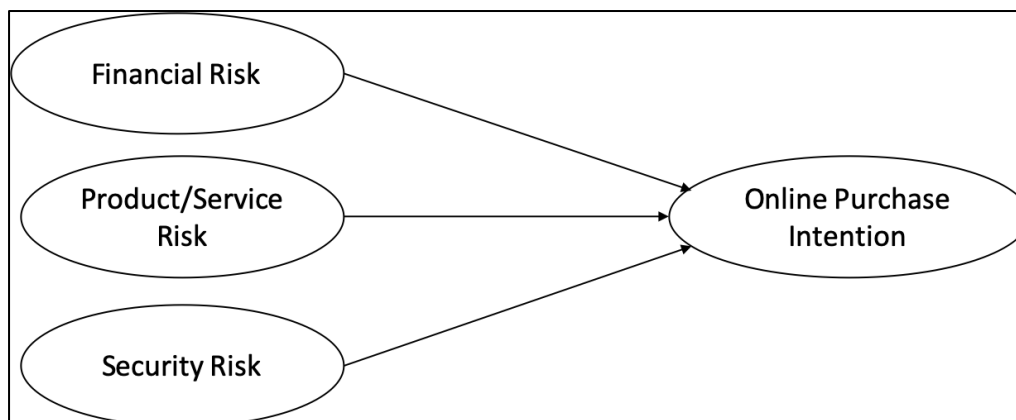


Figure 2: The research model

Literature Review and Research Hypotheses

Customers’ Online Purchase Intention

Meskaran et al., (2013) defined online purchase intention as the customers’ readiness to purchase through the internet. Also, Iqbal et al., (2012) specified online purchase intentions as the customers’ willingness to use internet services, make an actual purchase of goods and services or compare the prices of products. Purchase intention is used to predict the real buying activities of customers. Risk in online shopping plays a critical role as it influences consumer buying behavior (Zhang et al., 2011). So, consumers will not re-purchase online if he/she perceives a high risk.

Perceived risk

Perceived risk is defined as “the nature and amount of uncertainty or consequences experienced by the consumer in contemplating a particular purchase decision” (Cox & Rich, 1964). Laroche et al., (2005) specified perceived risk as the negative insights of the unpredicted and changeable results from the purchased products. The concept includes two elements, which are indecisions and consequences. Indecisions are defined as the probability of unfavorable outcomes, and consequences are defined as the importance of losses. Almousa (2011) indicated that perceived risks will negatively influence the intention to purchase products online. Although e-commerce has gained a lot of interest in research, Kamalul Ariffin et al., (2018) indicated that perceived risks concerning online shopping have yet to be identified completely as some online retailers are still affected by such risks that might impact their performance. Kamalul Ariffin et al., (2018) study in the context of Malaysia found that financial risk, product risk, security risk, time risk, and psychological risk all have a significant negative influence on online purchase intentions, while social risk was found to be insignificant. Barrantes et al., (2019) found that online risk perception discourages e-commerce and online financial services adoption and usage. Malapane (2019) studied the effect of financial risk, product risk, and privacy risk on online shopping confidence. Guru et al., (2020) ranked the perceived risks in the context of e-commerce in India, they found that perceived performance risk, perceived financial risk, and perceived time-loss risk considerably affect the purchase intention of online consumers in India. In their study, perceived performance risk was rated as the top risk and perceived financial risk as the second most important risk in online shopping.

1. Financial Risk

Financial risk is defined as the probability of an internet shopper suffering monetary loss from a purchase when the product does not perform well or if the product is not worth the price paid (Featherman & Pavlou, 2003). According to Almousa (2011), Dai et al. (2014), Kamalul Ariffin et al., (2018), Malapane (2019), and Guru et al., (2020) financial risk will negatively influence consumers’ online purchase intentions. Thus, the first hypothesis proposed in the study to test the relationship is:

H1. Financial risk has a negative influence on online purchase intention.

2. Product/Service Risk

Product risk denotes the possibility of product failure to meet the performance of what it was originally intended for (Zhang et al., 2011). For example, the delivered product’s color, shape, or quality may not be the same as the displayed product on the website. Results from past studies (Dai et al., 2014; Kamalul Ariffin et al., 2018; Malapane, 2019; Zhang et al., 2011) confirmed that product risk negatively influences consumer purchase intention. Based on this discussion, H2 is proposed:

H2. Product/Service risk has a negative influence on online purchase intention.

3. Security and Privacy Risk

Security risk is defined as a potential loss due to online fraud or hacking, which exposes the security of an internet transaction or online user (Soltanpanah et al., 2012). while privacy risk is defined as the probability of having personal information disclosed as a result of online transactions (Garbarino & Strahilevitz, 2004). Youn (2005) revealed that insecurity of the information and privacy is related to personal information data management that is handled by the online companies and consumers' history of authentication of accounts. Martín & Camarero (2009) noticed that customers avoid online shopping, not because of inconvenience but because most customers fear losing their credit card information about credit card theft. Also, several studies concluded that security and privacy risks have a significant influence on online shopping intention (Almousa, 2011; Barrantes et al., 2019; Dai et al., 2014; Kamalul Ariffin et al., 2018; Malapane, 2019; Zhang et al., 2011). Based on this discussion, the third hypothesis is:

H3. Security and privacy risk have a negative influence on online purchase intention.

Methodology

This research applies a deductive approach starting with the theory and leading to the research hypothesis and then followed by an analysis of the results to reject or confirm the hypotheses (Bryman & Bell, 2011). Quantitative methods have been used as it's the most appropriate tool for testing hypotheses. An online survey targeting individuals who had experiences with online shopping in Saudi Arabia was used to test the research model. The research instrument (questionnaire), which involved the construction of the variables and measurement items, was done during the literature review. Except for demographic information, all the survey questions for each construct in the research model will be measured on a 5-point Likert scale, ranging from 'strongly disagree (1)' to 'strongly agree (5)'. The research instrument included four constructs. Table 1 demonstrates each construct, the number of items, and the sources of these items.

Table 1: Measurement Items Sources

Construct	Number of Items	Sources
Financial risk	4	(Malapane, 2019)
Product/Service Risk	4	(Malapane, 2019)
Security Risk	3	(Kamalul Ariffin et al., 2018)
Intention to Purchase	3	(Kamalul Ariffin et al., 2018)

The analysis of the results was executed using the SEM-PLS analysis methods (structural equation modeling- Partial Least Squares). In this study, the SmartPLS software was used for the PLS analysis for the structural model (Ringle et al., 2015).

Results and Discussion

Data analysis was performed in two steps. First, statistics of the demographic information, the second step focused on hypotheses testing and model analysis. the data was analyzed using the SmartPLS software (Ringle et al., 2015).

A total of 208 completed responses were received. Table 2 shows the demographic characteristics of the survey respondents. The respondents were divided almost evenly in terms of gender as 48% of the sample were male and 52% were female. Most respondents (46%) were in the 18–30 age group, followed by the 31-50 age group which represented 38% of the sample, and the rest of the sample was either above 30 or less than 18 (16% of the sample). Most of the respondents were highly educated as 73.4% of them are bachelor's degree holders or above. 35% were students while 27% were employees in the public sector and 22% were employees in the private sector, and 16% were unemployed. In terms of internet average daily use, 76.4% of the respondents answered above 3 hours. A large percent of the sample (58%) described their online shopping experience as an intermediate. 35% of the sample trusts local websites more than global ones, and 32% trusted global websites more, while 33% were indifferent in terms of trusting local websites more than global ones.

Table 2: Demographic information

Characteristics	Items	Frequency	Percentage (%)
Gender	Male	100	48%
	Female	108	52%
		208	100%
Age	Less than 18	13	6%
	18-30	95	46%
	31-50	80	38%
	Above 50	20	10%
		208	100%
Education	Bachelor	117	56%
	Master	33	16%
	PhD	3	1.6%
	Other	55	26.4%
		208	100%
Work	Student	73	35%
	Public Sector	56	27%
	Private Sector	45	22%
	Unemployed	34	16%
		208	100 %
Daily Average internet usage	Less than one hour	4	2%
	1-2 hours	13	6%
	2-3 hours	32	15.6%

Characteristics	Items	Frequency	Percentage (%)
	Above 3 hours	159	76.4%
		208	100%
Online shopping experience	Beginner	25	12%
	Intermediate	121	58%
	Advanced	62	30%
		208	100%
Trusting local websites more than global ones	Strongly Agree	20	10%
	Agree	53	25%
	Neutral	68	33%
	Disagree	50	24%
	Strongly Disagree	17	8%
		208	100%

The next step is to evaluate the structural model. Examining the structural model involves calculating the coefficient of determination (R^2) and the path coefficient (Hair et al., 2017). The model exhibited an R^2 value of 0.721 for the intention to purchase online. R^2 values above 0.67 indicates high coefficient of determination (see Figure 3). The results of the path analysis from SmartPLS are shown in table 3.

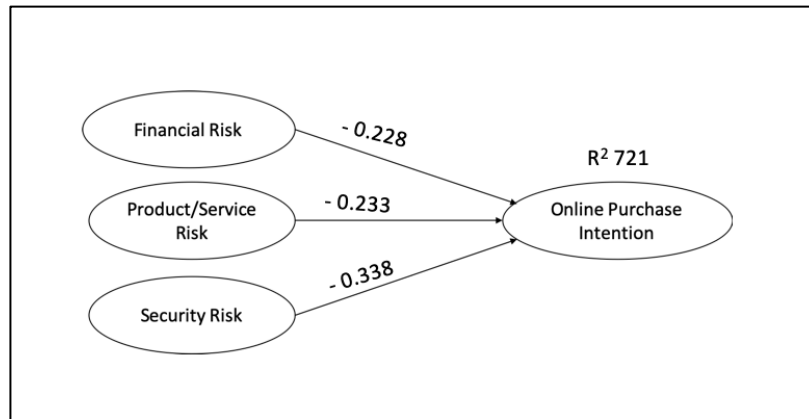


Figure 3: The structural model

Table 3: Structural Model Results

Hypotheses	Std. Beta	Std. Deviation	T Statistics	P Values	Decision
H1: Financial Risk -> Intention to purchase (online)	-0.228	0.077	2.978	0.001	Supported**
H2: Product/Service Risk -> Intention to purchase (online)	-0.233	0.068	3.435	0.000	Supported**
H3: Security Risk -> Intention to purchase (online)	-0.338	0.061	5.581	0.000	Supported**

Note: Significant at P***= < 0.01, P*<0.05.

According to the results above all three proposed hypotheses are supported. The analysis shows that financial risk, product/service risk, and security risk have a significant negative impact on the intention to purchase (online). Security risk is the highest affecting factor according to the study's results. The outcome is consistent with previous studies. Kamalul Ariffin et al., (2018) study's results have also shown that financial risk, product risk, and security risk have a significant negative influence on online purchase intentions. Studies by (Guru et al., 2020; Malapane, 2019) has also concluded similar outcomes.

Conclusion

The research conducted a risk analysis on online shopping in Saudi Arabia and examined three factors that affect the online purchasing behavior of Saudi customers after COVID-19. A questionnaire was constructed for data collection, and quantitative analysis was applied to test the hypotheses. The results showed that financial risk, product/service risk, and security risk have a significant negative impact on the intention to purchase (online). Therefore, online retailers in Saudi Arabia should develop strategies to minimize those risks, especially the perceived security risks as the results showed that it's the highest "negatively" affecting factor in online shopping intentions.

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