Consumer Acceptance of Mobile Marketing: A Study of Three Generation Cohorts in Jakarta

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Abstract

This research aims to examine the factors influencing mobile marketing acceptance in three generation cohorts in Jakarta, Indonesia, and to confirm the influence of risk acceptance and personal attachment as antecedent factors toward mobile marketing acceptance with the support of marketing-related mobile activities. This study employs Cronbach's alpha to test reliability and confirmatory factor analysis (CFA) to test the validity of the questionnaire. Furthermore, this study used simple and multiple regression analysis and mediating analysis and analysis of variance (ANOVA) to examine whether there are any significant differences between three generation cohorts towards risk acceptance, personal attachment, and mobile marketing acceptance. The results show that risk acceptance and personal acceptance significantly affect mobile marketing-related activities, and mobile marketing-related activity has a significant influence toward mobile marketing acceptance. However, among all the variables, only mobile activity related to accessing content significantly mediates personal attachment to mobile marketing acceptance.

Keywords: Mobile marketing; Marketing communication; Generation cohort; Risk acceptance; Personal acceptance; Indonesia.

1. Introduction

Mobile devices have become one of the basic human needs in contemporary life. Starting from the expansion during the Internet Era (Archibugi and Coco, 2004; Odlyzko, 2001), the number people that can connect and access the Internet via mobile devices has kept growing exponentially. With the astonishing growth of Internet users and the popularity of mobile device subscription to stay connected, some researchers believe that the development of technology in mobile communication creates new ways for brands and customers to interact with each other (Shankar and Malthouse, 2007). Many companies consider the power of mobile devices as strong, new tool to directly communicate and interact with their consumers through wide marketing activities such as location-based promotion and television-style advertising (Sultan et al., 2009). Previous research in the same context has investigated the scope of the Internet (Novak et al., 2000) and mobile devices (Carroll et al., 2007; Peters et al., 2007) and the mobile phones is seen as a viable commercial and advertising medium.

In this research, the authors examine personal factors that contribute to marketing-related mobile activity (providing information, sharing content and accessing content), and whether marketing-related mobile activity affects mobile marketing acceptance, and how marketing-related mobile activity mediates the relation of risk acceptance and personal attachment to mobile marketing acceptance. Finally, this research focuses on three generation cohorts (generations X, Y, and Z), based on the theory of multi-generational marketing which stated that promotional messages and products targeting generational groups or cohorts can reflect their generational values which in turn can drive their consumption behaviors (Hernandez et al., 2000). We believe that each generation will have different responses towards risk acceptance, personal attachment, and mobile marketing acceptance.

2. Literature Review
2.1. Risk Acceptance and Marketing-Related Mobile Activity

Adapted from Sultan et al. (2009), risk acceptance refers to the willingness of individuals to give their personal information to an online-party such as a web site. It is the willingness of consumers to give personal information to register for online marketing promotions, to enter contests, get future discounts, or receive gifts. There is significant amount of literature that focuses on risk acceptance; risk acceptance and mobile privacy has shown spamming and privacy invasion as central issues related to consumers' willingness to receive mobile advertisements (Barnes and Scornavacca, 2004; Grant and O'Donohoe, 2007; Leppaniemi and Karjaluoto, 2005). Hence, the researchers considered the role of risk acceptance in the hypotheses below:

H1: Risk acceptance positively and significantly affects mobile activity related to providing information to firms for marketing-related purposes.

H2: Risk acceptance positively and significantly affects mobile activity related to sharing content to firms for marketing-related purposes.

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H3: Risk acceptance positively and significantly affects mobile activity related to accessing content in the mobile setting.

2.2. Personal Attachment and Marketing-Related Mobile Activity

Personal attachment refers to the scope of consumers seeking to customize their mobile phone with unique content, wallpaper, and ringtones as ways to show their phone as an extension of their own idiosyncrasies (Sultan *et al.*, 2009). Research conducted by Peng and Spencer (2006) showed a positive connection of mobile phone personalization on personal attachment towards mobile advertising. Numerous studies have examined the main effect of personal attachment related to the usage of mobile phones, including studies of children and teenagers in Finland (Kasesniemi and Rautiainen, 2002), studies of teens in Norway (Skog, 2002), the usage of mobile phones among Korean consumers (Kim, 2002). Thus the researcher created the following hypotheses:

H4: Personal attachment positively and significantly affects mobile activity related to providing information to firms for marketing-related purposes.

H5: Personal attachment positively and significantly affects mobile activity related to sharing content with others in the mobile setting.

H6: Personal attachment positively and significantly affects mobile activity related to accessing content in the mobile setting.

2.3. Marketing-Related Mobile Activity and Mobile Marketing Acceptance

Adapted from Sultan *et al.* (2009), marketing-related mobile activity is the model that will inform this study in explaining the effects of marketing-related mobile activity. This model includes the regular usage of mobile devices for providing information, sharing content, and accessing content in the mobile marketing acceptance context. The mediating model was developed from the Technology Acceptance Model (TAM) and gratifications perspectives that affect the usage factors on behavioral intent (Sultan *et al.*, 2009). Based on this literature, the researchers believe that the mediating factors will alleviate the paucity of previous research about mobile marketing acceptance. The mediating factors include (1) providing information (2) accessing content (3) sharing content. Based on previous studies, therefore:

H7: Mobile activity related to providing information positively and significantly affects mobile marketing acceptance.

H8a: Mobile activity related to sharing content positively and significantly affects mobile marketing acceptance.

H8b: Mobile activity related to sharing content positively and significantly affects providing information to firms for marketing related purposes.

H8c: Mobile activity related to sharing content positively and significantly affects mobile activity related to accessing content.

H9: Mobile activity related to accessing content positively and significantly affects mobile marketing acceptance.

2.4. Three Generation Cohorts X, Y, and Z, and Mobile Marketing Acceptance

The theory of multi-generational marketing stated that promotional messages and products targeting generational groups or cohorts can reflect their generational values which in turn can drive consumption behaviors (Hernandez *et al.*, 2000). There are many sources that roughly group the age or describe the age in each generation cohorts, but researchers decided to take the newest published and academic source from socialmarketing.org (Schroer, 2012) and use this source as the main benchmark to describe the ages in each generational cohort; Generation X is referring to the people who were born in 1966-1976, aged 36-46 in 2012. Generation Y or Echo Boomers or Millennials is referring to he people who born in 1977-1994, aged 18 to 35 in 2012, and Generation Z is referring to the people who were born in 1995 – 2012, age 0 to 17 in 2012. Researchers believe that the different characteristics of the members of Generations X, Y, and Z will cause them to respond to mobile marketing differently due to the levels of involvement in using internet via mobile devices, thus:

H10a: There is a different response between each generational cohort in Generation X, Y, and Z towards risk acceptance.

H10b: There is a different response between each generational cohorts in Generation X, Y, and Z towards personal attachment.

H10c: There is a different response between each generational cohorts in Generation X, Y, and Z towards mobile marketing acceptance.

2.5. Marketing-Related Activity as a Mediating Variable Between Risk Acceptance and Personal Attachment to Mobile Marketing Acceptance

Following a previous study conducted by Sultan *et al.* (2009), marketing-related mobile activity providing information, sharing content, and accessing content are the mediating factors that will help this study in explaining consumer acceptance towards mobile marketing in Jakarta. Based on the mentioned theoretical framework in the subtitle, several hypotheses are made by the researchers:

H11: Mobile activity related to providing information positively and significantly mediates risk acceptance to mobile marketing acceptance.

H12: Mobile activity related to sharing content positively and significantly mediates risk acceptance to mobile marketing acceptance.

H13: Mobile activity related to accessing content positively and significantly mediates risk acceptance to mobile marketing acceptance.

H14: Mobile activity related to providing information positively and significantly mediates personal attachment to mobile marketing acceptance.

H15: Mobile activity related to sharing content positively and significantly mediates personal attachment to mobile marketing acceptance.

H16: Mobile activity related to accessing content positively and significantly mediates personal attachment to mobile marketing acceptance.

Figure-1. Research Model
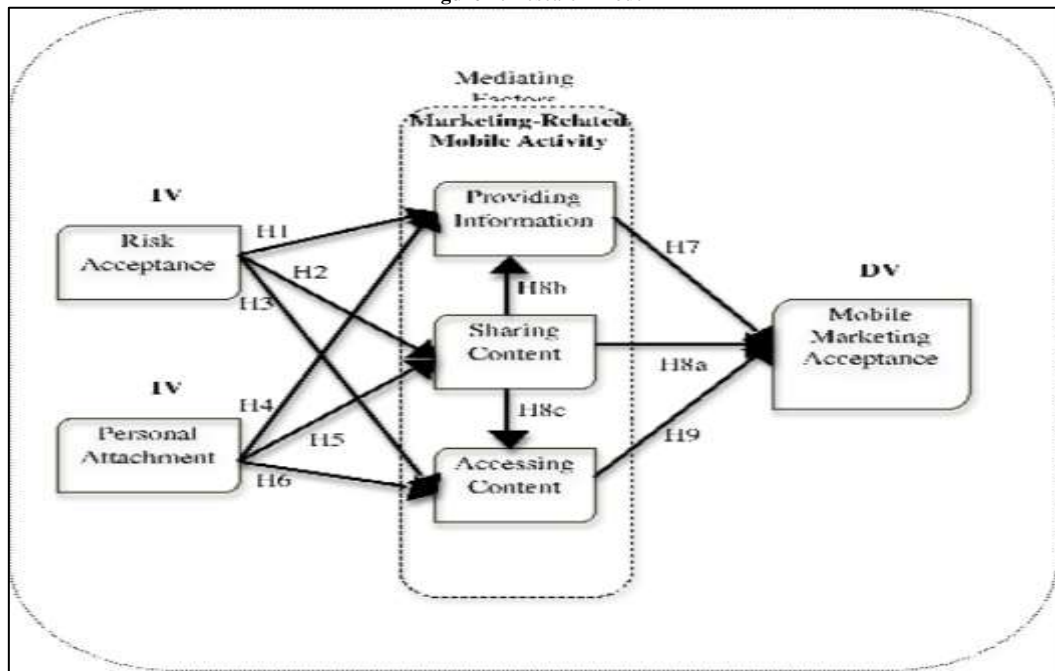
3. Methodology
3.1. Research and Sampling Procedures

This study employed descriptive quantitative data analysis. Hypotheses were developed from theoretical reviews and empirical studies. Subsequently it followed a confirmatory strategy of research in which a process of confirming or disconfirming hypotheses is employed to answer previously identified research questions. A non-probability sampling was employed, and the sampling method used was convenience sampling. The questionnaires were distributed using two type of approaches; a self-administered survey, by sending the online questionnaire through email to specific respondents in the Jakarta area and the personal approach by conducting face-to-face structured interviews. To gain responses from three generational cohorts, the samples were gathered consisting of high school students which represented Generation Z, university students for Generation Y, and employees for Generation X. The researchers obtained 225 valid responses from 75 respondents in each generational cohorts. Prior to conducting a full-scale survey, the researchers conducted a pre-test survey to 30 individuals to determine whether the items for each construct were reliable and valid.

3.2. Measurement

All data was generated from questioners and was designed, based and modified from previous studies. The risk-acceptance construct was measured using 3 items and personal attachment consisted of 3 items, both adapted from Davis (1989). Marketing related mobile activity consisted of three constructs, namely: providing information (3 items), assessing content (3 items), and sharing content (2 items) adapted from Davis (1989). Finally, mobile marketing acceptance was measured using 3 items and was also adopted from Davis (1989). All questions were measured with a six-point Likert scale, where 1 = strongly disagree, 2 = somewhat disagree, 3 = disagree, 4 = agree, 5 = somewhat agree and 6 = strongly agree. Finally, to obtain respondent profiles, the questionnaires also included several demographic questions such as age, gender, education, and occupation.

Using the survey data, the descriptive statistics procedure in SPSS 17.00 was employed for validating the outcome of the questionnaire. Cronbach's alpha was used to validate the consistency of the measurement and Confirmatory Factor Analysis (CFA) was used to identify the degree of construct-validity. Moreover, simple and multiple linear regression were performed to test the hypotheses followed by Baron and Kenny Mediation Analysis. Finally, analysis of variance (ANOVA) was conducted to determine differences in means between the three generational cohorts.

4. Results and Discussion

The authors tested the reliability for each variable used in this study both for the pre-test data and the full-scale survey data. The Cronbach's alpha values for those variables are greater than 0.6 (Malhotra, 2012), thus all variables are reliable. The results for the validity test show that all variables are exceeding the acceptable value of 0.5 for KMO and less than 0.5 for Barttlett test, it shows that the entire questions are valid since the component matrices are greater than 0.7 (Malhotra, 2012). The results from simple and multiple regression indicates that we accept H1-H9 with various values R^2 and with sig. level below 0.05 (table 1).

In addition the results from the ANOVA test show risk acceptance has a significant value of 0.000, which is lower than $\alpha = 0.05$ and therefore it is concluded that risk acceptance has a significant difference between the three generational cohorts. Meanwhile, personal attachment has a significant value of 0.000, which is lower $\alpha = 0.05$ and therefore it is concluded that personal attachment also has significant difference between the three generational cohorts. Mobile marketing acceptance as a dependent variable in this study has a significant value of 0.009, which is lower than $\alpha = 0.05$ and therefore it is concluded that mobile marketing acceptance has significant difference between the three generational cohorts. Therefore, we accept H10a, H10b, H10c.

Meanwhile, the result of the Baron and Kenny Mediating Analysis (table 2) shows that providing information (Beta coefficient of -0.070 and significant value of 0.320, which is greater than $\propto = 0.05$) insignificantly mediates risk acceptance and mobile marketing acceptance. It is also shown that sharing content, accessing content, sharing content have an insignificantly mediates risk acceptance to mobile marketing acceptance, thus we reject H11-H15. The findings also suggest that providing information insignificantly mediates personal attachment mobile marketing acceptance, whereas accessing content partially mediates personal attachment and mobile marketing acceptance, therefore we accept H16.

Table-1. Hypotheses Results from Simple and Multiple Regression

Hyphotheses	R^2	Sig. level	Result
H1: Risk acceptance positively and significantly affects mobile activity related to providing information to firms for marketing-related purposes.	0.501	0.000	Accepted
H2: Risk acceptance positively and significantly affects mobile activity related to sharing content to firms for marketing-related purposes.	0.095	0.000	Accepted
H3.: Risk acceptance positively and significantly affects mobile activity related to accessing content in the mobile setting.	0.232	0.000	Accepted
H4: Personal attachment positively and significantly affects mobile activity related to providing information to firms for marketing-related purposes.	0.168	0.000	Accepted
H5: Personal attachment positively and significantly affects mobile activity related to sharing content with others in the mobile setting.	0.203	0.000	Accepted
H6: Personal attachment positively and significantly affects mobile activity related to accessing content in the mobile setting.	0.276	0.000	Accepted
H7:Mobile activity related to providing information positively and significantly affects mobile marketing acceptance.	0.214	0.000	Accepted
H8a:Mobile activity related to sharing content positively and significantly affects mobile marketing acceptance.	0.054	0.000	Accepted
H8b:Mobile activity related to sharing content positively and significantly affects providing information to firms for marketing related purposes.	0.027	0.013	Accepted
H8c:Mobile activity related to sharing content positively and significantly affects mobile activity related to accessing content.	0.132	0.000	Accepted
H9: Mobile activity related to accessing content positively and significantly affects mobile marketing acceptance.	0.073	0.000	Accepted

Table-2. Mediating Analysis Results

Relationship	R²	Unstandardized B coefficient	Sig.
Risk acceptance to mobile marketing acceptance	0.490	0.812	0.000
Risk acceptance to providing information	0.501	0.780	0.000
Risk acceptance to sharing content	0.095	0.366	0.000
Risk acceptance to accessing content	0.232	0.535	0.000
Personal attachment to mobile marketing acceptance	0.070	0.301	0.000
Personal attachment to sharing content	0.203	0.524	0.000
Personal attachment to assessing content	0.276	0.591	0.000
Providing information to mobile marketing acceptance	0.214	0.487	0.000
Sharing content to mobile marketing acceptance	0.054	0.227	0.000
Accessing content to mobile marketing acceptance	0.073	0.273	0.000
Providing information controlling for risk acceptance to mobile marketing acceptance	0.492	-0.070	0.326
Sharing content controlling for risk acceptance to mobile marketing acceptance	0.490	0.017	0.727
Accesing content controlling for risk acceptance to mobile marketing acceptance	0.073	0.273	0.000
Providing information controlling for personal attachment to mobile marketing acceptance	0.220	0.447	0.000
Sharing content controlling for personal attachment to mobile marketing attachment	0.086	0.138	0.051
Accesing content controlling for personal attachment to mobile marketing	0.094	0.183	0.016
Beta for risk acceptance (1)		0.897	0.000
Beta for risk acceptance (2)		0.806	0.000
Beta for risk acceptance (3)		0.860	0.000
Beta for personal attachment (1)		0.103	0.163
Beta for personal attachment (2)		0.229	0.006
Beta for personal attachment (3)		0.193	0.025

5. Conclusion and Managerial Implications

The findings show that risk acceptance, sharing content, and accessing information are proven to have a significant and positive relationship to providing information, sharing content, and accessing content. It can be concluded that risk acceptance is an antecedent variable affecting each marketing-related mobile activity, thus it is considered an important driver for mobile marketing-related purposes.

Moreover, personal attachment positively and significantly affects providing information, sharing content, and accessing content. Personal attachment also serves as a significant factor affecting marketing–related activity. Furthermore, providing information, sharing content, and accessing content are found to influence mobile-marketing acceptance. The three marketing-related activities are considered as significant drivers toward mobile marketing acceptance.

Meanwhile, from the results of mediating analysis, it is shown that providing information, sharing content, and assessing content do not significantly mediate risk acceptance and mobile marketing acceptance. Furthermore, providing information, and sharing content are insignificantly mediated by personal attachment and mobile marketing acceptance. The only variable that is significant in mediating personal attachment and mobile marketing acceptance is accessing content. In addition, sharing content is found to have a direct relationship towards providing information, accessing information, it also significantly affects providing information.

From the research findings, we compare the means between the three variables namely task acceptance, personal attachment, and mobile marketing acceptance to three generation cohorts. It is found that there are significant differences among generation X, Y, and Z towards those three variables. As we looked in more detail on the means of each generation cohorts, we can see that the youngest generation tends to accept risk, have more attachment, and have more acceptance towards mobile marketing compared with the older generations.

Managerial implications can be drawn from the results of this study. Firstly, it is shown that mobile marketing is accepted if consumers can have more attachment to accessing content. Managers should focus on designing and delivering more content such as wallpapers, ringtones, or games. Secondly, each of the generational cohorts has different response towards risk acceptance, personal attachment, and mobile marketing acceptance. Therefore, a mobile marketing strategy should target the younger generations as it is seen as more effective compared with the older generations.

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