

Structural Relationships between Disruptive Attributes and Women Consumers' Attitude when Using Mobile Retailing

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Abstract

This study aims to examine the structural relationship between disruptive attributes and women consumers' attitude when using Mobile Retailing. A total of 486 completed sets of structured self-administered questionnaires were analyzed using the purposive sampling technique. The sample for this study consisted of Malaysian women who have used Mobile Retailing in the past six months, including mobile retailers and members of women organizations in Malaysia. A Structural Equation Modeling (SEM) technique was used to evaluate the relationship among the hypothesized variables for this study via the Analysis of Moment Structure (AMOS) computer program version 21. Based on the SEM analysis, five significant results and two insignificant results were obtained in regard to the direct relationship between disruptive attribute factors and women consumers' attitude when using Mobile Retailing. Specifically, reachability, ubiquity, personalization, connectivity, and convenience have a direct, positive relationship with women consumers' attitude when using Mobile Retailing, whereas mobility and localization have no significant relationship with women consumers' attitude when using Mobile Retailing. It is vital for retailers to entice female consumers to buy their products. The sellers are able to re-observe and alter their marketing approaches to specific target markets and earn a competitive advantage by recognizing their customers' personal attitudes and subjective norms, all of which may affect their behavior. The direction for future research concludes this study.

Keywords: attitude, behavior, mobile retailing, convenience, perceived usefulness, perceived ease of use

1. Introduction

Mobile Retailing has been widely adopted globally; by 2020 there will be \$284 billion in sales, where the overwhelming majority were women and young people between 26 years to 34 years old (BI Intelligence Report, 2016). The rapid growth of Mobile Retailing is due to the revolutionary developments in mobile technology and the Internet. Women spend more time than men accessing the mobile web and when using mobile applications (Kaefer, 2014). A previous research discovered that when using ICT technology, women mainly experience nervousness, have less computer self-efficacy, and also harbor less encouraging attitudes (Jackson, Ervin, Gardner, & Schmitt, 2001). In the Malaysian market, according to the Nielsen Global Survey of E-Commerce (2014), Malaysia is ranked third in terms of mobile shopping growth in the Asia Pacific after recording a growth of over 20 per cent in 2014, and 42 per cent of Malaysians have made purchases using their smartphones, which are fast becoming their primary shopping companion of choice. Smartphone technology will become a leading platform that will drive the growth of e-commerce in 2017. eMarketer Inc. (2013) noted that in 2017 market share of smartphones and tablets will touch 25% by 2017 with computer and consumer electronics has better sales at \$56.8 billion and share 21.9%. Mathew, Sarker, and Varshney (2004) affirmed that Mobile Retailing assists consumers to independently purchase anything anytime and anywhere.

One study pointed out the insignificant amount of studies that relate to the use of location technology with the utilization and acceptance of mobile platforms (Tarasewich, Nickerson, & Warkentin, 2002). Aspects such as location identification, user trust, and readiness to use the technology have also received miniscule attention in previous studies (Sreenivasan & Noor, 2010). Previous scholars such as Grewal, Bart, Spann, and Zubcsek (2016)

noted that online retailers must be equipped with the knowledge of online consumer purchasing behavior to develop and design a retailing website that can attract and match their target market. Furthermore, Aubrey and Judge (2012) claim that retailers must also be aware of the role of the physical retail environment channel and combine it with other electronic commerce channels. These roles could be considered as factors affecting consumer interest when using mobile applications, which will persuade them to make a purchase. Thus, the goal of this study is to examine the structural relationship between disruptive attributes and the attitude of women consumers when using Mobile Retailing. This study will significantly contribute to the development of Mobile Retailing, as the findings will help developers identify and explore the factors that contribute to consumer acceptance level and ascertain its important factors so that resources are carefully distributed accordingly, as well as to sustain and enhance the acceptance of Mobile Retailing. This study also advances the understanding of the important factors that affect Mobile Retailing acceptance among women retailers in Malaysia.

2. Literature Review

This section describes the factors of disruptive attributes mentioned at the start of this study, which include mobility, reachability, ubiquity, localization, personalization, connectivity, and convenience. Organizations must be able to identify and explore disruptive characteristics associated with the mobile retail sector to generate new knowledge and capabilities for designing and implementing a viable business model. Mobile technology and mobile retail products and services should also capitalize on the inventive and unique characteristics of mobile technology to enhance the consumers' quality of life. Lee, Choi, Kim, and Hong (2007) suggest that mobile service providers could devise differentiation strategies for some target user groups and provide customized mobile Internet services for each of these groups. However, to gain consumer acceptance and to be successful in the Mobile Retailing sector, a business model that capitalizes on the disruptive attributes of Mobile Retailing (mobility, reachability, ubiquity, localization, personalization, connectivity and convenient) could potentially reap many positive benefits (Le & Ho, 2010). The disruptive attributes of e-commerce can aid managers in formulating a decision on Internet strategies (Lee, 2001). Apart from that, business models should also capitalize on the unique attributes of mobile Internet commerce, which comprise of two specific attributes i.e. mobility and reachability, and five other attributes, namely personalization, ubiquity enhancement, localization of products and services, convenience, and connectivity (Turba, King, Lee, & Viehland, 2004).

2.1 Mobility

Consumers prefer services that can be accessed anywhere and anytime. Nowadays, Mobile devices have realized this form of customer service, where the consumers are now able to shop even while traveling. This type of mobility has allowed the users to experience the unique characteristics of using their mobile phones to connect to the Internet whenever they want no matter the time (Kakihara & Sorensen, 2001). Indeed, Kim, Chan, and Gupta (2007) also affirm that mobility enables users to contact and communicate with retailers in real-time. On the flip side, retailers are also able to reach consumers anytime and anywhere, even when on the move. The influence of the consumer's side will continue to grow, as they are enthusiastic about mobility and are capable of searching for information and using that information, either directly or indirectly (Doherty & Ellis-Chadwick, 2010). Mobile electronic devices are equipped with portable and flexible characteristics such that it can increase the level of instantaneous response and ubiquitous connectivity (Chun, Lee, & Kim, 2012). Mobility and portable ease are not constrained by physical locations, thus it would be easier to carry around a mobile phone, compared to carrying a notebook everywhere. Mobility allows the user to initiate real-time contact and transactions while at the same time, maintain the connection anywhere (Lee & Ho, 2010).

Findings from previous works in this field regarding the mobile payment system prove that mobility is a strong factor that has led to the rapid adoption of the technology among consumers because it gives the consumers freedom in terms of time and location (Schierz, Schilke, & Wirtz, 2010). The results from one study also confirm that online commerce platforms that use online payment systems offer more mobility elements, especially for reaching out to more consumers and thus increasing the adoption of Mobile Retailing. Mobility allows consumers to make a purchase and pay online due to there being no restrictions in time and place, and this unique feature can assist consumers to bargain with the retailer at home or when traveling (Dastan, 2016). This on-the-go mobile payment instrument will clearly bring significant advantages to consumers. Mobility is frequently mentioned as the most important feature of mobile business because the mobile ICT infrastructure supports interaction in various ways by diversifying the ways that retailers deal with consumers (Al-Louzi & Iss, 2011). Taking all this into consideration, the researcher posits the following hypothesis:

H1: Mobility has positively impacted women's attitude towards Mobile Retailing

2.2 Reachability

Perceived reachability refers to “an individual’s perception regarding the degree to which he or she can ‘reach’ other individuals ‘anytime-and-anywhere’ via mobile wireless technology” (Kim & Garrison, 2009, p. 326). In other words, reachability is achieved when information can be retrieved and user query can be delivered at any moment and from any location (Le & Ho, 2010). Reachability allows retailers to use mobile device technology to connect with customers anywhere, anytime because the client will have the mobile device on them wherever they go (Kataria, Dixit & Hasan, 2014). Interactive shopping is very convenient as it can increase the efficiency of the product-searching process from home and eliminate having to travel to and from a variety of stores, making way for what is known as single-stop shopping (Childers, Carr, Peck, & Carson, 2001). For the retailer, the adoption of mobile technology poses a tremendous marketing opportunity to serve and reach consumers at all times, without any boundaries. Promoting and providing detailed information about retailer product and service can be achieved and requested, and delivered to consumers anytime and anywhere. The paradigm shift from a traditional retail environment to mobile-based retailing transactions enables consumers to be reached anytime, anywhere through mobile devices (Shankar, Venkatesh, Hofacker, & Naik, 2010). Therefore, the following hypothesis is posited:

H2: Reachability positively impacts women’s attitude towards Mobile Retailing

2.3 Ubiquity

Perceived ubiquity refers to “an individual’s perception regarding the extent to which mobile wireless technology provides personalized and uninterrupted connection and communication between the individual and other persons” (Kim & Garrison, 2009, p. 326). In a similar vein, ubiquity is based on time- and location-flexible usage that represents a unique feature of the mobile phone, which permits users to transfer and use real-time information wherever they are (Okazaki, Hairong & Morikazu, 2009). Mobile devices are conveniently more movable, personal, and reachable compared to desktop computers; hence mobile devices are ubiquitously available since users will almost always carry them everyday and everywhere they go (Balasubramanian, Peterson & Jarvenpaa, 2002; Watson, Leyland Pierre, & George, 2002). Similarly, Barnes (2002) argues that ubiquitous interactivity can give consumers more control over what they see, read, and hear no matter where they are. On the other hand, Scharl, Astrid and Jamie (2005) claims that the ubiquity of mobile devices has prolonged the time-space paradigm of traditional marketing, lending emphasis to the importance of time, location, and personalization attributes. Accordingly, the related hypothesis is posited:

H3: Ubiquity positively impacts women’s attitude towards Mobile Retailing

2.4 Localization

The unique characteristics of localization and instant connectivity of mobile Internet applications have been recognized as precursors of perceived value in regard to consumer attitude when using mobile technology (Lee & Park, 2006). There is a demand for technology that can offer timely and relevant location-specific products and services, including their associated information. It is proven that location-aware search techniques, development of registered mobile networks, and globalized mobile advertising platforms and applications have caused a radical shift in the ways brands and consumers interact with each other (Balasubramanian et al., 2002). Furthermore, according to Sultan, Rohm, and Gao (2009), products that are sold through mobile platforms can be priced slightly lower, based on location and time. Localization of the global positioning system (GPS) service that is available on cell phones enables the accurate track-and-trace of the location of each user, where this information is then funnelled to the site (Le & Ho, 2010). This mechanism will allow retailers to accommodate to consumers via instant transactions using location-specific information. Thus, it is recommended that mobile websites that are set up in one particular place be designed to meet the preferences of the local users (Oyibo, Ali & Vassileva, 2016). Therefore, this leads to the fourth hypothesis for this study:

H4: Localization positively impacts women’s attitude towards Mobile Retailing

2.5 Personalization

Personalization refers to the feature that makes available a user’s personal information on the mobile phone for personal identification and more personalized service (Durlacher, 1999). According to Lee and Benbasat (2004), customization refers to a site’s ability to tailor or adapt itself to each user (personalization), which in turn influences the customer’s behavioral intent towards mobile marketing practices (Sultan et al., 2009). Customization of products and services that retailers offer in accordance to the personal preferences of the customer would help increase customer value and instill competitive business advantage on the Internet (Ball, Coelho, & Vilares, 2006; Han & Han, 2001). This shows that personalized or customized products tailored to the

shopping patterns and behaviors of consumers are far different and more unique than non-personalized products because in the case of the former, the retailer knows exactly what the consumers want. Therefore, the fifth related hypothesis is posited:

H5: Personalization positively impacts women’s attitude towards Mobile Retailing

2.6 Connectivity

The customers’ involvement in online retailing can be processed over the Internet through network connectivity and real-time interactivity such as via open computing platforms or architecture (Tapscott, 1996). Sometimes, this connection is defined as the extent of formal linkage from one site to another platform. From the consumers’ perception, instant connectivity is one of the factors that will influence their intention of usage (Kim, Mirusmonov, & Lee, 2010). The author agrees with Batkovic and Batkovic (2015) in that Mobile Retailing suits the mobile lifestyle, as it supports consumers to buy and make payments virtually using an Internet connection. Generally, when using mobile technology, mobile users are more concerned with the capabilities of the communication infrastructure, which allows them to establish connectivity with the retailers regardless of place and time (Giri & Singh, 2014). Mobile services that rely on 3G connections will positively affect consumer intention to use their services as the connection enables quick and easy access to their site, and this is a strong utilization characteristic (Suki, 2011). A fast connection in accessing mobile retailer sites while maintaining connection capability has become a necessity for wireless technology acceptance among consumers. Thus, the subsequent hypothesis is postulated:

H6: Connectivity positively impacts women’s attitude towards Mobile Retailing

2.7 Convenience

The wireless atmosphere is very convenient for users because it enables them to access information and perform transaction activities wherever they want without having to expend much effort (Choi, Seol, Lee, Cho, & Park, 2008). Convenience is one key factor that can influence consumer behavior in the Internet retail environment. According to Hofacker (2001), convenience is manifested by the opportunity to shop at home twenty-four (24) hours a day and seven (7) days a week, and this feature is expected to influence and increase the acceptance of online retail stores. Rayport and Jaworski (2001) mentioned that the framework of an effective customer interface design should include seven criteria i.e. context, content, community, customization, communication, connection, and commerce, all of which can affect the customers’ perceptions when using Mobile Retailing applications. Szymanski and Hise (2000) investigated consumer experience in regard to web site convenience, design, and security and found that these characteristics have strong implications on overall usage satisfaction. These features of convenience can be achieved through a variety of features such as hardware performance, access speed, well-organized navigation layouts, reliable website design, and differing functions related to supporting transactions (Green & Browder 1998). On the basis of these arguments, the following hypothesis is posited:

H7: Convenience positively impacts women’s attitude towards Mobile Retailing

Based on the findings and conjectures discussed in the literature review, the research framework is proposed in the following sub-section.

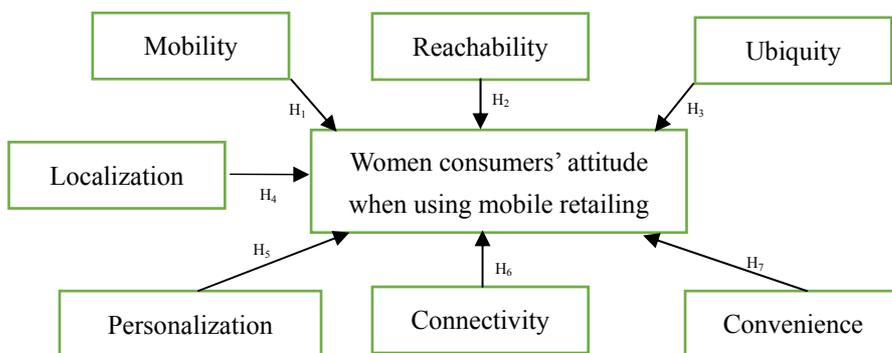


Figure 1. Proposed theoretical framework

3. Methodology

3.1 Sampling and Population

The target population for this study consists of Malaysian women who actively use Mobile Retailing services. In the pilot study, a total of 30 selected respondents from Dewan Usahawan Wanita (DuBS) Negeri Sarawak were asked to complete the questionnaire. The final questionnaire was fine-tuned based on the comments and suggestions given by the respondents. A total of 500 sets of structured, self-administered questionnaires were distributed to Malaysian women by using the purposive sampling technique which was distributed among those who have had experience in using Mobile Retailing platforms in the past six months, including mobile retailers and members of women organizations in Malaysia. Of the 500, 486 questionnaires were completed and considered usable, corresponding to a response rate of 97.2%. Scholars such as Hair, Black, Babin, Anderson, and Tatham (2010), and Iacobucci (2010) asserted that a sample size between 30 and 500 is realistic. Therefore, the sample in this study is considered reliable.

3.2 Questionnaire Development

The questionnaire aims to gain information on the mobile phone usage behavior and perception of the respondents towards mobile online platform retailing. The instrument was designed based on a review of the related literature. The questionnaire was divided into two sections; Section A focuses on the essential aspects of the demographic characteristics of the respondents while Section B identifies the respondent perception of acceptance towards Mobile Retailing in terms of disruptive attributes (mobility, reachability, ubiquity, localization, personalization, connectivity, convenience), and attitude towards use of Mobile Retailing. The measurement of the instruments together with a list of adapted sources is provided in Appendix A. All responses were measured using a 5-point Likert scale where 1 = "Strongly disagree" and 5 = "Strongly agree".

3.3 Statistical Technique Used

The Statistical Package for Social Sciences (SPSS) computer program version 21 was used to perform descriptive statistics and analyze the data for this study. Next, a Structural Equation Modeling (SEM) technique was used to assess the hypothesized relationships between the variables using the Analysis of Moment Structure (AMOS) computer program version 21. This software builds models with standard multivariate statistical techniques and creates attitudinal and behavioral models that transform complicated relationships into simple ones for ease of comparison. The model developed for this study is also refined using this software.

4. Results

Table 1 shows the descriptive analysis of the socio-demographic profile of the respondents, of whom 100% are female. Almost half of the respondents are 18–34 years of age (47%). When asked about their primary access or the location of their personal computer, a big portion of the participants indicated that they relied on their home as the primary access location (72%), followed by the workplace (17%), and public facilities (11%). From the data, more than half of the respondents surf the Internet for more than 11 hours a day, and have more than 4 years of Internet experience, indicating that they are also familiar with using the Internet.

Table 1. Socio-demographic profile of respondents

Characteristics	Frequency	Percentage (%)
Age (years old)		
18 to 24	96	19.8
25 to 34	131	27.0
35 to 44	126	25.9
> 44	133	27.4
Primary access location		
Home	349	71.8
Workplace	84	17.3
Public facilities	53	10.9
Duration of Internet surfing		
< 5 hours/day	135	27.8
5-10 hours/day	84	17.3

Characteristics	Frequency	Percentage (%)
11-15 hours/day	58	11.9
16-20 hours/day	58	11.9
> 20 hours/day	151	31.1
Years of Internet experience		
< 1 years	109	22.4
1-3 years	73	15.0
4-6 years	131	27.0
7-10 years	86	17.7
> 10 years	87	17.9

4.1 Experience with Mobile Retailing

The respondents' experience with using Mobile Retailing is depicted in Table 2. A quarter of the respondents (25%) stated that they had more than three years of online shopping experience. In a month, they would make online purchases more than 16 times. This same proportion also preferred to purchase gifts via the Internet.

Table 2. Experience with mobile retailing

Characteristic	Frequency	Percentage (%)
Years of experience with Mobile Retailing		
< 1 year	220	45.3
1-3 years	142	29.2
3-5 years	77	15.8
> 5 years	47	9.70
Frequency of online shopping in a month		
1 - 5 times	246	50.6
6 - 10 times	93	19.1
11 - 15 times	43	8.80
16 - 20 times	24	4.90
> 21 times	80	16.5
Types of products purchased using the mobile phone in the past month		
Clothes	136	28.0
Gifts	167	34.4
Women hair accessories	81	16.7
Flower	27	5.60
Magazines	75	15.4

4.2 Structural Equation Modeling

The Structural Equation Modeling (SEM) approach via Analysis of Moment Structure (AMOS) computer program version 21.0 was applied to assess the research hypotheses. This study used the maximum likelihood method as the method of estimation to ensure model consistency with the data. Harris and Goode (2004, p. 147) pointed out that the "Structural Equation Model overcomes the limitations of bivariate analyses through the simultaneous analysis of all the complex relationships between variables". The SEM approach integrates multiple data analyses into a structural model such as path analysis, factor analysis, and linear regression. In analyzing the SEM results, several activities were executed including the Confirmatory Factor Analysis (CFA) of the measurement model and examination of the structural model based on the formulated hypotheses and proposed research framework.

4.2.1 Measurement Model

The measurement model requires the inspection of several analyses such as the reliability analysis, and convergent validity and discriminant validity for each of the construct measures and fitness of the measurement

model.

4.2.2 Reliability Analysis

The reliability analysis is conducted with the aim of testing the internal consistency of the factor items in representing their respective factor, which is done via evaluation of (i) Cronbach's alpha, and (ii) composite reliability. Earlier scholars such as Hair et al. (2010) and Nunnally and Bernstein (1994) suggested that reliability values of 0.70 and above are sufficient thresholds for reliability. As for this study, the Cronbach's alpha values ranged from 0.788 to 0.934, which fulfills this requirement, proving that the factor items have a high reliability (see Table 3).

Table 3. Results of measurement model

Items	CFA Loadings	Cronbach's Alpha	Composite Reliability ^a	Average Variance Extracted ^b
Mobility		0.828	0.833	0.625
DAM03	0.752			
DAM04	0.848			
DAM05	0.769			
Reachability		0.919	0.916	0.645
DAR01	0.758			
DAR02	0.777			
DAR03	0.814			
DAR04	0.841			
DAR05	0.829			
DAR06	0.797			
Ubiquity		0.875	0.875	0.637
DAU02	0.760			
DAU03	0.809			
DAU04	0.808			
DAU05	0.815			
Localization		0.889	0.888	0.666
DAL03	0.810			
DAL04	0.796			
DAL05	0.832			
DAL06	0.825			
Personalization		0.899	0.899	0.639
DAP02	0.808			
DAP03	0.811			
DAP04	0.787			
DAP05	0.800			
DAP06	0.792			
Connectivity		0.862	0.864	0.679
DAC02	0.822			
DAC03	0.837			
DAC04	0.813			
Convenience		0.898	0.788	0.689
DACV01	0.782			
DACV03	0.862			
DACV04	0.842			
DACV06	0.833			

Attitude towards Use		0.920	0.921	0.700
A02	0.763			
A03	0.843			
A04	0.851			
A05	0.831			
A06	0.889			

4.2.3 Convergent Validity

Convergent validity was tested via two elements: (i) the standardized loadings for each measurement item must be above 0.70, and (ii) the Average Variances Extracted (AVE) of latent variables must surpass the permitted beginning value of 0.50 (Hair et al., 2010). Table 3 shows that all the measurement items have standardized item loadings of above 0.70. Initially, each factor was prepared using six measurement items. However, several items in the model were removed after referring to the modification indices for improving the less convincing indices of the model fit values for loadings less than 0.70. Besides that, the AVE for each construct also surpassed 0.50. The results therefore indicate that convergent validity has been handled well in this study.

4.2.4 Discriminant Validity

Discriminant validity was checked by comparing the variances shared between variables with the square root of AVE for each variable; the discriminant validity is considered acceptable when the former is lower than the latter (Hair et al., 2010). As presented in Table 4, the diagonal elements in bold indicate the square root of AVE values that exceed the inter-construct correlations, hence, discriminant validity is achieved. Indeed, the correlation coefficients between all pairs of variables revealed a positive significant association at $p < 0.01$, which infers that multicollinearity has not been seen in this study. Skewness of all the variables ranged from -0.199 to -0.463, below ± 2.0 , while kurtosis ranged from 0.140 to 0.687, which is well underneath the threshold of ± 10 . All these values were below the endorsed value, meaning that the scores approximate a normal distribution. The means for all variables ranged from 3.496 to 3.694 on a scale of 1= Strongly disagree to 5= Strongly agree, indicating that the respondents mainly had a positive acceptance of Mobile Retailing.

Table 4. Inter-construct correlations

Variables	DAM	DAR	DAU	DAL	DAP	DAC	DACV	A
DAM	0.791							
DAR	0.634**	0.803						
DAU	0.612**	0.782**	0.798					
DAL	0.631**	0.674**	0.678**	0.816				
DAP	0.612**	0.693**	0.707**	0.751**	0.799			
DAC	0.518**	0.664**	0.653**	0.655**	0.703**	0.824		
DACV	0.580**	0.688**	0.670**	0.691**	0.728**	0.728**	0.830	
A	0.562**	0.601**	0.653**	0.648**	0.699**	0.675**	0.711**	0.837
Mean	3.529	3.576	3.524	3.496	3.534	3.591	3.617	3.559
SD	0.751	0.700	0.710	0.722	0.690	0.733	0.733	0.743
Skewness	-0.269	-0.463	-0.430	-0.226	-0.217	-0.297	-0.329	-0.199
Kurtosis	0.140	0.687	0.543	0.145	0.219	0.479	0.532	0.174

** Correlation is significant at the 0.01 level (2-tailed). Diagonal elements in bold show the square root of AVE.

4.2.5 Structural Model

The structural model was then tested to investigate the structural relationship of the postulated hypotheses by scrutinizing the fit indices and percentage of variance explained by the model (Hair et al., 2010). The exogenous (i.e. independent) variables of this study include mobility, reachability, ubiquity, localization, personalization, connectivity, convenience, and attitude towards use, while actual behavior acts as the endogenous (i.e. dependent) variable. The goodness-of-fit indices for the structural model is as follows: CFI = 0.907, GFI = 0.915, AGFI = 0.902, and NFI = 0.905; these values progressed i.e. outstripped 0.90, while RMSEA = 0.056 was below 0.08

(Bentler, 1990; Byrne, 2001), indicating an apposite model fit (see Table 5). Therefore, the standardized beta coefficients and variance of the endogenous variables translate to the hypothesized model being a good fit and is adequate for the study.

Table 5. Goodness-of-fit indices for structural model

	χ^2	df	χ^2/df	CFI	GFI	AGFI	NFI	RMSEA
Recommended values	N/A	N/A	< 3.0	> 0.9	> 0.9	> 0.9	> 0.9	< 0.08
Model values	2981.901	1180	2.527	0.907	0.915	0.902	0.905	0.056

The SEM findings reveal that the disruptive attribute factors accounted for 75 per cent of the total variance in attitude towards use. Out of the seven factors of disruptive attributes, H1 ($\beta_1=0.114$, t-value=1.923, $p>0.05$), which specifies that mobility insignificantly affects women consumers’ attitude when using Mobile Retailing, is not supported. In contrast, H2 (reachability) and H3 (ubiquity) were supported; implying that women consumers’ attitude when using Mobile Retailing highly relied on the aspects of reachability and ubiquity of Mobile Retailing.

Table 6. Relationships with actual behavior towards mobile retailing

Paths	Estimate	S.E.	C.R.	<i>p</i>
H1 Mobility ---> Attitude towards Use	.114	.054	1.923	.055
H2 Reachability ---> Attitude towards Use	-.181*	.088	-1.967	.049
H3 Ubiquity ---> Attitude towards Use	.239*	.094	2.496	.013
H4 Localization ---> Attitude towards Use	-.044	.081	-.516	.606
H5 Personalization ---> Attitude towards Use	.247*	.084	2.689	.007
H6 Connectivity ---> Attitude towards Use	.223*	.073	2.845	.004
H7 Convenience ---> Attitude towards Use	.338*	.084	3.854	.000

* $p<0.05$; S.E. = Standard error; C.R. = Critical ratio

However, H4 hypothesized that localization significantly influenced women consumers’ attitude when using Mobile Retailing. The study’s results discover that H4 is not maintained, as $p>0.05$ and t-value<1.96 (see Table 6). On the other hand, women consumers’ attitude when using Mobile Retailing is highly reliant on elements such as personalization ($\beta_5=0.247$, t-value=2.689, $p<0.05$) and connectivity ($\beta_6=0.223$, t-value=2.845, $p<0.05$); the latter being the most pronounced sub-factor predictor that significantly influences women consumers’ attitude when using Mobile Retailing. Indeed, aspects of convenience ($\beta_7=0.338$, t-value=3.854, $p<0.05$) were also emphasized. Hence, except H4, H5, H6, and H7 are sustained.

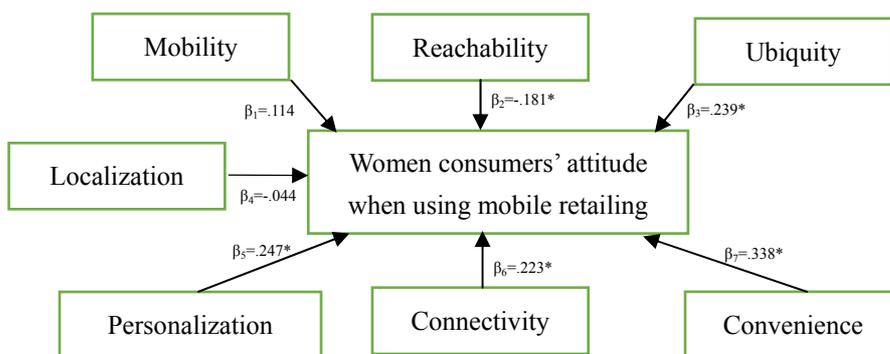


Figure 2. Structural model

5. Discussion and Conclusion

This study examined the structural relationships between disruptive attributes and women consumers' attitude when using Mobile Retailing. Based on the SEM analysis, five significant results and two insignificant results were obtained in regard to the direct relationship between disruptive attribute factors and women consumers' attitude when using Mobile Retailing. Specifically, reachability, ubiquity, personalization, connectivity, and convenience have a direct, positive relationship with women consumers' attitude when using Mobile Retailing, whereas mobility and localization have no significant relationship with women consumers' attitude when using Mobile Retailing. Hence, except for H1 and H4, H2, H3, H5, H6, and H7 are all retained with $p < 0.05$.

In terms of ubiquity, in a single click of a button, mobile commerce can extend user ability to create new transaction opportunities and make transactions across any time and location (Chen, Lee, & Cheung, 2001). Ubiquity offers users the chance to engage in commerce anytime and anywhere (Kleijnen, Ko, & Martin, 2007). Indeed, Muk (2007) reported that the ubiquity of the mobile phone extends the traditional time-space media. The mobile phone represents more than just a communication device, it can also be used to personalize and customize certain features. Each consumer differs in terms of his or her needs based on personal requirement, thus customization helps consolidate the differences in customer values to meet their needs and wants (Han & Han, 2001). In sum, Mobile Retailing products and services should be adaptive to localization and sensitive to customer personalization to achieve success.

Wireless communication advancements have heightened the usage and growth of mobile electronic devices and Mobile Retailing globally, and Malaysia is no exception. With the progression of the retail marketplace, it is vital for retailers to entice female consumers to buy their products. The sellers are able to re-observe and alter their marketing approaches to specific target markets and earn a competitive advantage by recognizing their customers' personal attitudes and subjective norms, all of which may affect their behavior. Many organizations try to outshine others in terms of business performance and have put major investments in Information Technology implementation. The right decision and selection of technology that is to be used must be aptly considered. This is because it is not cheap to implement such technologies and the failure to use them effectively would affect the performance of the entire organization. Therefore, retailers with support from Government agencies should investigate the reasons behind Mobile Retailing adoption. Successful Mobile Retailing depends on the use of mobile application as a medium for product purchases and marketing. Therefore, it becomes essential to analyze which variables determine Mobile Retailing acceptance among consumers.

Besides that, in line with the development and execution of Mobile Retailing technology that is rapidly increasing, this study adds to the literature via the development of a theoretical model that assesses the factors that significantly affect the consumer acceptance of Mobile Retailing, especially among women retailers in Malaysia. This study shows that disruptive innovation attributes can be used as factors to ascertain the acceptance of Mobile Retailing among the women in Malaysia in the near future. The outcomes from this study are invaluable for formulating marketing strategies. It is recommended that future research expand the sample size to widen the research coverage. A multivariate data analysis that incorporates mediating and moderating variables is also encouraged, which would help to investigate the subjective well being of low-involvement and high-involvement mobile retail consumers.

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Appendix A

Measurement of Instruments

Item	Measurement Instrument	Sources
Mobility		
DAM01	I frequently use Mobile Retailing for various services	Choi, Seol, Lee, Cho & Park (2008)
DAM02	Mobile Retailing sites build links between the mobile retailer and its customers	
DAM03	I access mobile retail sites while traveling	
DAM04	I access mobile retail sites regardless of time and place	
DAM05	Mobile transactions offers flexibility	
DAM06	Time is required for delivering products and services to the customer	
Reachability		
DAR01	Information can be requested and delivered to users anytime and anywhere	Le & Ho (2010)
DAR02	The user is satisfied with the instant services offered by Mobile Retailing	
DAR03	Mobile Retailing sites can be reached anytime	
DAR04	Mobile Retailing sites can be reached from anywhere	
DAR05	I think the ‘anywhere-anytime’ accessibility infrastructure of Mobile Retailing is good enough to attract me to use it	
DAR06	It is easier and faster to access and deliver information online	
Ubiquity		
DAU01	Commercial transactions can be done anytime and anywhere	Le & Ho (2010)
DAU02	Mobile services are available at any location at any given time	
DAU03	I have control over my transactions when using a mobile channel	
DAU04	The usage patterns of mobile devices are easy to understand	
DAU05	It is easy to access product information online	
DAU06	Coverage and quality of the wireless signal is very important	
Localization		
DAL01	I frequently use Mobile Retailing for various services	Le & Ho (2010)
DAL02	The user can search for an information according to his or her location	
DAL03	Mobile Retailing provides timely and relevant locations based on specific information	
DAL04	Mobile Retailing offers location-specific product and services	
DAL05	Mobile Retailing allows retailers to provide users with instant and specific information on locations or transactions	
DAL06	Mobile Retailing can fulfill local customer demand	
Personalization		
DAP01	Customized content while browsing, which are user-personalized can attract users to use Mobile Retailing sites	Ball, Coelho & Vilares (2006); Ball, Coelho & Vilares (2006)
DAP02	Mobile Retailing offers me products and services that fulfill specific needs and preferences	
DAP03	Mobile Retailing offers me products and services that I cannot find when using other platforms	

DAP04	Personalization will impact my trust when using the website	
DAP05	I feel that mobile advertising is personalized for my usage	
DAP06	I prefer to have mobile services that are customized to my interest	
Connectivity		
DAC01	Links to others sites allow users to find diverse information from other resources	Lee & Benbasat, (2004)
DAC02	The Mobile setting increases the intention of customers and potential customers to visit the Mobile Retailing sites	
DAC03	It is convenient for users to operate in a wireless environment	
DAC04	It is easy to make a transaction in a secure environment	
DAC05	I think the connection and transaction speed in Mobile Retailing sites is good enough to attract me to use it	
DAC06	Using mobile services would make transactions less time consuming	
Convenience		
DACV01	The overall process for accessing Mobile Retailing is easy	Choi, J., Seol, H.,
DACV02	It is convenient to navigate the content of Mobile Retailing	Lee Cho & Park
DACV03	Mobile devices are easy to operate	(2008) ; Li, Dong &
DACV04	Mobile transactions would make things convenient for me	Chen (2012).
DACV05	It is easy to access and deliver information using Mobile Retailing	
DACV06	It is faster to access and deliver information using Mobile Retailing	
Attitude towards Use		
A01	Mobile Retailing is a good idea	Karaali, D.,
A02	I have positive feelings toward Mobile Retailing	Gumussoy & Calisir
A03	Mobile Retailing will make my life more interesting	(2011); Shin, Jung &
A04	I am motivated to do more business with the online retailer	Chang (2012),
A05	I consider online products and/or services to be valuable	Zheng, Li & Jiang
A06	I am satisfied with the overall products and services provided by Mobile Retailing	(2012); Davis
		(1989).

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