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Determinants of Consumers' Continuance Intention Towards Retail Mobile Applications: PLS-SEM Approach on Malaysian Consumers

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Abstract

The study aims to identify the relationship between retail mobile apps and consumers' continuance intention in Malaysia. It is very important for an organization to ensure sales are doing well. In this research, the researcher chooses retail mobile apps as the factors, which are privacy & security concerns, ease of use, system quality, design/enjoyment and information quality. In this research, it focuses on five objectives, which are to determine each relationship of independent variables (privacy & security concerns, ease of use, system quality, design/enjoyment and information quality) with dependent variables (consumers' continuance intention). All 159 respondents were chosen using simple random sampling. All the independent variables affect consumers' continuance intention in using retail mobile apps. However, two of the independent variables are insignificant which are privacy and security concern and design/enjoyment.

Keywords: Consumers' Continuance Intention, Retail Mobile Application, PLS-SEM

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Introduction

Online shopping is growing due to the new era of globalization. Many retailers decided to create apps to grow their business. A mobile apps is a product application grew particularly for use on little, remote figuring gadgets, for example, cell phones and tablets, as opposed to work area or smart phones. Mobile applications frequently remain as opposed to work area applications that keep running on personal computers, and with web applications, which keep running in versatile web programs instead of specifically on the cell phone. While retail means the offer of products to general society in moderately little amounts for

utilize or utilization instead of for resale. Therefore retail mobile apps is applications on mobile phone where retailers sell their goods to consumers.

Internet and technology has changed consumers' ways of life, with online utilization applying an extensive and continuous effect on customary utilization designs (Dawei Shang, 2017). The previous couple of years have seen the improvement and ascend in prevalence of versatile business applications, for example, cell phones web based shopping, portable instalment, shrewd voyaging administrations, and so forth, in accordance with the world economy and developing markets. The cell phone use and m-shopping notoriety incline is more self-evident (Dawei Shang, 2017).

Some people prefer to not using mobile apps because they do not know how it works and some customers still refuse to use mobile application for shopping or ordering foods. People in China mostly refuse to use retail mobile apps (Gao, Waechter & Bai, 2015). While versatile sellers can offer countless administrations to portable clients by means of those hand-held gadgets, numerous individuals who have portable buy encounter are unwilling to consistently utilize cell phones to do the shopping and that makes the development of portable buy generally moderate (Gao, Waechter, & Bai, 2015).

Problem Statement

Dan J. Kim and Charles Steinfield (2004) highlighted that the mobile (wireless) service market has been quickly developing alongside the advancement of an assortment of remote applications and administrations and the expanding number of portable Internet clients. In this quickly changing business sector condition, understanding clients' fulfillment with versatile internet benefit, the measurements of administration quality, and their aims to utilize flow benefit is essential to both industry players and specialists. To get by in profoundly aggressive markets, associations need to give products or administrations that exceedingly fulfilled and keep up steadfast clients. At the point when clients are fulfilled, they are probably going to return, while disappointed clients will probably change to contender Kim & Steinfield, 2004).

Although mobile purchase is helpful in the time of portable business, numerous shoppers still do not use mobile purchase to its maximum capacity. From the portable merchant's point of view, holding current clients and encouraging their proceeded with buy are critical to make profitability and accomplish a manage capable advancement. A comprehension of the duration goal towards versatile buy can give experiences into portable sellers' showcasing efforts. In this way, it is vital to look at the determinants that affect duration goals of buyers for portable buy (Gao, Waechter & Bai, 2015).

According to Azyanee Luqman, Razli Che Razak & Mohammad Ismail (2014), in recent years, thorough research has been done in the zones of client maintenance systems in the media transmission industry. Numerous concur that a definitive objective is to get however many steadfast clients as could be allowed. Mobile commerce, better known as m-commerce, is verifiably one of the quickest developing advancements after the introduction of the internet. Unlike its predecessor which is e-commerce, customers everywhere throughout the world are never again confined to topographical requirements with a specific end goal to take part in portable trade exercises. The way that portable business gives omnipresence, which implies that customers can direct exchanges whenever, anyplace finished remote media communications systems, additionally support up the quantity of cell phone endorsers all through the world (Azyanee, Razli, & Ismail, 2014)

Based on a research that was conducted by Harmony Hollow Software in 2006, although online businesses are believed to have greater potential than conventional businesses, there are constraints and challenges to it. According to Statista Market Forecast in 2018, revenue growth of e-commerce is declined and expected to be decrease through the years. It is stated in a newspaper article that customers are less confident with paperless transactions and prefer face-to-face with sellers. Additionally, some customers prefer conventional shopping activities. Through this way, they have the opportunity to see, observe and choose the desired products in front of the eyes. Based on observations, the constraints caused online businesses to be underestimated and difficult to implement, especially in less developed countries as well as their technologically illiterate people. That constraint can lead to the failure of online business execution (Kosmo! Online, 2016). Continuance intention is important to sustain for a long time (Lee & Kim, 2017).

Literature Review

Consumers Continuance Intention

Mobile commerce alludes to any exchange with financial value that is directed through a mobile network (Goi & Ng, 2011). The focus on postadoption or post-purchase behavior has been to some degree left despite the fact that there are past studies that weight on the significance of understanding the continuance usage intention (Varnali & Toker, 2010). Mobile commerce users are conflicting in their activities, and they may not come back to the movement once they take off (Lin, Wu & Tsai, 2005). In this way, pulling in clients and keeping up their continuation use is pivotal for the achievement of mobile commerce (Chong, A.Y.-L., 2013a).

Continuance intention is a post-acceptance build that is set in the first Expectation-Confirmation Model by Bhattacharjee, A., 2001. As it is develop estimated after the real use has occurred, a few investigations operationalised continuation use expectation as the demonstration of loyalty intention (Azyanee, Razli, Ismail, 2014). Contrasted with the plenteous research on introductory selection, continuance intention has gotten moderately less consideration (Yuan, Liu, Yao, 2014). Chen and Liu (2012) contended that the ceaseless change of mobile content administrations positively affects clients' desires. Consumer loyalty is a post-decision assessment of a particular exchange (Kim & Steinfield, 2004). From a client's point of view, satisfaction is a particular type of his or her assessment to decide the esteem or worth of what is being utilized or given (Kim & Steinfield, 2004). Continuation Intention alludes to customers' inside evaluated probability that they will keep on using the administration gave by the versatile Internet benefit seller (Kim & Steinfield, 2004).

Consumers' continuous intention reflects the level of loyalty to the service provider, and tend to be a significant driver of the service provider's profitability and long-term viability (Coffees, 2001, Pontes and Kellys, 2000). Emotional changes are trailed by social shirking or approach contingent upon the valence of the enthusiastic encounters (Ding & Chai 2015). The adapting hypothesis recommends that an individual tends to keep on using an application to fortify positive feelings if the involvement with it is tasteful, however quit utilizing it to maintain a strategic distance from negative feelings if the application ends up being low quality (Lazarus, 1991). User satisfaction with Mobile Social Networks is derived from perceived usefulness, perceived risk, perceived enjoyment and privacy concerns. Users' continuance intentions is derived only from satisfaction, supporting the work of (Bhattacharjee, 2001).

Security & Privacy Concerns

Privacy concerns reflects consumer's view of how their own data is being utilized. Online networking system specialist co-ops gather data concerning consumers. They likewise hold data on the clients' connections with different clients. Users of social network might be worried about how suppliers may gather store and utilize their own data. In the event that users feel that this data may spilled or that they can be followed because of a security infringement at that point, they might be hesitant to utilize the framework. Consumers with high protection concerns are of the assessment that surrendering their own data may bring about some security hazard to them. It might require more prominent levels of trust in the framework to have these users receive the framework (Ofori et al, 2015). Security concern has been found to straightforwardly influence behavioural intentions of consumers in various settings (Gao, Waechter, & Bai, 2015). Aside the immediate impact that protection concern has on consumer behaviour, it has be appeared to indirectly affect client conduct through the interceding parts of trust, perceived risk and perceived usefulness (Gashami, Chang, Rho, & Park, 2015).

Privacy and security concerns show that consumers are concern about their personal information and payment security like fear of improper access, unapproved secondary use, errors, data collection, fraud, and financial loss (Gao, Waechter & Bai, 2015). It has been proposed by literature that protection and security concerns are indivisibly associated (Gao, Waechter & Bai, 2015). The financial information is consumers' personal matter (Hong & Thong, 2013). Past experimental examinations have discovered that security and protection concerns are a noteworthy inhibitor of on the web/versatile business acknowledgment (Gao, Waechter & Bai, 2015). Trade off of protection is seen as a hazard by portable customers who along these lines, are unwilling to unveil their data to mobile vendors (Gao, Waechter, & Bai, 2015).

They are worried that their buys would be followed, individual data abused or that they would start to get spontaneous messages and commercials in the event that they enrolled to a versatile site. Data protection and exchange security are firmly identified with concealed data and shrouded conduct (Gao, Waechter & Bai, 2015). Preceding leading mobile shopping, a user has no chance to get of knowing whether the mobile vendor is equipped for ensuring or legitimately utilizing private data. Indeed, even after the exchange is done, the client still does not know whether the vender can be trusted to keep private information secure (Gao, Waechter & Bai, 2015). In this way, protection and security concerns may hose shoppers' trust as they may question versatile sellers' capacity, trustworthiness and kindness to ensure their own data and exchange security. Numerous researchers have announced the impact of protection worries on trust (Gao, Waechter & Bai, 2015). Privacy & security concern negatively affects satisfaction. If privacy and security concerns increase, consumers' satisfaction decreases. Satisfaction positively affects the continued intention towards mobile purchase (Gao, Waechter & Bai, 2015).

Ease of Use

Ease-of-use of mobile device is an imperative factor in making cheerful consumers. Cell phone convenience is estimated by three things: the apparent ease of use of the unit, the degree to which the gadget is surfing/working cordial, and the simplicity of exploring the screen content (Kim & Steinfield, 2004). Davis (1989) contended that the helpfulness of an innovation is reliant on the fact that it is so natural to utilize. In other words, the less

demanding it is for a user to interface with mobile social network the more helpful clients would see it to be (Ofori et al., 2016).

IS and mobile terminal applications (APP) are employed as tools to shop online by m shopping users. According to previous technology acceptance studies, application, usefulness and users' CI can be influenced by the perceived ease of use of m-shopping (Shang & Wu, 2017). In the m-business setting, most clients embrace peruse first and buy later practices since they are like web based shopping with a PC. Furthermore, since various age and sexual orientation bunches have differing propensities and acknowledgment limits, PEOU can change among mobile terminals clients. PEOU may likewise influence the m-shopping clients' fulfilment levels (Shang & Wu, 2017). At the point when aptitudes are bigger than challenges, consumers feel exhausted. Interestingly, when challenges are bigger than abilities, consumers feel restless. At the point when the two aptitudes and difficulties are lower than the threshold values, consumers feel lack of concern. Just when the two abilities and difficulties surpass the threshold values and have a decent match would users be able to encounter flow. At the point when shoppers intend to utilize mobile apps, they need an essential learning and aptitudes on mobile Internet and application. They may likewise confront difficulties, for example, task trouble and concerns in regards to disclosure of individual data and instalment security, which speaks to a primary test contrasted with utilization of different sorts of mobile services (Gao, Waechter, Bai, 2015). Ease of use positively influences continuance intention (Shang & Wu, 2017).

Design/Enjoyment

Enjoyment is defined as the benefits consumers get by using mobile apps (Nguyen, 2015). Not at all like extraneous inspiration, for example, has perceived usefulness which depends on accomplishment of particular objectives or rewards, inborn inspiration alluded to the delight of completing a movement itself (Nguyen, 2015). According to Davis et al. (1992), perceived enjoyment to the original TAM and found that it has significant effect on adoption intention in word-processing program (Nguyen, 2015).

In the brain science writing, impact of feel on human practices has been perceived and considered widely (Nguyen, 2015). Back in the 70s, Dion et al. sets that an individual physical appearance impacts his/her different parts of social connection (Lavie, Tractinsky 2004). Particularly, socially alluring attributes are connected more with truly appealing people than with physically ugly people (van der Heijden 2004). Alice et. al. (1991) confirm through a meta-analysis that good appearance stimulate strong preferences about interpersonal as well as perceptive competence.

In marketing literature, aesthetics is located to play an important role in new product development and sales strategies (Nguyen, 2015). Without a doubt, as put by Bloch (1995), "physical form or design of a product is an unquestioned determinant of its marketplace success". By utilizing a trial study, Veryzer and Hutchinson (1998) find that inside item outlines brings about solid reactions from purchasers, which turns have an effect on actual purchase behaviour (Bloch 1995). In addition, Holbrook and Zirlin (1985) suggested that visual facets of a product are a potential method to obtain pleasure for the consumer (as cited by Veryzer, Hutchinson 1998) which explain the assumption about the effect of design on enjoyment in mobile apps.

According to Chiu et al. (2009), enjoyment means the degree to which internet shopping is seen to be actually agreeable and fun. Based on self-determination theory, users are self-determining and basically motivated in online shopping when they are

interested in it or enjoy doing it (Chiu et al., 2009). In other words, consumers who have lower perceived enjoyment may feel that the website requires more effort to use (Venkatesh et al., 2002). It seems likely that shoppers' intentions become stronger if they perceive higher enjoyment on the website or mobile apps due to the usual voluntary and searching as well as buying are impulsive behaviours of internet shopping (Li & Zhang, 2005). Enjoyment affects satisfaction. Satisfaction positively affects Continuance Intention (Ofori et al., 2015).

System Quality

System quality means access speed, ease of use, navigation, visual appeal, and connection of a mobile apps. Mobile systems and terminals have liberated clients from the transient and spatial requirements and empowered them to direct pervasive buys (Gao, Waechter & Bai, 2015). However, purchasers may experience benefit intrusion or inaccessibility under a few conditions because of the inconsistent system and back-end frameworks. In this way, giving universal administrations to users will show versatile merchants' capacity and trustworthiness additionally influencing users' trust (Gao, Waechter, Bai, 2015). According to Lee (2005), detailed that omnipresent association influences user confide in mobile transactions (Gao, Waechter & Bai, 2015).

If mobile shopping sites/systems are hard to utilize and a have bad interface outline, buyers may feel that service providers do not have the capacity and honesty important to offer quality administrations. In this way, system quality may influence user trust. The impact of system quality has been bolstered in past research. (Gao, Waechter, Bai, 2015). According to Lee and Chung (2009), system quality can cause consumers' lack of trust in mobile transaction. Zhou (2011) asserted that system quality affects consumer trust in mobile website (Gao, Waechter, & Bai, 2015).

Furthermore, a poor system quality may threaten purchasers' shopping background. For instance, shoppers are browsing item data on a mobile site. In the event that the site is unsteady, not efficient and has moderate access speed, customers should hold up quite a while to get data and administrations. This will expand their trouble of utilizing the versatile site. Buyers can't feel satisfaction because of the absence of inclusion while getting to the site. They may likewise feel in absence of control. Under a few conditions, administrations might be intruded on unexpectedly (Gao, Waechter, Bai, 2015)

Lin and Wang (2006) reported that a poor system quality would not make consumers satisfied because consumers always expect to adopt a quality mobile commerce system. Previous research has noted the effect of system quality on user satisfaction with mobile Internet sites, mobile work in healthcare, and mobile banking (Gao, Waechter & Bai, 2015). System quality affects continuance usage intention, as users are not satisfied with the system quality to maximum level, they will have disbelief and complaints about the system. System quality is considered as the capability of systems to produce data, and as one of the important factors affecting user satisfaction (Lee & Kim, 2017). System quality positively affects satisfaction. Satisfaction positively affects the continued intention towards mobile purchase (Gao, Waechter & Bai, 2015).

Information Quality

As one of the crucial SNS qualities to be appraised, information quality is the quality of information which systems produce, and is important for the IS success (Lee & Kim, 2017). Parasuraman et al. (1994) placed precision, fittingness, and value as the nature of data; further, efficient and auspiciousness as cost components of data administration and

usability, accommodation, openness as comfort factors (Lee & Kim, 2017). De Wulf et al. (2006) suggested that reliability, recency, and easiness of understanding affected on user attitude toward information. McKinney et al. (2002) stated that in evaluating the fulfillment of consumers, data quality is made out of reasonably, justifiably, dependability, fittingness, extension, and ease of use, which influence users' fulfilment (Lee & Kim, 2017).

Information quality speaks to the degree to which the content of the website is timely, accurate, and complete. Hasan and Abuelrub (2011) think about it as content quality, and demonstrate that it can fundamentally influence users' states of mind and communication with internet business (Lee & Kim, 2017). Information quality is a key element affecting consumer fulfilment with and dedication towards web based business (Lee & Kim, 2017). Not at all like system quality and service quality, which are the duty of SNS suppliers, information quality relies upon part commitments and the environment of the interpersonal organization as the data accessible on long range informal communication locales is generally created by the user (referred to as user-generated content). Nevertheless, this research opted to incorporate information quality as the target of the investigation to examine SNS characteristics regardless of the responsibility of the characteristics (Lee & Kim, 2017).

Information quality reflects information relevance, sufficiency, accuracy and timeliness. Consumers chose to shop online without going to existing store because it is easy for them to look at the product information and purchase products or services at anytime from anywhere. They may also feel that mobile vendors are not trusted and ignore their need. Information quality also affected user trust in mobile banking which has been identified before. Poor data quality may undermine client encounter as clients need to spend considerably more exertion on investigating data. This increases the difficulty of their operation (Gao, Waechter & Bai, 2015). Information quality affects satisfaction. Satisfaction positively affects the continued intention towards mobile purchase (Gao, Waechter & Bai, 2015).

Based on the above literature, the following hypotheses were developed:

H1: There is a significant relationship between ease of use and consumers' continuance intention in using retail mobile apps.

H2: There is a significant relationship between system quality and consumers' continuance intention in using retail mobile apps.

H3: There is a significant relationship between information quality and consumers' continuance intention in using retail mobile apps.

Research Methodology

The purpose of this research is a correlational study. It shows whether there is a relationship between the two variables or not (verywellmind.com, 2018). It determines whether there is a significant relationship between the mobile apps quality and the consumers' continuance intention. It is either relationship of positive, negative or no relationship at all. Population is the total number of person who possessing a country, city, district or any area. It refers to the target group that is aimed for. A research population is for the most part a huge gathering of people that is the primary focal point of a logical question (Explorable.com). In this research, the researcher targeted people that lives in Kuala Lumpur that have the experience of using retail mobile apps. The researcher inserted preliminary questions to know whether respondent lives in Kuala Lumpur or not and

whether respondent has the experience using retail mobile application. Questionnaire is attached as appendix. People from any age are welcomed to answer the questionnaire.

Sample Frame

Sample frame refers to the representative of the entire population chosen (Wikipedia, 2018). Therefore, this research are targeting of people living in Kuala Lumpur and have experienced using retail mobile apps, so that, the sample frame of this research is the consumers of retail mobile apps or potential people that has experienced it.

Sampling design is related to how the individual selected (Wikipedia, 2018). Thus, for this research using probability sampling technique been chosen because this sampling uses some type of random selection. In order to have a random selection strategy, the researcher set up some procedure or methodology that guarantees that the distinctive units in the populace have risen to probabilities of being picked it is called simple random sampling. To establish the representativeness of the sample for generalizability is importance of sample size. According to Sekaran and Bougie (2014) neither too large nor to small sample size help research project. Sample size larger than 30 and less than 500 are appropriate for most research. Thus, for this research, questionnaires will be distributed through Google Form.

Research Instruments

There are four fundamental inquiry reaction positions utilized as a part of request to plan a survey which are open, close-ended, scale-response and assessment opinion type of question. In this research, specialist chose to apply close-ended inquiries since it can spare respondents' chance and exertion while noting the inquiries. Respondents can easily choose any answers from the five point Likert-type scale. The questionnaire is organized by basic English words and sentence for the respondents effectively see every one of the question asked and in this manner it contributed from finding precise solution. The questions is immediate, not befuddling and just comprises of one component in every statement. The researcher attaches the sample of questionnaire in the Appendix. These data were coded and analyzed using SmartPLS version 2.0.

Results and Analysis

Partial least squares (PLS) technique also known as components-based structural equation modeling (SEM) is used to analyze the data in this study. PLS-SEM can evaluate the psychometric properties by using the measurement model and estimate the parameters via structural model (Chin, 1998). Hitherto, the objective of using PLS-SEM is to maximize the explained variance of the endogenous variables (i.e. quality pledge). Referring to Anderson and Gerbing (1988), the measurement model was first determined to measure the convergent and discriminant validity then followed by assessing the structural model. On the other hand, the bootstrapping method (500 re-samples) was used to determine the significance levels for loadings, weights and path coefficients (Chin, 1998).

Measurement model

The measurement model consists of relationships among the latent variables and their items/indicators. It is required to establish the construct validity for the measurement model before evaluating the structural model for hypothesis testing. Items in the measurement model need to demonstrate sufficient convergent and discriminant validity as a condition for establishing a structural model (Hair et al., 2006).

Convergent Validity

Table 1.0 presents the items loadings, average variance extracted (AVE) and composite reliability (CR) of this study.

Table 1.0 Items loadings, AVE and CR

Construct	Items	Loadings	AVE	CR
Consumers' Continuanace Intention	QP1	0.857	0.717	0.953
	QP2	0.819		
	QP3	0.887		
	QP4	0.846		
	QP6	0.826		
	QP7	0.863		
	QP8	0.798		
	QP9	0.874		
	Ease of Use	EC3		
EC4		0.760		
EC5		0.855		
EC6		0.874		
System Quality	BC1	0.860	0.744	0.946
	BC2	0.861		
	BC3	0.867		
	BC4	0.886		
	BC5	0.842		
	BC6	0.859		
Information Quality	PC3	0.849	0.737	0.918
	PC4	0.838		
	PC5	0.891		
	PC6	0.856		

Based on the above results, the items loadings of all indicators in this study ranging from 0.760 to 0.891 exceeded the required cut-off level of 0.60 (Bagozzi & Yi, 1988). Moreover, the composite reliability values for all the constructs that are ranging from 0.889 to 0.953 surpassed the threshold value of 0.70 (Hair et al., 2006) while the AVE values for each construct ranging from 0.668 to 0.744 exceeded the suggested value of 0.50 by Fornell and Larcker (1981). Hence, the convergent validity of this study was established.

Discriminant Validity

Table 2.0 shows the latent variable correlations with square root of average variance extracted in this study.

Table 2.0 Latent variable correlations with bolded square root of the AVEs

Construct	CCI	EU	SQ	IQ
Consumers' Continuanace Intention	0.862			
Ease of Use	0.748	0.818		
System Quality	0.749	0.709	0.859	
Information Quality	0.769	0.646	0.692	0.847

Note: Diagonals represent the square root of the AVEs while the off-diagonal entries represent the correlations between constructs

After convergent validity was satisfied, then discriminant validity can be tested in order to identify the degree to which the measures of different constructs are distinct from one another and by assessing the comparison of correlations between constructs with the square root of the AVE for each construct (Fornell, & Larcker, 1981). Based on Table 2.0, the elements in the matrix diagonals which represent the square root of the AVEs are found to be greater in all cases than the off-diagonal elements in their corresponding row and column, therefore, demonstrating that discriminant validity was satisfactory.

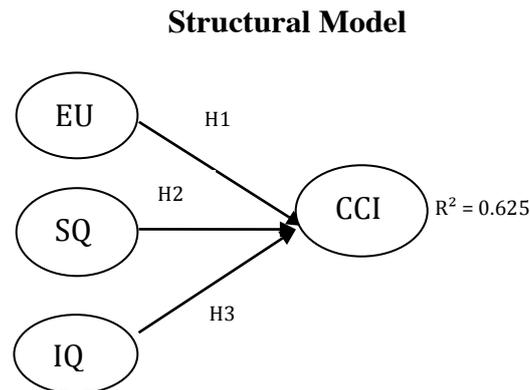


Figure 1.0 Results of the Structural Model

After the measurement model was satisfied, then the structural model was analyzed. The structural model in this study presents the hypothesized relationship between exogenous variables (i.e. Ease of Use, System Quality and Information Quality) and endogenous variable (Consumers' Continuance Intention). Figure 1.0 shows the R² result for the structural model in this study. The explanatory power of the estimated model can be assessed by observing the R² of the endogenous construct. Hence, the R² value for this model was 0.625, representing that 62.5% of the variance in Consumers' Continuance Intention can be explained by all the exogenous variables in the model.

Furthermore, based on Table 3.0, Ease of Use (b=0.531, p<0.01) and Information Quality (b=0.236, p<0.10) were found to have a significant effect on Consumers' Continuance Intention. However, System Quality (b=0.082, p>0.05) was found to be insignificant to Consumers' Continuance Intention. Therefore, based on the above results, H1 and H3 were supported, and H2 was not supported.

Table 3.0 Results of Hypothesis Testing

Hypothesis	Relationship	Std. Beta	Std. Error	t-value	Decision
H1	EU -> CCI	0.5312	0.1001	5.3067**	Supported
H2	SQ -> CCI	0.0815	0.0862	0.9447	Not Supported
H3	IQ -> CCI	0.2362	0.2362	2.1346**	Supported

Discussion and Conclusions

The first objective is “to examine the relationship between privacy and security concern”. The finding shows that there is a moderate relationship between privacy and security concern and consumers continuance intention. Privacy and security concern does influence consumers’ continuance intention moderately. Past experimental examinations have discovered that security and protection concerns are a noteworthy inhibitor of on the web/portable business acknowledgment (Gao, Waechter & Bai, 2015). However, these two variables are insignificant and negatively related. Which means if privacy and security concerns increase then consumers’ continuance intention will decrease. Thus it can be concluded that consumers worry about their privacy and security of information in using retail mobile apps but not as important as other independent variables. If the mobile apps does not seem trustworthy consumers will stop using it.

The second objective is “to identify the relationship between ease of use and consumers’ continuance intention to use retail mobile apps”. From results that were shown in chapter 4, ease of use and consumers’ continuance intention are related moderately which also means ease of use influenced consumers’ continuance intention. The easier consumers’ flow of using retail mobile apps the better consumers’ intention to still using the apps. Ease of use in using retail mobile apps is also significant and positively related with consumers’ continuance intention. Therefore, consumers consider their ease of use in retail mobile apps which also means consumers prefer mobile apps that is easy to use and understand for them to keep using it.

The third objective is “to find out the relationship between system quality and consumers’ continuance intention to use retail mobile apps”. Findings show that there is a moderate relationship between system quality and consumers’ continuance intention in using retail mobile apps. These two variables are also significant and positively related. Consumers’ continuance intention in using retail mobile apps is affected by system quality and system quality is one of the important reasons for consumers to continue using retail mobile apps. To sum up, the better the system quality of the mobile apps the greater consumers’ intention to keep using the mobile apps.

Fourth objective is “to study the relationship between information quality and consumers’ continuance intention to use retail mobile apps”. Information quality and consumers’ continuance intention and both are moderately related. Information quality is whether the quality is trustworthy, true and up-to-date or not. If consumers finds the information quality is good, consumers will keep using the mobile apps. Information quality could be one of the reasons why consumers stop using retail mobile apps because the result shows that information quality is significant.

Last objective is “to determine the relationship between design/enjoyment and consumers’ continuance intention to use retail mobile apps”. Design/enjoyment has a moderate relationship with consumers’ continuance intention but is insignificant. The design of mobile apps does influenced consumers’ continuance intention. If consumers feel the enjoyment in using the mobile apps consumers will still use it and have the intention to keep using it. However design is insignificant so consumers do not really care about design/enjoyment for them to continue using retail mobile apps.

Overall, it can be concluded that all independent variables influenced dependent variables. Consumers’ continuance intention in using retail mobile apps is affected by privacy & security concerns, ease of use, design, system quality and information quality.

Recommendation

Based on the study, there are a few suggestions that retailer can do to improve their mobile apps quality. Firstly, based on the privacy and security concern, to alleviate their protection and security concern and enhance shoppers' involvement, portable merchants can post their security strategies on their versatile locales to illuminate purchasers about their practices on data gathering, stockpiling and utilization. They can likewise show protection seals to exhibit that their security hones are confirmed by confided in outsiders. Consumers afraid that their private information would be disclosed to other party and consumers also afraid that hackers could use their information especially during transaction. However, privacy & security does not really concern consumers to keep using retail mobile apps because it is insignificant.

Specifically, ease of use is significant on consumers' continuance intention of using retail mobile apps. Which means retailer has to improve their mobile apps so that consumers can easily use it. Of course consumers do not want to face any complications during using the application. Retailer should make it easy for consumers to use their mobile apps for example put various type of payment method so it is easier for them to make transaction, if consumers do not own credit card maybe they could use mobile banking, paypal or cash on delivery. Also, retailer should make it easy for consumers to browse their product like organize product according to brand or price or retailer can make consumers choose how consumers want to browse their product or menu.

Furthermore, design/enjoyment of mobile apps has insignificant relationship with consumers' continuance intention which means consumers do not really care about the design and their enjoyment in using retail mobile apps. But, does not mean retailers do not have to make it attractive or appealing. Retailers can actually feature something that is appealing to make consumers more interested such as audio clips, nice colours but not too exaggerated. Something that is wonderful to enjoy while browsing the retail mobile apps.

Moreover, both system quality and information quality have positive significant relationship with consumers' continuance intention. That indicates that system and information quality of mobile apps influenced consumers' continuance intention greatly. Consumers want the system they are using is good and the information given are aligned with their expectations. Information is very important for consumers' when they do online shopping so retailers need to give accurate information since consumers cannot feel or touch the items or products. Retailers should put a very detail information about the products retailers are selling and always update the details especially apparel. For an instance, put the measurements for every clothes and shoes retailers are selling and the height and size of the model that s wearing the apparel. As for system quality, it is important for consumers to use a quality system that has no bugs and easy to navigate. Apps developer of the company should always check their system if there is any bugs and fix it immediately so that consumers do not have to experience it

Lastly, future researcher should investigate whether the independent variables could be used for different dependent variables such as consumers' impulse buying, customer loyalty, customer satisfaction, and purchase intention. It is recommended that the future study should replicate current research setting in Indonesia because there are articles found that mobile apps retailers faced loss in their online business there because the citizens refuse to use mobile apps. Since this study is carried out during researcher's internship the time is limited to carry out. Questionnaire was distributed using google form which might not give sufficient evidence of the consumers' real behaviour. When there are

insufficient evidence, it might not be able to achieve full accuracy. This study is carried out in Kuala Lumpur, the results might not be applicable to other cities.

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