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Article

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MARKETING | RESEARCH ARTICLE

The moderating effect of culture on the construct factor of perceived risk towards online shopping behaviour

Marzieh Zendeheel^{1*}, Laily Hj Paim¹ and Narges Delafrooz²

Abstract: Recently, advances in Internet communication have changed the performance of business and interactions between producers and consumers. Various endeavours have been made by Malaysian Government to equip the society with electronic gadgets to facilitate Internet commerce or e-marketing. Paying attention to the factors affecting online shopping attitude is of paramount importance for marketers to develop their marketing strategies and improve sales. This research examines the factors affecting students' online shopping attitude in universities around Klang Valley area in Malaysia. The study has shown that collectivism/individualism to be at individual level. Past research revealed that the most widely utilized approach in cultural consumer behaviour seems to be the individualism/collectivism. This study examines the moderating effect of collectivism/individualism as a dimension of culture on the relationship between attitude and other factors such as; perceived risk, privacy, security and subjective norms. These results revealed that significant moderation effects with regards to the association of subjective norm and attitude, perceived risk and other factor were significantly correlated with the attitude towards online shopping while perceived risk was observed to be negatively significant on attitude. Accordingly, the findings of the study suggested that online retailers are required to consider the online shopping to enhance their success in retailing business via Internet.

ABOUT THE AUTHORS

Marzieh Zendeheel (Jadehenari) was born in Rasht, Iran. She received her PhD degree in Consumer Science from University Putra Malaysia (UPM) in 2013. She was a lecturer at the Payam Nur University between 2002 and 2006. Her current research interests include consumer behaviour, online shopping and management marketing. She is a postdoctoral research student at University Putra Malaysia.

Laily Paim was the Dean and Deputy Dean in the Faculty for several years. She received her MSc from Indiana State University, USA. She obtained her PhD in Consumer Behaviour from University of Illinois, Urbana Champaign, USA. She teaches both undergraduate and postgraduate courses in Research Methods, Consumption Economics and Consumer Behaviour. She has published a book on consumer science and family economics. She has more than 60 publications in international journals in the areas of consumer buying behaviour in online shopping, consumer behaviour and management.

PUBLIC INTEREST STATEMENT

The aim of this paper was to study consumer attitudes towards online shopping in Malaysia. With the advent of Internet; e-commerce has changed the way business-to-consumer transactions take place which includes shopping online. Online shopping makes available a challenge to many consumers because it is new. In traditional brick and mortar store, a consumer can assess the goods or services, but in the modern era, shopping is something different because of its unique features of uncertainty, insecurity and lack of control involved in it. This study is also among the limited empirical studies attempting to form the importance of understanding cultural influences on consumers' online shopping behaviour in a single country.

Subjects: Business, Management and Accounting; Consumer Behaviour; Internet/Digital Marketing/e-Marketing

Keywords: perceived risk; privacy; security; subjective norm; consumer behaviour; online shopping

1. Introduction

The rapid spread of the Internet across the world has enabled businesses and consumers to become more connected than ever before. This increased connectivity has led to the proliferation of electronic commerce (e-commerce): a business area that has expanded exponentially during the past decade.

In the Internet world, the issues of privacy and security are highly imperative and cannot be over emphasized. The privacy here characterized the condition of restriction on information. The security is said to be the main inhibitor to online purchase and is defined as the ability of the system to prevent trespassers from getting access to the available individual information online or misusing the individual information. Hence, there exists a relationship between privacy and security in terms of online transactions. According to the extant research, privacy and security serve as a significant component of e-business and are the main factors affecting the online purchasing behaviour intention, adoption and attitude (Cheung, Chan, & Limayem, 2005).

Besides, there are undeniable evidences suggesting that culture serves as a main factor in shaping consumer behaviour. Broadly and at the macro level, several studies have indicated that consumers' responses to new innovations vary from culture to culture (Yaveroglu & Donthu, 2002). In addition, it is obvious that consumers from various cultures possess different attitudes, perceptions, preferences and values (Calantone, Griffith, & Yalcinkaya, 2006). That is why the cultural values and norms are assumed to be determinant of individual's manners and intentions (Markus & Kitayama, 1991; Triandis & Suh, 2002; Yenyurt & Townsend, 2003). Furthermore, researches conducted in the US revealed that culture is considered as a moderator in online shopping context (Gefen, Benbasat, & Pavlou, 2008; Kacen, & Lee 2002; Kim, Ferrin, & Rao, 2008; Pavlou & Chai, 2002). Investigations by Griffith, Hu, & Ryans, 2000 and Strong & Weber, 1998 on the influence of culture on trust showed that these parameters have not been studied in relation to e-shopping in Malaysia and are thus, considered in this study. Previous studies were carried out in countries other than Malaysia. However, to avoid generalization of result across countries, there is need for researches in every country due to the peculiarity of various cultures and traditions which differs from one country to another. More so, even those who belong to a collectivist nation may show higher degree of individualism than the average when doing online shopping. Malaysia may provide a very good context for further study on consumer behaviour due to its rich cultural heritage and diverse religions. Therefore, this study includes culture as moderator from cultural dimensions, individualism/collectivism based on Hofstede's (1984), on the association between the main constructs of the proposed model among the respondents (students) of one country.

2. Literature review

2.1. Theoretical framework

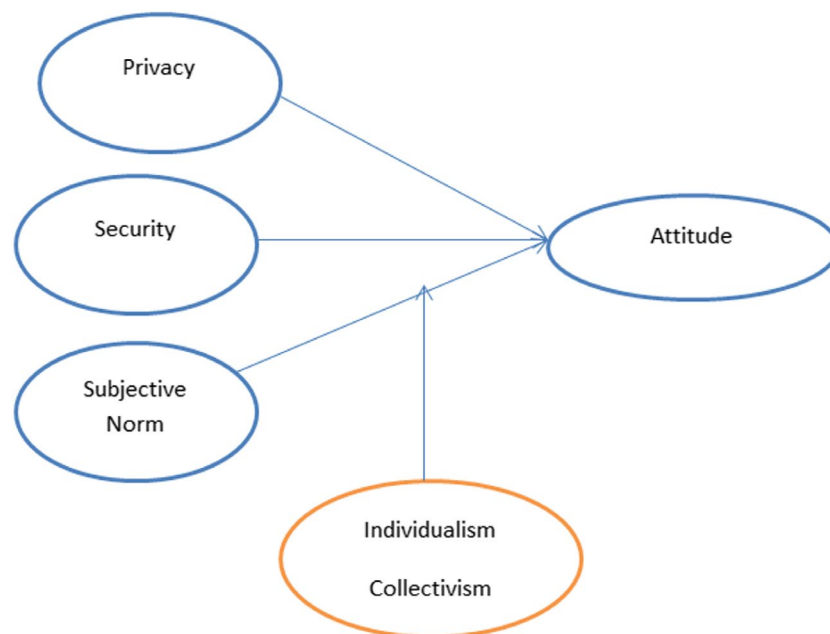
Considerable studies on Information Systems field are theoretically based on Theory of Planned Behavior (TPB). Various researchers used different approaches to the TPB model: TPB was integrated with construct(s) derived from various theories or models (Limayem, Khalifa, & Frini, 2000). In another study, it examined the effect of culture as moderator in theory of planned behaviour (Morris & Venkatesh, 2000; Pavlou & Chai, 2002) and in 2003, TPB was employed as a research model without any variation (Chau & Lai, 2003). In addition, Tan, Yan, and Urquhart (2006) indicated that culture has been used as a moderator on online shopping behaviour which determined the role of culture as moderator (collectivism and individualism) towards the association between attitude, intention and subjective norm in the theory of planned behaviour. The attitude towards the transaction, subjective norm directly influences online transaction intentions (Pavlou, 2003) as deduced from the TPB (Ajzen, 1991).

As indicated in TPB, attitudes of consumers are affected by subjective norms to deal with online shopping. According to Fishbein and Ajzen (1975), subjective norms are expressed as the perceived judgement of others in relation to the questioned behaviour and how this behaviour is being affected by the perceived opinions of others. Furthermore, it demonstrated that subjective norms have a considerable effect on attitude (Ramayah & Ignatius, 2005). Therefore, this study intends to advance a comprehensive theoretical framework and test the theorized hypotheses to explore the cultural effect on online shopping behaviour. The framework was drawn from the theory of planned behaviour concerning its moderating effect on the individual level of the dimension of culture. Based on the TPB, the main predictors of online consumer behaviour are attitude and subjective norms (Pavlou & Chai, 2002). This study examines e-shopping using the key constructs of the TPB which are attitude and subjective norms (social influence).

Furthermore, according to Azjan (2002), attitude is defined as the degree of one's positive feelings about taking part in online shopping. Purchasing through online is carried out when consumers exhibit positive attitude. For instance, Pavlou and Fygenson (2006) reported that attitude plays an important role in forming intention to do online shopping. Consequently, it is believed that consumers with more positive attitudes will have more tendencies to purchase through Internet which form the first hypothesis (Figure 1):

- H1:** perceived risk and attitude have relationship towards online shopping.
- H2:** subjective norm and attitude have relationship towards online shopping.
- H3:** culture (individualism and collectivism) has the role of moderator between relationship of subjective norm and attitude towards online shopping.
- H4:** culture (individualism and collectivism) has the role of moderator between relationship of perceived risk (privacy, security) and attitude towards online shopping.

Figure 1. Theoretical framewok.



2.2. Perceived risk

The perceived risk addresses issues related to trade platforms of online shopping services whereby it does not only seek to eliminate middlemen between vendors and consumers but also secure authorized verification means and a protected operation policy (Kayworth & Whitten, 2010; Martin & Camarero, 2008). Previous literatures recognized perceived risk to be a vital factor affecting online consumers shopping. Uncertainty in the online shopping is perceived as a risk for consumers (Larose & Rifon, 2007; Martin & Camarero, 2008). The study of Purva Kansal (2014) suggested a similar perspective that perceived risk had an important influence on Internet purchasing behaviour. Perceived risk has been largely defined by behaviour of consumer's perceptions as well as the probable negative outcomes after obtaining a product or a service (Kukar-Kinney & Close, 2010; Littler & Melanthiou, 2006). Lallmahamood (2007) revealed that many studies have discussed concerns about security and privacy in an online environment. By definition, perceived security and privacy are personal data or information control and awareness of the users with regards to protection towards security risks. In this study, perceived risk represents the ambiguity confronted by consumers whilst they have no expectation of the consequences of their online transaction behaviour (Lwin, Wirtz, & Williams, 2007). The risk in online transaction environment is obviously different from the risk related to traditional market place where the product is presented and verified vividly (Gefen, 2002; Lopez-Nicolas & Molina-Castillo, 2008). In addition, Lee (2009) analysed and validated the impact of the perceived risk in association with security and privacy on the adoption of online shopping. Online shoppers give more consideration to these types of risk compared to other types of risk owing to the nature of the online environment (Chen & Barnes, 2007; Mukherjee & Nath, 2007). In 2007, Poon reported that it is generally accepted that the main constraint of e-commerce is due to the absence of security and privacy over the Internet. Also, Milberg, Smith, and Burke (2000) deliberated that the reason why consumers do not complete their online purchases is due to inadequate security and privacy.

Miyazaki and Fernandez (2001) acknowledged that once characteristics associated with Internet security and privacy transfer personal data to third party without his consent, it results to uncertain transactions and seizing personal information. The perceived risk proposed in this study emphasizes on users' anxieties about fraud issue that will lead to potential losses, disclosure of personal information, illegal use of personal data and vulnerable transactions. The matter of the significant negative influence of risk perception on online shopping attitude can be found in many previous studies (Rajamma, Paswan, & Ganesh, 2007; Schwartz, 2004; Sheehan & Hoy, 2000). Likewise, some studies have also noted a negative association between perceived risk and attitude towards e-commerce (Marzieh & Paim, 2012).

3. Cultural dimension of individualism–collectivism

Generally, culture refers to the shared set of values, forms of thinking and mutual feelings where an approach to understand and response to the world is provided. Also, culture could be defined as the way people belonging to certain groups and societies can be understood. According to Hofstede, culture represents the collective programming of the mind which distinguishes the members of one group from another. Therefore, based on Hofstede's model, five dimensions of culture were characterized into individualism–collectivism, power distance, long-term orientation, masculinity–femininity and uncertainty avoidance (Hofstede, 1991). Zhou and Zhang (2007) mentioned that among these five dimensions, the usage of individualism–collectivism is to predict consumer behaviour online. It is known that cultural distinctions have significant repercussions on consumer behaviour and factors that affect online shopping behaviour, irrespective of the mode of study.

Yeniyurt and Townsend (2003) revealed that the most widely utilized approach in cultural consumer behaviour seems to be the individualism/collectivism approach. Afzal (2010) also emphasized that individualism/collectivism has established remarkable support from previous works as one of the most important cultural variables that effects intention. Therefore, the present study adopts Hofstede's culture model as the individualism/collectivism dimension. Individualistic societies are considered by weak relations between individuals, and it is expected that everyone's responsibility is to take care of himself and his immediate family. In contrast, people in a collectivistic society protect themselves as a team during the course of life and are thus, strong and cohesive groups being connected to each other. The reason for adopting the individualism/collectivism in Malaysia is due to

different behavioural patterns which differ from person to person as a result of different cultural and religious backgrounds. Even though they lived in the same country as reported by (Olsen, 1975; Wu, 1985). Ng, Lee, and Soutar (2007) also noticed that national boundaries do not necessarily correspond to the culture and as contradictorily shown in literature, people selectively create or shape their own personal features, preferences and communication styles through both cognitive structures of individualism and collectivism when faced with different situations (Triandis, 1995). Therefore, according to Woodcock (2010), it sounds imperfect to accept that everyone from individualistic culture is simply an individualist, and those from collectivistic culture are solely collectivist.

In the case of the subjective norm and social influence of others, this study seeks to investigate the individualism and collectivism which influence the relative effect of other important people on consumer behaviour (Kacen & Lee, 2002). Generally, the subjective norm has been proven to affect consumers' purchase intentions and attitudes much strongly in collectivist cultures when compared with individualist ones (Bagozzi, Wong, Abe, & Bergami, 2000). Consequently, this study can assume that the level of effect of norm or influence of society among students in a certain country, such as Malaysia, can vary from collectivism to individualism in the way of shopping. In addition, the current study shows the influence of risks perceptions between individualists and collectivists in terms of online shopping. Park and Jun (2003) reported a higher perceived risk related to online shopping among collectivism than individualists. For instance, there are less trusting standpoints in indecisive situations of the people in collectivistic societies. In contrast, the people in individualistic cultures are only trusted by others when others in society are given sufficient reason to be trusted (Aaker & Williams, 1998).

4. Research design

This study has tested the relationship between independent variables (privacy–security and subjective norm) and dependent variable (attitude) under the impact of a moderating construct (collectivism/individualism). Structural equation modelling (SEM) was used to analyse the data in this research. AMOS SEM software is a tool use in modelling multiple relationships between independent and dependent variables at the same time (Hair, Black, Babin, & Anderson, 2010). Furthermore, the study chose student as sample directly from universities in the Klang Valley area in Kuala Lumpur. It is believed that students are perfect choice as sample due to their active participation on Internet and use Internet more frequently in the course of their study, thus play a very important role in online marketing (Alam, Bakar, Ismail, & Ahsan, 2008; Delafrooz, Paim, & Khatibi, 2010). The reason why the present study investigates individualism/collectivism in one particular country is because people in the same country (Malaysia) do not necessarily present similar behavioural patterns (Olsen, 1975; Wu, 1985). Ng et al. (2007) also observed that culture does not limit boundaries, dissimilar to the perception of same-mindedness.

In this research, cluster was used as the sampling method so that the entire population, namely, universities' population was divided into two as public and private clusters. Four universities were chosen via simple random sampling from the selected universities. The students were chosen from any faculty or institute who enrolled in a wide range of courses. Consequently, among a total of 400 questionnaires, 375 were completely answered and returned. The respondent profile indicated that the majority who participated were women covering about 60% of the total respondents. About 55.2% of the respondents are between the ages of 20 and 25 years. The result indicated that 72.3% have a monthly income of less than RM 2400. While in terms of ethnicity, Chinese, Indians and Malays who partook in the exercise were in the population distribution of 32.8, 14.4 and 52.4%, respectively.

4.1. Instrument

The questionnaire on students' perceived risk was measured based on two dimensions which comprise 11 items. Security, which consists of five items was adopted from Gefen (2000). Privacy, which comprise six items was adapted from Kim et al. (2008). Privacy issues arise from concerns, such as unauthorized sharing of personal information, spam from online retailers and disclosure of the patterns of the customer's shopping behaviour (Miyazaki & Fernandez, 2001). The questionnaire on culture was measured based on two dimensions, which consisted of 12 items. The two dimensions are known as individualism which consist of six items and collectivism comprising six items were adapted from Triandis and Gelfand (1998).

Table 1. Cronbach's alpha

	Items	Cronbach's alpha (α)
Privacy	5	.801
Security	6	.81
Attitude	8	.902
Individualism	5	.79
Collectivism	5	.80

4.2. Analysis

Exploratory factor analysis was used to provide grounds and later, confirmatory factor analysis (CFA) was employed by SEM, respectively, in order to test the theoretical models. This study utilizes SPSS 18.0 for first step and factor loadings of less than .4 were dropped. Table 1 shows that all items has met above .70 criterion of Cronbach alpha Nunnally (1978).

Through CFA and utilizing a proper approach, SEM can test the measurement theory. The last part of the analysis was to assess the structural model. The results indicated that based on significant χ^2 , $p < .05$ was 1.708, RAMSEA was .048, whereas the IFI, TLI and CFI were .949, .945 and .949, respectively, which means that these diagnostics revealed that the model showed a good overall fit.

4.3. Construct validity

Construct validity was conducted through discriminate and the convergent validity in this study. Hair et al. (2010) defined construct validity as the extent to which a set of measured items reflects the theoretical latent constructs of those items designed to measure (p. 776). Therefore, to do this, factor loadings, convergent validity, reliability of constructs and variance extracted were evaluated. The results indicated that there is reasonable construct validity among convergent and discriminate validity. Discriminate validity was assessed by comparing squared inter-construct relation associated to that factor and variance extracted (Tables 2 and 3).

4.4. Structural model

After assessment of the measurement model, we proceeded for the second step which is structural model. Table 4 shows that the research model indicates the acceptable goodness-of-fit indices models.

Hypothesis Test: Table 5 results of hypotheses testing.

4.5. Moderator role of culture

Multi-group analysis was conducted to explore the moderating effect of culture using AMOS software. Utilizing the multi-group analyses through AMOS software, two variant and invariant group models were produced based on (Ho, 2006). In the variant group model, it is hypothesized that there will be different regression weights for individualism and collectivism respondents, while in the invariant group model, it is predicted that the individualism and collectivism respondents show the same regression weights and the path relationship of interest is constrained to be equal between individualism and collectivism. After setting the culture mean (individualism, collectivism), the moderation analysis was processed. The results show that, based on the baseline fit indices including CFI, TLI and IFI, both models fit the data while the χ^2 values for both path models are statistically significant and the value for the above-mentioned indices exceed the recommended value of .9. Beside, in both the variant and invariant model the RMSEA values .041 and .042 were less than the recommended range of .08, indicating that the fit for both models is appropriate. The goodness-of-fit statistics for the variant and invariant models are demonstrated in Table 6.

Table 2. CFA result

Variables	Standardized factor loadings	Average variance extracted (AVE)	Construct reliability (CR)
Security	–	.572	.870
Item 1	.556		
Item 2	.806		
Item 3	.899		
Item 4	.726		
Item 5	.769	.661	.906
Privacy	–		
Item 1	.626		
Item 3	.899		
Item 4	.931		
Item 5	.836		
Item 6	.736		
Individualism		.520	.807
Item 1	.666		
Item 2	.811		
Item 3	.843		
Item 4	.517		
Collectivism	–	.614	.886
Item 1	.548		
Item 2	.796		
Item 3	.922		
Item 4	.844		
Item 5	.758		
Normative	–	.614	.927
Normative 1	.764		
Normative 3	.650		
Normative 4	.789		
Normative 5	.866		
Normative 6	.869		
Normative 7	.835		
Normative 8	.800		
Normative 9	.665		
Attitude	–	.664	.922
Attitude 1	.679		
Attitude 2	.811		
Attitude 4	.745		
Attitude 5	.878		
Attitude 7	.895		
Attitude 8	.859		

Table 3. Correlation

Construct	Privacy	Security	Subjective norm	Attitude
Privacy	1			
Security	.307	1		
Subjective norm	.356	.110	1	
Attitude	.454	.106	.668	1

Table 4. Model fit.

Model	CMIN/DF	TLI	CFI	RMSEA	NFI
Default model	3.37	.941	.914	.052	.911

Table 5. Structural model results

Path			Estimate	SE	Standardized	C.R.	p
Attitude	←	Privacy	-.140	.022	-.166	-1.795	.000
Attitude	←	Security	-.129	.032	-.155	-4.058	.000
Attitude	←	Subjective Norm	.170	.040	.205	4.272	.000

Table 6. Fit keys for individualism and collectivism group variant and group invariant models

Model	NPAR	CMIN	DF	p	CMIN/DF	TLI	IFI	CFI	RMSEA
Variant model	236	3296.817	2020	.000	1.632	.911	.915	.913	.041
Invariant model	118	3569.485	2138	.000	1.670	.907	.914	.902	.042

Moreover, as represented in Table 7, nested model comparison has been used to show the level of goodness-of-fit for the variant and invariant model, accordingly, both model fit data; however, the variant model presented a considerably better fit than the invariant model, and χ^2 difference value for both models was 272.668, which was significant at the .05 level, with 118 degrees of freedom. Therefore, model of variant was chosen so that two models are significantly different in their goodness-of-fit. A statistically significant difference between the models shows that the path estimates were different and culture as moderator (individualism and collectivism) does exist.

Similarly, variant model was preferred as the full variant model group created a higher AIC in comparison with the invariant model group of 3768.817 and 3805.485, respectively.

Subsequently the comparison of the variant structural models between individualism and collectivism shows that there are some differences between respondents of individualism and collectivism based on the size and level of the significant relationships in the hypothesized path (Table 8).

Table 7. Comparison nested model

Model	DF	CMIN	<i>p</i>	IFI	NFI	TLI	RFI
Indirect model	118	272.668	.000	.016	.018	.005	.006

Table 8. Individualism-variant model

Construct	<i>B</i>	Standard estimate	<i>p</i>	CR for difference
<i>Subjective norm</i>				
Individualism	.028	.036	.714	.367
Collectivism	.241	.274	.000	4.43
<i>Perceive risk</i>				
Individualism	.021	.031	.014	1.09
Collectivism	.196	.176	.015	2.44

5. Result and discussion

This result revealed that there is significant relationship among perceived risk and attitude which is consistent with previous study by Sheehan and Hoy (2000), who reported that negative effect exists between perceived risk and attitude. In simple words, students' purchase attitudes will likely decrease if they are concerned about whether their information is used for other purposes only due to the process of online shopping. Additionally, this study found that students will reduce using online shopping if information security is not guaranteed. The main responsibility of any government is to secure the privacy and security of it people, which in turn, can enhance the growth of Internet shopping.

In relation to subjective norm, the result revealed that there is significant correlation in attitude towards purchasing behaviour. The finding is also in line with Aizen (1985), who argued that the attitude formation can be affected if an expert referent or other important people provide the information, normative beliefs have influence on attitude formation. More so, evidence from previous research by Monsuwe, Dellaert, and De Ruyter (2004) shows that a potential relationship between attitude and subjective norms which suggest that students would most probably trust the view of their close relation when making a purchasing decision of a product. In other words, the finding indicates that, if students find the people close to them adopting online shopping, it is likely that they would intend to buy too.

Culture as a moderator (individualism and collectivism) according to the variant model is discussed for each path hypothesis as follows:

The study result indicates that there is no correlation between respondents of individualism in case of the subjective norm and online shopping attitudes; however, the path hypothesis for respondents of collectivism was significant. So, the moderation role of culture on the association between the subjective norm and online attitude of purchasing behaviour was supported by result obtained in this study. The research is in agreement with the prior study which says that the subjective norm is stronger for students with a collectivism background than those who are individualists. Normative influences have been found to be more vital for collectivist consumers by other researchers such as (Bagozzi et al., 2000).

In terms of perceived risk, the results for respondents of individualism demonstrated that perceived risk and attitude have no significant relationship, while the path hypothesis for respondents of collectivism was significant ($\beta = .176$). Therefore, the moderation effect of culture was supported. It was discovered that the perceived risk of collectivism is more than for individualism. This result shows a negative relationship between attitude and individualism/collectivism which moderate the

relation between perceived risk and attitude. In other word, individualism is likely to trust others than collectivism, so they mention online shopping as more vulnerable than individualism which is in line with study (Jarvenpaa, Tractinsky, & Michael, 2000; Pavlou, 2003). Perceived risk for respondents of collectivism effect on attitude is stronger than individualism, therefore, sellers online should emphasise on reducing the concern of collectivism by improving the quality of the products and their reputation in order to develop the confidence among consumers. As mentioned earlier, security is significant for consumer and can influence the attitude by improving the security level of the online medium which is consistent with previous study by (Cheung & Lee, 2000; Garbarino & Johnson, 1999). Virtual sellers should advance their safety structures by explaining the safekeeping coordination that employed on the website which eventually could help to improve the consumers' attitude towards its usage.

6. Implication

In today's increasingly competitive world, marketers are not recommended to rely on stereotype marketing tools in order to increase their market sectors universally. Adopting specific customized marketing strategies assists the specific groups of consumers across the world which may have their own specific behavioural and consumption patterns. Therefore, marketers are required to fulfil the expectations of these specific consumers. Hence, the main interest of this research is to find unique solutions specifically in the context of Malaysia.

This study is aimed at improving on the previous works on e-shopping by introducing the factors that appear to affect online shopping attitude in Malaysia. In addition, identifying cultural dimensions and studying various aspects of cultural differences would enable marketers to understand consumer behaviours and attitudes. Multi-group analysis was used to examine the moderating effect of culture in order to test the hypothesis. The results presented in this study validate some previous works which would pave way for future researches. In the case of subjective norms, vendor should form positive word-of-mouth in order to improve the awareness to friends and family member of existing consumers. For this regard, positive word-of-mouth strategy might be helpful to advance and promote online shopping providers benefits as well as awareness of their services. Consumers with collectivist nature are most probably to be encouraged to do shopping with a friend or family member. Moreover, influencing the subjective norms of the family package product also seems a good business opportunity that should not be ignored. In addition, from practitioners' perspective, the main concern is to recognize consumer risks and how in relation to information available on the Internet. Online shopping marketers are looking for opportunities to spread and promote the importance of security and privacy. First, with regard to reinforce online security, several actions should be used such as; technological e-commerce security which consists of virus prevention techniques, intrusion detection systems, virtual private networks and firewalls. Then, it needs to establish e-commerce security management systems such as personnel controlling, systems for safety, tracking review, maintenance and data backup as well as regular cleaning of virus. Though, it is not an easy task to construct a risk-free platform for online shopping transactions. Hence, vendors should enhance risk-reducing strategies that might support needs for more searches on risk-reducing strategies which in turn might help stimulate high assurance in potential customers. Present study proposes that they should focus on the way to avoid fraud, identity theft and financial loss. Yet, there are some other measures need to be undertaken such as building secure firewalls which avoids interference and establishing approaches to strengthen encryption and authenticate websites.

Briefly, in practical terms, more knowledge about cultural effects on consumer behaviour enables e-marketers to better develop their Internet strategies and increase their rate of adoption. Moreover, such findings may be of interest and value to marketers whose business is for a particular segment of the market. The application of this study may create a new place in growing markets.

Hence, Malaysia has an attractive market for the online marketers with massive potential. Although, cultural distinctions to online concerns still exist in Malaysia and marketers need to advance understanding to these approach to Malaysian consumer by modifying plans for addressing

their privacy concerns. Reluctance to do so might result to lose of profit and position in competitive online market. Developing such strategy will lead to rewards in the Malaysian market which would make customer to be more faithful, assured and satisfied leading to more patronage.

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References

- Aaker, J. L., & Williams, P. (1998). Empathy versus pride: The influence of emotional appeals across cultures. *Journal of Consumer Research*, 25, 241–261.
<http://dx.doi.org/10.1086/jcr.1998.25.issue-3>
- Afzal, W. (2010). *Intention to buy/sell online: A propositional model*. Paper presented at the Emporia State University, Malaysia.
- Aizen, I. (1985). *From intentions to actions: A theory of planned behavior*. Berlin: Springer.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50, 179–211.
[http://dx.doi.org/10.1016/0749-5978\(91\)90020-T](http://dx.doi.org/10.1016/0749-5978(91)90020-T)
- Alam, S. S., Bakar, Z., Ismail, H. B., & Ahsan, M. N. (2008). Young consumers online shopping: An empirical study. *Journal of Internet Business*, 5, 81–98.
- Azjan, J. (2002). Perceived Behavioral Control, Self Efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology*, 32, 665–683.
- Bagozzi, R. P., Wong, N., Abe, S., & Bergami, M. (2000). Cultural and situational contingencies and the theory of reasoned action: Application to fast food restaurant consumption. *Journal of Consumer Psychology*, 9, 97–106.
http://dx.doi.org/10.1207/S15327663JCP0902_4
- Calantone, R. J., Griffith, D. A., & Yalcinkaya, G. (2006). An empirical examination of a technology adoption model for the context of China. *Journal of International Marketing*, 14(4), 1–27.
<http://dx.doi.org/10.1509/jimk.14.4.1>
- Chau, P. Y. K., & Lai, V. S. K. (2003). An empirical investigation of the determinants of user acceptance of internet banking. *Journal of Organizational Computing and Electronic Commerce*, 13, 123–145.
http://dx.doi.org/10.1207/S15327744JOCE1302_3
- Chen, L., & Barnes, S. (2007). Initial trust and online buyer behaviour. *Industrial Management & Data Systems*, 107, 21–36. <http://dx.doi.org/10.1108/02635570710719034>
- Cheung, C., & Lee, M. K. O. (2000). *Trust in Internet shopping: A proposed model and measurement instrument*. Paper presented at the Americas Conference on Information Systems, University of Hong Kong, Hong Kong.
- Cheung, C. M., Chan, G., & Limayem, M. (2005). A critical review of online consumer behavior: Empirical research. *Journal of Electronic Commerce in Organizations*, 3(4), 1–19.
<http://dx.doi.org/10.4018/JECO>
- Delafrooz, N., Paim, L. H., & Khatibi, A. (2010). Students' on line shopping behavior: An empirical study. *Journal of American Science*, 6, 137–147.
- Fishbein, M. E., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63, 70–87.
<http://dx.doi.org/10.2307/1251946>
- Gefen, D. (2000). E-commerce: The role of familiarity and trust. *Omega-Oxford-Pergamon Press*, 28, 725–737.
- Gefen, D. (2002). Reflections on the dimensions of trust and trustworthiness among online consumers. *ACM SIGMIS Database*, 33, 38–53.
<http://dx.doi.org/10.1145/569905>
- Gefen, D., Benbasat, I., & Pavlou, P. A. (2008). A research agenda for trust in online environments. *Journal of Management Information Systems*, 24, 275–286.
<http://dx.doi.org/10.2753/MIS0742-1222240411>
- Griffith, D. A., Hu, M. Y., & Ryans, J. K. (2000). Process standardization across intra- and inter-cultural relationships. *Journal of International Business Studies*, 31, 303–324. <http://dx.doi.org/10.1057/palgrave.jibs.8490908>
- Hair, J. F. J., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with SPSS*. Broken Sound Parkway NW, FL: CRC Press.
<http://dx.doi.org/10.1201/9781420011111>
- Hofstede, G. H. (1984). *Culture's consequences: International differences in work-related values* (Vol. 5). London: Sage.
- Hofstede, G. H. (1991). *Cultures and organizations: Software of the mind*. New York, NY: McGraw-Hill.
- Jarvenpaa, S. L., Tractinsky, N., & Michael, V. (2000). Consumer trust in an internet store information. *Technology and Management*, 1, 45–75.
- Kacen, J. J., & Lee, J. A. (2002). The influence of culture on consumer impulsive buying behavior. *Journal of Consumer Psychology*, 12, 163–176.
http://dx.doi.org/10.1207/S15327663JCP1202_08
- Kansal, P. (2014). Online privacy concerns and consumer reactions: Insights for future strategies. *Journal of Indian Business Research*, 6, 190–212.
- Kayworth, T., & Whitten, D. (2010). Effective information security requires a balance of social and technology factors. *MIS Quarterly Executive*, 9, 163–175.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, 44, 544–564.
<http://dx.doi.org/10.1016/j.dss.2007.07.001>
- Kukar-Kinney, M., & Close, A. G. (2010). The determinants of consumers' online shopping cart abandonment. *Journal of the Academy of Marketing Science*, 38, 240–250.
<http://dx.doi.org/10.1007/s11747-009-0141-5>
- Lallmahamood, M. (2007). An examination of individual's perceived security and privacy of the internet in malaysia and the influence of this on their intention to use e-commerce: Using an extension of the technology acceptance model. *Journal of Internet Banking and Commerce*, 12(3), 1–26.

- Larose, R., & Rifon, N. J. (2007). Promoting i-safety: Effects of privacy warnings and privacy seals on risk assessment and online privacy behavior. *Journal of Consumer Affairs*, 41, 127–149.
<http://dx.doi.org/10.1111/joca.2007.41.issue-1>
- Lee, M. C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications*, 8, 130–141.
<http://dx.doi.org/10.1016/j.eleap.2008.11.006>
- Limayem, M., Khalifa, M., & Frini, A. (2000). What makes consumers buy from Internet? A longitudinal study of online shopping. *IEEE Transactions on Systems, Man, and Cybernetics – Part A: Systems and Humans*, 30, 421–432.
<http://dx.doi.org/10.1109/3468.852436>
- Littler, D., & Melanthiou, D. (2006). Consumer perceptions of risk and uncertainty and the implications for behavior towards innovative retail services: The case of Internet Banking. *Journal of Retailing and Consumer Services*, 13, 431–443.
<http://dx.doi.org/10.1016/j.jretconser.2006.02.006>
- Lopez-Nicolas, C., & Molina-Castillo, F. J. (2008). Customer knowledge management and e-commerce: The role of customer perceived risk. *International Journal of Information Management*, 28, 102–113.
<http://dx.doi.org/10.1016/j.ijinfomgt.2007.09.001>
- Lwin, M., Wirtz, J., & Williams, J. D. (2007). Consumer online privacy concerns and responses: A power-responsibility equilibrium perspective. *Journal of the Academy of Marketing Science*, 35, 572–585.
<http://dx.doi.org/10.1007/s11747-006-0003-3>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
<http://dx.doi.org/10.1037/0033-295X.98.2.224>
- Martin, S. S., & Camarero, C. (2008). Consumer trust to a web site: Moderating effect of attitudes toward online shopping. *CyberPsychology & Behavior*, 11, 549–554.
<http://dx.doi.org/10.1089/cpb.2007.0097>
- Marzieh, Z., & Paim, L. B. H. (2012). Perceived risk of security and privacy in online shopping: A study of Malaysia context. *Life Science Journal*, 9, 983–987.
- Milberg, S. J., Smith, H. J., & Burke, S. J. (2000). Information privacy: Corporate management and national regulation. *Organization Science*, 11, 35–57.
<http://dx.doi.org/10.1287/orsc.11.1.35.12567>
- Miyazaki, A. D., & Fernandez, A. (2001). Consumer perceptions of privacy and security risks for online shopping. *Journal of Consumer Affairs*, 35, 27–44.
<http://dx.doi.org/10.1111/j.1745-6606.2001.tb00101.x>
- Monuwe, T. P., Dellaert, B. G. C., & De Ruyter, K. (2004). What drives consumers to shop online? A literature review. *International Journal of Service Industry Management*, 15, 102–121. <http://dx.doi.org/10.1108/09564230410523358>
- Morris, M. G., & Venkatesh, V. (2000). Age differences in technology adoption decisions: Implications for a changing work force. *Personnel Psychology*, 53, 375–403.
<http://dx.doi.org/10.1111/peps.2000.53.issue-2>
- Mukherjee, A., & Nath, P. (2007). Role of electronic trust in online retailing: A re-examination of the commitment-trust theory. *European Journal of Marketing*, 41, 1173–1202.
- Ng, S. I., Lee, J. A., & Soutar, G. N. (2007). Tourists' intention to visit a country: The impact of cultural distance. *Tourism Management*, 28, 1497–1506.
<http://dx.doi.org/10.1016/j.tourman.2006.11.005>
- Nunnally, J. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.
- Olsen, N. J. (1975). Social class and rural-urban patterning of socialization in Taiwan. *The Journal of Asian Studies*, 34, 659–674. <http://dx.doi.org/10.2307/2052548>
- Park, J., & Jun, J. K. (2003). A cross-cultural comparison of Internet buying behavior: Effects of Internet usage, perceived risks, and innovativeness. *International Marketing Review*, 20, 534–553.
<http://dx.doi.org/10.1108/02651330310498771>
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of electronic commerce*, 7, 101–134.
- Pavlou, P. A., & Chai, L. (2002). What drives electronic commerce across cultures? A cross-cultural empirical investigation of the theory of planned behavior. *Journal of Electronic Commerce Research*, 3, 240–253.
- Pavlou, P. A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *Management Information Systems Quarterly*, 30, 115–141.
- Rajamma, R. K., Paswan, A. K., & Ganesh, G. (2007). Services purchased at brick and mortar versus online stores, and shopping motivation. *Journal of Services Marketing*, 21, 200–212.
<http://dx.doi.org/10.1108/08876040710746552>
- Ramayah, T., & Ignatius, J. (2005). Impact of perceived usefulness, perceived ease of use and perceived enjoyment on intention to shop online. *Journal of Systems Management*, 3, 36–51.
- Schwartz, P. M. (2004). Property, privacy, and personal data. *Harvard Law Review*, 117, 2056–2128.
<http://dx.doi.org/10.2307/4093335>
- Sheehan, K. B., & Hoy, G. M. (2000). Dimensions of privacy concern among online consumers. *Journal of Public Policy and Marketing*, 19, 62–73.
<http://dx.doi.org/10.1509/jppm.19.1.62.16949>
- Strong, K., & Weber, J. (1998). The myth of the trusting culture. *Business & Society*, 37, 157–183.
<http://dx.doi.org/10.1177/000765039803700203>
- Tan, F. B., Yan, L., & Urquhart, C. (2006). Explaining actual online shopping behavior: Evidences from two distinct national cultures. Conference on Information Science Technology and Management.
- Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
- Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*, 74, 118–128.
<http://dx.doi.org/10.1037/0022-3514.74.1.118>
- Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology*, 53, 133–160.
<http://dx.doi.org/10.1146/annurev.psych.53.100901.135200>
- Woodcock, C. (2010). *Transformational leadership and employee commitment: The moderating role of perceived organizational support and individual level collectivism/individualism*. PhD. DeKalb, IL: Northern Illinois University.
- Wu, D. Y. H. (1985). Child training in Chinese culture. *Chinese Culture and Mental Health*, 7, 113–134.
<http://dx.doi.org/10.1016/B978-0-12-701630-6.50016-2>
- Yaveroğlu, I. S., & Donthu, N. (2002). Cultural influences on the diffusion of new products. *Journal of International Consumer Marketing*, 14, 49–63.
http://dx.doi.org/10.1300/J046v14n04_04
- Yeniurt, S., & Townsend, J. D. (2003). Does culture explain acceptance of new products in a country? An empirical investigation. *International Marketing Review*, 20, 377–396.
<http://dx.doi.org/10.1108/02651330310485153>
- Zhou, L., & Zhang, D. (2007). Online shopping acceptance model: A critical survey of consumer factors in online shopping. *Journal of Electronic Commerce Research*, 8, 41–62.



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