The Mediating Role of Attitude in Influencing Consumer Purchase Intention Towards Online Apparel Shopping in Malaysia

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Abstract

Online apparel shopping had been growing steadily in Malaysia over the decade. Regardless, the aspects of purchase intention are not well researched, and a holistic framework remains limited. Considering the potential of apparel shopping, this study was conducted to develop an integrated framework and to understand the role of attitude as a mediator using baseline models such as the Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB). Using purposive sampling, this study retrieved 314 responses through a self-administered questionnaire from online apparel shoppers in Malaysia. The hypotheses were tested using PLS-SEM. Conclusively, perceived risk, web experience, pricing, utilitarian, hedonic, and products and service attributes demonstrated a significant relationship towards attitude. Direct relationships were also present between pricing, utilitarian, hedonic, convenience and online apparel purchase intention (OAPI). Interestingly, attitude was found to mediate all variables towards purchase intention except for convenience. The findings contribute academically to marketing and online apparel literature in the Malaysian context. With these innovative insights, online marketers and online apparel business owners can better comprehend online buyers' interest to purchase.

Keywords: attitude, convenience, hedonic, online apparel purchase intention, perceived risk, pricing, product and services attributes, utilitarian, web experience

1.0   Introduction

The rapid advancement of internet technology has changed the face of electronic commerce (e-commerce). E-commerce is an electronic buying and selling product activity that utilises web-based applications to assist the transmission of communications, particularly products and services (Krishnan et al., 2017). Through e-commerce, the expansion of online shopping has concurrently generated huge

marketing opportunities for e-retailers. As part of the e-commerce trend, businesses can easily reach consumers without time or geographical constraints (Taher, 2021), as well as benefit the enterprises, including small and medium-sized firms (SMEs) to engage in worldwide business transactions (Rahayu, 2017). According to the Ministry of International Trade and Industry, the e-commerce industry contributed almost RM 279 billion to Malaysia's GDP in 2018 (Department of Statistic Malaysia, 2021).

Malaysia is a significant contributor to online shopping, and it has taken the lead to be the next Southeast Asia's e-commerce powerhouse (The Edge Malaysia, 2021). Globally, Statista (2021) stated that Malaysians' spending on online shopping hits RM 4.46 billion and is expected to rise in years to come. Fashion and beauty are one of the most popular categories in Malaysia, with the category representing USD1.42 billion in value of the total Malaysian e-commerce market in 2020 (Data Reportal, 2020). With the global rise of online fashion demand, there are numerous chances for market development and expansion in the online apparel market. Online apparel is a fraction of e-commerce that facilitates the purchase of apparel items, especially clothing via third-party websites. As a booming category, it is critical to understand the elements that influence consumers' willingness to embrace and engage in online apparel purchasing.

Early research on online shopping in Malaysia revealed that factors such as the perceived risk of online shopping, consumers' shopping motivation (utilitarian and hedonic), and benefits such as convenience, lower price and customer service strongly influence online purchase intention (Delafrooz et al., 2011; Yulihasri et al., 2011; Mansori et al., 2012). These findings also revealed a research gap, whereby an abundance of prior studies focused on general online shopping while only a few comprehensive empirical studies emphasised online apparel shopping intentions. In other words, previous research has only focused on understanding the critical factors influencing e-commerce purchases and the findings are not generalisable across all product categories. For instance, some products have become outdated due to the extensive improvement in technology and e-commerce.

Specifically, online apparel shopping differs significantly from most other types of online shopping. It is considered a high involvement item and purchasing that generally requires the consumer to physically

examine the fabrics, fit, and colours. As such, online shoppers would expect themselves to be able to touch, feel, and able to check on the fitting of the garments before purchasing them. Additionally, the selection of online apparel products varies in terms of pricing, quality, and size (Kim & Kim, 2004). Due to these significant differences, previous research focusing on online shopping or e-commerce may not apply to online apparel shopping. Nevertheless, some research on Malaysian online apparel shoppers has investigated the influential factors such as perceived risk, satisfaction (website and post-purchase intention), and compulsive buying (Nawi & Mamun, 2017; Folarin, 2016; Omar et al., 2015). Conversely, these studies did not take a more holistic view of online apparel purchase intention. A comprehensive framework is necessary rather than focusing on separate entities. To address the research gap in the literature, this research aims to explore the factors influencing consumers' online apparel purchase intention by integrating and extending the Technology Acceptance Model (TAM) and Theory of Planned Behaviour (TPB).

Although TAM is renowned for its parsimonious, critics argue that TAM is restricted towards online behavioural intention as the model is originally sought to understand consumer technology acceptance through two constructs, which are perceived usefulness (PU) and perceived ease of use (PEOU) (Park et al., 2014). The online environment is complex and uncertain, and there are varieties of potential influencing factors; thus, TAM variables may not be adequate to capture the critical beliefs that influence online purchase intention. Hence, TAM should be expanded to include additional constructs to better understand online shopping purchase intention (Wixom & Todd 2005; Porter & Donthu, 2006). Resultantly, TPB is incorporated in this study to facilitate the limitation of TAM by adding additional constructs with the perceived behaviour control (PBC) construct, which includes behaviour in which consumers do not have volitional control as suggested by Delafrooz et al., (2011) and Meskaran (2015). Combining TAM and TPB could result in a more robust model for determining the factors influencing online apparel shopping purchase intention.

Additionally, this research will further include the attitude towards online apparel shopping as a mediator. An individual's intention is determined by their attitudes, and it simultaneously plays a role in shaping their decision-making and behaviours. Therefore, attitude has a potentially significant role in high-involvement transactions such as online apparel shopping. Initially, Davis et al.

(1989) included attitude as a mediator but it was later removed in the final model after it was discovered to partially mediate behavioural intention (Venkatesh et al., 2003). Past researchers had shed some light on the role of attitude and concluded that it should be included as a mediator while emphasising its significance in determining intention, especially in the voluntary use of technology such as online apparel shopping (Ursavas, 2013; Lopez-Bonilla & Lopez-Bonilla, 2017). Similarly, previous research demonstrated that attitude has a substantial impact on online purchasing intention (Delafrooz et al., 2009; Delafrooz et al., 2011; Meskaran et al., 2013). To the best of our knowledge, the role of attitude has not been vastly researched in the context of online apparel in Malaysia. Theoretically, this limited information motivated the need to integrate the TAM and TPB to elucidate the mediating function of attitude.

Accumulated evidence from prior studies reflects sparse and insufficient information on online apparel purchase intention, thus highlighting the need for this research to be conducted. To truly comprehend Malaysians' online apparel purchase intentions, this study will incorporate perceived risk, convenience, hedonic and utilitarian motivations, pricing, product and service attributes (PSA), web experience, and attitude toward online apparel shopping into a holistic model. According to previous empirical studies, these constructs have been established as important variables in online shopping intention and attitude. The integration of TAM and TPB could assist this study to discover new relationships in the context of online apparel shopping. The study will also validate the untested mediating role of attitude in influencing factors towards purchase intention.

2.0 Literature Review

2.1 Online Apparel Purchase Intention (OAPI)

Online purchase intention is described as "the concept that drives and motivates consumers to shop online" (Thamizhvanan & Xavier, 2013). In other regards, it focuses on the intention or desire of a person to purchase something. Similarly, Jiradilok et al. (2014) defined online purchase intention as the effect of consumers' attitudes or behaviour on their willingness to purchase from a particular online website. Consumers are expected to perform the behaviour of thoughtfulness in purchasing after perceiving the outcome of online products and services. Actual purchase behaviour could be predicted

by predicting the intention to use a product or service (Jiradilok et al., 2014; Childers et al., 2001). Similarly, Schiffman and Kanuk (2010) opined that those who have a higher intention of purchasing are more likely to purchase a product. A few studies reported that purchase intention correlates with online apparel shopping (Jegethesan et al., 2012; Kim & Forsythe, 2010).

The intention to purchase online apparel has also been investigated in recent studies such as perceived risk (Folarin, 2016), consumer satisfaction (Nawi & Mamun, 2017), and impulsive buying (Omar et al., 2015). However, only certain dimensions had been looked into, thereby leaving a gap where a holistic framework for online apparel purchase intention remains absent. Drawing upon past established factors that influence online purchase intention (Delafrooz et al., 2011; Yulihasri et al., 2011; Mansori et al., 2012; Zendehdel et al., 2015), other aspects such as convenience, pricing, product and service attributes, website experience, utilitarian, hedonic, perceived risk are considered the main focus in this study (Figure 1).
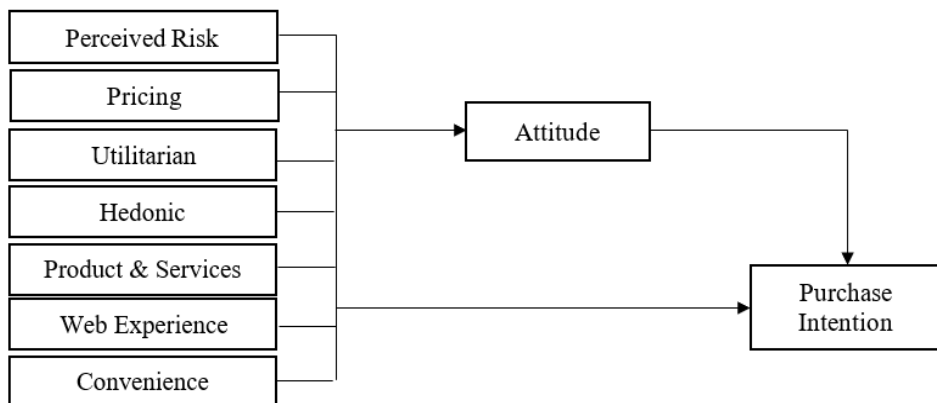

Figure 1 : Proposed Framework

2.2   Technology Acceptance Model (TAM)

Davis (1989) adopted the Theory of Reasoned Action (TRA), which was proposed by Fishbein and Ajzen (1975) in the creation of TAM. While TRA predicts the overall consumer behaviour, TAM predicts the impact of technological advancements on the determinants of consumer behaviour. The models identified intention as a predictor of PU and PEOU. The two variables can predict the behaviour of technical systems (Davis, 1989); in which PEOU forecasts how easy the technical systems will be used, while the degree to which a person

feels technology will boost job performance is predicted by PU. TAM is beneficial in explaining consumer adoption and rejection of technological systems (Hausman & Siekpe, 2009). According to Meister and Compeau (2002), 40% of the variance in user intentions and 30 per cent of the variance in system usage may be explained by the TAM model. Though TAM had been extensively applied in different disciplines, TAM has been criticised since it has drawbacks in analysing the behaviour of technology adoption. Thus, TAM should be extended with additional factors to understand online shopping purchase intentions (Gefen et al., 2003; Rafique et al., 2014). Several prior researchers have added additional constructs to TAM to elucidate online purchasing intention, and they found that TAM is a reliable predictive model for online consumer behaviours (Gefen et al., 2003). The simplicity of TAM enables consumer, context, technology explanation and prediction to be in behavioural intention (Teo, 2009).

2.3   Theory of Planned Behaviour (TPB)

Similar to TAM, TPB is also an extension of TRA by Ajzen (1985), who added a new variable which is perceived behaviour control (PBC) for intention and behaviour. PBC was included due to the ability of TRA to explain scenarios, where the individuals lacked full control over their actions (Taylor & Todd, 1995). This paradigm determines behavioural intention through attitude, subjective norm (SN), and PBC; SN refers to the social pressure of influence towards a behaviour. In contrast, PBC refers to a person's belief that they can perform a given action or an external force that facilitates the belief (Javadi et al., 2013). However, numerous researchers believe that TPB is a one-dimensional model, making it impossible to comprehend specific beliefs that may influence users' behaviour (Taylor & Todd, 1995; Hoie et al., 2012). Hence, TPB is not feasible to examine online purchasing behaviour due to several missing and crucial variables. Other researchers posited that the limitations of TPB can be overcome by adding new constructs or combining other theories like TAM (Delafrooz et al., 2011; Meskaran, 2015).

Conclusively, this study extends TAM by incorporating suitable variables drawn from the strengths of TPB in understanding online apparel purchase intention. Based on the previous discussion, eight additional constructs will be included in the hypothesised model for this study.

2.4   Perceived Risk

Ko et al. (2010) described perceived risk as the possibility of loss incurred when expecting positive outcomes during online shopping. Alternatively, perceived risk is a consumer's perception of having a negative feeling about a transaction and the consequence of their transaction, which is an important aspect of considering online shopping. Several types of perceived risk are experienced by online shoppers, which include product performance risk, privacy risk, financial risk, time risk, delivery risk, psychological risk, and security risk (Almousa, 2011). The negative impact of perceived risk on consumers' decision to shop online has also been reported in previous studies (Bhatnagar et al., 2000; Javadi et al., 2013). The event was attributed primarily due to unfavourable effects on consumers' attitudes as they believe that purchasing from websites is riskier than purchasing from traditional stores. Nevertheless, as technology advances, researchers have found a changing trend in the perception of risk among online shoppers.

Consumers tend to be more receptive to online purchases when they have a better understanding of website security (Bhatnagar et al., 2000), data privacy (Zviran, 2008), return policies (Chang & Chen, 2008), secure payment terminals (Ariff et al., 2014), and order tracking system (Katawetawaraks & Wang, 2015). Due to continuous advancements in e-commerce transactions, consumers perceive privacy and security protections as preconditions for online shopping. Low perceived risk was also found to be associated with positive attitudes (Ariff et al., 2014) and encouraging purchase intention (Samadi & Nejadi, 2009). In line with that, Personal Data Protection (PDPA) had been enforced in Malaysia in 2013 to ensure all websites are equipped with security and privacy protections (MCMC, 2018). It has also been determined that previous studies have not comprehensively examined the relationship between perceived risk and attitude in the context of online apparel purchases, particularly product, security, privacy, and delivery risk. Thus, based on these viewpoints, it can be hypothesised that:

H1a.   Low perceived risk has a positive influence on attitude.

H1b.   Low perceived risk has a positive influence on OAPI.

2.5   Pricing

Pricing has been a deciding factor for online apparel consumers. According to Ashton (2010), pricing is defined as a monetary exchange by consumers to acquire a product or service. Many academics believe that pricing influences customer purchasing intention (Vijayasarathy & Jones, 2000). In online buying, a product's price is usually accompanied by the cost of delivery (Nguyen et al., 2019). Lo et al. (2014) opined that consumers expect online prices to be lower than in-store prices and decreased operating expenses can facilitate online retailers to offer lower prices. Indirectly, price reduction between online and physical channels would influence consumers' purchase intentions (Devaraj et al., 2002).

However, Cowart and Goldsmith (2007) discovered that price does not have a direct influence on online apparel purchases. Furthermore, shipping costs and handling fees may lead them to abandon their shopping carts during checkouts (Close & Kukar-Kinney, 2010). On the contrary, Kim (2008) found that consumers are receptive to purchasing during the sales period. Similarly, Oliver and Shor (2003) opined that discounts, price offs, and free delivery offers are the vital elements that attract consumers to complete their online transactions. In light of prior researchers' views and limited studies that have looked at the correlation between pricing and consumer attitudes related to online apparel purchasing, the following hypotheses are examined:

H2a.   Lower pricing has a positive influence on attitude.

H2b.   Lower pricing has a positive influence on OAPI.

2.6   Utilitarian Shopping Orientation

Utilitarian shopping orientation refers to an evaluation of the benefits and sacrifices needed to acquire a product (Overby & Lee, 2006). Utilitarian consumers tend to be task-specific or goal-oriented and make valid and rational decisions before a purchase (Childers et al., 2001). They need a sense of accomplishment or satisfaction and are more determined to meet their shipping goals (Overby & Lee, 2006). They also seek convenience, quality, the monetary value of a product, variety, and many others during a purchase decision (Mathwick et al., 2001; Chiu et al., 2014). In online apparel, utilitarians look forward to information such as quality, value, and other attributes

to ensure the product purchased is adding benefit to them. Past studies such as Bhatnagar et al. (2000) and Srinivasan et al. (2002) opined that convenience offered in online shopping is the main influencing factor for utilitarianism.

In a nutshell, it may also be observed that utilitarians prioritise convenience, time-saving, money-saving, and information-gathering in their purchasing decisions. Past researchers have found that utilitarianism has a direct relationship with attitude, especially the cognitive attitude such as monetary and convenience (Delafrooz et al., 2009; Chiou & Ting, 2011). Similarly, utilitarianism was found to be linked with purchase intention as there is an influence on shopping frequency (Close & Kukar – Kenney, 2010). Ndubisi and Sinti (2006) further discovered that utilitarian motivations have a strong link to Malaysia's adoption of online shopping and purchase intention. Therefore, the following hypotheses are examined:

H3a.   Utilitarianism has a positive relationship with attitude.

H3b.   Utilitarianism has a positive relationship with OAPI.

2.7   Hedonic Shopping Orientation

According to Overby and Lee (2006), hedonic shopping orientation is defined as the overall assessment of experiential benefits such as enjoyment and pleasure when performing an activity. Consumers' attitudes and behaviours are shaped by the effect of enjoyment or the cues of hedonic motivation, especially in online shopping. Hedonists are more involved in the experience and the fun aspects of shopping (Wolfinbarger & Gilly, 2001). Fun and excitement are their top priority, and they may end up buying products they do not even need. Hedonics tends to buy more if they are satisfied, making them the prospects of impulsive buying (Wolfinbarger & Gilly, 2001). Shopping for entertainment and enjoyment is a common goal for them regardless of online or offline shopping (Mathwick et al., 2001).

In online shopping, exploration from different websites would feed their fun-seeking needs and are more likely to assist them with information, and bargains, and satisfies their excitement needs (Kim & Eastin, 2011). Excitement gained from online browsing has allowed hedonics to satisfy their emotional aspects such as fun and fantasy, especially in an online apparel environment (Park et al., 2005). These positive experiences indirectly lead to a positive purchase intention due

to the association of web interactivity, images, and convenience of checkouts. According to Kim and Forsythe (2008), hedonic orientations are the important determinants of online shopping attitudes. Similarly, Cowart and Goldsmith (2007) opined that consumers' intention to apparel purchasing is influenced by their hedonic motivation. On the other hand, Chen et al. (2017) postulated that hedonic motivation is more significant to online shoppers than utilitarian motivation. Therefore, the following hypotheses are examined:

H4a.   Hedonic has a positive relationship with attitude.

H4b.   Hedonic has a positive relationship with OAPI.

2.8   Product and Service Attributes (PSA)

Product and service attributes (PSA) are important components in the marketing mix, especially from the viewpoint of online shopping and consumer behaviour. PSA is one of the differentiation factors in establishing a competitive advantage over the offerings of competitors. Few researchers have pointed out that PSA is one of the most significant factors in determining consumers' intentions and attitudes towards online shopping (Akpoyomare et al., 2012). Similarly, past researchers on apparel products have identified a few important attributes that consumers evaluate before purchasing apparel such as brand, fit, quality, durability, comfort, styles, and fabric (Ko et al., 2010; Su & Chang, 2018). Kim et al. (2006) developed a framework, E-A-S-QUAL that covers 11 apparel quality attributes and other merchandising attributes. In the present study, E-A-S-QUAL is adopted and PSA is evaluated from the perspective of the product description, brand and size chart, availability of items, order fulfilment and shipping, responsiveness, and customer service.

Quality, style, brand, and stock availability are favourably associated with online shopping purchases (Cowart & Goldsmith, 2007; Jegethesan et al., 2012). Similarly, previous studies have also established that good brand image (Cowart & Goldsmith, 2007), availability of the product, delivery information (Park & Kim, 2007), return policies (Pei et al., 2014), and customer service (Ha & Stoel, 2012) have a direct impact on consumer's attitude and being strong predictors towards online purchase. Therefore, the following hypotheses will be examined:

H5a. Product and service attributes have a positive relationship with attitude.

H5b. Product and service attributes have a positive relationship with OAPI.

2.9 Web Experience

The web experience is defined as a consumer's general perception of an online merchant premised on their virtual marketing tools. Digital platform experiences such as navigation and website interactivity will significantly determine online shoppers' purchasing decisions (Constantinides, 2004), where consumers must be able to feel, touch, and try on high-involvement items such as apparel. It is essential to provide clear and concise site content as a well-designed website and a visual presentation of apparel would be able to encourage consumers to buy the product (Isa et al., 2019). Hence, the tactile properties of online purchases must be compensated.

Few researchers believe that interactivity influences consumers' attitudes and motivation to buy, which appears through 360-product-viewer on the apparel products websites (Park et al., 2008; Aldhmour & Sarayrah, 2016). Consumers who are just not tolerant of slow loading times or pixelated graphics may experience distress, which will negatively influence them towards purchasing. The quality, interactivity, and navigation of a website have a positive impact on consumers' attitudes toward online shopping (Shergill & Chen, 2005; Merle et al., 2012; Mpinganjira, 2016). The relationship between web experience and attitude in online apparel shopping is not well acknowledged, despite numerous studies done for general shopping, as apparel is a high-risk product that requires thorough inspection without touch and feels properties. As a result, the following hypotheses are developed:

H6a. Web experience has a positive relationship with attitude.

H6b. Web experience has a positive relationship with OAPI.

2.10 Convenience

Convenience is defined as an elaborated view of psychological costs and other non-monetary costs such as time, effort, and stress (Aylott & Mitchell, 1998). Consumers prefer online shopping because it

allows them to shop from anywhere and at any time (Hofacker, 2001). It is made possible by Internet connectivity, which enables consumers to shop conveniently from their computers and smartphones (Rohm & Swaminathan, 2004). Wolfinbarger and Gilly (2001) found that online transactions can minimise the deal of time and effort spent while selecting and queuing for the checkout process in traditional stores, thus encouraging customers to have online purchase intention. According to Vijayasarathy and Jones (2000), time-saving is a major priority for online shoppers. Some researchers believe that consumers are more likely to shop online if it is more convenient than traditional shopping (Delafrooz et al., 2011). Childers et al. (2001) assert that effective shopping influences purchase behaviour. Factors like travel, selection, and time savings during checkout influence consumers' willingness to shop online. The convenience of online shopping is a key determinant for products such as clothing and perfume (Girard et al., 2003). Findings from Delafrooz et al. (2011) also found that convenience is an important predictor of online shopping attitudes. It is also cited as an influencing factor in online shopping intentions (Ling et al., 2013; Szymanki & Hise, 2000). Thus, the following hypotheses have been formulated:

H7a.   Convenience has a positive relationship with attitude.

H7b.   Convenience has a positive relationship with OAPI.

2.11   Influence of Attitude on Purchase Intention Towards Online Apparel

Attitude refers to a consumer's positive and negative feelings throughout a buying choice (Chiu et al., 2014). However, very little research had been done on attitude and their relationship to online apparel shopping. Drawing on the TAM theory, this research intends to focus on how consumers establish attitudes toward online apparel shopping intention. Pavlou and Chai (2002) hypothesised that attitude influences online shopping intention. Previous research has shown positive attitudes toward online shopping, which then led to an increase in purchase intention among customers (Almousa, 2011). Previous online shopping studies in Malaysia also revealed the influence of attitude on buying intentions (Delafrooz et al., 2009; Zendehdel et al., 2015; Aldhmour & Sarayrah, 2016). Likewise, Delafrooz et al. (2009) found that the more positive a consumer's opinion regarding online

buying, the more likely they are to do so. Although these studies examined the impact of attitude on online buying behaviour, it appears to be a lack of insight into customers' attitudes toward online shopping (Zendehdel & Paim, 2015), especially in online apparel shopping. Thus, the following hypothesis is developed:

H8. Attitude has a positive relationship with OAPI.

2.12 Mediating Effect

This study proposes that attitude mediates the relationship between all eight variables and online apparel purchase intention (H9a-g). Attitude was chosen as the mediator given that it has been demonstrated to play a mediating role in previous studies related to online shopping. Attitude, as suggested by TAM, is shaped by an individual's salient belief (PU and PEOU) based on what the individual believes about the consequences of the behaviour, and how they view those consequences. Most researchers argued that attitude does not adequately mediate the link between PU and PEOU; hence, it was omitted from the initial TAM model (Venkatesh et al., 2003). Several studies had included attitude as an affective component in the TAM model (Delafrooz et al., 2011; Nguyen et al., 2019). According to past researchers, attitude plays a significant role in behavioural intention, thus it should not be neglected in voluntary usage research (López-Bonilla, 2011; Ursavas, 2013). Recent studies have utilised attitude as a mediating variable and postulated that attitude mediated the relationship between utilitarianism, convenience and price (Delafrooz et al., 2011), perceived risk and web usability (Aldhmour & Sarayrah, 2016; Putro & Haryanto, 2015). Following this recent research, attitude was added as a mediator to better understand the phenomenon of online apparel purchase intention.

H9a. Attitude mediates the relationship between perceived risk and OAPI.

H9b. Attitude mediates the relationship between pricing and OAPI.

H9c. Attitude mediates the relationship between utilitarianism and OAPI.

H9d. Attitude mediates the relationship between hedonic and OAPI.

H9e. Attitude mediates the relationship between PSA and OAPI.

H9f. Attitude mediates the relationship between web experience and OAPI.

H9g. Attitude mediates the relationship between convenience and OAPI.

3.0 Methodology

3.1 Sample and Data Collection

The target population for this study were the Malaysian social media users aged 18 to 60 years old, who are also the existing consumers in purchasing apparel products online. According to MCMC (2018), there are about 24.6 million social media users in Malaysia. Hair et al. (2014) opined that for Structural Equation Modelling (SEM), at least 70 samples are required because seven structural paths lead to attitudes and purchase intentions, respectively. On the other hand, Sekaran and Bougie (2016) recommended a sample size of 382, which fulfilled the minimum sample size for PLS-SEM. Benitez et al. (2020) suggested that a sample of at least 300 is required for factor analysis. Based on the suggestions, a sample size of 300 was determined for this study to meet the SEM analysis and achieve generalisation of the findings. Non-probability sampling with the purposive sample technique is chosen for this study. Samples can be taken using this method of collection as it provides researchers with flexibility as well as accessible sample. Thus, a high survey response rate can be achieved. The respondents were targeted through Facebook advertising given that the platform has been employed in respondents' recruitment in several social and health studies. Due to its simplicity, self-automation, and reduced printing and distribution costs, Facebook advertising has been a popular recruiting tool among academic researchers (Kosinski et al., 2015; Forgasz et al., 2018).

3.2 Research Design & Research Instrument

A quantitative research approach was utilised in this study. The self-administered survey questions were employed due to the flexibility of the questionnaire that allows respondents to answer without any interference. The survey instrument consists of 62 items assessed by a 5-point Likert scale (1 denotes strongly disagree and 5 strongly

agree) adopted from published articles. All measuring variables were adopted and modified from past studies to fit the Malaysian context as reflected in Table 2.

3.3   Data Analysis

SEM is statistical modelling that is used to examine the hypothesised relationship between observed and latent variables in a study (Gefen et al., 2000). The framework consists of seven independent variables to be tested against the mediator (attitude) and the dependent variable (purchase intention). Since these variables have not been examined in the context of online shopping, the use of Partial Least Square SEM (PLS-SEM) is more appropriate due to its predictive estimates and suitability for models with complex variables. PLS-SEM is well known for its robustness against data issues such as multicollinearity (Cassel et al., 2000) and non-normal distributed data (Semeijin et al., 2005). The data was analysed using SMART PLS 3.0 software in a two-step approach, namely the measurement and the structural model.

4.0   Findings

4.1   Demographic Characteristics of the Respondents

Table 1 reflects the demographic profiles of online apparel shoppers involved in this study, which comprises 66.6% and 33.4% of females and males, respectively. The majority of the respondents were aged 20 to 39 years old (85.7%). Meanwhile, 70.7% of the respondents from the three groups have a salary between RM 2,001 and $5,000.

A descriptive analysis of the respondent's online shopping habits and their experience revealed that 36.6% of them spent between 4 and 6 hours online each day, while 30.1% spent only seven hours shopping online daily. For the frequency of online purchases, 54% of respondents shopped online at least four times a month, followed by 32.2% who shopped online at least eight times a month in the past six months.

4.2   The Measurement Model

The outer model, which is often referred to as a measurement model examines the loadings, reliability and validity tests of reflective constructs and values are determined as recommended by Hair et al. (2014). Convergence validity was assessed through factor loadings,

composite reliability (CR) and average variance extracted (AVE) (Hair et al., 2017). In this study, all the measurement items that did not meet the factor loading of a minimum value of 0.5 as recommended by Hair et al., (2010) were removed. Both Cronbach's alpha and composite reliability values should range from zero to one. Accordingly, Hair et al. (2010) suggested that a reliability value above 0.70 is considered excellent. As reflected in Table 2, both Cronbach's alpha and composite reliability met the recommended value. Similarly, an AVE of 0.50 or above is sufficient, which indicates that a latent variable can account for more than half the variance in its indicators on average (Henseler et al., 2010; Hair et al., 2014). All AVE values for the constructs were between 0.568 to 0.688, thus conforming with the recommended value of 0.5 and higher. As such, all three requirements for the measurement model were met and confirmed. The detailed results are presented in Table 2.

Table 1 : Demographic Characteristics of the Respondents

Demographics	Frequency	Percentage (%)
Gender		
Male	105	33.4
Female	209	66.6
Age		
18 – 29 years old	131	41.7
30 – 39 years old	124	39.5
40 – 49 years old	45	14.3
50 – 59 years old	7	2.2
Above 60 years old	7	2.2
Income Level		
Below RM1,000	41	13.1
RM 1,001 - RM 2,000	9	2.9
RM 2,001 - RM 3,000	64	20.4
RM 3,001 - RM 4,000	86	27.4
RM 4,001 - RM 5,000	72	22.9
RM 5,001 above	42	13.4
Average hours spent online in a day		
1 - 3 hours	104	33.1
4 - 6 hours	118	37.6
7 hours & above	92	29.3

Demographics	Frequency	Percentage (%)
The frequency of apparel purchases in the last six months		
1 - 4 times	171	54.5
5 - 8 times	95	30.3
9 times & more	48	15.3

Table 2 : Assessment of Measurement Model

Variable	Item	Source	Factor loading	Cronbach's Alpha	CR	AVE
Purchase Intention	INT1	Parasuraman et al. (1988)	0.863	0.882	0.915	0.683
	INT2		0.852			
	INT3		0.675			
	INT4		0.890			
	INT5		0.836			
Attitude	ATT1	Jarvenpaa et al. (2000) and Teo & Liu (2005)	0.817	0.841	0.888	0.618
	ATT2		0.648			
	ATT3		0.843			
	ATT4		0.816			
	ATT5		0.780			
Convenience	CONV1	Walther et al. (2012), Wolfinbarger & Gilly (2001) and Forsythe et al. (2006)	0.780	0.876	0.899	0.598
	CONV2		0.783			
	CONV3		0.730			
	CONV4		0.715			
	CONV6		0.822			
	CONV7		0.784			
Pricing	PC2	Girard et al. (2003), Kukar-Kinney & Close (2010), and Cowart & Goldsmith (2007)	0.802	0.873	0.904	0.653
	PC3		0.816			
	PC4		0.784			
	PC7		0.823			
	PC8		0.817			
Perceived Risk	PR1	Vijayasarathy (2004); Ariff et al. (2014) and Wolfinbarger & Gilly (2001)	0.670	0.849	0.886	0.568
	PR2		0.702			
	PR3		0.708			
	PR4		0.864			
	PR5		0.866			
	PR7		0.675			

Variable	Item	Source	Factor loading	Cronbach's Alpha	CR	AVE
Hedonic	SOH1	Overby & Lee (2006), To et al. (2007)	0.776	0.751	0.855	0.664
	SOH2		0.843			
	SOH3		0.821			
PSA	PSA2	Kramer (2012), Kim et al. (2006), Rayman et al. (2011), To et al. (2007) and Schaupp & Belanger (2005)	0.730	0.924	0.938	0.656
	PSA3		0.769			
	PSA4		0.903			
	PSA7		0.688			
	PSA8		0.904			
	PSA9		0.894			
	PSA11		0.728			
	PSA12		0.835			
Utilitarian	SOU1	Overby & Lee (2006), To et al. (2007)	0.732	0.847	0.898	0.688
	SOU2		0.859			
	SOU3		0.914			
	SOU5		0.802			
Web Experience	WEX1	Ha & Stoel (2009), Kim & Stoel (2005), and Shergill & Chen (2005)	0.690	0.927	0.940	0.662
	WEX2		0.852			
	WEX3		0.814			
	WEX4		0.829			
	WEX5		0.826			
	WEX6		0.866			
	WEX7		0.860			
	WEX8		0.757			

Items removed due to low loading: CONV5, PC1, PC5-6, PR6, SOH4-5, PSA1, PSA5-6, PSA10, SOU4.

Discriminant validity refers to the degree to which items are able to differentiate between different constructs or to measure specific concepts. The Fornell–Larcker criterion was used, which stipulates diagonal elements in the same row and column as supposed to be greater than off-diagonal ones (Duarte & Raposo, 2010). Except for hedonic, all AVE square root values were higher than the correlations (Table 3). However, the difference in magnitude was almost negligible (Ab Hamid et al., 2017). Thus, it may be inferred that the internal consistency reliability, convergent validity, and discriminant validity of the model were sufficient for further study of the structural model.

Table 3 : Discriminant Validity using Fornell-Larcker criterion

	ATT	CONV	SOH	PI	PR	PSA	SOU	WEX	PC
ATT	0.786								
CONV	0.756	0.797							
SOH	0.793	0.777	0.815						
PI	0.729	0.606	0.741	0.827					
PR	0.499	0.584	0.443	0.493	0.754				
PSA	-0.539	-0.572	-0.677	-0.596	-0.396	0.810			
SOU	-0.657	-0.724	-0.819	-0.673	-0.444	0.661	0.829		
WEX	0.699	0.757	0.743	0.728	0.533	-0.677	-0.723	0.813	
PC	0.760	0.691	0.760	0.776	0.431	-0.701	-0.759	0.715	0.808

(ATT = Attitude, PR = Perceived Risk, PC = Pricing, SOH = Hedonic, SOU = Utilitarian, PSA = Products and Services Attributes, CONV= Convenience, WEX = Web Experience, PI = Purchase Intention)

4.3   The Structural Model

The path coefficient (ß) was used to examine the correlation between independent variables and dependent variables in SEM and to test the hypotheses (Hair et al., 2017). As suggested by Henseler et al. (2009), the structural model assessment was performed using the bootstrapping method to estimate the statistical significance of the estimated path coefficients as displayed in Figure 2. About 74.4% of the variance was explained by the variables for Attitude while the R^2 for purchase intention was 91.1%, suggesting a reliable predictive explanatory power.
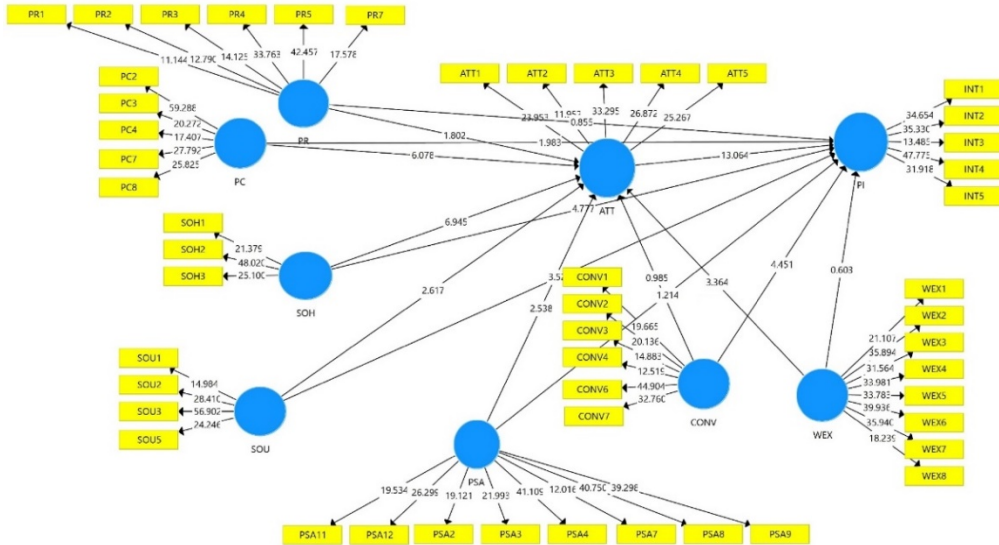
Figure 2 : Partial Least Square Results of The Structural Model

4.4   Hypothesis Testing

The hypotheses testing results are displayed in Table 4. All the hypothesised direct relationships demonstrated a positive and significant effect, except four which were insignificant and thus rejected. Values closer to 1 suggest a positive association, whereas those that are closer to 0 indicate a negative relationship (Hair et al., 2014).

H1a, which is assumed to have a direct positive relationship between low perceived risk and attitude towards online apparel shopping received strong support (β = 0.087, t = 1.802). However, H1b testing revealed that perceived risk (β = 0.021, t = 0.855) had no significant relationship with OAPI. Similarly, lower pricing (β = 0.398, t = 6.078) had no positive influence on attitude and a significant relationship with OAPI (β = 0.181, t = 2.367), thus supporting both H2a and H2b. As for utilitarian, the factor displayed a significant relationship with both attitude (β = 0.193, t = 2.617) and OAPI (β = 0.164, t=3.524), thus both H3a and H3b are supported. Similarly, hedonic reflected a significant relationship with both attitude (β = 0.474, t = 6.945) and OAPI (β = 0.267, t = 4.777), supporting both H4a and H4b. As for PSA, a direct positive relationship with attitude (β = 0.144, t = 2.538) was detected, thereby supporting H5a but a negative non-significant relationship was observed with OAPI (β = -0.031, t = 1.214), thus H5b was rejected. Similarly, web experience has a significant relationship

with attitude (β = 0.234, t = 3.364) supporting H6a, but its relationship with OAPI was insignificant (β = 0.018, t = 0.603), thus H6b was rejected. Convenience disclosed an insignificant relationship with attitude (β = 0.067, t = 0.985), but significantly associated OAPI (β = 0.202, t=4.451), thus H7a was rejected while H7b was supported. Similar to previous studies, H8 proposed that there is a direct relationship between attitude and OAPI (β=0.587, t=13.064), thus supporting the hypothesis.

Table 4 : Path Coefficient Assessment

Hypo thesis	Relationship	Path Coefficie nt (β)	t-values	p-values	Decision
H1a	PR → ATT	0.087	1.802	0.036	Supported
H1b	PR → OAPI	0.021	0.855	0.196	Rejected
H2a	PC → ATT	0.398	6.078	0.000	Supported
H2b	PC → OAPI	0.083	1.983	0.024	Supported
H3a	SOU → ATT	0.193	2.617	0.004	Supported
H3b	SOU → OAPI	0.164	3.524	0.000	Supported
H4a	SOH → ATT	0.474	6.945	0.000	Supported
H4b	SOH → OAPI	0.267	4.777	0.000	Supported
H5a	PSA → ATT	0.144	2.538	0.006	Supported
H5b	PSA → OAPI	-0.031	1.214	0.112	Rejected
H6a	WEX → ATT	0.234	3.364	0.000	Supported
H6b	WEX → OAPI	0.018	0.603	0.273	Rejected
H7a	CONV → ATT	0.067	0.985	0.162	Rejected
H7b	CONV → OAPI	0.202	4.451	0.000	Supported
H8	ATT→ OAPI	0.587	13.064	0.000	Supported
H9a	PR → ATT → OAPI	0.051	1.808	0.035	Supported
H9b	PC→ ATT → OAPI	0.234	5.689	0.000	Supported
H9c	SOU → ATT → OAPI	0.113	2.574	0.005	Supported
H9d	SOH → ATT → OAPI	0.278	6.213	0.000	Supported
H9e	PSA → ATT → OAPI	0.085	2.511	0.006	Supported
H9f	WEX→ ATT→ OAPI	0.137	3.231	0.001	Supported
H9g	CONV → ATT → OAPI	0.040	0.983	0.163	Rejected

4.5   Mediating Analysis

This study was designed to investigate the indirect effects of independent variables and attitudes toward online apparel purchasing. In order to explore the mediation effect, the bootstrapping resampling

approach of indirect effect developed by Preacher and Hayes (2008) was applied. Memon et al. (2018) further supported the view that researchers should estimate individual indirect effects rather than total indirect effects when analysing models including mediators, as opposed to total indirect effects. Table 4 depicts the results of mediating testing by revealing out of seven proposed relationships, six were significant and supported and one was proven insignificant. Attitude was found to mediate the relationship between perceived risk, pricing, utilitarian, hedonic, PSA and web experience, thus supporting H9a, H9b, H9c, H9d, H9e and H9f. However, H9g was rejected since the result revealed a non-significant mediating effect between convenience and purchase intention. The predictive relevance of the structural model was also obtained based on the Q^2 value using the blindfolding procedure. The Q^2 values for both endogenous variables, attitude and purchase intention were 0.446, and 0.612, respectively. These results establish that the predictive power of the model is adequate.

5.0   Discussion

This study examines perceived risk, convenience, pricing, PSA, hedonic, utilitarian and web experience incorporated into an extended TAM and TPB model. These findings provide unique insights into the existing body of knowledge on online apparel shopping in the Malaysian context. This study found significant support for the influence of all variables except for convenience on attitude towards online apparel shopping. Lowered perceived risk assists in forming an attitude towards online apparel shopping. This finding is consistent with previous studies (Ariff et al., 2014; Zhang et al., 2012), thus reflecting that customers are likely to be positive about a purchase if they believe that their personal information is safe and secure during the decision-making process. Computer literacy on the other hand also assists consumers to develop a positive attitude with a great understanding of website security.

Pricing is also essential in determining attitude toward online apparel shopping, whereby consumer spending has shifted from necessities to luxury items aligning with the current economic conditions. This finding coincides with the previous studies by Devaraj et al. (2002) and Lo et al. (2014). Interestingly, this is a novel finding in the context of online apparel shopping, where pricing is correlated to attitude. Consumer spending habits have shifted, and many people are

looking for low-cost alternatives to many products including apparel. The availability of online products may explain why online apparel shoppers favour low-cost apparel. Utilitarianism was found to substantiate past studies by Delafrooz et al. (2009) and Chiou & Ting (2011). This is a new finding in the context of online apparel shopping as it establishes the fact that online apparel customers' attitudes towards online apparel shopping are favourably influenced when they undertake utilitarian-related shopping tasks. This conclusion is based on utilitarian motivations, which include convenience, seeking variety, saving time, and product knowledge. Likewise, this study concluded that hedonic is one of the major drivers of attitude toward online apparel shopping. Online apparel customers are highly perceptive to fun and enjoyment, which promotes a positive attitude towards online apparel purchasing. They also tend to browse web stores and enjoy the online purchasing experience similar to traditional shopping, which aligns with the findings from prior studies (Chen et al., 2017; Kim and Forsythe, 2008).

This study has discovered new knowledge about the effect of product and service attributes in the Malaysian context. The findings revealed that positive PSA boosts consumer attitudes about online apparel purchasing. Though it is in line with previous research (Su & Chang, 2018; Kim et al., 2006), that only focus on generic PSA, and not specific apparel, as the attributes vary by product. The findings are driven by the fact that consumers could only learn about and assess apparel products through online merchants' product information and services. In offline purchasing, customers could learn about the goods by touching, feeling, and trying them on, or by asking the salesperson. Thus, such experience should also be made available for online transactions. Online stores should provide personalised size assistants to assist customers with size measurement, fabric specifics, fabric care, and other intricate elements of apparel.

Similar to finding by Aldhmour and Sarayrah (2016) and Shergill and Chen (2005), consumers' attitudes toward online apparel are influenced by their web experience. Due to the rapid growth of technology and internet service providers, consumers were continuously asking for improvements in their purchasing experiences such as easier browsing, faster website navigation, and better apparel product arrangement and display. To improve consumer attitudes towards online apparel purchasing, online retailers and marketers should focus on improving the website's responsiveness, reliability,

interactivity, and quality. Contrary to earlier studies, the convenience factor is independent of consumer attitudes, as the finding contradicts the previous research (Delafrooz et al., 2011; Vijayasarathy & Jones, 2000). The fact that most Malaysians spend more than seven hours a day online demonstrates that convenience, particularly time-saving, is no longer a luxury but a necessity in people's daily lives. It is not a surprise since it could be possibly due to the differences in work between the early days of online purchasing and the present moment.

The hypotheses on the positive association of the independent variables on purchase intention yield mixed results. Only four relationships are supported: pricing, utilitarian, hedonic, convenience and attitude on purchase intention. However, perceived risk, web experience, and PSA did not establish a relationship with purchase intention. All these findings also contradicted the previous findings (Folarin, 2016; Ha & Stoel, 2012; Merle et al., 2012). The contradictory finding could be attributed to changes in the context or setting of the previous study, as most research is conducted on general online buying. In terms of perceived risk, it supports the findings of Zhang et al. (2012) who found that security and privacy concerns are irrelevant to online purchasing intention. In recent years, more system modifications made to improve the security of commercial e-commerce websites. Since 2013, Malaysia's Personal Data Protection Act (PDPA) requires e-commerce websites to use approved security measures against system hackers and intruders. The mediation results indicate that attitude mediates perceive risk towards online apparel purchase intention, thus having an indirect effect through attitude. Similarly, many academics have studied various aspects of online purchasing, but no study has been conducted on the product and services environment, notably online apparel. Regardless, the finding was substantiated by Mansori et al. (2012) in which PSA indirectly affects online purchase intention. On the other hand, web experience does not have a direct impact on online apparel purchase intention, but rather has a more indirect impact through attitude. Given that apparel is a sensory product, contradictory results are predicted. In this study, the prior findings are irrelevant to the existing business model of online apparel purchase intention.

Lastly, this study found that attitude has a mediating role for independent variables on purchase intention, except for convenience. There are no previous studies on online apparel shopping in Malaysia that looked at the mediating role of attitude. Similar to previous

research by Ursavas (2013) and Lopez-Bonilla and Lopez-Bonilla (2017), the model accounted for 74 per cent of the variance in attitude establishing the mediation effect on online apparel purchase intention.

6.0   Conclusion and Implication

This study has several theoretical implications for understanding consumer attitudes and purchase intentions in online apparel shopping. It is essential to fill the knowledge gap in online apparel purchasing by constructing an integrated theoretical framework of customers' purchase intentions toward online apparel shopping using attitude as a mediator. The literature review revealed that online apparel shopping is hardly studied in Malaysia. Despite being one of the most popular online purchases, there are no comprehensive studies on online apparel. As a result, the study managed to develop an integrated framework for online apparel shopping in Malaysia. The study validated an integrated model including TAM and TPB, as well as external factors derived from empirically validated variables. Adding these variables has helped in building a more comprehensive model that better explains online apparel purchase intention among customers.

In this study, the role of attitude toward online apparel shopping has been examined and the theoretical view from a consumer behaviour perspective has been enriched by the findings. The findings revealed that attitude does mediate, explaining 74 per cent of the variance in attitude and 91 per cent of the variance in purchase intention. The indirect effect of attitude posits that consumer attitudes shape purchase intentions for online apparel. In other words, a good attitude towards online apparel shopping is developed through independent variables such as perceived risk, pricing, web experience, utilitarian, hedonic, and product/service qualities. With these findings, this study has contributed to the body of knowledge on consumer behaviour and its function in the TAM. Marketing researchers are able to utilise this research to understand their customers' needs. The success of online apparel benefits online apparel merchants since the increased traffic and sales contribute to increased revenue. These findings help online apparel retailers and marketers to understand better how to influence online buyers' attitudes and intentions to buy online apparel. In general, consumers will look for security, privacy, a smooth web experience, product information, order fulfilment, and many other aspects while shopping online. The framework suggests

that fostering a good attitude toward online shopping can increase purchase intention towards online apparel purchasing among consumers. Therefore, online apparel sellers and marketers need to improve their services and performance by increasing customer purchase intention while maintaining and improving competitive advantage, so that they could gain the benefit from a well-thought-out marketing strategy. In conclusion, this research will enable online retailers, online marketers, research analysts, and private agencies to devise their strategies. Therefore, online apparel businesses will gain more profitability through customer engagement in marketability.

7.0   Limitation and Future Research

Despite new findings, there are a few limitations to be considered. Firstly, the sample size was constrained by the amount of data collected. A larger sample of Malaysian online apparel shoppers can be utilised to yield different and greater results. Also, the study focused on online apparel shoppers in Malaysia. The data may not represent global online apparel shoppers. It is highly recommended that researchers from various countries investigate similar studies and perhaps do a cross-cultural study using data from various countries. Future studies should consider looking into the effects of a moderator or other mediator on purchase intention. As such, variables such as convenience, brand awareness, or impulse buying behaviour can be considered. Besides, it would also be stimulating for future studies to evaluate online apparel buying intention in f-commerce. In recent times, Facebook and Instagram are extensively used by social media apparel businesses to promote their goods. Research in these areas could provide new insights into online apparel shopping and how these channels could contribute to the success of online apparel shopping.

References

Ajzen, I. (1985). From intention to action: A theory of planned behaviour. *From Cognitions to Behaviours*, New York: Springer. Retrieved from ResearchGate.

Ab Hamid, M R, Sami, W. & Mohmad Sidek, M. H. (2017). Discriminant Validity Assessment: Use of Fornell & Larcker criterion versus HTMT Criterion. *Journal of Physics: Conference Series 890*.

Akpoyomare, O.B., Adosun, L.P.K. and Ganiyu, R.A. (2012). The Influence of Product Attributes on Consumer Purchase Decision in the Nigerian Food and Beverages Industry: A Study of Lagos Metropolis. *American Journal of Business and Management, 1*(4), 196-201.

Aldhmour, F., Sarayrah, I. (2016). An investigation of factors influencing consumers' intention to use online shopping: An empirical study in the south of Jordan. The *Journal of Internet Banking and Commerce,* 1-51. Retrieved from Science Direct.

Almousa, M. (2011). Perceived Risk in Apparel Online Shopping: A Multi-Dimensional Perspective. *Canadian Social Science, 7*(2), 23-31. Retrieved from Science Direct

Ariff, Mohd Shoki Md., Michele, Sylvester., Norhayati, Zakuan., Khalid, Ismail., Kamarudin, Mat Ali. (2014). Consumer Perceived Risk, Attitude and Online Shopping Behaviour: Empirical Evidence from Malaysia. *IOP Conference Series: Materials Science and Engineering 58* (2014).

Ashton, A.S, Scott, N., Solnet, D., Breakey, N. (2010). Hotel restaurant dining: The relationship between perceived value and intention to purchase. *Tourism and Hospitality Research, 10*(3), 206-218.

Aylott, R., & Mitchell, V. W. (1998). An exploratory study of grocery shopping stressors. *International Journal of Retail & Distribution Management, 26*(9), 362–373.

Ben Mansour, K. (2016). An analysis of business' acceptance of internet banking: An integration of e-trust to the TAM. *Journal of Business and Industrial Marketing, 31*(8), 982–994. DOI:10.1108/JBIM-10-2016-271

Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. *Information & Management, 57*(2), 103-168. DOI:10.1016/j.im.2019.05.003

Bhatnagar, A., Misra, S., & Rao, H. R. (2000). On risk, convenience, and internet shopping behaviour. *Communications of the ACM., 43*(11), 98-105. DOI: 10.1145/353360.353371

Cassel, C., Hackl, P., & Westlund, A. H. (2000). Robustness of partial least-squares method for estimating latent variable quality structures. *Journal of Applied Statistics, 26*(4), 435–446. DOI: 10.1080/02664769922322

Chang, H., & Chen, S. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online. Info. Rev., (6),* 818 – 841.

Chen, W.K., Chang, D.-S., & Chen, C.-C. (2017). The Role of Utilitarian and Hedonic Values on Users' Continued Usage and Purchase Intention in a Social Commerce Environment. *Journal of Economics and Management, 13*(2), 193–220. DOI: 10.1016/j.ijhm.2016.06.007.

Childers, T. L., Carr, C.L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behaviour. *Journal of Retail, 77*(4), 511–535. DOI: 10.1016/S0022-4359(01)00056-2.

Chiou, J. S., & Ting, C. C. (2011). Will you spend more money and time on internet shopping when the product and situation are right? *Computers in Human Behavior, 27*(1), 203–208. DOI: 10.1016/j.chb.2010.07.037

Chiu, C.M., Wang, E.T.G., Fang, Y.H. & Huang, H.Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal, 24*(1), 85-114. DOI: 10.1111/j.1365-2575.2012.00407.x

Close, A. G., & Kukar-Kinney, M. (2010). Beyond buying: Motivations behind consumers' online shopping cart use. *Journal of Business Research, 63*(9-10), 986-992.

Constantinides, E. (2004). Influencing the online consumer's behaviour: The Web experience. *Internet Research.* DOI: 10.1108/10662240410530835.

Cowart, K. O., & Goldsmith, R. E. (2007). The influence of consumer decision-making styles on online apparel consumption by college students. *International Journal of Consumer Studies, 31*, 639–647.

DataReportal (2020). Digital 2020 Spotlight: eCommerce in Malaysia. Retrieved from:https://datareportal.com/reports/digital-2020-ecommerce-in-malaysia.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-339. Retrieved June 10, 2017, from ACM SIGMIS database.

Delafrooz, N., Paim, L. H., Haron, S. A., Sidin, S. M., & Khatibi, A. (2009). Factors affecting students' attitude toward online shopping. *African Journal of Business Management, 3(*5), 200-209. Retrieved October 30, 2016, from IEEE database.

Delafrooz, N., Paim, L.H., & Khatibi, A. (2011). Understanding consumers' internet purchase intention in Malaysia. *African Journal of Business Management, 5*(3), 2837-2846. DOI: 10.5897/AJBM10.1266.

Department of Statistics Malaysia Official Portal. (n.d.). Malaysia's e-commerce income soared 17.1 per cent to RM279.0 billion in the third quarter 2021.
https://www.dosm.gov.my/v1/index.php?r=column%2FcthemeByCat&cat=473&bul_id=cmRYZ21sUVF4elBySHVWckhkMGU4Zz09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09#. Retrieved December 9, 2021.

Devaraj, S., Fan, M., & Kohli, R. (2002). Antecedents of B2C channel satisfaction and preference: Validating e-commerce metrics. *Information Systems Research, 13*, 316-333.

Duarte, P., & Raposo, M. (2010). A PLS model to study brand preference: An application to the mobile phone market. In: Esposito Vinzi, V., Chin, W.W., Henseler, J., Wang, H., editors. Handbook of Partial Least Squares. New York: Springer Berlin Heidelberg. 449-485. DOI: 10.1007/978-3-642-16345-6.

Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. *Reading*, MA: Addison-Wesley.

Folarin, T. O. (2016). Influence of customers' perceived risk on online shopping intention in Malaysia'a apparel industry. *International Journal of Information Systems and Engineering,4(*2),69–81.

Forgasz, H., Tan, H., Leder, G., & McLeod, A. (2018). Enhancing survey participation: Facebook advertisements for recruitment in educational research. *International Journal of Research and Method in Education, 41*(3), 257–270.
DOI: 10.1080/1743727X.2017.1295939

Gefen, D., Karahanna, E., & Straub, D. (2003). Trust and TAM in online showing: an integrated model. MIS Quarterly, 27(1), 51-90. DOI:10.2307/30036519.

Gefen, D., Straub, D. W., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the Association for Information Systems, 4*(8), 1–79.

Girard, T., Korgaonkar, P., & Silverblatt, R. (2003). Relationship of type of product, shopping orientations, and demographics with preference for shopping on the internet. *Journal of Business and Psychology, 18*(1), 101–120. DOI: 10.1023/A:1025087021768.

Ha, S., & Stoel, L. (2012). Online apparel retailing: Roles of e-shopping quality and experiential e-shopping motives. *Journal of Service Management, 23*(2), 197–215.

Hahn, C., Johnson, M. D., Herrmann, A., & Huber, F. (2002). Capturing customer heterogeneity using a finite mixture PLS approach. S*chmalenbach Business Review, 54*(3), 243–269.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling.* 2nd Ed. Thousand Oaks: Sage.

Hair, J.F., Hult, G.T M., Ringle, C.M., & Sarstedt, M. (2014). *A primer on Partial Least Squares Structural Equation Model (PLS-SEM)*. Los Angeles: Sage. DOI: 10.1108/ebr-10-2013-0128.

Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis: A Global Perspective.* 7th ed. Upper Saddle River: Prentice Hall.

Hair, J. F., Money, A. H., Samouel, P., & Page, M. (2007). *Research methods for business.* John Wiley & Sons Ltd., The Atrium, Southern Gate, Chichester, West Sussex, England.

Hausman, A.V., & Siekpe, J.S. (2009). The effect of web interface features on consumer online purchase intentions. *Journal of Business Research, 62*(1), 5-13.
DOI: 10.1016/j.jbusres.2008.01.018.

Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy, 98,* 39–57. DOI:1016/j.brat.2016.11.001.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modelling in international marketing. *Advances in International Marketing, 20*, 277–319.

Henseler, J., & Fassott, G. (2010). Testing Moderating Effects in PLS Path Models: An Illustration of Available Procedures. *In Handbook of Partial Least Squares (*713–735). Springer, Berlin Heidelberg. DOI:10.1007/978-3-540-32827-8_31

Hofacker, C.R., (2001). *Internet Marketing*, 3rd ed., Wiley, New York.

Høie, M., Moan, I. S., Rise, J., & Larsen, E. (2012). Using an extended version of the theory of planned behaviour to predict smoking cessation in two age groups. *Addiction Research and Theory, 20*(1), 42. DOI:10.3109/16066359.2011.557165

Isa, N. F., Salleh, N. A. M., Aziz, A.A. (2019). Social Media Addiction: Role of Web and Digital Experience on Buying Decision Intention and the Moderating Effect of Consumer Review. *Malaysian Journal of Consumer and Family Economics, 23*, 123-148.

Javadi, M., Kadkhodaee, M., Yaghoubi, M., Maroufi, M., & Shams, A. (2013). Applying Theory of Planned Behavior in Predicting of Patient Safety Behaviors of Nurses. *Materia Socio-Medica, 25*(1), 52–55. DOI: 10.5455/msm.2013.25.52-55.

Jegethesan, K., Sneddon, J.N., & Soutar, G.N. (2012). Young Australian consumers' preferences for fashion apparel attributes. *Journal of Fashion Market Management, 16*, 275-289.

Jiradilok, T., Malisuwan, S., Madan, N., & Sivaraks, J. (2014). The impact of customer satisfaction on online purchasing: a case study analysis in Thailand. *Journal of Economics, Business and Management, 2*(1), 5-11. DOI:10.7763/joebm.2014.v2.89.

Katawetawaraks, C., & Wang, C. L. (2015). Online Shopper Behavior: Influences of Online Shopping Decision. *Asian Journal of Business Research, 1*(2) DOI: 10.14707/ajbr.110012.

Keating, B. W., Alpert, F., Kriz, A., & Quazi, A. (2011). Mediating role of relationship quality in online services. *The Journal of Computer Information Systems, 52*(2), 33–41.

Kim, EY (2008). Online purchase intentions for product categories—the function of Internet motivations and online buying tendencies. *Journal of Korean Soc Clothing Textiles, 32(*6), 890–901.

Kim, J., & Forsythe, S. (2008). Adoption of virtual try-on technology for Online Apparel Shopping. *Journal of Interactive Marketing, 22*(2), 45–59. DOI: 10.1002/dir.20113

Kim, J., & Forsythe, S. (2010). Factors affecting adoption of product virtualization technology for online consumer electronics shopping. *International Journal of Retail & Distribution Management, 38*(3), 190-204.
DOI: 10.1108/09590551011027122.

Kim, M., Kim, J.H., & Lennon, S.J. (2006). Online service attributes available on apparel retail websites: An E-SQUAL approach. *Managing Service Quality, 16*(1), 51-77.
DOI:10.1108/09604520610639964.

Kim, S., & Eastin, M.S. (2011). Hedonic tendencies and the online consumer: An investigation of the online shopping process. *Journal of Internet Commerce, 10*(1), 68-90. DOI: 10.1080/15332861.2011.558458.

Kim, Y. E., & Kim, Y. K. (2004). Predicting online purchase intentions for clothing products. *European Journal of Marketing, 38*(7), 883–897. DOI: 10.1108/030905 60410539302

Ko, H., Jung, J., Kim, J., & Shim, S.W. (2010). Cross-cultural differences in perceived risk of online shopping. *Journal of Interactive Advertising, 4*(2), 20-29.

Kosinski, M., Matz, S. C., Gosling, S. D., Popov, V., & Stillwell, D. (2015). Facebook as a research tool for the social sciences: Opportunities, challenges, ethical considerations, and practical guidelines. *American Psychologist, 70*(6), 543–556.

Krishnan, S., Hisyam, F., Ramlan, S., Diyana, N., Salihah, N., & Atiqa, Z. (2017). Purchase Intention towards Counterfeiting Luxuries Fashion Product among Undergraduate Student in UniKL, *American Journal of Economics, 7*(1), 29-40. doi: 10.5923/j.economics.20170701.04.

Ling (Alice), Jiang., Zhilin, Yang., & Minjoon, Jun., (2013). Measuring consumer perceptions of online shopping convenience. *Journal of Service Management, 24*(2),191 – 214.

Lo, Sh., Hsieh A., & Chiu Y. (2014). Why Expect Lower Prices Online? Empirical Examination in Online and Store-based Retailers. *International Journal of Electronic Commerce Studies, 5(*1), 27-38. DOI: 10.7903/ijecs.1191.

López-Bonilla, L. M., & López-Bonilla, J. M. (2011). The role of attitudes in the TAM: A theoretically unnecessary construct? *British Journal of Educational Technology, 42(*6). DOI:10.1111/j.1467-8535.2011.01232.x.

López-Bonilla, L. M., & López-Bonilla, J. M. (2017). Explaining the discrepancy in the mediating role of attitude in the TAM. *British Journal of Educational Technology, 48*(4), 940–949.

Malaysia e-commerce income up 23.1%. (n.d.). Retrieved March 3, 2022, from https://www.statistics.gov.my/v1/uploads/files/5_Gallery/2_Media/4_Stats%40media/2_Media%20Release%20for%20Statistical%20Release/2021/11%20Nov/11%20Nov%20-%20Media%204%20-%20the%20malaysian%20reserve.pdf

Malaysian Communication and Multimedia Corporation. (2018). Law to act against data breach. Retrieved January 10, 2019, from https://www.mcmc.gov.my/media /press-clippings/law-to-act-against-data-breach.

Mansori, S., Liat, CB., Shan, LH. (2012). Study of E-Shopping Intention In Malaysia: The Influence Of Generation X & Y. *Australian Journal of Basic and Applied Sciences, 6*(8), 28-35.

Mathwick, C., Malhotra, N., & Rigdon, E. (2001). Experiential value: Conceptualization, measurement and application in the catalog and internet shopping environment. *Journal of Retail, 77*, 39-56.

Meister, D.B., Compeau, D.R., (2002). Infusion of innovation adoption: an individual perspective. Annual conference of the Administrative Sciences Association of Canada (ASAC), May 25–28, Winnipeg, Manitoba: 23–33.

Memon, M. A., Cheah, J., Ramayah, T., Ting, H., & Chuah, F. (2018). Mediation Analysis Issues and Recommendations. *Journal of Applied Structural Equation Modeling, 2*(1), i-ix

Merle, A., Senecal, S. & St-Onge, A. (2012). Whether and how virtual try-on influences consumer responses to an apparel web site, *International Journal of Electronic Commerce, 16* (3), 41-64.

Meskaran, F., Ismail, Z., & Shanmugam, B. (2013). Online Purchase Intention: Effects of Trust and Security Perception. *Australian Journal of Basic and Applied Sciences, 7*(6), 307–31.

Meskaran, Fatemeh (2015). The effect of perceived trust, perceived security and attitude on online purchase intention in Malaysia public universities. PhD thesis, Universiti Teknologi Malaysia, Advanced Informatics School.

Mpinganjira, M. (2016). An investigation of customer attitude towards online stores. *African Journal of Science, Technology*, *Innovation and Development, 8*(5-6), 447–456

Naseri, R. N. N., Othman, N. A., & Ibrahim, N. R. W. (2020). The Barriers and Obstacles of Attitude towards Online Shopping in the Malaysian Market. *International Journal of Academic Research in Business and Social Sciences, 10(*6), 440–448.

Nawi, N. B. C., & Mamun, A. A. (2017). Customer satisfaction of online apparel businesses in Malaysia: point-purchase and post-purchase comparison. *International Journal of Business Innovation and Research, 12*(3), 386.
DOI: 10.1504/ijbir.2017.082093

Ndubisi, Nelson Oly., Sinti, Queenie. (2006). Consumer attitudes, system's characteristics and internet banking adoption in Malaysia. *Management Research News, 29(*1/2), 16-27.

Nguyen, T. T. H., Nguyen, N., Nguyen, T. B. L., Phan, T. T. H., Bui, L. P., & Moon, H. C. (2019). Investigating consumer attitude and intention towards online food purchasing in an emerging economy: An extended TAM approach. *Foods, 8*(11). https://doi.org/10.3390/foods8110576

Oliver, R.L. & M. Shor, (2003). Digital redemption of coupons: Satisfying and dissatisfying effects of promotion codes. *Journal of Product Brand Management, 12*, 121-134.

Omar, N. A., Wel, C. A. C., Alam, S. S., & Nazri, M. A. (2015). Understanding students compulsive buying apparel: An empirical study. *Jurnal Personalia Pelajar, 18*(2), 142–148.

Overby, J. W., & Lee, E. J. (2006). The Effects of Utilitarian and Hedonic Online Shopping Value on Consumer Preference and Intensions. *Journal of Business Research, 59*, 1160-1166.

Park, J., & Kim, J. (2007). The importance of perceived consumption delay in internet shopping: Time-related information, time risk, attitude, and purchase intention. *Clothing and Textiles Research Journal, 25*(1), 24–41. DOI: 10.1177/ 0887302X06296869.

Park, J., Lennon, S. J., & Stoel, L. (2005). On line product presentation: Effects on mood, perceived risk, and purchase intention. *Psychology and Marketing, 22*(9), 695-719. DOI:10.1002/mar.20080.

Park, J., Stoel, L. and Lennon, S.J. (2008). Cognitive, affective and conative responses to visual simulation: the effects of rotation in online product presentation. *Journal of Consumer Behaviour, 7*, 72-87. DOI:10.1002/cb.237.

Park, N., Rhoads, M., Hou, J., Lee, K. M. (2014). Understanding the acceptance of teleconferencing systems among employees: An extension of the technology acceptance model. *Computers in Human Behavior, 39*(0), 118-127.

Pavlou, PA., & Chai, L., (2002). What drives electronic commerce across cultures? Across-cultural empirical investigation of the theory of planned behavior. *Journal of Electronic Commerce Res. 3* (4), 240-253.

Pei, Z., Paswan, A., & Yan, R. (2014). E-tailer's return policy, consumer's perception of return policy fairness and purchase intention. *Journal of Retailing and Consumer Services, 21*(3), 249–257.

Porter, C. E., & Donthu, N. (2006). Using the technology acceptance model to explain how attitudes determine Internet usage: The role of perceived access barriers and demographics. *Journal of Business Research, 59*(9), 999–1007. DOI: 10.1016/j.jbusres.2006.06.003.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and re-sampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.

Putro, H. B., & Haryanto, B. (2015). Factors affecting purchase intention of online shopping in Zalora in Indonesia. *British Journal of Economics, Management and Trade, 9*(1), 1–12. DOI: 10.9734/BJEMT/2015/18704.

Rafique, M., Rizwan, M., Batool, A., & Aslam, F. (2014). Extending TAM, in terms of Trust and Attitude towards the online shopping intention. *Journal of Public Administration and Governance, 4*(3), 90-108. DOI:10.5296/jpag.v4i3.5851.

Rahayu, R., Day, J. (2017). E-commerce adoption by SMEs in developing countries: evidence from Indonesia. *Eurasian Bus Rev 7*, 25–41. DOI:10.1007/s40821-016-0044-6.

Rohm, A.J., & Swaminathan, V. (2004). A Typology of Online Shoppers Based on Shopping Motivations. *Journal of Business Research, 57*(7), 748-758. DOI:10.1016/S0148-2963(02)00351-X.

Rungtusanatham, M., Miller, J. W., & Boyer, K. K. (2014). Theorizing, testing, and concluding for mediation in SCM research: Tutorial and procedural recommendations. *Journal of Operations Management, 32*(3), 99-113. DOI: 10.1016/j.jom.2014.01.002.

Samadi, M., & Nejadi, A. Y. (2009). A survey of the effect of consumers' perceived risk on purchase intention in e-shopping. *Business Intelligence Journal, 2* (2), 261-275.

Schiffman, G. L., & Kanuk, L. L. (2010). *Consumer Behavior*, 10th Edition. Prentice Hall, New Jersey, USA.

Sekaran, U., & Bougie, Roger., (2016). *Research Methods for Business: A Skill-Building Approach.* 7th edition. New York: Wiley.

Semeijin, D., Van riel, C. R., Birgelen, V., Marcel, J. H., & Streuken, S. (2005). E services and offline fulfillment: how e-loyalty is created. *Managing Service Quality, 15*(2), 182-194.

Shergill, S.G., & Chen Z. (2005). Web-Based Shopping: Consumers Attitudes towards Online Shopping in New Zealand. *Journal of Electronic Commerce Research, 6*(2), 79-94. DOI:10.1039/c3lc50404b.

Srinivasan, S.S., Anderson, R., & Ponnavolu, K. (2002). Customer loyalty in e-commerce: An exploration of its antecedents and consequences. *Journal of Retailing, 78*(1), 41-50. Retrieved April 30, 2017, from Emerald database.

Statista. (2021, December 2). Statista - The Statistics Portal. Retrieved March 5, 2022, from https://www.statista.com/map/asia/malaysia/e-commerce

Su, J. and Chang, A. (2018) Factors affecting college students' brand loyalty toward fast fashion: A consumer-based brand equity approach. *International Journal of Retail & Distribution Management, 46(1*), 90-107. DOI: 10.1108/ijrdm-01-2016-0015.

Szymanski, D.M., & Hise, R.T. (2000). E-satisfaction: An initial examination. *Journal of Retailing, 76*(3), 309–322.

Taher, G. (2021). E-Commerce: Advantages and Limitations. *International Journal of Academic Research in Accounting Finance and Management Sciences, 11*(1), 153-165.

Taylor, S., & Todd, P. A. (1995). Understanding information technology Usage: A test of competing models. *Information Systems Research, 6*(2), 144-176.

Teo, T. (2009). Modelling technology acceptance in education: A study of pre-service teachers. *Computers & Education, 52*, 302–312. DOI: 10.1016/j.compedu. 2008.08.006.

Thamizhvanan, A., & Xavier, M. J. (2013). Determinants of customers' online purchase intention: an empirical study in India. *Journal of Indian Business Research, 5*(1), 17-32.

The Edge Malaysia (2021, October 20). Malaysia e-shopping king of the region, 9 out of 10 online by end-2021. The Edge Markets. https://www.theedgemarkets.com/article/malaysia-eshopping-king-region-9-out-10-online-end2021. Retrieved December 4, 2021.

Ursavaş, Ö. F. (2013). Reconsidering the role of attitude in the TAM: An answer to Teo (2009) and Nistor and Heymann (2010), and Lopez-Bonilla and Lopez-Bonilla (2011). *British Journal of Educational Technology, 44*(1). DOI: 10.1111/j.1467-8535.2012.01327.x.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*, 425–478.

Vijayasarathy, Leo R., Jones, Joseph M. (2000). Print and Internet catalog shopping: assessing attitudes and intentions. *Internet Research, 10* (3), 191-202, DOI: 10.1108/10662240010331948.

Wixom, B. H., & Todd, P. A. (2005). A theoretical integration of user satisfaction and technology acceptance. *Information Systems Research, 16*(1), 85-102. DOI:10.1287/isre.1050.0042.

Wolfinbarger, M., & Gilly, M. (2001). Shopping Online for Freedom, Control, and Fun. *California Management Review, 43*(2), 34-55.

Yulihasri, Ku Amir, K. D., & Md. Aminul, I. (2011). Factors that influence customers' buying intention on shopping online. *International Journal of Marketing Studies, 3*(1),128-139.

Zendehdel, M., Paim, L. (2015). Effect of consumers' characteristics on attitude towards online shopping. *Malaysian Journal of Consumer and Family Economics, 18*, 35-49.

Zhang, L., Tan, W., Xu, Y. & Tan, G. (2012). Dimensions of Consumers' Perceived Risk and Their Influences on Online Consumers Purchasing Behaviour. *Communications in Information Science and Management Engineering, 2*(7), 8-14. DOI:10.1007/978-3-.

Zviran, M. (2008). User's perspectives on privacy in web-based applications. *Journal of Computer Information Systems, 48*(4), 97.