JURNAL
REKOMEN
Riset Ekonomi Manajemen

Analysis of the Influence of Factors Affecting Purchase Intention of Premium Items in MOBA-Type Online Games

Andri Ardhiyansyah[a]✉, Favian Firwan Firdaus[b], Bayu Aji Aritejob[c]
[a]Universitas Nusa Putra, [bc]Universitas Gadjah Mada
✉ andri.ardhiyansyah@nusaputra.ac.id

ABSTRACT. Increased mobile gaming revenue can't be separated from the rapid growth of technology, especially on smartphones. The popularity of free-to-play games also supports the increase in mobile gaming revenue. The Mobile Legends and AoV, games with Multiplayer Online Battle Arena type, are popular today, where they can be played on any smart phone anywhere and anytime. One of the main commodities in this game is the premium items. to get the virtual goods players have to exchange some money that can be purchased through google play store or electronics stores. The purpose of this research is to analyze the effect of enjoyment value, character competency value, visual authority value, monetary value, character identification, and the satisfaction of the game against the intention of repurchase. This research uses survey method to collect data. The Sampling method is non- probabilities with purposive sampling approach. The number of samples in this study is 130 respondents, with the criteria playing a Mobile Legends or AoV and make purchases of premium items on the games. Hypothesis testing was analyzed using multiple linier regression. The result of hypothesis testing shows that the six independent variables, namely the value of pleasure, the value of character competence, the value of visual authority, the value of money, the character identification, and the satisfaction of the game have a positive effect on the intention of repurchasing premium items.

Keyword: Character Competency Value, Enjoyment Value, Intention to Repurchase, Satisfaction of the GamE, Visual Authority Value.

INTRODUCTION

The rapid development of technology impacts several sectors, including the telecommunications sector, where today's mobile phones enable people to do various things only through their cell phones. Rapid technological advances also affect the behavior of technology use, especially cell phones. Today's cell phone itself is one of the things that cannot be separated from human hands. Mobile phones are also equipped with an operating system that can run various software or applications that must first be done through application store services such as the google play store on the Android operating system and the App Store application store on the iOS operating system. The function of cell phones, which used only to call and send short messages, is now used as a means of communication and as a medium of entertainment. One of the entertainments that is often used on cell phones today, especially millennials, is gaming. The game industry is now starting to shift from previously dominated by game consoles, such as the Playstation and Xbox, and computer games are slowly starting to move towards mobile games. At this time, we can play the games contained in the mobile phone anytime and anywhere.

Internet support, where the internet has become a basic human need today, makes game developers create games where players can connect by using an internet connection. In addition to the increasingly sophisticated specifications of mobile phones and closer to computers, the development of the internet has also become one of the factors that make the mobile game industry able to compete with computer games and even pass it because of its practicality to be able to play games anywhere and anytime not fixated on one place if you have an internet connection.
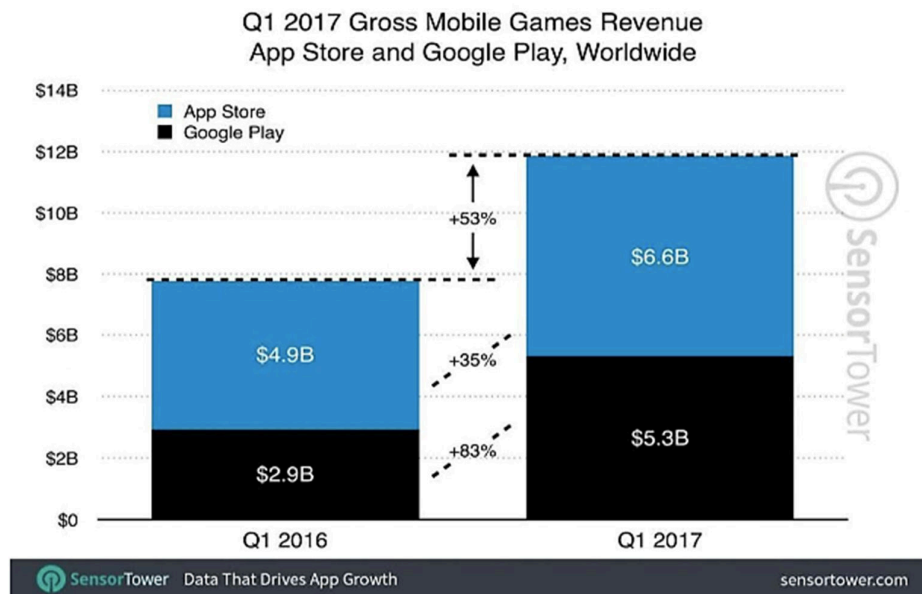

Figure 1: Dunia Games Revenue Growth
Source: World of games, 2017

Mobile Legends is a MOBA (Multiplayer Online Battle Arena) game played by two teams fighting each other, with each team containing five players, and each person can choose their respective hero that can be used in the game. There are six types of heroes in this game with different roles. Namely tank, fighter, mage, support, marksman, and assassin. At the same time, AoV itself is a

similar game that is a competitor to Mobile Legends. There are five types of heroes with different roles: Laner, Midlaner, Offlaner, Observer, and Jungler. The objective of both games is to destroy each other's Towers.

Mobile Legends and AoV are free-to-play (F2P) games downloaded on Google Play for the Android operating system and in the app store on the iOS operating system. This game in Indonesia has become a phenomenon in society, especially among the millennial generation. According to Moonton Indonesia's Country Manager, Fendy Tan, as quoted by kumparan.com, the number of active Mobile Legends users in Indonesia has reached 8 million players and has been downloaded 35 million times. This number continues to grow along with updates that Moonton continuously makes as the developer by presenting new features and new heroes with interesting abilities. Not wanting to be outdone by its competitors, AoV claims to have 80 million active users every day and 100 million active players who have played it.

As a free-to-play game, Mobile Legends has some content that we can get if we pay for it, such as the Premium Starlight Member service, where when we buy the premium service every month, we will get six free heroes, permanent premium skins, weekly prizes, special avatar frames, get an additional 5% battle points every time you play, and can help game developers. This virtual service costs Rp. 149,000 / month. Other content that can be obtained by paying is diamond. The diamond itself is an item that can be used to buy heroes or skins quickly to increase a hero's abilities. By buying new skins, each hero will get additional strength; for example, a hero with a tank role will get an additional 100 HP so that his defense against enemy attacks will be stronger.
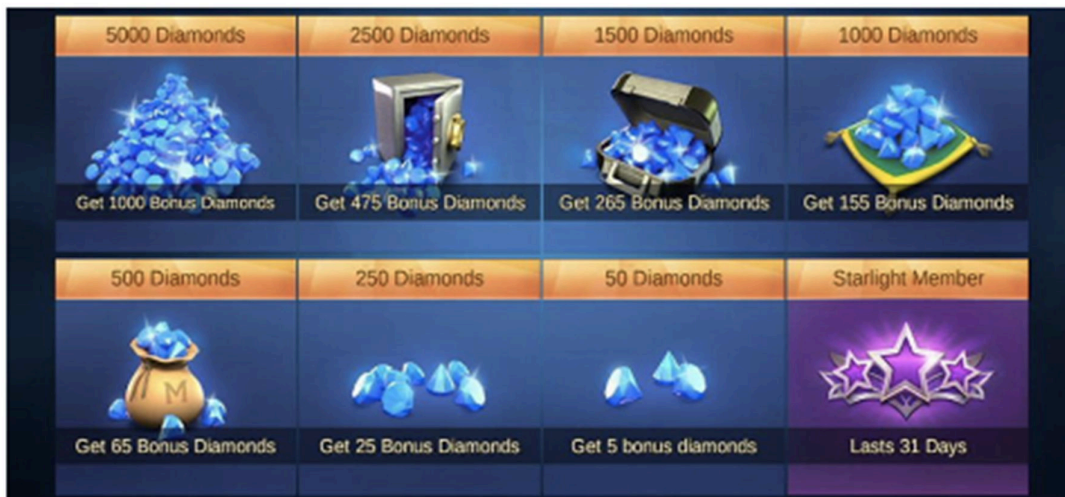

Figure 2: Diamond appearance in the Mobile Legends game

The way to get these virtual goods, players can buy them through the google play store by cutting credit or can buy them in e-commerce such as Tokopedia, Lazada, Codashop, or through a minimart like Indomaret. To get your skin, you need many diamonds that vary from 269 diamonds, 299 diamonds, 599 diamonds, 749 diamonds to 899 diamonds depending on the hero skin. If the Mobile Legends game uses diamonds, then AoV uses vouchers with varying amounts and prices starting from 60 vouchers, 180 vouchers, 236 vouchers, 396 vouchers, 636 vouchers, 1,196 vouchers, 3,596 vouchers, and 5,996 vouchers with prices between Rp. 15,000 up to Rp1,499,000, which can also be obtained via e-commerce or directly through the google play store.

Figure 3: Voucher Display on AoV game

Although the types of free-to-play games are increasingly widespread, not many studies have examined the motivation for purchasing game items or virtual goods in free-to-play types of games. Companies need to know what causes gamers to buy things they cannot touch directly repeatedly. Usually, satisfied customers generally buy/use more products and services. These loyal customers will also recommend their products and services to friends, family, and other acquaintances. Therefore, there is a need to investigate the purchasing behavior (regarding game items) of free-to-play game users.

METHODS

This study uses a quantitative approach in which data analysis is carried out after a survey is conducted to respondents and then tabulated into numerical data. The survey method is a measurement process used to gather information during a highly structure interview with the interviewer directly or without the interviewer (Cooper and Schindler, 2014: 218). The survey method used in this quantitative approach is to test the developed hypotheses and the relationship between the variables forming the model. This study was designed to test six variables: fun value, character competency value, visual authority value, money value, character identification, and satisfaction with the game on consumer repurchase intentions. This study uses primary data using a survey method. The objects in this study are the Mobile Legends and AoV mobile games. This object was chosen because it is currently a popular game for Indonesians, not limited to age and gender, and is a popular game on smartphones. This study's model was empirically tested through a survey distributed online using social media, with the object of research being consumers who buy diamonds in the Mobile Legends game and vouchers in the AoV game.

The samples chosen in this study were Mobile Legends mobile game players who had purchased diamond items and AoV players who had purchased voucher items and were domiciled in the Special Region of Yogyakarta.

In determining the sample unit, there are several criteria used in the study, namely:
1. Are or have played the mobile game Mobile Legends or AoV
2. Consumers who have purchased diamonds in the Mobile Legends mobile game or vouchers in the AoV game.

This study uses a questionnaire as a primary data source by easily distributing it online to access the questionnaire. Making the questionnaire using the help of Google Docs. To simplify research and save research time. The following are the steps for taking and collecting polymer data, including:
1. Prepare a questionnaire connected to the respondent by using the Google docs facility.
2. Distributing questionnaires connected to respondents through various social media such as Whatsapp, E-mail, Line, Facebook, Twitter.
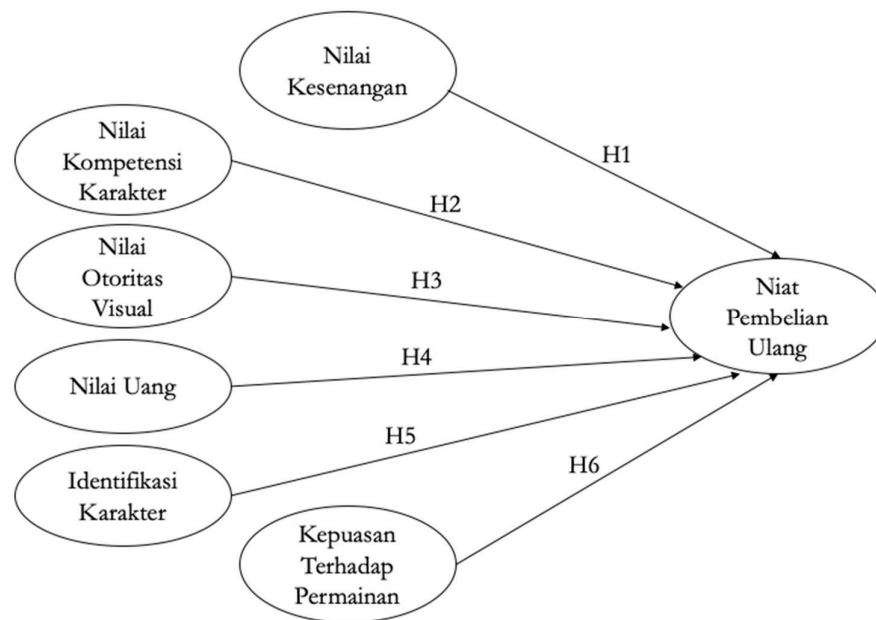
Information:

This model is a replication adopted from the research of Park and Lee (2011) in South Korea entitled "Exploring the Value of Purchasing Online Game Items."

RESULT AND DISCUSSION

This study aims to confirm whether this study supports or does not support previous studies' results and analyzes whether the character competency value, visual authority value, money value, character rating and game satisfaction affect re-purchase intentions. This study used a sample of 130 respondents domiciled in Yogyakarta. Respondents have played Mobile Legends or AoV games played on cell phones and have purchased diamond items or premium vouchers in this study. This research was collected using a questionnaire developed by the researcher. Before conducting an in-depth analysis, researchers need to ensure the feasibility and changes in obtaining data through validity and reliability tests.

Descriptive category of Respondents based on gender

The first respondent category is gender. Descriptions of respondents based on gender can be seen in Table 1.

Table 1. Respondents based on gender

Sex	Total	Percentage (%)
Man	94	72,31
Woman	36	27,69
Total	130	100

Source: Primary data processed, 2018

Table 1 shows that most of the respondents or 94 people (72.31%) were male respondents with female gender and 36 people (27.69%).

Descriptive Characteristics of Respondents by Age

The age characteristics obtained in this study are diverse. Descriptions of the elements of respondents by age can be seen in Table 2.

Table 2. Characteristics of Respondents by Age

Age	Frequency	Percentage (%)
≤ 20 tahun	20	15,38
21-25 tahun	74	56,92
26-30 tahun	32	24,62
≥ 31 tahun	4	3,08
Total	130	100

Source: Primary data processed, 2018

Table 2 shows that most respondents or as many as 74 people (56.92%) were between 21-25 years old. Followed by respondents with ages between 26-30 years as many as 32 people (24.62%), respondents with ages ≤ 20 years (15.38%), and respondents with ages ≥ 31 years as many as four people (3.08%). Thus, it can be concluded that the respondents who played and had bought premium items were mainly 21-25 years old.

Descriptive Characteristics of Respondents by Occupation

Other respondent characteristics obtained in this study are the type of work status. The respondents' occupational group in this study were students, entrepreneurs, civil servants, private employees, and others. Descriptions of respondent characteristics based on job status can be seen in Table 3.

Table 3. Characteristics of Respondents by Occupation

Job status	Frequency	Percentage (%)
Student / Student	84	64,62
Private employees	23	17,69
Government employees	2	1,54
Entrepreneur	21	16,15
Others	0	0
Total	130	100

Source: Primary data processed, 2018

Table 3 shows that most of the respondents based on work as students, namely as many as 84 people or 64.62%. Respondents who work as private employees are 23 people or 17.69%. Twenty-one respondents worked as entrepreneurs or 16.15%. Respondents who work as civil servants are two people or 1.54%.

Descriptive Characteristics of Respondents Based on Income / Allowance per Month
Descriptions of respondent characteristics based on monthly income or monthly allowance can be seen in Table 4.

Table 4. Characteristics of Respondents Based on Income per Month

Income per Month	Frequency	Percentage (%)
≤Rp.1.000.000	0	0
Rp.1.000.001 sampai dengan Rp.1.500.000	7	5,38
Rp.1.500.001 sampai dengan Rp.2.000.000	13	10
Rp.2.000.001 sampai dengan Rp.2.500.000	43	33,08
Rp.2.500.001	67	51,54
Total	130	100

Source: Primary data processed, 2018

Table 4 shows that most of the respondents earned an income of more than Rp. 2,500,001, as many as 67 people or 51,254%. Respondents with income of Rp. 2,000,001 to Rp. 2,500,000 were 43 people or 33.08%. Respondents with an income of Rp. 1,500,001 to Rp. 2,000,000 were 13 people or as much as 10.00%. Respondents with income of Rp. 1,000,001 to Rp. 1,500,000 were 7 people or 5.38%, while respondents with an income of Rp. 1,000,000 were 0 people or 0.00%.

Descriptive Characteristics of Respondents Based on Last Formal Education
The characteristics of the next respondent are based on the last formal education. Descriptions of the features of respondents based on the latest formal education can be seen in table 5.

Table 5: Characteristics of Respondents Based on Last Formal Education

Last Formal Education	Frequency	Percentage (%)
SMP/sederajat	0	0
SMA /sederajat	38	29,23
D1/D3	7	5,38
Sarjana (S1)	73	56,15
S2	12	9,23
Lainnya	0	0
Total	250	100

Source: Primary data processed, 2018

Table 5 shows that most respondents in this study had the latest undergraduate education (S1), as many as 73 people or 56.15%. Respondents followed them with a high school education level of 38 people or 29.23%. Respondents with an S2 education level were 12 people or 9.23%, and a D1 / D3 education level was 7 people or 5.38%.

Validity Test
The validity test in this study used CFA (Confirmatory Factor Analysis), which was analyzed using SPSS for Windows version 23. This CFA test looked at the KMO-MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value and the result of the varimax factor rotation. The number of respondents obtained was 130 people who all fit the criteria. The CFA test needs to pay attention to the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test values. After that, pay attention to the Rotated Component Matrix Table factor loading value if both KMO values> 0.5.

Table 6: Value of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0,821
Bartlett's Test of Sphericity	Sig.	0,000

Source: Primary data processed, 2018

Reliability Test

This study's reliability test used Cronbach's Alpha analysis, which was analyzed using SPSS for windows version 23 software. The reliability test in this study will see the resulting Cronbach Alpha value. The desired Cronbach Alpha value in this study must have a value above 0.7 (Latan, 2014: 90).

Table 7: Reliability Test Results

Variable	Cronbach Alpha Value	Number of Items
Value of Fun	0,806	3
Character Competency Value	0,777	3
Visual Authority Value	0,795	4
Money value	0,576	3
Character Identification	0,802	4
Satisfaction with the Game	0,821	4
	0,821	4

Source: Primary data processed, 2018

The reliability test results on the fun value variable have a Cronbach's Alphas value of 0.806. This value is greater than the desired Cronbach's Alpha value so that the fun value variable can be said to be reliable. The variable character competency value has a Cronbach's Alpha value of 0.777. This value is greater than the desired Cronbach's Alpha value so that the character competency value variable can be said to be reliable. The visual authority value variable has a Cronbach's Alpha value of 0.795; this value is greater than the desired Cronbach's Alpha value. The variable visible authority value can be said to be reliable. The money value variable has a Cronbach's Alpha value of 0.830; this value is greater than the desired Cronbach's Alpha value. The money value variable can be said to be reliable. The character identification variable has a Cronbach's Alpha value of 0.802; this value is greater than the desired Cronbach's Alpha value. The character identification variable can be said to be reliable. The satisfaction variable with the game has a Cronbach's Alpha value of 0.821. This value is greater than the desired Cronbach's Alpha value so that the satisfaction variable with the game can be said to be reliable. The repurchase intention variable has a Cronbach's Alpha value of 0.821. This value is greater than the desired Cronbach's Alpha value so that the repurchase intention variable can be said to be reliable.

Results of Data Analysis

Analysis of the data used to test this study's hypotheses, namely, to test the effect of fun value, character competency value, visual authority value, money value, character identification, and game satisfaction on repurchase intentions. The hypothesis in this study was tested using multiple linear regression analysis and simple linear regression analysis. The results of multiple linear regression analysis can be seen in Table 10.

Table 10. Multiple Linear Regression Test Results

Variable	The coefficient is not standardized		Standardized coefficient	t	Sig.
	B	Std Error	Beta		
Constant	6,532	1,307		4,996	0
Value of Fun	0,427	0,098	0,402	4,373	0
Character Competency Value	0,191	0,075	0,243	2,999	0,003
Visual Authority Value	0,34	0,069	0,408	4,637	0

Money value	0,272	0,075	0,341	3,641	0
Character Identification	0,258	0,094	0,187	2,359	0,002
Satisfaction with the Game	0,232	0,44	0,166	2,737	0,007

Dependent variable: intention to repurchase premium items

Adjusted R Square = 0,295

F = 10,016

Sig. = 0,000

Based on Table 10, all variables have positive standardized coefficient values. This shows that the variables of fun value, character competency value, visual authority value, money value, character identification, and satisfaction with the game positively influence repurchase intention. The statistical F value calculated in Table 4.12 is 10.016 with a value of $\alpha = 0.05$, and a significance value shows a value below 0.05. This value indicates that the independent variables simultaneously significantly affect the dependent variable, namely repurchase intention.

The Adjusted-R Square value in multiple linear regression analysis has a value of 0.295. This value shows the repurchase intention variable, which can be explained by the independent variables, namely the importance of fun, the value of character competence, the value of visual authority, the value of money, character identification, and satisfaction with the game is 29.5%. The regression coefficient value of visible authority's importance has the highest value of 0.408, meaning that visual management has the most decisive influence on repurchase intention compared to other variables.

Based on the hypothesis testing results that have been done, these tests' products can be summarized in Table 11.

Table 11. Summary of Hypothesis Testing Results

H	Variable	Keterangan
H1	Pleasure value has a positive effect on repurchase intentions	Supported
H2	Character competency values have a positive effect on repurchase intentions.	Supported
H3	The value of Visual Authority has a positive effect on repurchase intentions	Supported
H4	Character competency values have a positive effect on repurchase intentions.	Supported
H5	Character identification has a positive effect on re-purchase intentions	Supported
H6	Value for money has a positive effect on repurchase intentions	Supported

Source: Primary data processed, 2018

CONCLUSION

Based on the results of research and discussion, it can be concluded that the value of fun, character competency value, visual authority value, money value, character identification, and satisfaction with the game are proven to have a positive and significant effect on repurchase intention. Based on this research, the variable visual authority value becomes the variable with the most considerable influence than other variables because it has the highest significance value.

Based on the results of research and discussion, it can be concluded that the research conducted on the Mobile Legends and AoV games in Yogyakarta regarding the influence of fun value, character competency value, visual authority value, money value, character identification, and satisfaction with the game on intention to repurchase premium items diamond supports previous research conducted by Park and Lee (2011) in South Korea. The results of this study can explain that players who have previously purchased premium items will intend to make repeat purchases when they are satisfied with the game.

References

Ambarsari, Ningrum. (2013). *Multi Sided Business Model pada Layanan Online Games*. Thesis. Tidak Diterbitkan. Magister Manajemen. Univeristas Gajahmada: Yogyakarta.

Bastian. (2015). *Pengaruh Kompetensi Karakter, Nilai Virtual Item dan Kepuasan Game Terhadap Intensi Pembelian Virtual Item Dalam Game Online Dota 2*. Skripsi. Tidak Diterbitkan. Fakultas Ekonomi. Universitas Negeri Yogyakarta: Yogyakarta.

Cooper, D.R. and Schindler, D.S. (2014). *Business Research Methods*, 12 ed. New York: McGraw-Hill Education.

Engel. F dan Roger D. Blackwell. (1995). *Perilaku Konsumen*. Buku Satu, Edisi Keenam. Jakarta: Binarupa Aksara

Ghozali, Imam. (2012). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 20*. Semarang: Universitas Diponegoro.

Hair, J.F; Black, W; Babin, B; Anderson, R; and Tatham, R. (2010). *Multivariate Data Analysis*, 7th ed. Upper Saddle River, New Jersey: Pearson Prentice Hall

Kotler, P. and Keller, K.L. (2016). *Marketing Management,* 15th ed." Upper Saddle River, New Jersey: Pearson Education.

Schiffman dan Kanuk. (2010). *Perilaku Konsumen*. Jakarta: PT. INDEK. Schiffman, Leon G., and Leslie, Lazar Kanuk. (2004). *Consumer Behavior*, 5th Edition. Prentice Hall & Co, New Jersey.

Sekaran, U. and Bougie, R. (2010). *Research Methods for Business, A Skill Building Approach,* 5th ed, Chichester, WS: John Wiley and Sons, Ltd

Bodet, G. (2008). Customer satisfaction and loyalty in service: Two concepts, four constructs, several relationships. *Journal of Retailing and Consumer Services*, 15(3), 156–162

Chen, Y.-C., Shang, R.-A., & Lin, A.-K. (2008). The intention to download music files in a P2P environment: Consumption value, fashion, and ethical decision perspectives. Electronic Commerce Research and Applications, 7(4), 411–422.

Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication & Society*, 4(3), 245–264

Guo, Y., & Barnes, S. (2009). Virtual item purchase behavior in virtual worlds: An exploratory investigation. *Electronic Commerce Research*, 9, 77–96.

Hefner, D., Klimmt, C., & Vorderer, P. (2007). Identification with the player character as determinant of video *game* enjoyment. In L. Ma, R. Nakatsu, & M. Rauterberg (Eds.). ICEC 2007. LNCS (Vol. 4740, pp. 39–48). Heidelberg: Springer.

Ho, P.-I. (2014). Candlemas: The Value of Being Powerful or Beautiful in Games - How Game Design Affects the Value of Virtual Items. *The Computer Games Journal.*

Hoffner, C. & Buchanan, M. (2005). Young adults' wishful identification with television characters: The role of perceived similarity and character attributes. *Media Psychology*, 7, 325-351.

Hsu, F. -M., & Chen, T. -Y. (2007). Understanding information systems usage behavior in E-Government: The role of context and perceived value. *In Proceedings of 11th Pacific–Asia conference on information Systems (pp. 477–490).*

Lee, Y., Kim, J., Lee, I., & Kim, H. (2002). A cross-cultural study on the value structure of mobile Internet usage: Comparison between Korea and Japan. *Journal of Electronic Commerce*, 3(4), 227–239.

Lehdonvirta, V. (2009). Virtual Item Sales as a Revenue Model: Identifying Attributes that Drive Purchase Decisions. *Electronic Commerce Research, 9, 97–113.*

Lin, H., & Sun, C.- T. (2007). Cash trade within the magic circle: Free-to-play *game* challenges and massively multiplayer *online game* player responses. *In Proceedings of DiGRA 2007: Situated Play (pp. 335–343).*

Live *Game*r. (2009). Virtual item monetization: A powerful revenue opportunity for *online game* publishers and virtual world operators.

Macintosh, G., & Lockshin, L. S. (1997). Retail relationships and store loyalty: A multilevel perspective. *International Journal of Research in Marketing*, 14(5), 487–497.

Oliver, R. L. (1999). Whence consumer loyalty. *Journal of Marketing*, 63, 33–44.

Park, B.-W. dan Lee, K. C. (2011). Computers in Human Behavior: Exploring the value of purchasing *online game item*s. 2178-2185.

Ping, R. A. (1993). The effects of satisfaction and structural constraints on retailer exiting, voice, loyalty, opportunism, and neglect. *Journal of Retailing*, 69(3), 320–352.

Sheth, J., Newman, B., & Gross, B. (1991). Consumption values and market choice. Cincinnati, OH: South-Western Publishing.

Turel, O., Serenko, A., & Bontis, N. (2010). User Acceptance of Hedonic Digital Artifacts: A Theory of Consumption Values Perspective. *Information & Management, 47(1), 53–59.*

Whang, L. S. -M., & Kim, J. Y. (2005). The comparison of *online game* experiences by players in *game*s of Lineage & EverQuest: Role play vs. Consumption. In Proceeding