A FACTOR ANALYSIS OF CONSUMER PURCHASE DECISION OF PAID GAMES APPLICATION IN THE APPSTORE OF IPHONE

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Abstract

Apple App Store was founded in 2008 and has accommodated a variety of applications that includes Free apps, Paid apps, and Freemium apps. App Store provides a variety of app categories that best describes its users. Gaming apps are the most popular apps among the other types of application based on availability. This study aims to find out what encourage consumers to do buying decision on paid games applications in the app store of iPhone.

The method used in this study is quantitative with the type of descriptive analysis research. The types of data needed for this study are primary data and secondary data. Sampling is done by non-probability sampling method type of purposive sampling with the number of respondents taken as many as 100 respondents of Apple app store paid games users. Then for the analysis technique using factor analysis and processing data using SPSS version 24 software.

Based on the results of testing the hypothesis as a whole, all factors of paid games application in app store customer decision are included in the good category with the acquisition of an average value of 72,9%. Of the 29 factors that have been studied, 9 new factors have been formed which represent the previous factor in encouraging App store paid games application buying decision. These 7 factors consist of: Customer Expectations with a percentage value of 9,490%, Paid Games Quality with a percentage value of 9,383 %, Social Impression with a percentage value of 9,170%, Affordable Price of Paid Games with a percentage value of 8,113 %, Paid Games Ratings with a percentage value of 7,727%, Free Alternatives of Paid Games which has the 7,726%,Communications with a percentage value of 5,604% of variance As for the iPhone Appstore, the improvement is needed for all variables. The most affecting variable is the game ratings, so the improvement on the ratings such as let the users knows how to reach with the developers will contributes the biggest advantages for iPhone Appstore.

Keyword: Factor Analysis, Purchase Decision, Paid Games Application, iPhone, Indonesia

1. INTRODUCTION

A mobile device is a tool that can be used to connect to the internet and iPhone is one of the mobile devices that can be used besides other smartphones like Samsung, Asus, Xiaomi, Windows Phone, Nokia, And Blackberry. A mobile operating system, also called a mobile OS, is an operating system that is specifically designed to run on mobile devices. There are many variants of OS that run based on their devices such as, iOS, Android, Symbian, Windows Phone, Blackberry OS, Yun OS, etc. Based on the total mobile OS share data for October 2018, Android and iOS still remain the most widely-used mobile operating systems. Android's share of the global mobile market sits at 69.68% as of October 2018. Apple's iOS platform has the next-largest share of the market, but the gap is tremendous. Apple's share of the market to be just 28.88% as of October 2018. *(NetMarketShare, 2018).* Apple App Store was founded in 2008 and has accommodated a variety of applications that includes Free apps, Paid apps, and Freemium apps. Freemium apps can be considered as Free apps with in-app purchases, because it is provided as free of charge apps but required money for additional features.

App Store provide a variety of app categories that best describes its user such as Books, Business, Education, Entertainment, Finance, Food & Drink, Games, Health & Fitness, Lifestyle, Magazines & Newspapers, Medical, Music, Navigation, News, Productivity, Reference, Shopping, Social Networking, Sports, Travel, Utilities, and Weather. Gaming apps are the most popular apps based on availability. Business apps were the second-most popular category, with a share of 9.77 percent of active all apps being business apps, closely followed by the education category. Lifestyle and entertainment complete the top 5 most popular iOS app categories list. Gaming is also an app category with high mobile user engagement - in June 2016, 88 percent of digital gaming time was spent via mobile apps. (*Statista, 2016*).

In this study, the research will focus on paid games whether it was with in-app purchases or without in-app purchases because it turns out there are more people that inclined towards in-app purchases(*Gartner,2018*). A primary reason for this inclination is that, once a customer is satisfied with a product, they are more likely to pay for better features and other facilities in the gaming app. As the games deliver something irresistible to its users, users will not mind choosing the paid games rather than free games.

This research inline with previous research conducted by Chin-Lung Hsu regarding the *"What drives purchase intention for paid mobile apps? – An expectation confirmation model with perceived value"* The purpose of the research is to find out about user intention to purchase paid apps. The study amends the expectation confirmation model and incorporates app rating, free alternatives to paid apps and habit as belief-related constructs to predict user behavior. The proposed model was empirically evaluated using a survey of 507 respondents about their perceptions of app usage. The results indicated that confirmation was positively related to perceived value and satisfaction. Value for money, app rating and free alternatives to paid apps were to found to have a direct impact on intention to purchase paid apps.What will be expected from the results of this study is to find what factors that can dominate consumer considerations in the purchase decision to buy a paid game application in App Stores of iPhone. So that research can be submitted, *"A Factor Analysis Of Consumer Purchase Decision Of Paid Games Application In The App Store Of Iphone"*

1.1   Research Objectives
1 To find out How are the condition of every factor that influence consumer purchase decision tp buy paid games in the App Store
2 To find out what factors that influence consumer purchase decision to buy paid games in App Store
3 To find out what dominant factors that influence consumer purchase decisions to buy paid games in the App Store

2.   LITERATURE REVIEW
2.1   Consumer Behavior
Consumer behavior according to Winardi in Sunyoto (2015) can be formulated as the behavior shown by people in terms of planning, buying and using economic goods and services. while Engel, Blackwell, and Miniard in Sunyoto (2015: 3) interpret consumer behavior as actions directly involved in acquiring, consuming, and consuming products and services, including the process of decisions that precede and follow this action ".

2.2   Factors Affecting Consumer Behavior
Sangadji (2013: 24-26) "Consumer behavior is influenced by psychological factors, situational factors, and social factors."
1. Psychological factors

Psychological factors include perception, motivation, learning, attitude, and personality. Attitudes and trust are psychological factors that influence consumer purchasing decisions. Attitude is a tendency that is learned to react to product offerings in certain situations and conditions consistently. Personality is an individual pattern to respond to stimuli that arise from their environment. Included in the personality are opinions, interests, and initiatives. Learning has an impact on change. Consumers will learn after gaining experience, both their own experiences and those of others.

2. Situational factors

Situational factors include the state of facilities and infrastructure for shopping, shopping time, product use, and conditions at the time of purchase. The state of facilities and infrastructure for shopping includes parking lots, buildings, exterior and interior of shops, air conditioners, lighting, Place of worship and so on.

3. Social factors

Social factors include laws/regulations, family, reference groups, social class, and culture.

a. Before deciding to buy a product, consumers will consider whether the purchase of the product is allowed or not by the rules/laws that apply.

b. The family consists of father, mother, and child.

c. For reference groups, for example, reference groups for mothers (recitation groups, PKK groups, and neighborhood), teenagers, and fathers, for example, big motorbike fans.

d. For social classes in the community, for example upper, middle and lower classes.

e. For culture and sub-culture, for example Sundanese, Javanese, Batak, Madura. Each ethnic / ethnic group has a different culture or sub-culture.

2.4   Consumer Purchase Decision

Purchasing decisions according to Setiadi (2003) in Sangadji (2013: 121) reveal that the core of consumer decision making is the process of integration that combines knowledge to evaluate two or more alternative behaviors and choose one of them.

2.5   Research Framework
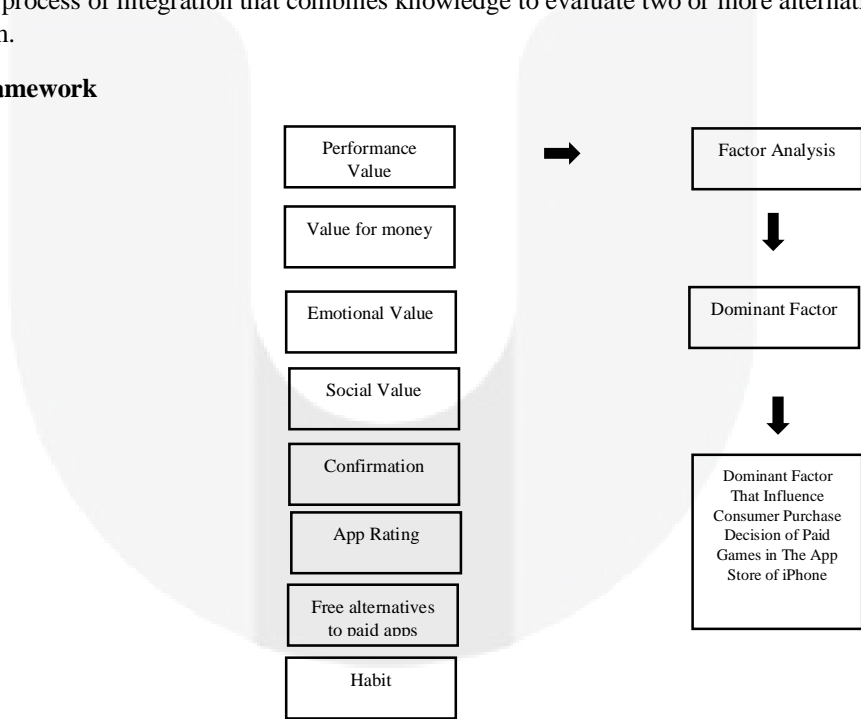
Research Hypothesis

"there is at least 1 dominant factor of the element that have an effect on consumer purchase decision of paid games in App Store of iPhone."

3.   RESEARCH METHODS
3.1   Types of Research

In this study the approach used is an approach using quantitative methods. According to Sugiyono (2013: 13) quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to examine certain populations or samples, sampling techniques are generally done randomly, data collection uses research instruments, quantitative data analysis / statistics with the aim to test the predetermined hypothesis. Based on the variables examined, the purpose of the research used is descriptive. The objective of the descriptive research according to Indrawati (2015: 117) is done when the researcher already knows the factors or variables to measure an object or field but does not yet know the relationship between these factors or variables. The type of this research is causal. According to Indrawati (2015: 117) causal research is research conducted when researchers want to describe the causes of a problem (both carried out through experiments and non-experiments).

3.2   Population

Population is the whole group of people, events, objects that attract researchers to study. The population chosen by researchers to study will be the limitation of the results of the research obtained. This means that research will only apply to the selected population (Indrawati 2015: 164). The population in this study were consumers who had bought a paid games application in App Store of iPhone.

3.3   Sample

Samples are members of the selected population to be involved in the study, both to be observed, treated, and asked for opinions about what is being studied (Indrawati, 2015: 164). Basically, there are two sampling techniques from the population which is, probability sampling and non probability sampling.

3.4   Validity and Reliability Test

The calculation of the validity test for the questionnaire was carried out using Pearson Product Moment while the reliability test used was using Chronbach's Alpha. Both tests were carried out using SPSS version 24 software for Windows. Based on the results of the validity and reliabilitytest, the instruments in the study were valid and reliable.

4.   RESEARCH RESULTS AND DISCUSSION

4.1   Descriptive Analysis

Descriptive analysis provides a general description of the data obtained in this study. Through descriptive analysis, it can be seen the frequency of each answer to the questionnaire distributed to respondents. Descriptive Analysis of Answer Distribution Based on Every Factors is in the good category with an average of 72,9%

4.2   Factor Analysis
4.2.1   KMO and Barlett Test

Table 4.1
KMO and Barlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	,770
Barlett's Test of Sphericity Approx. Chi-Square Df Sig	1133,595 406 ,000

Source: Data Processed by Author, 2018

Based on table 4.1 above, it can be seen that the results of KMO and Barlett Test Sphericity are 0.770 with a significance value of 0,000. These results indicate that the existing variables and samples can be continued because according to the criteria, namely the number 0.851 is already above 0.5 as well as the significance is below 0.05 which is 0,000

4.2.2   Process factoring

Table 4.2 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7,550	26,035	26,035	7,550	26,035	26,035	2,752	9,490	9,490
2	2,215	7,636	33,671	2,215	7,636	33,671	2,721	9,383	18,873
3	1,775	6,122	39,793	1,775	6,122	39,793	2,659	9,170	28,042
4	1,629	5,616	45,409	1,629	5,616	45,409	2,353	8,113	36,155
5	1,603	5,527	50,935	1,603	5,527	50,935	2,241	7,727	43,883
6	1,398	4,820	55,755	1,398	4,820	55,755	2,241	7,726	51,609
7	1,291	4,451	60,206	1,291	4,451	60,206	1,625	5,604	57,213
8	1,165	4,017	64,224						
9	1,045	3,603	67,826						
10	,910	3,139	70,965						
11	,840	2,895	73,860						
12	,758	2,612	76,473						
13	,702	2,419	78,892						
14	,644	2,222	81,114						
15	,621	2,141	83,255						
16	,595	2,053	85,308						
17	,557	1,920	87,228						
18	,522	1,800	89,028						
19	,478	1,647	90,675						
20	,423	1,458	92,133						
21	,370	1,275	93,409						
22	,332	1,144	94,553						
23	,312	1,077	95,629						

It can be seen that from 23 variables included in factor analysis, it only formed 7 factors. This can be seen in table 4.2 where the sequence of numbers in the total from the largest to the smallest is only to 7, the total number factor is still above 1. Meanwhile in the 8 untill 23 factors the total initial eigen values have values below 1.

4.2.3   Grouping Factors

<p align="center">**Table 4.3**
Rotated Component Matrix</p>

	Component								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
item15	,662	-,032	,169	,000	,058	,002	-,126	,314	,184
item7	,590	,055	,298	,168	,191	,234	,084	,114	-,187
item21	,587	,248	-,061	,344	-,046	,040	,317	-,050	,303
item5	,520	,447	,219	,106	,189	,074	-,299	-,035	-,184
Item3	-,132	,731	,162	,310	,284	,021	-,026	,094	,096
Item8	,403	,724	,246	,022	,116	,124	-,030	-,039	-,012
item1	,255	,661	-,013	-,025	,134	,197	-,056	,029	,315
Item2	,016	,513	,185	,151	-,144	,430	,320	,028	,283
item12	,083	,063	,784	-,041	,190	,129	-,070	,171	-,001
item10	,172	,305	,777	,158	,076	-,096	,018	,087	,027
item11	,101	,037	,753	,204	-,014	,238	,155	,012	,112
Item6	,058	,051	-,061	,754	,372	,028	,046	,023	-,014
Item19	,148	,194	,166	,677	-,094	,138	-,112	,059	,106
item4	,197	-,047	,314	,627	,017	,193	-,010	,127	,116
item17	,006	,182	,176	,056	,733	,087	,155	-,052	-,098
item16	,072	,207	-,030	,004	,675	-,062	-,149	,227	,218
item13	,102	-,373	,322	,216	,550	,174	,075	,000	,218
item9	,421	,186	,028	,235	,432	,337	,275	,012	,032
Item14	,371	,254	,173	,360	,372	,077	,324	-,109	,237
item18	,092	,070	,114	-,093	,128	,766	-,067	-,044	,170
item22	,085	,103	,023	,323	-,023	,744	-,004	,165	-,103
item20	,121	,073	,389	,244	,203	,549	,011	,283	-,134
item23	-,036	-,064	,013	-,053	,115	-,019	,837	,101	-,082

From the table 4.3 there are nine new factors that were formed from using SPSS 24. The first factor categorized as purple colour and named customer expectation, The second factor categorized as red colour and named paid games quality, the third factor categorized as pink colour and named social impression, the fourth factor categorized as yellow colour and named affordable price of paid games, the fifth factor categorized as green colour and named paid games ratings, the sixth factor categorized as blue factor and named free alternatives of paid games, the seventh factor categorized as turquoise colour and named communications, the eighth factor categorized as orange

colour and named frequent purchase, and the last factor categorized as dark green colour and named the worth of paid games.

5.   Conclusions

Based on the research conducted with this factor analysis process, the conclusion will answer all the problems that have been formulated previously. The description of the conclusion of this study are as follows:

1. Based on descriptive analysis overall the purchase decision factor on paid games application in the app store is included in the good category with the acquisition of an average value of 72,9%. With the highest score of 84,4% on the paid games i use have good ratings on websites and the lowest score of 59% on i often use paid games to communicate with others. This means that all the factors applied for paid games apps in the app store are already good.

2. There are 8 factors that influenced customer purchase decision on paid games application in appstore : Performance Value, Value for Money, Emotional value, Social value, Confirmation, App Rating, Free alternatives to paid apps, Habit

3. There are 7 new factors that were formed after using factor analysis to find out factors that influenced customer purchase decision of paid games application in the appstore, and the dominant factors is Customer Expectation factors with has the 9,490 score of % of variance

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