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CONSUMER ATTITUDES TOWARDS ONLINE SHOPPING: AN EMPIRICAL STUDY AMONG MALAYSIAN COLLEGE STUDENTS

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ABSTRACT

This study analyses the factors foreseeing university students' e-commerce attitude, and intention at universities of Klang Valley region in Malaysia. In this research, cluster sampling method was utilized, and further, examined the moderating effect of collectivism/individualism as a measurement of culture on the association between attitude, and other variables for example; attribute of innovation (relative advantage, compatibility, and complexity), Trust (integrity, benevolence, and ability), perceived risk, and subjective norm. The outcomes of structural equation modelling demonstrated that the degree of intention of online shopping was comparatively higher in university students, and pathway of attitude towards the e-shopping has significantly positive among them. Furthermore, a noteworthy moderation effects on the association between attitude, and subjective norm, compatibility, and relative advantage were observed.

Keywords: Collectivism, Individualism, Innovation Diffusion Theory, Theory of Planned Behaviour, Theory of Reasoned Action.

1. INTRODUCTION

The advent of web has grossly altered the way of the transaction of products, and services takes place globally, and therefore, e-shopping is obviously the present, future tendency of shopping. Nowadays, individuals have a sense that they do not have enough time to spend to go to a retail outlet or supermarket for shopping with the pace of each day's work, expanding day-by-day. Furthermore, the rise of the e-marketing conveyed lesser prices, discounts, and time savings [1]. In addition to that, three key aspects; easy, efficient, and practical, may be affected to the customers' preference for eshopping. In this way, the e-business dealers might focus their marketing approaches by focusing on these three elements to grab more consumers. Therefore, the e-shopping has turned into the mostly favoured channel of shopping among consumers nowadays [2], and their repurchase intention was mainly directed by perceived crowding and store image [3]. Moreover, customer satisfaction is depended on the factors such as, customer-perceived value, corporate image, and service quality [4].

In Malaysia, customers can buy goods, and services remotely from sellers, and more importantly, product information are also accessible through the same source because, the internet has made it easier for them [5]. Therefore, the government of Malaysia is trying, by providing enabling electronic platforms, and resources in its environment to buttress it interest in terms of ecommerce, because it has experienced explosive development over the previous decade as customers today think that its increasingly practical as well as

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progressively advantageous to shop on the web. Though, the change from the normal method of offline shopping to online business has made customers to face uncertainties over issues for example, online fraud, discrepancy in product quality and grade, private information leakage, unsuccessful delivery, and so forth [6].

Recently, young generation are playing a vital role in online transactions, and shopping due to their heavy use of electronic devices. Therefore, service providers in the e-retail business must engage in more research works on Malaysian students' behaviour towards online purchase intentions, online transactions, and the background of the contribution of students in Malaysian e-marketing [7]. But, Ooi et al. (2011) reported that internet growth is still slow in Malaysia when viewed from the perspective of its total population density [8].

There are many aspects that make online shopping a challenging field. In some countries, online shopping adoption seems to be very low because of the existing barriers, and the trust is the most important barrier that effect on web-based transactions. Many researchers believe that eshopping has not been widely adopted due to the issue of trust [9, 10]. Research conducted by Metehan and Yasemin (2011) on the internet usage has indicated that lack of confidence on the quality or genuine sellers remain the main reasons for discouraging consumers from shopping online [11].

Moreover, consumers are conscious about the security risk involved in releasing information into the public domain through the internet. As such, risk associated with making information public on the internet is a highly imperative factor in predicting the utilization of e-shopping [12]. Also, it is evident that customers from diverse cultural background have unalike perceptions, preferences, attitudes, and values [13]. There are more reasons why the norms, and cultural values are strong indicators in determining peoples' intentions, and attitudes towards the e-commerce [14, 15, 16].

Although many studies have studied moderating influence of culture, only a small fraction of researchers like [17, 10] included culture as a moderator regarding online shopping which were mostly carried out in the USA [18, 19]. Strong and Weber (1998), and Griffith et al. (2000) studied the cultural influence on trust, not regarding ecommerce, but in relation to the effect of culture on other factors, which is considered in this present study [20, 21]. Previous researches show studies between different countries, however, this study examines the individualism/collectivism level in Malaysia to avoid comparing other countries with each other, and introducing a general stereotype solution. Considering that those who buy goods online could have a greater level of individualism than average, even though they reside in nation regarded as collectivist personified. Religious, and cultural diversity in country like Malaysia gives an opportunity for research in relation to online consumer behaviour. Nowadays competitive world marketers should not emphasise on stereotype kind of marketing as a tool for increasing market sectors universally, rather, should specifically customize marketing strategies, and programmes to serve specific groups of consumers around the world that have consumption, and behavioural patterns. That is why this study is looking for unique solutions, specifically in relation to Malaysia.

Therefore, what makes this research different from previous studies is the quest for explanation by suggesting the moderating effect of approach of culture collectivism/individualism by Hofstede (2001) on the relationship between constructs of the model in one country among the respondents who are the students [22]. Based on the development of the Theory of Planned Behaviour (TPB), the Theory of Reasoned Action (TRA), and Diffusion of Innovations Theory (DIT), it tends to be comprehend that these theories are equipped for giving a substantial premise to clarifying, and anticipating customers' attitudes towards online shopping intention.

In addition, this research investigates eshopping intention among university students in Malaysia, with specific accentuation on comprehension, and assessing the moderator factors of the individual level of collectivism/individualism concerning the association between attitude, and independent components, for example, trust, perceived risk, attribute of innovation, and subjective norm.

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one of the most profoundly testing ideas by the scientists in which still does not really settled up [6]. It is basic that e-commercial centres find a way to build up trust, so buyers can engage in businesses with great confidence in the service providers of the commercial centre [29].

According to Mayer [30], trust is a critical component in business dealings, and thus, build on the basis of integrity, benevolence, and ability. These interconnected three parameters play a vital role in moulding the trust that one of the most important parameters which has been considered in online transactions, and commitments [18].

According to the previous research, if a higher trust in web-based shopping was developed in individuals, progressively inclined online shopping behavior was exhibited by the customers to buy goods and services. Indeed, trust assumes a focal job on e-purchases, because customers will hesitate to buy if they sense uncertainty, and risk [1]. In related to the literature, trust decreases the perceived risk of an online business deals. Though, there are some evidence that the perceived risk behaves as an obstacle on purchasers' trust. Moreover, existing investigations propose that trust is a significant indicator of purchase intention [6].

In (2006), Flavian and Guinaliu reported that the major element in determining consumer behaviour is trust, which also determines the success of the technology employed like e-buying [31]. The implementation of the new e-commerce approach in Malaysia has made it highly imperative to study consumers' trust in carrying out online transactions to achieve higher productivity, and result. Furthermore, the existing literature in e-commerce indicated that, attitude influence behaviour, and trust [10, 32]. Positive attitude influence consumer trust towards e-shopping, and leads to greater intention for purchasing on the internet. Palvia (2009) reported that trust impact significantly on participation intention through usage attitude [33]. Therefore, attitude can facilitate between intentions, and trust coupled with trusting belief.

2.3 Perceived Risk

Perceived risk is identified as a one of the important components that affect for the online customer behaviour [34, 35, 36]. It is a consequence of the consumer uncertainty most especially in online shopping phenomena [37, 38]. Furthermore, the level of risk aversion is identified as one of the main elements that influence the purchasing decision

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Malaysian Students Online Shopping Behaviour

Malaysian online customers show some unique characteristics such as, comparatively young, has higher education, and command a more favourable financial position with higher social status [23]. Suki (2006) led an investigation among Malaysian undergraduates and observed that they delight in buying mostly books/ magazines/ journals via the web [24]. Another resent study was revealed that the factors that affect more on Malaysian students' internet purchasing are hedonic orientation, utilitarian orientations, demographic characteristics and internet shopping perceived benefits and attitudes [23]. According to Harn et al., there is a noteworthy relationship among the areas of anxieties and issues confronted by Malaysian students of online purchasing [25], and these anxieties are on adequacy of consumer protection law and regulations, custom checks on goods, and degree of trust on web-based retailers. Furthermore, Jin et al. (2015) indicated that the Malaysian youths have presented moderate degree of attitude toward internet shopping exercises, as such, they are moving towards adopting web-based purchasing as the shopping platform, when they think positively on carrying out online buying [26]. In a previous study which was conducted by Haron and Chinedu (2018) on Malaysian students' consumer styles inventory (CSI) observed that seven factors such as, age, gender, ethnicity, household income, family size, and place where a student was raised up were found to have an important impact on the CSI factors [27]. Outcomes from another past study revealed that Gen Y in Malaysia purchases generally from web-based retailers giving service through Instagram and Facebook. Moreover, perceived reputation and perceived trust have a significant positive correlation with online shopping intention of Gen Y customers in Malaysia [28].

2.2 Trust

The trust is perceived as a key component in associations between people, between institutions, and between the people and the institutions. Moreover, it has been broadly considered by researchers over the years. Nonetheless, trust maybe



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[2]. Remarkably, very little investigations have examined at perceived risk accompanying by eshopping [1]. But, many researchers worked on the attitude towards online shopping has been proven to indicate negative influence of risk perception, which is a major issue [39, 40]. Furthermore, the traditional commerce is devoid of the negative results of security, and privacy challenges faced in online buying transactions [41, 42, 43].

Perceived risk affects negatively on one's decisions [44]. Once a purchaser has confidence in that he/she cannot regulate purchase outcomes or that consequences of a wrong choice would be significant and serious, risk might be appearing in the purchase environment [45]. Perceived risk may cause a substantial impact on the behavioural intentions. According to Cho et al. (2014), reducing perceived risk would influence customers' intention to repurchase in web-based businesses [46]. In the environment of an online shopping, risk influences attitude, and purchase intention [47], such that the level of risk perception has prominent effect on online procurements than on procurements from offline supplies. Different researchers characterized risk in the environment of e-commerce as the manner in which that clients accept the outcome of utilizing the web is negative, and is in this way a perilous strategy for transaction. Client reluctance to buy via online can be credited to the risk perception in regard to item quality, information content, delivery options, and method of payment [45].

Situations may make the impact of risk perception on costumer intention, and attitudes to differ which also depends on the circumstances due to the variation in the risk types [48]. Several investigations on factors such as intentions, actual usage of the internet shopping or attitudes on the risk effect have been carried out by several researchers [49]. A negative influence of perceived risk was observed on the intent to do online business [50].

2.4 Subjective Norm

In (1975), Fishbein and Ajzen [51] described subjective norm as "a persons' perception that most people who are important to him think he should or not perform the behaviour in question" (p. 4). This can be related to ones' intention due to the fact that people usually in line with their perception of what others assume they should do. In 2006, Pavlou and Fygenson reported that subjective norm indicates that individual's acts in accordance with what they think people important or associated to them would like them to behave [52]. However, various experimental investigations evidenced that a positive correlation was existed on the ideas of subjective norm, and intention [53].

A subjective norm, the perceived social force for doing a specific behavior, is an element of individual's beliefs, comprising social pressure put upon him/her by their families, relatives, or close friends, before the individual performs the behavior. In this manner, when buying items via online shopping, a subjective norm plays a useful job in developing a purchaser's perception of his or her close contacts, for example, whether their referents think he or she should buy an item, and his or her motivations to imitate to the referents, when their referents have solid negative feelings about the item, customers are bound to modify their buying intention; likewise, a consumer's buying intention might be raised up, if others more positively prefer the similar item. Subjective norms not just assume a significant job in a person's purchasing decision, yet in addition are positively accompanying by a customer's attitude towards particular sorts of [54]. In studying new technology behavior adoption, the subjective norm is accepted as a vital factor affecting behavioural intention, and it can be a factor that might affect the intention of students to shop online in Malaysia.

2.5 Attribute of Innovation

Web-based shopping could be regarded as an innovative technology since it permits consumers to carry out online purchases without the limitations to place, and time, and given direct online access to products, and services easily, and quickly via internet [55]. Also, online shopping can be regarded as an innovation, when compared with the conventional physical market place with space, and time constraints [56].

According to Rogers (2003), characteristics of an innovation that can have direct impact on people's rate of adoption can be classified in to five groups namely [57];

- 1. Relative advantage: the perceived level of the new idea or advancement over the previous one.
- 2. Compatibility: the level to which an improvement is perceived to be in accordance with the current values, previous experiences, and the needs more possible migration.
- 3. Complexity: how cumbersome an invention is perceived and it eases of understanding.

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behaviour. A technology cannot have perception, attitude, and intention. These values are held by individuals; especially the consumer for online shopping, in other words, when an innovation, such as online shopping was perceived as an advantage for a consumer, such perception will lead to a positive attitude towards online shopping, and is expected to raise the intention to adopt it. In addition, perceived attributes is an influencing feature in the consumer's tendency to buy commodities online [65].

2.6 Moderating Role of Individual Level Collectivism/Individualism (Culture as Moderating Variables)

Culture is a vital conception for the comprehension of consumer behaviour [66]. The present study explores culture across individuals within Malaysia. Despite how culture is studied, cultural distinctions have been affirmed to have significant ramifications for customer behaviour, and factors that influence internet shopping behaviour. The effect of culture on globalization of e-commerce cannot be over emphasised [67]. Online shoppers can potentially have different cultural norms, and values which have tremendous impact on people's motives, choices, and general way of life, such as shopping; thus, researchers need to take a holistic view in to the effect of culture on online shopping [49]. Previous research has revealed that various cultures respond distinctively to new products, and e-shopping behaviour [68, 16].

According to Hofstede's Culture Model, cultural contrasts are grouped into five dimensions; power distance, long-term orientation, individualism-collectivism, masculinity-femininity, and uncertainty avoidance [69]. Out of these five measurements, individualism/collectivism has been utilized to anticipate consumer behaviour [56]. Furthermore, Zhou et al. (2008) noted that individualism/collectivism has been applied to expect consumers' online behaviour as well [43]. Further, according to the Yeniyurt and Townsend (2003), most broadly used methodology in cultural consumer behaviour is the approach called individualism/collectivism [16]. Afzal (2010) likewise accentuated that individualism/collectivism has established extraordinary support from earlier works as one of the most significant cultural factors that impact on intention [70]. In this manner, the present examination applied Hofstede's Culture Model as the individualism/collectivism measurement.

- 4. Trial ability: the level to which an invention be is tested on a restricted basis.
- Observability: the level of visibility of an outcome of an innovation.

The most commonly identified attributes out of these innovations are; complexity, compatibility, and relative advantage, which can be diffused, and adopted in web-based platforms [58, 59, 60]. Furthermore, research has shown that complexity, compatibility, and relative advantage are more significant than others among the five attributes aforementioned for predicting user intention in online based internet technology [61]. The rate of adoption could be associated with compatibility, perceived observability, trialability, and relative advantage. However, complexity is adversely correlated to the adoption rate [57].

Therefore, in this research, only three; compatibility, relative advantage, complexity, would be considered out of the five perceived innovation characteristics suggested by Rogers in 1983 [62] and according to the authors' best of knowledge that is the first time which used above three characteristics of an innovation to study online shopping intention of the Malaysian college students. Time saving, and effort are key factors involve in convenient online shopping, which are described to reduce the cost of effort, and time required in buying goods, and services [63]. General, consumers are bound to be optimistic towards adopting web-based shopping when the perceived advantages offered are vivid. Innovation can be deduced in a better context if compatibility between each requirement, and inventions are exploited [64]. According to Vijayasarathy (2004), perceived compatibility is the best perception-based indicator for attitude towards online transactions [59].

These perceived characteristics of an innovation reflect the beliefs held by the consumer or decision maker about the attribute of an innovation, such as whether it is beneficial and/or appropriate to the consumer. These beliefs may tend to affect the attitude of the consumer towards adopting that innovation, such as online shopping. This argument of the relationship among one's attitude, perception, and behavioural intention is in line with that of the famous behavioural model TRA by Fishbein and Ajzen in 1975 [51]. According to TRA, through attitude, beliefs about performing behaviour indirectly affect behavioural intention. This refers to the favourable or unfavourable evaluative effect of the perceived characteristics of performing the target JATIT

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Communities with individualistic settings are considered to exhibit weak relationship between them, and each an individual is predictable to take care of himself. Conversely, those in a collectivistic society is associated to each other, and exhibit cohesive, and strong associations that defend. The major reason that the current research explores individualism/collectivism in one specific nation is on the grounds that individuals in a similar nation (Malaysia) do not essentially exhibit alike behavioural patterns [71, 72].

Ng et al. (2007) likewise detected that culture does not limit boundaries, unlike to the perception of same-mindedness [73]. Researchers have shown that individuals selectively form their personal communication patterns, and characters from both collectivistic, and individualistic features in dissimilar circumstances [74]. Therefore, we cannot presume that everyone in individualistic beliefs is an individualist, and that everyone in a collectivistic belief is a collectivist [75]. Malaysia can be considered a young nation with a total population density of 29 million. It harbours three main races namely Malays, Indians, and Chinese and other minority tribes since before its independence in 1957. The dynamics of amalgamation of diverse cultural background living within Malaysian environment called for the need for this study. Srite and Karahanna (2006), and Dash and Saji (2006) carried out studies on people's cultural values, and empirically recognized the moderator influence of culture [76, 77]. However, this study is a comprehensive investigation to determine the effect of value of the individualism/collectivism of respondents concerning each factor, such as trust, subjective norm, and perceived risk attribute of innovation.

Previous research only worked on each of them or just the effect of the dimension of culture, and not the moderating effect, and there has been no investigations that study all the named elements. Lee and Turban, (2001) highlighted the variances between formation of trust, and perception of trust across beliefs [78]. Keil et al. (2000) suggested that costumer's willingness to trust online vendor is being affected by the culture dimensions, and level of uncertainty, which is a key factor in carrying out online businesses [79]. Gefen et al. (2008) also focused on the future of research direction by taking in to account trust, and behavioural effects across cultures [18]. Those from individualistic background easily belief than those from collectivistic cultures. The individualist sees the collectivistic as more abstract, and inclusive compared to themselves [80]. Furthermore, in the case of the subjective norm, and individualism, social influence of others, and collectivism may affect the relative influence of significant on customer behaviour [17]. Triandis (1995) revealed that individuals from a more collectivist society are easier to be encouraged by customs, and values inherited, and give priority to the objectives of the collective, and tend to give priority to the bond that brought them together as one entity [74]. Generally, subjective norm was discovered to affect customers' purchase attitude, and intentions more intensely in collectivist compared to the later [81].

Additionally, the current study shows that individualists, and collectivists also be different in their perceptions of the risks accompanying by internet purchasing. Research has shown that perceived risk linked with collectivists is usually greater than that related to individualists in online shopping [82]. However, the collectivistic offer more protective avenue to it group when compared with individualist. Therefore, the consequences of the risk do not lie with collectivists, which makes is less risk-averse [83]. Similarly, there is lower possibility of risk-seeking in individualistic cultures because it is believing that the individual customer has to bear the possible consequences of their actions during the online purchases [84]. For instance, in a nation like Malaysia, there exist difference in individual values, and behaviours within the same culture which would lead to different orientations toward the cultural approach [85].

Van Slyke et al. (2005) revealed that online shopping could be a drawback for those in collectivist cultures [86]. Based on this perspective, it is considered that customers with different values of culture will view different aspects of online shopping as an advantage when compared with traditional shopping. Moreover, compatibility beliefs are significant factors for accepting consumer choices, which includes the choice to opt for online purchases [87].

2.7 Research Framework

Various research works on online shopping behaviour has been carried out from different models, perspectives, and theories. This research is considered the motivation, perception, and personality aspects in the perspective of behavioural theory like TPB, Innovation Diffusion Theory (IDT), and TRA. These theories have given a clearer insight to the online vendors on the reasons why

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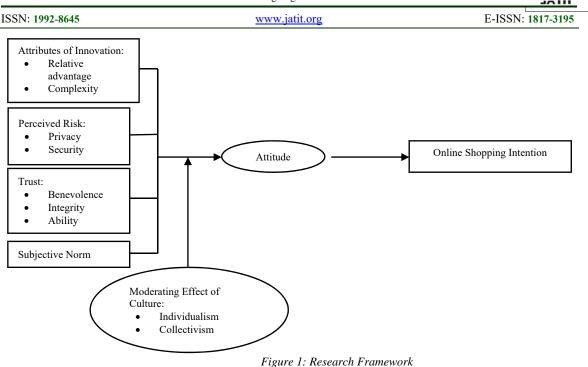
people make purchases online. To the best of the knowledge of the researchers there is no evidence for the integrated use of TPB, IDT and TRA in the context of online shopping. Therefore, this research is beneficial for academicians to improve their understanding of behavioural change towards the online shopping. However, it is still unclear how cultural differences affect online shopping behaviour [88]. According to Rogers (2003), there are three perceived characteristics of innovation could be important to form a favourable or unfavourable approach towards an innovation which are associated with intention to shop online [57]. In TPB, Ajzen (1991) argued that confidence on item can indirectly encourage intentions through attitudes, and behaviour [89]. If perceived risk related with a particular substitute can be considered as a belief in that item, it would most probably indirectly affect the intentions through the attitude towards online shopping [90, 91]. In addition, the TRA has also been used theoretically in recent works on formation of trust, most especially regarding online shopping [39, 92]. The TRA emphasises that the intention to act is subject to people's attitude

towards the conduct, and a one's attitude is affected by his/her beliefs, such as perceived risk, and trust. Furthermore, studies have shown that trust, and attitude are highly related, and attitude indicates a student's intent to buy online [93].

TPB was integrated with constructs from other models or theories by some sociologists for example, [94, 95, 96]. In addition, Tan et al. (2006) applied TPB to moderate the influence of culture on eshopping behaviour [88], and determined the moderating effect of individualism, and collectivism on the connection between attitude, subjective norm, and intention. According to the TPB [89], the attitude towards the subjective and norm transaction directly influences intentions of online transactions [34].

Based on the literature discussed above, and previous theoretical models, the below conceptual framework shown in Figure 1 is suggested, and associations of this framework are tested with the given hypotheses;

- H1: Attributes of innovation is associated with online shopping attitude.
 - H1a: Relative advantage is associated with online shopping attitude.
 - H1b: Complexity is associated with online shopping attitude.
 - H1c: Compatibility is associated with online shopping attitude.
- H2: Perceived risk is associated with online shopping attitude.
- H3: Trust is associated with online shopping attitude.
- H4: Subjective norm is associated with online shopping attitude.
- H5: Culture moderates the relationship between attributes of innovation and online shopping attitude.
 H5a: Culture moderates the relationship between relative advantage and shopping attitude.
 H5b: Culture moderates the relationship between complexity and online shopping attitude.
 H5c: Culture moderates the relationship between compatibility and online shopping attitude.
- H6: Culture moderates the relationship between perceived risk and online shopping attitude.
- H7: Culture moderates the relationship between trust and online shopping attitude.
- H8: Culture moderates the relationship between subjective norm and online shopping attitude.



3. RESEARCH METHODOLOGY

3.1 Sampling

Klang Valley where is located around Selangor in Federal Territory was chosen as the catchment area for the study due to its population density, modern social, and economic advancement level in Malaysia. The population distribution cut across a wide diversity in terms of race, age, ethnicity, and culture, which is a true reflection of Malaysian population. Therefore, the sample space chosen in terms of location can be presumed to be valid in terms of generalizing the findings of the research. Thus, sample selection was done using the cluster sampling method. The sample frame for the study was acquired from the private, and public universities; therefore, the Klang Valley is appropriate as it consists of several private, and public universities. From the universities in this area, the students are demographically different, so the cluster of this area was categorized into two main groups; private, and public. Then, from these two clusters four public universities, and four private universities were randomly chosen. Numbers of universities were selected from the clusters through random sampling. The following eight universities were chosen for this research work:

- 1. University Putra Malaysia (UPM)
- 2. University of Malaya (UM)
- 3. International Islamic University Malaysia (UIAM)
- 4. Technological University of Malaysia (UTM)

- 5. Sunway University (SYUC)
- 6. University Tenaga Nasional (UNITEN)
- 7. University Multimedia (MMU)
- 8. Limkokwing University of Creative Technology (LUCT)

Based on the valuation of each university under consideration, the student population who access internet are almost equal. About 50 questionnaires were administered to students in two randomly selected faculties in each of the universities to be assessed, making a total of 400 questionnaires in all. Convenience sampling was used to choose students who are registered in a various course in each faculty to answer the questions.

3.2 Instrument Development

Survey methodology was used, and the previously tested questionnaires were utilized to develop the survey instrument. Some innovations were done on the items to revise them as necessary to compatible with the framework of this study. The instrument contained several areas such as;

3.2.1 Independent variables

3.2.1.1 Trust

Believing convictions are perceptions of the reliability of the object of trust. Trusting beliefs are the trustor's recognition that the trustee possesses characteristics that would profit the trustor [30, 90].

These items measure the honesty (promise keeping, and trustee honesty), competence (ability of the trustee to do what the trustor needs), and

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acy and security were 0.73 and

benevolence (trustee caring, and motivation to act in the trustor's interests). The 21 items adapted from McKnight et al. (2002) were used to measure trust of the students, based on three dimensions namely; integrity (consisting of seven items), benevolence (comprising seven items), and ability (consisting of seven items) [91]. All the questions are ranging from 1 (strongly disagree) to 5 (strongly agree) according to the five point Likert scale. The Cronbach's alpha values for each dimension of integrity, benevolence, and ability were 0.73, 0.79, and 0.89 respectively, and all the values were above 0.70 which is the generally accepted minimum threshold value for reliability [92]. The other two items for ability were adopted from Doney and Cannon in1997 [93] which were, "Internet vendors have sufficient expertise, and resources to do business on the internet" and "internet vendors have adequate knowledge to manage their business on the Internet" (p. 38).

3.2.1.2 Subjective norm

The nine items, which were adapted from Taylor and Todd (1995) were used in the questionnaire to measure the factor subjective norm [94]. Like earlier, all the questions utilized a five point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The Cronbach's alpha value was 0.75, and it was above 0.70 which is the generally accepted minimum threshold value.

3.2.1.3 Attribute of innovation

The relative advantage is the first construct of this dimension, and six items were used to collect the data. It was measured by using the benefits of online shopping, for example, time saving, easy ordering, effort saving, and enhance performance [95]. The second dimension, compatibility, and the third dimension, complexity, both have seven items. All the three items were adapted from Parthasarathy and Bhattacherjee in 1998 [95], and utilized the fivepoint Likert scale. But, only some items of "relative advantage", "compatibility", and "complexity" were adopted from Moore and Benbasat in 1991 [97].

3.2.1.4 Perceived risk

Two dimensions (security and privacy) were used to measure the students' perceived risk which consisted of 11 items. The dimension, security (consisting of five items) was adopted from Gefen in 2000 [98]. Privacy comprises six items adapted from Kim et al. in 2008 [99]. Further, privacy issues come from concerns, for example, spam from online retailers, unauthorized sharing of personal information, and disclosure of the patterns of the consumer's online shopping behavior [100]. The five point Likert scale was utilized for all the questions, and the Cronbach's alpha value for each dimension of privacy, and security were 0.73, and 0.87, respectively.

3.2.2 Moderating variable

3.2.2.1 Culture

The individualism (consisting of six items), and collectivism (comprising six items) were the two dimensions of the construct culture, which were adapted from Triandis and Gelfand in 1998 [101]. The five point Likert scale was utilized for all the questions, and the Cronbach's alpha value for each dimension of individualism, and collectivism were above 0.70.

3.2.3 Mediating variable

3.2.3.1 Attitude towards online shopping

The scales established by Yoh et al. (2003), and Childers et al. (2001) were applied in the questionnaire to measure the consumers' attitude towards online shopping [102, 103], and very high reliability value (0.95) was reported. The five items from both scales were taken to measure consumers' attitude towards online shopping. Attitude was adapted from Taylor and Todd in 1995 [87], and two items, "using the internet to purchase is a positive idea" was adopted from Hernandez et al. in 2010 [104], and "using the internet to purchase is desirable" was adopted from Venkatesh and Davis in 2000 [105].

3.2.4 Dependent variable

3.2.4.1 Online shopping intention

The focus of this research is to examine which construct affects the dependent variable; student's intention towards online shopping. This variable (consisted of 7 items) defined how likely it is that the consumer intends to purchase online in the near future. "I plan to use the Internet to purchase again", "I intend to use the Internet to purchase within the next 6 months" and "I will strongly recommend others to use the Internet to purchase" were adopted from Davis in 1989 [106]. In addition, "my general intention to use online shopping is very high" and "I will think about using the internet to purchase" were adopted from Shimp and Kavas in 1984 [107]. The rest of the items were taken from Crespo et al. in 2009 [108].

4. **RESULTS AND DISCUSSION**

4.1 Demographic Profile of the Respondents

Overall a sum of 400 questionnaires were disseminated, and 375 duly completed questionnaires were collected back, yielding a response rate of 93.75%. There were increasingly female (60%) than male respondents (40%). Out of this group of respondents, the most of them were aged between 21-25 years old (55.2%). Clearly,

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81.1% were single, 18.1% were married, and 56.6% of the respondents were having a master's degree. According to the ethnic group 52.8% were Malay, 27.5% Chinese, and the remaining 5.3%, and 14.4% of the respondents were, Indians and, other

ethnicities respectively. The most common monthly income group of the respondents was $RM \ge 2400$. The demographic profile of respondents is displayed in Table 1.

Variable	Frequency	Percentage
Gender		
Male	150	40.0
Female	225	60.0
Age (years old)		
≥20	66	17.6
21-25	207	55.2
26-30	8	2.1
31-35	61	16.3
36-40	23	6.1
<41	10	2.7
Marital status		
Single	304	81.1
Married	68	18.1
Divorce	1	0.3
Widow	2	0.5
Educational		
qualification		
Bachelor	92	24.5
Master	211	56.6
PhD	36	9.6
Post-doctoral	3	0.8
Others	33	8.6
Ethnicity		
Malay	198	52.8
Chinese	103	27.5
Indian	20	5.3
Others	54	14.4
Monthly income		
(RM)		
≥2400	271	72.3
2401-3600	47	12.5
3601-4800	24	6.4
<4800	31	8.3
Missing	2	.5
Living place		
Campus	156	41.6
Out of campus	212	56.5
Dormitory	7	1.9

Data screening processes was used to treat for missing data, normality, outliers, and multi-co linearity. The data was analysed based on the steps of Structural Equation Modelling (SEM) which includes the structural model, and measurement model.

4.2 Measurement Model

SEM technique, and Structural Model using AMOS 16.0 software was used as two-step approach to evaluate the proposed research model. Fig. 2

shows the most frequently employed technique for SEM estimation that is based on maximum likelihood estimation. The first step of the SEM measurement model was used to assess the reliability of the research items. A confirmatory factor analysis was used to postulate the configuration to which each measure loads on a particular factor [109, 110, 92]. Table 2 displays the factor loadings, average variance extracted (AVE), and composite reliability for all constructs



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Table 2: The Factor Loadings, Composite Reliability, and Average Variance Extracted (AVE) for Variables

Variables	Standardized factor loadings	Average Variance Extracted (AVE)	Construct Reliability (CR)	
Integrity	-	.63	.894	
integrity 2	.696			
integrity 3	.732			
integrity 4	.852			
integrity 6	.859			
integrity 7	.815			
Benevolence	-	.591	.878	
benevolence 1	.756			
benevolence 2	.842			
benevolence 3	.804			
benevolence 5	.707			
benevolence 6	.728	505	905	
Ability ability 1	- .719	.595	.895	
ability 3	.607			
ability 4	.823			
ability 5	.825			
ability 6	.828			
ability 7	.747			
Relative	-	.649	.902	
Advantage				
Relative 1	.843			
Relative 2	.863			
Relative 3	.817			
Relative 5	.774			
Relative 6	.722			
Compatibility	-	.708	.923	
compatibility 1	.860			
compatibility 2	.894			
compatibility 3	.892			
compatibility 4	.851			
compatibility 5	.692	000	055	
Complexity	-	.808	.955	
complexity 2	.898 .895			
complexity 3 complexity 5	.893			
complexity 5	.893			
complexity 7	.906			
Security	-	.572	.870	
Item 1	- .556		.070	
Item 2	.806			
Item 3	.899			
Item 4	.726			
Item 5	.769			
Privacy	-	.661	.906	
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	(1)	005	
Collectivism	-	.614	.886	
Item 1	.548			
Item 2	.796			
Item 3	.922			

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	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			
	Intention	-	.724	.940	
	intention 1	.721			
	intention 3	.882			
	intention 4	.909			
	intention 5	.914			
	intention 6	.872			
	intention 7	.790			_

The standardized factor loadings using Convergent Validity Method was utilized to determine the validity of the research constructs [109]. From the result, it was observed that the reflective indicators of each factor loading are between 0.810 to 0.953, and is above the recommended limit (0.50). This confirmed the establishment of the convergent validity for each construct for each factor loading which was greater than 0.50, which signifies validation of all the constructs in the work. Furthermore, the AVE was determined for evaluating discriminate validity which is within the range of 0.761-0.884, and in line with findings by [109, 92]. As shown in Table 2, the value of AVE in square root between each pair of factors is greater than the correlation predictable between factors which means its discriminate validity of the construct is endorsed [111, 92].

Table 3 and 4 shows the structural model test results for attitude towards shopping online which revealed that an acceptable level was achieve by the model fitting the data.

Table 3: Summary for Model Fit of Attitude Toward Online Shopping Structural Model: Chi-Square/CMIN and GFI

Model	NPAR	CMIN	DF	Р	CMIN/DF	GFI
Default model	118	1725.443	1010	.000	1.708	.835
	(T 1 1 (D					
	Table 4: Base	line Compariso	ons, RAMSE, o	and SRMR		
Model	Table 4: Base	Ine Compariso	TLI		DMSEA	SDMD
Model		1		and SRMR CFI	RMSEA	SRMR

The results revealed that the 8 exogenous variables indicate 71% of the variances of attitude towards shopping online. It indicated that trust had the maximum impact on the forecast of attitude

towards shopping online based on the standardized regression weight (β = 0.307), then, trailed by relative advantage (β = 0.213) as shown in Table 5.

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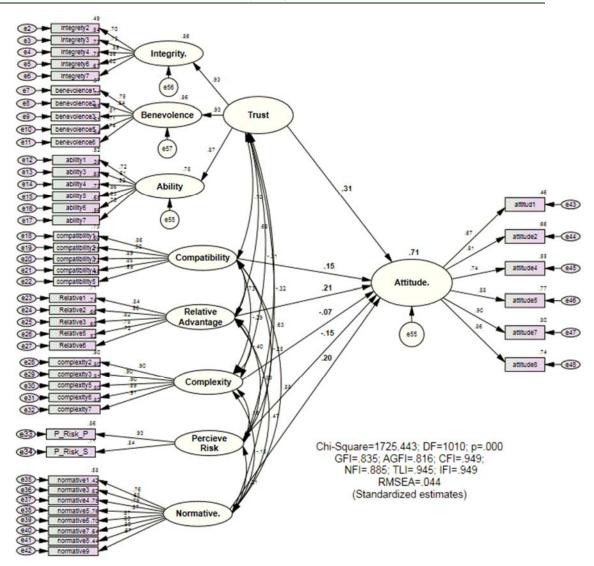


Figure 2: Structural Model of Attitude Toward Online Shopping

 Table 5: Un-Standardized and Standardized Regression Weights in Structural Model of Attitude Toward Online

 Shopping

Hy	pothes	İS	Estimate	S.E.	Standardized Estimated	C.R.	Р
Attitude	<	Trust	.306	.066	.307	4.670	.000
Attitude	<	Compatibility	.165	.065	.155	2.528	.011
Attitude	<	Relative advantage	.220	.065	.213	3.393	.000
Attitude	<	Complexity	040	.022	066	-1.795	.073
Attitude	<	Perceive risk	129	.032	155	-4.058	.000
Attitude	<	Subjective norm	.170	.040	.205	4.272	.000

Figure 2, and Table 5 display outcomes of variables of trust with three dimensions of integrity, benevolence, and ability which shows substantial

influence in the prediction of attitude to shopping online ($\beta = 0.307$, C.R.= 4.670, P <0.05). Thus, according to the significant association between

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attitude, and trust; H3, was validated. The result is in conformity with the previous works which revealed that a positive connection was observed between trust, and attitude [112, 32]. Furthermore, the results demonstrate that a significant association was seen between compatibility, relative advantage, and attitude towards online shopping; H1c, and H1a $(\beta = 0.155, C.R. = 2.528, p < 0.05), (\beta = 0.213, C.R. =$ 3.393, P <0.05). However, complexity did not show any noteworthy influence towards the likelihood of attitude towards e-shopping; H1b (β = -0.066, C.R.= -1.795, P >0.05). Consequently, H1b was not proved by the data of the research, and it is also not in conformity with most research works regarding shopping online [113, 114]. Furthermore, the results also demonstrated a negative association between perceived risk, and attitude towards online shopping; H2 (β = -0.155, C.R.= -4.058, p <0.05). Therefore, H2 was validated by the data in this study. Respectably subjective norm showed a significant influence in the forecasting attitude towards

Table , and the values of Chi-square for both models were statistically significant based on the baseline fit indices indicated by TLI, IFI, and CFI. The two models fit the data, and the result for these indices are greater than the values of 0.9 suggested. Moreover, both the variant, and invariant models show the

Table . The variant model was significantly better fit than the invariant model in comparison to the Nested Model. The difference in the two chi-square values for the models was 272.668 with 118 degrees of freedom, which was significant at the 0.05 level (p<0.05). Therefore, the goodness-of-fit

shopping online; H4 (β = 0.205, C.R.= 4.272, P <0.05). Hence, the association between normative, and attitude was supported significantly.

4.3 The Moderating Effect of Culture (Individualism and Collectivism)

Two variant, and invariant group models were produced by AMOS software when conducting multi-group analysis to assess the moderation effect of culture. In the variant group model, distinctive regression weights will be hypothesized for individualism, and collectivism respondents, while the similar regression weights will be anticipated for individualism, and collectivism respondents in the invariant group model, and the path relationship of interest is obliged to be equivalent between individualism, and collectivism.

The statistics for the goodness-of-fit for the variant, and invariant models are shown in the

RMSEA values of 0.041, and 0.042, below respectively, which are the recommended range of 0.08, indicating that the fit of both models are adequate. The goodness-of-fit level for the variant, and invariant models were compared in accordance with the Nested Model comparisons, as shown in

of the two models were considerably different, and the model variant was preferred. Statistically, difference between the models signifies that the path estimates were not the same, and that the moderation effect for culture (individualism and collectivism) does exist.

Model	NPAR	CMIN	DF	Р	CMIN/DF	IFI	TLI	CFI	RMSEA
Variant Model	236	3296.817	2020	.000	1.632	.914	.907	.913	.041
Invariant Model	118	3569.485	2138	.000	1.670	.902	.901	.902	.042

Also, the results 3296.817, and 3569.485 for variant, and invariant respectively shows that the full variant model group resulted to

lesser AIC compared to the invariant model group which makes the variant the preferred model.

Table 7: Nested Model Comparisons (Assuming Variant Model to be Correct)

Model	DF	CMIN	Р	NFI	IFI	RFI	TLI
				Delta-1	Delta-2	rho-1	rho2
Indirect Model	118	272.668	.000	.016	.018	.005	.006

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Consequently, the variant model was affirmed in terms of better fit. The hypothesized regression path for individualism, and collectivism were matched grounded on the variant model group. The comparison of the variant structural models between individualism, and collectivism as depicted in Table 8 and Table 9 show few contrasts between individualism, and collectivism depended on level of the significant connections, and the size in the hypothesized path.

Table 8: Un- Standardized and Standardized Regression Weights (Individualism-Variant Model)

Hypothesis			Estimate	S.E.	Standard Estimate	C.R.	Р
Attitude	<	Trust	.357	.167	.357	2.131	.033
Attitude	<	Compatibility	.279	.138	.295	2.016	.044
Attitude	<	Relative advantage	.165	.151	.176	1.095	.274
Attitude	<	Complexity	005	.034	008	152	.879
Attitude	<	Perceive risk	118	.043	174	-2.740	.006
Attitude	<	Subjective norm	.028	.075	.036	.367	.714

Table 9: Un-Standardized and Standardized Regression Weights (Collectivism- Variant Model)

Hypothesis	5		Estimate	S.E.	Standard Estimate	C.R.	Р
Attitude	<	Trust	.327	.077	.325	4.265	.000
Attitude	<	Compatibility	.138	.081	.120	1.691	.091
Attitude	<	Relative advantage	.196	.080	.176	2.444	.015
Attitude	<	Complexity	052	.029	087	-1.775	.076
Attitude	<	Perceive risk	151	.050	145	-3.004	.003
Attitude	<	Subjective norm	.241	.054	.274	4.437	.000

The results reveal that the attitude and trust towards relationship between online shopping for respondents with a predominant personality of individualism was significant (β =0.357). In addition, this path hypothesis for respondents with a predominant personality of collectivism was significant (β = 0.325). Meanwhile, there are some variances in the size of standard regression weight in this path's relationship for individualism, and collectivism, this path was significant for both groups. Therefore, the moderation effect of culture on this path; H7, was not accepted.

The results indicated that compatibility, and attitude relationship towards online shopping for respondents with a predominant personality of individualism was significant (β =0. 295). But, the path hypothesis for respondents with a predominant personality of collectivism was not significant (β = 0.120). Therefore, the moderation effect of culture on the path relationship between compatibility, and attitude towards online shopping; H5c, was supported. Compatibility in individualism respondents are more than for collectivism respondents, which is a blueprint of the studies by

Van Slyke et al. in 2005 [86]. Considering Malaysian, it was observed that students with a more collectivist tendency feel that online shopping is not consistent with their interest for interpersonal connections which result to reduce compatibility due to the fact that traditional shopping is more interpersonal than online shopping [115]. The results show that there was no noteworthy association between relative advantage, and attitude towards online shopping for respondents with a predominant personality of individualism (β =0.176). Meanwhile, the path hypothesis for respondents with a predominant personality of collectivism was significant ($\beta = 0.176$). Therefore, the moderation effect of culture on the path relationship between relative advantage and attitude towards the online shopping; H5a, was supported. In terms of relative advantage, this study found that the perceived relative advantage of collectivism is more than for individualism as mentioned before internet shopping is an unsociable practice in relation to conventional shopping. This might be act as a drawback for collectivist respondents [86]. In line with this approach, this study believes that students will take

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attitudes of the undergraduates in India [117]. Another study demonstrated that convenience, price, utilitarian orientation, and a wider selection influenced purchasers' attitudes towards web-based shopping [118]. The findings of Kumar and Sobha (2015) have affirmed that the perceived reputation and perceived marketing mix might be effect on the students' attitude of adopting online purchasing [119]. But, as indicated by Jadhav and Khanna (2016), the major impacting factors for internet shopping were low price, availability, comparison, promotions, customer service, convenience, attitude, perceived ease of use, trust, time consciousness, and variety seeking [120].

Therefore, according to the results of the above mentioned previous research and the current study did not compare different countries as well as attitudes of the students who engage with different subject streams. Hence, further elaboration of empirical studies might also be conducted to find out likenesses and contrasts of online customers of various nations and compare between the attitude, perception, and purchase behavior of the customers. Moreover, future studies can likewise be carried out to compare on web-based purchasing attitude among students depend on distinction of subject stream like arts, professional or non-professional courses, commerce, science etc. In addition, future research should utilize a more elaborate model in cooperating additional antecedent factors beyond those mentioned in this study.

5. CONCLUSION

The result of this study highly support the suitability of applying innovation attributes to determine consumer intention towards shopping online. Those students who are optimistic, and have positive belief about the perceived relative advantage of online shopping formed a more favourable attitude towards adopting online shopping. Moreover, if students' find web-based shopping companionable with their needs, experiences, and values and it appears to be attitude predictor, and become more interested to apply it in their shopping transactions.

Furthermore, the outcomes affirm the essentialness of compatibility, and relative advantage of consumer's decision making process to shop online, and also confirmed the Diffusion of Innovation Theory. However, the present study did not find any significance for complexity.

advantage of e-commerce as an alternative to traditional shopping method.

It was observed that the association between complexity, and attitude towards online shopping for respondents with a predominant personality of individualism was not significant. Moreover, the path hypothesis for respondents with a predominant personality of collectivism was not significant. Thus, the moderation effect of culture on the path relationship between complexity, and attitude towards online shopping; H5b was not supported.

The results indicated that the significant association is negative between perceived risk, and attitude towards e-shopping for respondents with a predominant personality of individualism (β=-0.176). It also showed that path hypothesis for respondents with a predominant personality of collectivism was significant ($\beta = -0.145$). Therefore, the moderation effects of culture on the path relationship between attitude, and perceived risk towards shopping online; H6, was not supported. The results also reveal that there was no significant relationship was existed between the subjective norm, and attitude towards online shopping for respondents with a predominant personality of individualism (β = 0.036). Conversely, the path hypothesis for respondents with a predominant personality of collectivism was significant (β = 0.274). Therefore, the moderation effect of culture on the path relationship between the subjective norm, and attitude towards online shopping; H8, was in accordance with the study data. This research is in agreement previous studies that the subjective norm is more optimistic for students with a collectivism background than those who are individualists. This is in line with observation by Bagozzi et al. (2000) who revealed that normative influences are more important for collectivist consumers [81].

Furthermore, some influencing factors has noteworthy effect on student's online shopping practices and have been studied by several researchers. For example, Farah et al. (2018) studied five factors; privacy, functionality, perceived value, firm reputation and trust, and found to be the most influencing factors on online shopping behavior but, the current study, privacy and trust have been used as the factors which are important to form online shopping attitudes [116]. Furthermore, comparing the product, discounts and offers and anytime purchasing facility were identified as major influencing factors of the web-based shopping © 2005 - ongoing JATIT & LLS

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Overall, individualistic, and collectivistic respondents showed a significant difference in the subjective norm, compatibility, relative advantage, and trust associated with online shopping. The positive association between the subjective norm, relative advantage, and attitude to carryout business is better in collectivist respondents than in individualists, while trust, and compatibility are higher for individualists. It was also discovered that individualism-collectivism relationship is not affected by cultural dimension.

From the result obtained, it was inferred that should target consumers marketers with individualistic cultural values, and should emphasis more on these aforementioned points to build trusting relationships. For example, the system units, and the design program should satisfy the individualistic consumers by conveying precisely the product statistics through navigation, help, and comparison functions, and effecting the given instructions in a fast, and reliable way in other to improve the level of trust. The functionality of a result means that an effective e-marketing strategy for collectivistic consumer's targeted audience may be one that stresses their benevolent intentions.

6. IMPLICATIONS

Based on the research findings, the implications can be divided into three units or forms; online retailers for Telecom Malaysia, service provider of the internet in the country, and Malaysian Government. It is essential for e-market retailers to simplify, and design the online shopping websites in an easy, and convenient way as possible. The website should be unambiguous in other to prevent the buyers from being confused, most especially those that are not conversant with this new type of shopping. Moreover, for efficient delivery of service, there is a need for properly developed the internet security program for their e-customers regarding the safety of their private data in terms of privacy. In this regard, the need for Telecom Malaysia to take a lead in the nation's e-commerce or online purchases, and marketing cannot be over emphasised. This would give a clearer vision, business direction, and objectives towards sustainable online transactions. Telecom Malaysia as a leader in the field of communication, and the internet service delivery needs to reflect lowering the cost of the internet data access in order to encourage more internet usage to its customers. The low cost of internet access in Malaysia may have an effect on the internet adoption rate, and availability of such infrastructure in the country. It would drastically improve the growth rate of the users of internet in Malaysia thereby generating a critical mass for eshopping to kick start in Malaysia. Moreover, introduction of more affordable high-speed internet connections is essential to grab more e-consumers.

This investigation highlights some important opportunities to e-marketers who comprehend how to promote consumers' attitude with the purchase decision. In this respect, the present study also discovered some contributions due to culture among the respondents. The results indicated that it would be accurate to describe this study's sample as having an attitude towards online shopping that is aligned with cultural values. This study focuses on a single society (Malaysia) with a wealthy population of different races that differ in individualism, and collectivism in their consumer behaviour. Thus, the difference between this research, and the previous works is that, this research tends to examine the perceptions of students with individualistic, and collectivistic values on various influences that have an impact on attitude towards online shopping within Malaysian students, as a single community. Therefore, the need to cover this research gap becomes highly imperative as this area of research has not been exploited in Malaysia. Moreover, there is for investigation in this area by comparing the consumer behaviour based on Hofstede's cultural dimensions. Also, speedy development in recent times of Malaysia's economy has changed the dynamics of consumption of goods, and services of Malaysians, thereby making consumer behaviour in the country's e-market a challenging, and interesting area of research.

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