ONLINE GAME LOYALTY BASED ON GRATIFICATION AND EXPERIENTIAL MOTIVES NEEDS

A THESIS

Presented as Partial Fulfillment of the Requirements to Obtain Bachelor Degree in Management Department

By:

DANISWARA ADI PRAWIRA

Student Number: 10311398

DEPARTMENT OF MANAGEMENT

INTERNATIONAL PROGRAM

FACULTY OF ECONOMICS

UNIVERSITAS ISLAM INDONESIA

YOGYAKARTA

2015

ONLINE GAME LOYALTY BASED ON GRATIFICATION AND EXPERIENTIAL MOTIVES NEEDS

Written by

DANISWARA ADI PRAWIRA

Student Number: 10311398

Approved by

Content Advisor,

Anas Hidayat Drs.,M.B.A., Ph.D. September,16th 2015

Language Advisor,

Cihtra Orisinilandari, SS.,MA. September,16th 2015

ONLINE GAME LOYALTY BASED ON GRATIFICATION AND EXPERIENTIAL MOTIVES NEEDS

A BACHELOR DEGREE THESIS

By

DANISWARA ADI PRAWIRA
Student Number: 10311398

Defended before the Board of Examiners
On, March 2015
and Declared Acceptable

Board of Examiners

Examiner 1:

Yasid Drs., M.M. .....

Examiner 2:

Anas Hidayat Drs., M.B.A., Ph.D .....

Yogyakarta, March 2015
International Program Faculty of Economics
Islamic University of Indonesia
Dean

Dr. D. Agus Harjito, M.Si

DECLARATION OF AUTHENTICITY

Herein I declare the originality of the thesis; I have **not** presented anyone else's work to obtain my university degree, nor I have **present** anyone else's words, ideas or expressions without acknowledgments. All quotations are cited and listed in the bibliography of the thesis.

If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, April 1, 2015

Daniswara Adi Prawira

ACKNOWLEDGMENT

Alhamdulillahi rabbil,,alamin. All praise to Allah SWT for guiding and blessing hence this thesis could be finished, and for giving me abundance of endowment in my life. I would recite Shalawat and Salam to Muhammad SAW, the messenger for all people. Finally, I could finish my thesis entitled "**Online Game Loyalty Based on Gratification and Experiential Motives Needs**". I realize that this thesis would not have been possible without the persistent help, trust, and support of those people surrounding me. In this occasion, I would like to say thank you for:

1. My beloved family, the most precious treasure in my life who always supports me in every aspect of my life so that I can finish my thesis. My parents, Drh. Syamsu M.M. and Eti Syamsu, for which I truly believe I was blessed with the greatest parents on earth. They overcame many challenges and obstacles in raising 3 children, and have sacrificed so much. Thank you for all that you have given to me, for which I cannot even possibly list one by one. My two lovely brothers, Donny Rizky Septian and Denny Dwipan Oktavian, thank you for all the motivation and encouragement. I am so grateful that I have my family in my life. I will never take for granted how greatly I have been blessed.

finish my thesis. Thank you for every helpful critic, advice and support. May Allah always be with you and give you His blessings.

3. Cithra Orisinilandari, SS., MA., as my language advisor who always help me correcting my awful grammar. Thank you for every recommendation and advice that you gave to me.
4. Anas Hidayat Drs.,M.B.A., Ph.D., as the director of IPFE UII.
5. My best friends, my blood bound mates, my brothers and sisters from another mother: Marcel, Ecko, Rian, Alimah, Amri, Pakde, Abe. Thank you for all the happiness, support, laughter and pain that we experienced.
6. My DOTA 2 TEAM "Zero without Dying": Steve, Seceng, Vinton, Dodo and also my friend who has been sharing playing this game together, Marbun, Aris, Bayem, Ejak and Gideon.
7. My IP Management 2010 classmates. Thank you for being a good friend during the four years we had spent together. and all marketing students; my best panic mate, Vika Matin. Marketing friends, Wulan, Netra, Ipul, Mega, Guruh, Burhan,, Mas Dony.

I hope this research will be helpful to give inspiration or improvement in our society in the future.

Wassalamualaikum Wr. Wb.

Yogyakarta, April 1, 2015

Daniswara Adi Prawira

Abstract

Daniswara Adi Prawira (2014). Online Game Loyalty Based on Gratification and Experiential Motives Needs.

Online gaming is a play forum for teenagers favored by adolescents, meanwhile online games have various types of games starting from strategy game, adventure and musical which make attraction for everyone who plays online game. The online game also provides features an online community features that gamers are coming together and become place of information for online gamers to form a network among fellow social online game players. This research is aimed to gain an integrated model that examines the relationship between two elements of gratification theory (entertainment and sociality), and flow theory (challenge, control, interactivity) also customer satisfaction with the customer loyalty as its consequence

This research was conducted in Indonesia, which took young people as the research object. The data was collected by using questionnaires enclosed with the statement based on the likert scale. The respondents were university students who stay in the area of Yogyakarta with 200 respondents. The testing of the hypothesis in this study adopted structural equation model (SEM) designed to simultaneously examine the structural relationship among the proposed construct.

The research found that gratification theory (entertainment and sociality) and flow theory (challenge, control, interactivity) have positive influences on customer loyalty toward online gaming. It was found that customer satisfaction has a significant influence on the customer loyalty. Therefore, the customer satisfaction is a significant predictor of customer loyalty.

Keywords: Online Gaming, Gratification Theory, Flow Theory, Computer Games, Customer Satisfaction, Customer Loyalty.

Abstrak

Daniswara Adi Prawira (2014). Kesetian Permainan Online Berdasarkan Kebutuhan Kepuasan dan Pengalaman Motif Kebutuhan.

Game online merupakan suatu wadah bermain bagi remaja yang sangat di gemari remaja, dimana game online tersebut terdapat berbagai macam jenis permainan yang mulai dari game strategi, pertualangan dan musical sehingga menimbulkan daya tarik bagi setiap orang yang memainkan game online tersebut. Game online tersebut juga menyediakan fitur fitur komunitas online yang disana terdapat para pemain game yang saling berkumpul dan menjadi sarana informasi bagi para pemain game online sehingga membentuk jaringan sosial antar sesama pemain game online. Penelitian ini bertujuan sebagai kesatuan model yang menguji hubungan antar dua elemen dari teori kepuasan (hiburan dan sosialitas), teori aliran(tantangan, kontrol dan interaktivitas) juga kepuasan pelanggan dengan loyalitas pelanggan sebagai konsekuensinya.

Responden penelitian ini adalah mahasiswa yang berada di area Yogyakarta dengan total 200 responden. Uji hipotesis dalam penelitian ini menggunakan SEM yang menguji hubungan struktural antar variabel.

Hasil penelitian menemukan bahwa teori kepuasan (hiburan dan sosialitas) dan teori aliran (tantangan, control, interaktivitas) memiliki pengaruh positif pada loyalties pelanggan terhadap permainan online. Penelitian ini menunjukkan bahwa kepuasan pelanggan memiliki pengaruh yang signifikan terhadap loyalitas pelanggan. Oleh karena itu, kepuasan pelanggan merupakan factor penentu dari loyalties pelanggan.

Kata kunci: Permainan Online, Teori Kepuasan, Teori Aliran, Permainan Komputer, Kepuasan Pelanggan, Loyalitas Pelanggan.

CHAPTER 1

INTRODUCTION

1.1. Background of the study

In the era of technology, understanding economics is vital to improving quality of life. People can feel the effects of a global recession, but only by grasping the principles behind it can they see the changes that must be made to solve it. When people truly understand the reason why things cost what they do and how a seemingly minor thing, such as gas prices, can affect every facet of their lives, they can begin making decisions that will contribute to the overall financial health of the nation. Global economy is characterized by very fast changes and high uncertainty. The development of business and technology has led the business doers of the business world into tight competition. The tight competition is indicated by various marketing strategies being used to get as many consumers as possible. Therefore, our marketing activity must make them feel satisfied with our goods and services that we provide. As various Internet-based applications spread into human society on a broad scale, they create numerous business opportunities and enrich everyday consumer activities. One of the most prevalent online activities is gaming. According to the survey by DFC Intelligence in 2010, the total revenue of worldwide online game market for the PC is predicted to soar to more than US$20 billion in 2015 (Lan & Ying, 2011).

Many factors could influence people not leave their old products and switch to the other products because of their loyalty of good products itself. For example, most people like to play games and they feel they can find a new world that they cannot meet in the reality. They will enjoy one particular game to increase their loyalty to play that game till end. “Gaming is undoubtedly a highly profitable online industry that warrants research on the exploration of its acceptance factors. In effect, many types of online games exist, usually characterized by anonymity, media richness, real-time interaction, and lack of boundary” (Lan & Ying, 2011). Like cinema, computer games have as many different genre categories as they do audience groups. Unlike cinema, many of them are known by their tongue-twisting acronyms. Based on Australian Centre for The Moving Image (n.d) here are some of the most notable type of games that popular nowadays:

1. Advertise games

   Games Developed for advertising purposes.

2. Adventure

   Adventure games involve exploration of, and interaction with, the environment as a main facet of gameplay. Story and puzzle solving are also highlighted and interaction is usually driven by point and click. Fighting plays a minor role. Adventure games include Zork and Myst.

3. Classic Arcade

   Classic arcade games refer to games that originally existed on freestanding coin-operated machines. Classic arcade games include Pong and Space Invaders

4. Fighting

   Fighting games involves rendering opponents unconscious or dead by using a number of different moves. Gameplay tactics are limited to selecting the most appropriate move in a situation. Fighting games include Tekken 3 and Street Fighter.

5. First Person Shooters (or FPS): are games in which the player has the first-person perspective of their character. FPS shooters include Doom and Quake, and the most popular fps game in the world is Counter- Strike.

6. First Person Sneaker: This is a sub-genre of First Person Shooter, where the focus is on stealth rather than combat or shooting.

7. MMORPG: 'Massively Multiplayer Online Role Playing Games' are multi-player role-playing games that enable thousands of players to play in an evolving virtual online world at the same time. MMORPGs include Diablo and WarCraft.

8. RPG: 'Role Playing Games' are games in which the player's character has skills and abilities represented by statistics. Gameplay involves the characters exploring and completing quests that build up their statistics

and possessions. It can be single or multi-player. RPGs include Everquest and Ultima.

9. Multiplayer online battle arena (MOBA), also known as action real-time strategy (ARTS), is a sub-genre of the real-time strategy (RTS) genre of video games, in which often two teams of players compete with each other in discrete games, with each player controlling a single character through an RTS-style interface. MOBA include the world most popular game defense of the ancients (DotA). Since its original release, DotA has become a feature at several worldwide tournaments, including Blizzard Entertainment's BlizzCon and the Asian World Cyber Games, as well as the Cyberathlete Amateur and CyberEvolution leagues; in a 2008 article of video game industry website Gamasutra, the article's author claimed that "DotA is likely the most popular and most-discussed free, non-supported game mod in the world".
10. Strategy Games: Strategy games require the player to take on a leadership role and oversee every detail of the provided scenario(s). Gameplay focuses on strategies and careful planning and resource management in order to win. Strategy games include Age of Mythology.

Customer will be loyal to several games because they feel satisfied with the quality of that game, and this could be influenced by their environment. For

example, a person who originally does not like to play game, he or she could be influenced by his or her friend who likes playing game every day and then finally he or she will like playing games too. “Particularly, massively multiplayer online role- playing games (MMORPG) attract a growing number of participants as MMORPGs, it permits individuals to interact with each other concurrently within a science fiction world full of genre- based fantasy” (Lan & Ying, 2011). Popular MMORPGs include Prius online, World of Warcraft, Lineage, and many others make the people who play this game enjoy their virtual worlds.

The producer of online game compete each other to attract the consumers to get their loyal customers, usually every customer has different behavior to adapt with the quality of the games from the magazine and the review of television program about games rating. A recent survey of Internet entertainment behaviors in Taiwan revealed that online games are the most popular entertainment applications on the Internet in terms of the number of people participating, their willingness to pay, and their intention to use these applications in the future (Liu & Chou, 2008).

This research tries to investigate the factors that influence online game loyalty based on gratification and experiential motives in Yogyakarta. The construct of experiential value, such as aesthetics, entertainment, visual appeal, escapism, interaction, service excellence, and consumers return on investment, have all been identified as important factors in internet shopping behavior. “Since the internet

shopping environment is similar to that online gaming, it may be that similar causal relationships exist between experiential value and satisfaction with regard to online gaming" (Kwei & Ming, 2007).

1.2. Problem Statement

Every business tries to get bigger profit, including online game business. One of the ways is by building lasting relationships with their customers because the best foundation for growth and profitability is to have a substantial base of loyal customers.

Playing online game nowadays has become a global phenomenon, many people like to playing games starting from young, adolescents, even though the old one. Through online games, people can get new friends, share ideas, and even sell or trade their items or products without paying some amount of money. In Indonesia there are several games that have their own characteristic and provide some value added for the costumer to choose. As in the case with any research efforts, the limitations may occur during the data collection. Although the results help enrich the current understanding of determinants of online game loyalty, certain limitations are of note. First, and perhaps the major limitation of the study is the breadth of our sample. Based on Insafe online gaming in context (n.d) some of the key issues relating to online gaming are outlined below:

1. **Age appropriateness**

One of the key concerns with games – whether online or indeed video based – is the age appropriateness of the content. Many games are given age ratings, and these are there for a reason.

2. **Online interactions**

It should also be noted that as many games feature aspects of player interaction, some if not all of the risks associated with regular chat-based services may also apply. And, due to the truly global nature of games, young gamers might encounter those with different values and cultures to themselves. Key risks include inappropriate content and language, conduct and contact, and increased risk of cyber bullying. Our additional articles on chat-based services and cyber bullying provide further information on these issues.

3. **Revealing too much personal information**

As with any online interaction, children and young people should understand that they should keep their personal information private. They should ideally play using a nickname and avatar rather than their real name or photograph, keep their passwords

secure, and seek help from a trusted adult if they feel that their personal information may have been compromised in any way.

4. Addictive tendencies

There are concerns that online gaming may have addictive tendencies, with players being distracted from regular every-day activities to attend to the crops in their virtual farm or to progress to the next level in their favourite MMORPG.

5. Impact on behaviour, health and welfare

A further concern is the impact on behaviour, health and welfare that online gaming may have. Negative aspects typically associated with gaming include the length of time spent online, disturbed sleep patterns, and the associated impact on offline activities and relationships.

Various researches have tried to establish the link between playing games and violent behaviour. Despite some media reports to the contrary, no scientifically valid causal link has yet been established. Instead, it is likely that other social factors have much more of an influence on an individual's actions.

Gaming does however, trigger a release of adrenaline, and this small level of hormone increase may also cause a small, short-term behavioural change. Therefore,

it is important that gamers have offline time too, to give themselves time to ‘wind down’ from a gaming session before bedtime, for example, regular sleep patterns may be disturbed. Additionally, gaming is a somewhat static activity. Gamers should therefore take regular breaks, move around, and make sure they eat and drink regularly, and balance their gaming activities with physical activities in the real world.

It is not all negative, however. Some people may find it difficult to establish regular social relationships in their own (real) communities, and for them, the online networks associated with gaming may actually help to boost their confidence and self-esteem. As with everything in life, however, there should be balance, and online interactions that are not substitute for regular real-life interactions. Based on the background of study above, the basic problems that could be stated here is the online game loyalty based on gratification and experiential motive needs at Yogyakarta.

1.3. Research Questions

Based on the defined problems above, this research study will focus on how the gratifications and online flow experience factors influence the consumer loyalty toward online game and thus the relationship of the satisfaction and customer loyalty. Therefore, the problems can be formulated into the following questions:

1. Does gratifications have positive impact to consumer loyalty toward online game?

2. Does online flow experience have positive impact to consumer loyalty toward online game?

3. Does customer satisfaction significantly affect consumer loyalty toward online game?

By identifying the answers to those questions, the online game vendors are able to understand why the consumers become loyal to play online game or satisfied regardless of the online game contents. The producers and marketers could then come up with ways or different strategies in engaging the consumers to become loyal toward online game context.

1.4. Research Objective

This paper analyzes the online game loyalty based on gratification and experiential motive needs. This study replicates the study conducted by Lan-Ying and Ying-Jiun (2011). In that study, customer loyalty toward online game is affected by two variables which are U&G theory (gratifications) and Flow theory (online experience).

Therefore, here are the research objectives to be conducted:

1. To examine the relationship between gratifications factor and consumer loyalty toward online game context.
2. To examine the relationship between online flow experience factor and consumer loyalty toward online game context.

3. To investigate the relationship between satisfaction to the consumer loyalty toward online game context.

1.5. Research Contribution

This study is conducted based on past research of Lan and Ying (2011). The research was done in a different country with different setting such as different behavior and different culture of customers. This study contributes in enabling others to understand the attitudes of customers in Indonesia. The writer would like to contribute the study for both theoretical use and practical use. Those benefits may be useful for the following parties:

a. The researchers

   The result of this study can be used to measure the impact of factors influencing customer loyalty toward online game in order to have better understanding about how come people become loyal to online games that are provided by online game vendors, and to be able to apply the knowledge in the real business field. Furthermore, this study can be used as additional information that can be further analyzed and compared to other findings or study conducted in different area.

b. The marketing and gaming practitioners

The findings can be beneficial to the manufacturers and marketers of branded game products in understanding the consumers' behavior toward online game.

c. Others

The result of this thesis may contribute to a literature work to expand the study of marketing strategy. It is also may be used as a reference to conduct further research and the outcome of this study can be used as reference and knowledge educational institution.

CHAPTER 2

REVIEW OF LITERATURE

The previous chapter has highlighted the importance of this study. This chapter will cover previous literatures of each topic area. Literature reviews are secondary sources obtained from published work such as journals, books, master's thesis, conference proceedings, and other reports, which is vital in supporting the derivation of hypothesis.

2.1. Introduction

The study of satisfaction had always received large attention by researchers. It is however a subjective concept, as it can be inferred from the different definitions found in literature. Having said that, it must be pointed out that there is wide consensus that "satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations" (Kotler, 2003, p. 36). Therefore, satisfaction is closely related to consumers' expectations. More specifically, the narrower the gap is between the consumers' expectations and the actual performance of the product or service, the higher is the consumer's satisfaction (Hutcheson & Moutinho, 1998). Consumers usually have various expectations from what they want from the online game.

Customer satisfaction has been considered as a fundamental determinant of customer loyalty. Anderson and Sullivan (1993) found that satisfied customers have greater propensity to be retained and resist to alternative options, while Fornell (1992) stated that high satisfaction results to customers with increased loyalty, less prone to be approached from competition. Moreover, satisfaction enhances repeat purchase and positive word of mouth by customers (Reichheld & Sasser, 1990; Wirtz, 2003). Overall, it can be concluded that research has shown that customer satisfaction has significant effects on both behavioural and attitudinal aspects of loyalty.

The objectives of business marketing activities are often the development, maintenance, or enchantment of customer loyalty (Dick & Basu, 1994). The online gaming vendors always have to maintaining about their contents of the game to make consumer feel satisfied, and actually online game they are all based around the idea of allowing participants to communicate online, make friends, assume roles and conduct transactions involving real or virtual assets. Most of gamers gaining profit from this kind of business, they feel so happy even their sleep time actually are less than normal people who do not like playing online game. These groups can realize daring accomplishments that they could never hope to achieve in the real world and can, in some ways, significantly their self- esteem (Kwei & Ming, 2007).

2.2 Hypothesis Development

2.2.1 Customer Loyalty

Consumer loyalty is often examined from a behavioural point of view by measuring items such as number of repeat purchases, "share of wallet" and purchase frequency. A frequent assumption is that loyalty translates into an unspecified number of repeat purchases from the same supplier over a specified period (Egan, 2004). In this line, Oliver (1999) defined loyalty as "a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour". However, the definition of loyalty based solely on repurchase behaviour does not provide a holistic view of this complex concept. This drove researchers to propose alternative and more comprehensive definitions. Dick and Basu (1994) suggested that loyalty has both attitudinal and behavioural elements and argued that it is determined by the strength of the relationship between relative attitude and repeat patronage. Examining loyalty under the attitudinal lens, it can be derived from psychological involvement, favoritism and a sense of goodwill towards a particular product or service (Oh, 1995 cited by Kim et al., 2004). Therefore, most technology and a few media psychology researchers focus on the adoption intention (e.g. Koo, 2009), whereas a rich body of media psychology and online flow research concentrates on the negative aspect of the behavior, namely addiction (e.g. Wan and Chiou, 2006). Although researchers contend that intention is

a reliable indicator of actual behavior (Webb & Sheeran, 2006), online consumer behavior researchers suggest that continuance, compared to intention and adoption, remains an underexplored area of research (Cheung et al., 2003). Furthermore, several researchers affirm that only a small portion of online gamers can be classified as Internet addicts, indicating that non-addicts constitute a vast group of online game players (Chak & Leung, 2004; Koo, 2009). As a result, the study considers consumer loyalty as the criterion variable because it is an indicator of continuance and represents an important behavioral consequence in online gaming (Flavia´n et al., 2006).

In view of the consumers, consumer loyalty can be influenced by a number of antecedents. The literature largely supports two groups, namely:

1. Gratifications (U&G theory) including entertainment and sociality, and

2. Online experience (Flow theory) such as Challenge, Control, and Interactivity.

2.2.2 Gratifications (U&G theory)

U&G research has its foundation in communication research, which constitutes an integrated field of researchers in media, sociology, and psychology (Bryant & Miron, 2004). In the late twentieth century, scholars begin to employ this approach to examine the adoption of Internet related services owing to their increasing use as a new form of communication (Ruggiero, 2000; Svennevig, 2000; Stafford et al., 2004; Castan˜eda et al., 2007). U&G theory posits that individuals use particular forms of

mass communication to meet specific needs. If these needs are fulfilled, they are likely to repeat the experience (Bryant & Miron, 2004).

Gratifications studies reveal many different ways of categorizing the central concept. Swanson (1992) suggested a fundamental and dichotomous gratification structure, namely, gratifications that result from learning information from the media content and subsequently putting it to use in practical affairs (i.e. content or knowledge gratifications), and gratifications that result from the pleasurable experience of media content and are realized during consumption (i.e. process or entertainment gratifications). Content-based use of online games can be exemplified by those online gamers who look for a specific bit of information or knowledge (e.g. ancient history, cultures, etc.). A more process-based perspective might be represented by those who pass time by playing online games. For example, online game participants may view the games as sources of providing diversions and filling time (Peters et al., 2007). Playing with the features in the online games would be a form of entertainment that the online gamer could use to fill up his/her unused time when free or waiting.

The conceptual definition of usability by ISO (International Organization for Standardization) 9241-11 is the extent to which a product can be used to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use (Karat, 1997; Agarwal & Venkatesh, 2002; Sauro & Kindlund, 2005; Whitehead, 2006; Peevers et al., 2007). Usability means the use quality of a system for a user to achieve his/her own purpose after a series of tasks. Higher system

usability guides users to their own challengeable objectives. The operational definition of usability, that is, the heuristic evaluation framework of usability by Nielsen dominates (Gray & Salzman, 1998). This definition includes visibility of system status, match between the system and the real world, user control and freedom, consistency and standards, error prevention, recognition rather than recall, flexibility and efficiency of use, aesthetic and minimalist design, and helping users recognize, diagnose, and recover from errors (Nielsen, 1994a). Nielsen (1994b) further grouped the framework into five usability goals: learnability, efficiency, memorability, errors (as in low error rate), and satisfaction.

Online games are social spaces, new social worlds where players spend time and interact with others as well as form friendships or meet future life partners (Taylor 2006). The social play is the unique selling point of these games (Cole & Griffiths 2007) and design for interaction between players is a basic function (Williams, 2006). Player interdependency, player created guilds, player grouping and other social engineering features are ways in which developers foster social engagement within the game and support player interaction (Jakobsson & Taylor 2003; Ducheneaut, Yee, Nickell and Moore 2006). The high Internet penetration in the past decade, however, points to the potential social usefulness of Internet-based services, arising from consumer use of the Internet as a social environment (Toral et al., 2009). As such, online games possess high attraction to individuals using the Internet for social stimulation. For instance, participants can interact with others anonymously and

instantly, and even form virtual interpersonal relationships or organize virtual communities. In this virtual group, members can assume different roles, exchange virtual assets, develop strong relationships, as well as strengthen social ties (Kolo and Baur, 2004; Williams, 2006). Furthermore, online game participants may expect others' feedback, thus obtaining mutual benefit or social rewards such as reputation, expected relationships, and trust. These tendencies collectively reveal that the virtual world created by an online game mimics the real world in that they both provide a "living" place for people to carry on daily activities. Thus, the "cyberspace" an online game creates should not be simply reckoned as a medium for playing games, but as a social place where new types of lives and personal relationships are formed.

In Massive Multiplayer Online Games (MMOs) players compete but also work together and have the opportunity of building long-lasting relationships; in short, these games offer many opportunities for social interaction (Kolo and Bauer 2004; Ducheneaut and Moore 2004). As Jakobsson and Taylor (2003, p.88) argued, "The production of social networks and the circulation of social capital prove to be one of the most important aspects in EQ" [The MMO EverQuest (Sony 1999)]. Gameplay where groups take part in different adventures is what characterizes these games, so they are dependent on high levels of trust and cooperation between gamers in order to function (Chen 2008). Gamers do, however, use these spaces in their own ways and engage in sociality on their own terms (Simon, Boudreau & Silverman 2009). In this study we take a closer look at the relationship between played and designed sociality

in online games from an interaction perspective by looking at sociality in temporary collaboration groups.

H1: Online gamer's gratification from (a) entertainment and (b) sociality relate positively to their loyalty toward the game.

2.2.3 Flow Experience: Online Flow

Researchers characterize flow as being facilitated by an order in conscientiousness that causes individuals to enter a specific experiential state so desirable that one wishes to repeat the state as often as possible (Csikszentmihalyi, 2008). They argued that flow can only occur when both challenges and skills exceed the level of difficulty that is typical for the individual's day-to-day experiences. Especially, for an individual to remain in the state of flow, he/she must be continually challenged with more difficult tasks in order to ensure that the level of complexity is consistent with his/her level of skills. Thus, early scholars link flow with various types of leisure activities such as gaming, dancing, playing chess, etc. where the individual becomes so immersed in the activity as to create an enjoyable experience (Havitz & Mannell, 2005). Over the past twenty years, researchers begin to establish the flow construct and its antecedents in relation to computer related activities (Novak et al., 2000; Pearce et al., 2005). Novak et al. (2000) stated that online flow is a cognitive state experienced during navigation, which is characterized by a seamless sequence of responses facilitated by machine interactivity, intrinsically enjoyable, accompanied

by a loss of self-conscientiousness, and self-reinforcing. Furthermore, providing consumers with flow opportunities is critical to the success of online commercial activities as these opportunities underlie what makes for a compelling online experience.

In light of the unique features online gaming possesses in the context of human-computer interaction, the study builds upon the following frequently endorsed online flow elements: challenge, control, and interactivity to predict online gamer's participating behavior (Novak et al., 2000). First, the challenge an activity presents is among the most important predictors of flow (Hoffman & Novak, 2009). Game designers normally create a series of challenging virtual tasks that are causally linked and connected in the simulated environment (Rollings & Adams, 2003), intending to influence a player's response to that experience, for example, by restricting his/her progress in the game (Kiili, 2005). Csikszentmihalyi (2008) maintained that individuals tend to experience these challenging situations as rewarding and feel happiest when these challenges match their skills. It appears that online games allow the players to constantly improve their gaming skills through learning to overcome the challenges from which they acquire a sense of personal achievement. Therefore, an appropriate level of challenge keeps the online gamer continuously motivated and engaged in the game (Woszczynski et al., 2002; Kiili, 2005; Hoffman & Novak, 2009).

Second, flow research generally regards control as the level of an individual's control over the environment and his/her actions. This definition is comparable to Ajzen's (2001) perceived behavioral control in that control is specific to an action and its level can vary in different situations or actions. Accordingly, the study characterizes online gaming control by feeling unrestricted or free to act in a variety of ways under a specific situation in the virtual environment. Third, interactivity commonly refers to the artifact's (i.e. Internet human-computer interface) interactive behavior as experienced by the users. Similar to the concept of feedback, online game interactivity signifies the extent to which an individual perceives that gaming brings forth interaction between players mediated by the virtual environment (Chung & Tan, 2004; Hoffman & Novak, 2009). Interaction design allows players to actively participate in the process through continuous and immediate feedback. In particular, Wang and Wang (2008) stated that prompt feedback facilitates a gamer's playful experience. The term "interactivity" indeed refers to a complex and multi-dimensional concept (McMillan, 2000), which incorporates other elements such as the way an online game participant move his/her cursor on the screen or with the joystick, the way the online game allows an individual to select an icon in the list, and the way he/she enters text. Nonetheless, little agreement exists in the literature about the conceptual and operational definitions related to interactivity (Kiousis, 2002). Online game participants usually need to cooperate with each other to overcome a series of challenges, stressing the need of sufficient bandwidth as well as servers. Failing to satisfy the need may lead to broken connection between participants or lag

system response, which causes frustration, thereby hindering an individual's intention to play the game. Thus, the study evaluates interactivity from the aspect of speed, which online flow scholars largely consider as a primary feature of interactive gaming (Chung & Tan, 2004; Wang & Wang, 2008).

H2: Online gamer's perceived (a) challenge, (b) Control, and (c) interactivity of the game relate positively to their loyalty toward the game.

2.2.4 Customer Satisfaction

The study of satisfaction had always received large attention by researchers. It is however a subjective concept, as it can be inferred from the different definitions found in literature. Having said that, it must be pointed out that there is wide consensus that "satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations" (Kotler, 2003, p. 36). Therefore, satisfaction is closely related to consumers' expectations. More specifically, the narrower the gap is between the consumers' expectations and the actual performance of the product or service, the higher is the consumer's satisfaction (Hutcheson & Moutinho, 1998). Consumers usually have various expectations from what they want from the game they played for example reward, actually people who play game always want to get their reward after completing the mission or quest from the game.

Customer satisfaction has been considered as a fundamental determinant of customer loyalty. Anderson and Sullivan (1993) found that satisfied customers have greater propensity to be retained and resist to alternative options, while Fornell (1992) stated that high satisfaction results to customers with increased loyalty, less prone to be approached from competition. Moreover, satisfaction enhances repeat purchase and positive word of mouth by customers (Reichheld & Sasser, 1990; Wirtz, 2003). Overall, it can be concluded that research has shown that customer satisfaction has significant effects on both behavioural and attitudinal aspects of loyalty. Word of mouth has been used by every people to inform something good or bad to other people if they like that product then they will be loyal to that product. Maintaining customer loyalty not only economizes on the cost of acquiring new customers, but it also brings in substantial revenues (Reichheld & Schefter, 2000; Semeijn et al., 2005).

For online gaming vendors, the revenues come from two major sources. One is "monthly game card" or "fee for network connection", which players need to buy in advance and consume as they play games online. The other is the "virtual property", which players can buy and then use to enhance the capabilities of their in-game characters (Chen et al., 2005). The more the players play the game, the greater the required fees and the more likely that player will spend money on acquiring fancier virtual property. Therefore, maintaining players' loyalty provides online gaming vendors with revenue. Loyalty has been conceptualized as comprising both attitudinal

and behavioral characteristics (Oliver, 1999). For gamers, virtual property in the game is so value for them because they can spend many things to fulfill their needs. Oliver (1996) defined satisfaction as "the consumers' fulfillment response, the degree to which the level of fulfillment is pleasant or unpleasant". Moreover, satisfaction can be viewed as a post-purchase attitude and the customer's emotional response to the transaction experience (Rodgers et al., 2005). Previous research has identified satisfaction as key to achieving customers' loyalty (Dick & Basu, 1994; Oliver, 1999).

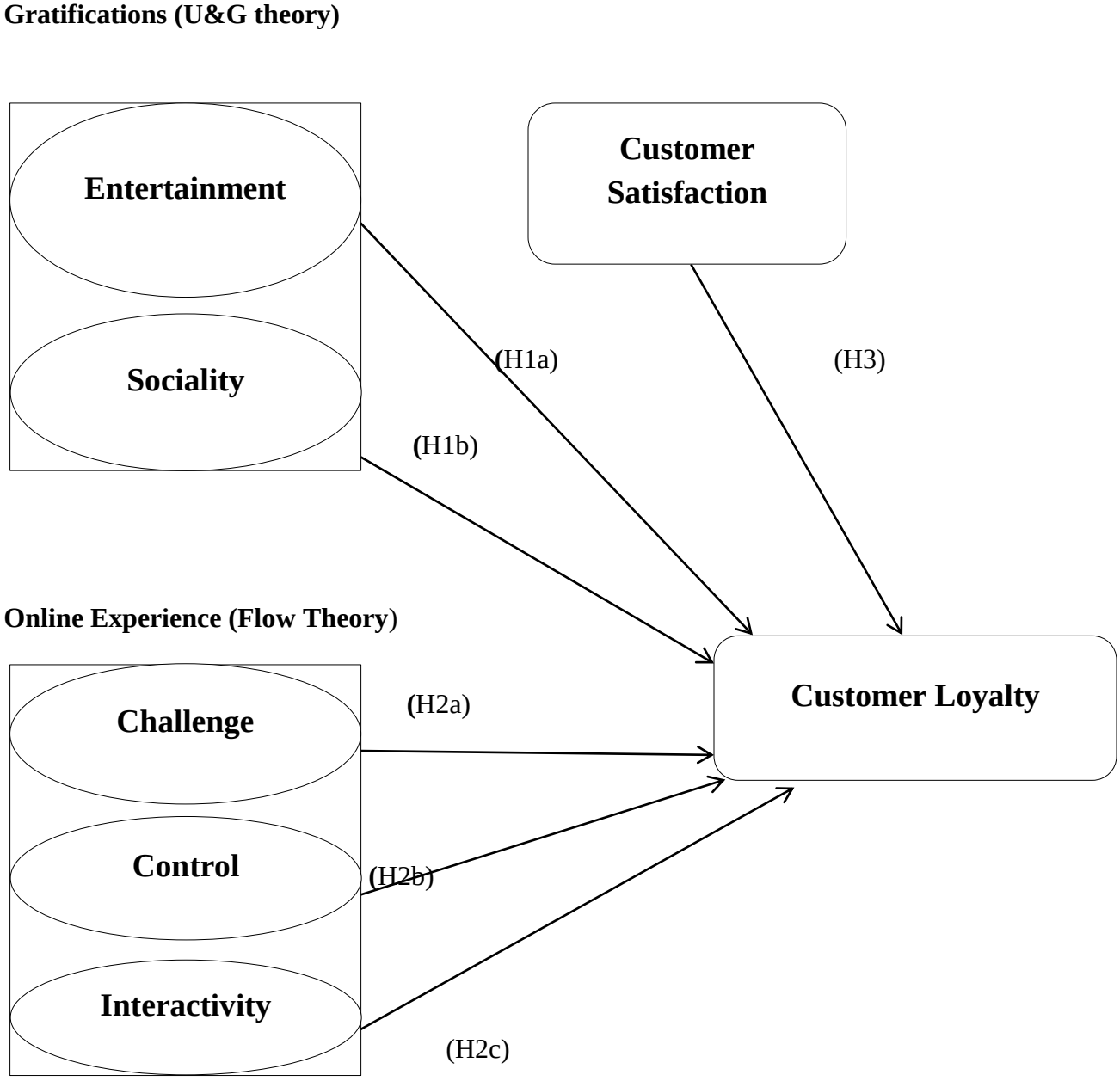
H3: Customer satisfaction is positively associated with consumer loyalty

2.3 Theoretical Framework

The studies on the antecedents and outcomes of online game loyalty have been centered on the online game loyalty based on gratification and experiential motive needs. This research, therefore, tries to investigate the online game loyalty based on gratification and experiential motive needs. The perimeter of the finding in a country may be used as a comparison to other research findings in different countries. The major constructs in the model are Gratifications (U&G theory), Online Experience (Flow theory), and customer satisfaction; customer loyalty.

By considering the research hypothesis, the conceptual framework is proposed as:

Figure 1: Theoretical Framework



CHAPTER 3

RESEARCH METHOD

The previous chapter discussed the literature review of past study and research, presented the conceptual model and discussed the hypotheses that are to be analyzed. The content of this chapter will cover the methods chosen to do the analysis such as how the questionnaire was developed, how the sample was selected, how the data were collected, and the analysis techniques that will be used on the data obtained from the questionnaire.

3.1. Type of Study

This research study can be classified as a causal study, and this research is to examine the relationship between gratification and customer loyalty toward online game context, examine the relationship between online flow experience and customer loyalty toward online game context, and investigate the relationship of customer satisfaction to the customer loyalty. This research use quantitative approach with survey method and the research instrument is using questionnaire and also using itemized rating scale to assess data from and 200 questionnaires that has been spread out. The method use in this research adopted from Huang et al. (2011).

3.2. Unit of Analysis

The study is to determine the factors that influence customer loyalty toward online gaming context of Indonesian people. The study will be within the context of Indonesian market and the respondents are consumers residing in Indonesia of the age from those 18 years and above because it is believed most of Indonesian people have a considerable amount of spending their time through play online games are teenagers.

3.3. Sampling Method

3.3.1. Population

The study case takes place in Indonesia and applies to find out whether online games can lead customer satisfaction and customer loyalty to make online game industry more profitable over recent years. This research will use the population in Sleman region of Yogyakarta. The population was divided into groups based on market shares, and the samples were using randomly drawn from each group.

3.3.2. Sampling Design

The samples taken are limited between the ages of 18– above. The range of age has been considered that they have a considerable amount of spending power and substantial exposure and knowledge of counterfeit products. To

make a disperse distribution, the samples are taken from two adult groups of individuals: the non-student population (professionals, employees, etc) and the student population. The questionnaires are distributed randomly using non-probability sampling design of purposive sampling, which can be categorized into judgment sampling. In this study, the use of non-probability sampling explains that the elements in the population do not have a predetermined chance of being selected as subjects (Sekaran, 2000). The student population survey is taken in a campus; meanwhile the non-student population survey is taken outside campus and high-school population. The study further considered the people (customer) toward online games as the part of sample subject.

3.4. Data Collection Method

The approach of study taken is the quantitative approach. The approach is seen as having objective observations, precise measurements, statistical analysis and verifiable truths. A combination of both primary and secondary data collection methods have been used for this study. The primary data for this study is obtained from the data collected through the questionnaire distributed. The secondary data is collected from past literature reviews and relevant articles.

All methods of data collection were conducted from September 2013 until November 2013. The number of the sample obtained was 200 respondents. However, the

number of samples was reduced automatically when the respondent failed to answer the questionnaire completely and it was considered void.

3.5. Questionnaire Design

The questionnaire consists of four parts which evaluates the seven variables. All measurement variables were assessed using seven-point likert-type scale, ranging from strongly disagree (1) to strongly agree (7). The construct of entertainment gratifications was measured by four items (Peters et al., 2007; Stafford 2008). Seven items were generated to measure social gratifications (Ko et al., 2005; Hsu and Lin, 2008; Stafford, 2008). Furthermore, the online flow measures were drawn from the items developed by Novak et al. (2000), Chung and Tan (2004), Wang and Wang (2008), resulting in a total of 10 items. Finally, the four-item scales measuring customer loyalty toward online games were culled from Choi and Kim (2004) and Yang and Peterson (2004) research in which English language is used. However, the questionnaire used in this study was translated into Indonesian language to ensure the understanding of the respondents towards the questions.

The questionnaire contains four parts – Sections A and B measuring the gratifications and perceived online flows. Section C examined customer satisfaction and customer loyalty. Section D comprised demographic information of respondents. All items were measured on a seven-point Likert scale with 1 representing “strongly disagree” and 7 representing “strongly agree” as can be seen in table 3.1:

Variable measurement	Source	Number of items	Type of variable
Gratifications 1. Entertainment 2. Sociality	Peters at al. (2007); Stafford, 2008); Ko et al. (2005)	4 7	Independent
Perceived online flow 1. Challenge 2. Control 3. Interactivity	Novak et al. (2000); Chung and Tan (2004) Wang and Wang (2008)	4 3 3	Independent
Customer satisfaction	Anderson and Srinivasan (2003),	5	Independent

	Choi and Kim (2004)		
Consumer loyalty	Choi and Kim (2004), Yang and Petersen (2004)	4	Dependent

Table 3.1: Source of measurement scale items

3.6. Research Variables and Operational

3.6.1. Independent Variables

All variables in this study were adopted from Huang et al., (2011), Peters et al (2007) Stafford (2008), Ko et al (2005), Novak et al (2000) Chung and Tan (2004) Wang and Wang (2008), Clyde and Jiming Wu (2008) and Juan Carlos Roca et al (2008). An independent variable is a variable that influences the dependent variable in either a positive or a negative direction (Sekaran, 2000). According to Ghazali (2004), independent variable is also called as an exogenvariable, because the variable is not influenced by its antecedent. This research is conducted with independent variables which are use and gratifications, perceived online flow, customer satisfaction, brand trust, and one dependent variable which is customer loyalty.

3.6.1.1. Gratifications (U&G theory)

The uses and gratifications (U&G) approach has a long standing history in communication research and mass communication (Katz & Lazarsfeld, 1955). Uses and gratifications theory (UGT) is an approach to understanding why and how people actively seek out specific media to satisfy specific needs. UGT is an audience-centered approach to understanding mass communication. This new branch of research explores the U&G of starting to play games online. Achievement, enjoyment and social interaction are all motivations for starting to play an online game, and their success at the game as well as the extent to which their uses were gratified predicted their continuance in playing. The indicators used for the use and gratifications in this research are:

3.6.1.2 Entertainment gratifications

1. Customer playing game as diversion
2. Customer playing game as entertainment
3. Customer had fun while playing the games
4. Customer play games just to fill their time

3.6.1.3 Social gratifications

1. The influence of other people to make friends
2. The influence of other people to meet them with similar interests
3. The Influence of other people to chat with the others
4. The influence of the other people to communicate with the others
5. The interest of the customer to establish relationship with others

3.6.2. Online experience (Flow theory)

A promising approach has been undertaken by McKenna and Lee (1995). Their research is strongly based on the theory of flow experience, initiated by Csikszentmihalyi (1990; 2000). This theory later called positive psychology rests on an analysis of subjective positive experience: processes of pursuing a desired or a cherished result seem sometimes to be more pleasing and self-rewarding that the result itself, when and if it is gained. Csikszentmihalyi describes this experience as someone's "flowing from one moment to the next, in which he is in control of his actions, and in which there is a little distinction between self and environment, between stimulus and response, between past, present, and future" (Csikszentmihalyi, 2000, p. 34). The indicators used for flow theory in this research are:

3.6.2.1. Challenge

1. I always get good test of my skills
2. I always play games that challenge me to perform my best ability

3. Playing online game was fun and challenging
4. I always find that online games stretches my capabilities to the limits

3.6.2.2. Control

1. I feel in control when playing online games
2. I feel dominant when playing online games
3. I feel curiosity influence me when playing online games

3.6.2.3 Interactivity

1. The interaction with online games is slow and tedious
2. The Pages on the online games I play usually load quickly
3. The games I played got lagging response experience

3.6.2.4. Customer Satisfaction

Satisfaction is a customer condition that occurs after comparing the quality of service with his/her expectation. Howard and Sheth (1969), first denoted consumer satisfaction as a related psychological state to appraise the reasonableness between what consumer actually gets and gives. The indicators used for customer satisfaction in this research are explained by the following statements:

1. Satisfied with the content of the online game
2. Pleased with the services provided by the online game vendor

3. The online game vendor performs well in handling the opportunistic behavior
4. Pleased with the quality network provided by the vendor
5. Overall, I am satisfied with the online game

3.6.2. Dependent Variables

A dependent variable is the primary interest variable of the researcher (Sekaran, 2000). According to Ghozali (2004), dependent variable is also called as endogen variable, because this variable is influenced by its antecedent. The dependent variable analyzed in this study is Consumer loyalty derived from the previous study conducted by Huang et al., (2011), Lu et al., (2011). However, intention to play only means that the customers have positive attitude or preference to play the game (Lu & Wang, 2008). They may not continue to play the games in the future if there are new games available. However, customer loyalty has become one of the important issues in e-commerce. Loyal customers will keep a longer relationship with the business and use the services for a longer time (Otim & Grover, 2006). The indicators for Customer loyalty are:

1. I am willing to play the online game that I played the most
2. I am willing to recommend the online game I played the most to others
3. I am willing re-use the online game that I played before when I want to play online game
4. When I want to play online game, that game is my first choice

3.7. Technique of Data Analysis

In this study, the researcher will use Structural Equation model as the technique of data analysis. The conventional approach of structured equation model (SEM) can be described as the figure 2 below.

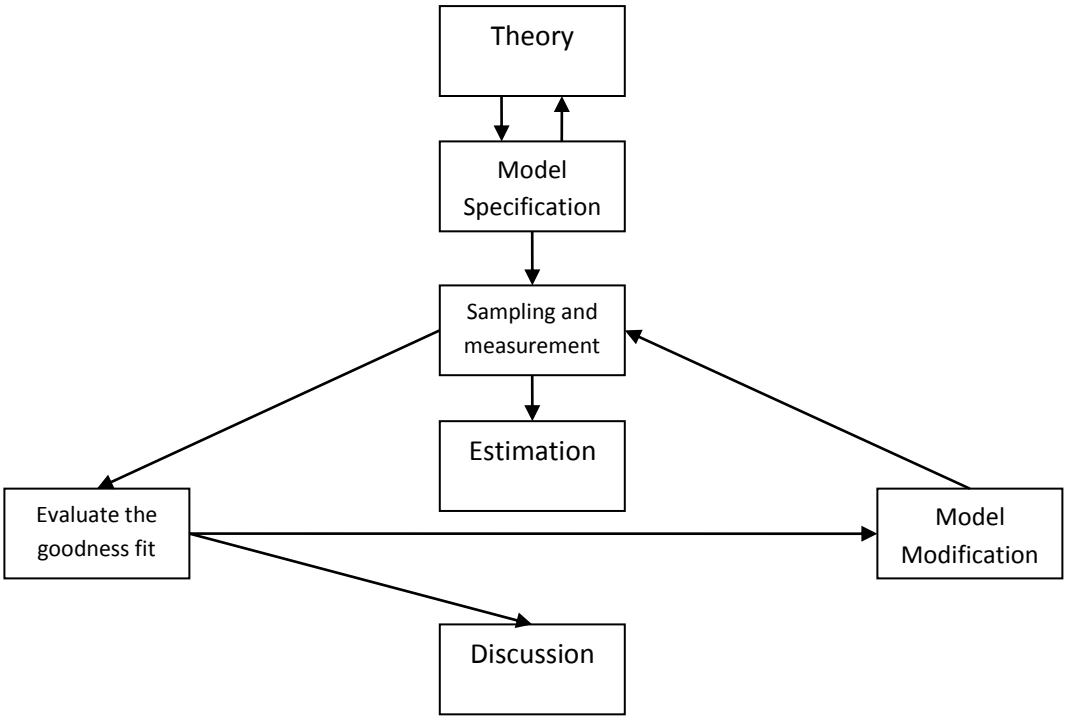


Figure 2: Steps of Structured Equation Model Approach

Based on the figure 2 above, if there is a theory, the theory must be explained first. Structural equation is drawn by a path diagram and is considered as a representative of the theory. The relationship among latent variables drawn in path diagram was considered as a theory. Afterwards, the researcher will get the samples and their measurement and then conduct the estimation towards the parameter model. In this step, the model measurement can be estimated first and then followed by the structural model or full model. Later, evaluate the goodness fit from the model, whether it needs the model modification or not. If the model can fulfil the fit criteria, the next step will be the discussion.

3.7.1. Structural Model

In the structural equation model, it includes the relationship among latent variables and this relationship is considered as linear, although further development might include in nonlinear equation.

Regression parameters that describe the relationship between latent constructs are generally written in Greek characters "gamma" (γ) for construct regression from construct endogenous to exogenous and "beta" (β) for the regression of the endogenous constructs to other endogenous constructs. Endogenous constructs in the SEM can be correlated or at each other covariates and parameter linking correlation is written in Greek characters “Phi” (φ) that describes the covariance or correlation.

3.7.2. Structural Error

Researchers generally know that it is impossible to predict completely independent constructs. Therefore SEM models that incorporate structural error term was written in Greek characters “zeta” (ζ). To achieve consistency of parameter estimation, the error term is assumed to be uncorrelated with the exogenous constructs in the model. However, the structural error term may be correlated with the other structural error terms in the models.

3.7.3. Manifest Variable Indicator

SEM researchers use manifest variables or indicators to form the latent constructs. The manifest variables embodied in the Likert scale questions. Manifest variables that form exogen latent constructs given the symbol (X) while the manifest variables that form the endogen latent constructs are given the symbol (Y)

3.7.4. Measurement Model

In SEM, each latent constructs usually associated with multiple measure. The relationship between latent constructs with measurements is performed by analytic factor measurement models. Every latent constructs modeled as a common factor of the measurement. Value of "loading" which linking construct with the measurement given the character of Greek symbol "lamda" (λ).

There are two measurement models; measurement model for exogenous variable and endogenous variable. The measurement model is the relationship between indicators and latent variable. In this research, there are three measurement models for exogen variables they are physical environment quality, food quality, and service quality. Also, there are four measurement models for endogenous variables, they are restaurant image, customer perceived value, customer satisfaction, behavioural intention. Loading factor value from indicators to the latent construct is called "lambda" (λ). Here is the mathematics equation for measurement model:

3.7.5 Measurement Error

SEM users acknowledge that their measurements are not perfect, and it was included in the model. The structural equation models incorporate measurement error in its modelling. In relation to analytic factor measurement model, the measurement error (the error term) is the unique factors associated with each measurement. The measurement error associated with the measurement of X is labelled by "delta" (δ) character, while the measurement error associated with the measurement of Y given the symbol of "epsilon" (ε)

3.7.6. Structural Models with Latent Variables

Structural models with latent variables consist of two parts, the measurement model (the relationship of indicators with latent variables) and structural model (relationships between latent variables).

3.7.7. Steps of Modeling and Structural Equation Analysis

According to Hair, et. al., (1998) the process of Structural Equation Modeling (SEM) consists of the following step:

Step 1: Model Development Based on Theory

Structural Equation Modeling (SEM) is based on causality relationship where the changing of one variable is assumed to be caused by changing other variables. The strong causality relationship between two variables is assumed not to be caused by the analysis chosen, but it is caused by the theoretical justification to support the analysis (Ghozali, 2004).

Step 2 and 3: Path Diagram and Structural Equation

According to Ghozali (2004), there are two steps that must be taken to make a path diagram and structural equation which arranging the structural model by correlating latent construct (endogenous and exogenous) with indicator variable *(manifest variable*).

First, building the path diagram which indicates a causal relationship (regression) from one construct to another construct, by using the rightwards arrow or leftwards arrow (→) or (←) to show the relationship between the constructs. Second, a line with left-right arrow symbol (↔) indicates the correlation or covariance between constructs.

There are two assumptions underlying the path diagram. Firstly, all are based on a theory of causality (theory as a basis to enter or eliminate causality). Secondly, the causality relationship is considered linear models (Ghozali, 2004).

Step 4: Choosing Input Matrix and Estimation Model

Model in structural equation is different from other multivariate analysis techniques. SEM only uses data input, and it is variance/covariance matrix or correlation matrix. Through data from the questionnaire, by using AMOS, the data will be changed into variance/covariance matrix or correlation matrix so that the equation is also stated as covariance structural analysis. Covariance matrix has more advantage than correlation matrix in giving comparison validity between different population and different sample. The interpretation result will be more difficult if we use covariance matrix because the covariance value must be interpreted based on construct measurement unit. Correlation matrix has the general range which is possible to compare the coefficient in the model directly (Ghazali, 2004).

Step 5: Structural Model Identification

Identification problem is conducted because of the incapability of the proposed model to result in an estimation model. The identification problem can be done by considering the estimation result, they are: (1) big value of *standard error* for one or more coefficients, (2) incapability of program to invert *information matrix*, (3) impossible estimation value (*negative error variance*), and (4) high correlation

(>0.90). If there is any identification problem, so there are 3 things that must be concerned: (1) coefficient amount that relatively estimated toward covariance or identified correlation with small value of *degree of freedom* (df), (2) using reciprocal correlation among constructs, and (3) failures in determining fix value on construct scale (Ghozali, 2004).

Step 6: Goodness of Fit Criteria

Before evaluating the goodness of fit from the structural model, make sure that the data must be qualified with the assumption of the structural equation model. There are three basic assumptions, they are: independent data observation, random sampling respondent and the linear relationship. After SEM assumption can be qualified, the next step is making sure the occurrence of *offending estimates* (whether the coefficient estimation in the structural model or other measurements is above the acceptable value.).

If *offending estimates* happen, which are: negative variance *error* or *non-significant error* variance of construct, *standardized coefficient* closing to value of 1.0, and high standard error, the cause of *offending estimates* must be eliminated first. *Fit Index* and *cut of value* are used to test whether the model can be accepted or not, the explanation is as follows:

a) Absolute Fit Measures

1. Likelihood Ratio Chi Square Statistics

An analysis tool to measure overall fit is *likelihood ratio chi-square statistics*, with the sample of 250 respondents. Model tested will be considered as good or satisfied if *the chi-square* (χ^2) value is small. Small value of χ^2 means that the model is good (χ^2= 0, means that there is nothing differences, Ho is accepted) and accepted based on the probability with *cut of value* p>0.05 or p>0.10 (Hulland, et. al., 1996, in Ghozali, 2004).

Because this analysis objective is to develop and test a model which is suited and fit based on the data, so that it requires insignificant value of χ^2 that tests null hypotheses *(estimated population covariance* is not equal than *sample covariance*). Value of χ^2 can be compared with *degree of freedom* (df) to get relative value of χ^2.It is used to make conclusions that the high relative value of χ^2 means significant difference between covariance matrix observed and covariance matrix estimated.

Small value of χ^2 which results the significant level more than 0.05 indicates that there is no significant difference between covariance matrix data and covariance matrix estimated (Hair, et. Al., 1995 in Ghozali, 2004)

2. CMIN/DF (The Minimum Sample Discrepancy Function)

   The minimum Sample Discrepancy Function (CMIN) divided by its *degree of freedom* (df) will result CMIN/DF (generally, it is used for the researcher as an indicator to measure the fit level of the model. CMIN/DF is also as chi-square statistic; χ^2 divided by its *degree of freedom* (df) is relative χ^2. Value of

χ^2 is relatively less than 2.0 or even less than 3.0 this indicates the *acceptable fit* between model and data (Arbuckle, 1997 in Ghozali, 2004)

3. GFI (Goodness of Fit Index)

   Fit Index can measure the proportion of variance in covariance matrix sample stated by estimated matrix covariance population (Bentler, 1983; Tanaka &Huba, 1989 in Ghozali, 2004). GFI is non-statistical measurement tool that has range value from 0 (*poor fit*) until 1.0 (*perfect fit*). The higher value in this index shows "*better fit*".

4. RMSEA (The root Mean Square Error of Approximation)

   RMSEA is an index that can be used to compensate *chi-square* statistic in big samples (Baumgartner & Homburg in Ghozali, 2004). RMSEA value shows the expected *Goodness of Fit Index* if estimated model in population (Hair, et. al., 1995). Small value of RMSEA (< 0.08) means the model shows the close fit of model based *on degree of freedom* (df) can be accepted (Browne & Cudeck in Ghozali, 2004)

b) Incremental Fit Measures

1. AGFI (Adjusted Goodness of Fit Index)

Tanaka &Huba (1989) in Ghozali (2004) stated that GFI is an analogue of R^2 in multiple regressions. This *Fit Index* can be adjusted toward available *degree of freedom* (df) to test whether the model can be accepted or not (Arbuckel in Ghozali 2004: 20). The index got from the equation can be seen below.

$$AGFI = 1 - (1 - GFI)\frac{d_b}{d}$$

Where

$$d_b = \sum_{g=1}^{G} p^{\bullet(g)} = \text{Sample } moments$$

d = degrees of freedom

Acceptance level that is recommended when AGFI has the equal value of more than 0.90 (Hair et al., in Ghozali, 2004). GFI and AGFI are the criteria that measure the proportion of variance in a covariance matrix sample. The value of 0.95 can be interpreted as *good overall fit* level and the range value of 0.090-0.95 shows *adequate fit level* (Hulland et al., in Ghozali, 2004).

2. TLI (Tucker Lewis Index)

TLI is *incremental fit index* alternative to compare between tested model toward baseline model (Baugartner Homburg, 1996). The recommended value as the base of model is ≥ 0,90 (Hair, et. al., 1995), and the value that is close

to 1 (one) shows a very good fit (Arbuckle, in Ghozali, 2004). The index is as follows:

Or:

$$TLI = \frac{\frac{C_b}{d_b} - \frac{C}{d}}{\frac{C_b}{d_b} - 1} \qquad TLI = \frac{\left(\chi^2_{null}/df_{null}\right) - \left(\chi^2_{proposed}/df_{proposed}\right)}{\left(\chi^2_{null}/df_{null}\right) - 1}$$

Where C is discrepancy of model that is evaluated and d is degree of freedom. Meanwhile Cb and db are discrepancy and *degree of freedom* from the *baseline model has a comparison.*

3. NFI (Normed Fit Index)

   NFI is the comparison measurement between the proposed model and the null model. The value of NFI will be varied from 0 (no fit at all) until 1.0 (perfect fit). Like TLI, there is no absolute value used as the standard, but generally recommended as equal or > 0.90.

Step 7: Model Interpretation

According to Ghozali (2004), when model is stated as acceptable, it can be considered to make a modification index to recover the theoretical justification or goodness of fit. This modification must have a consideration. The modification model must be cross validated (estimated with separated data) before modification model is accepted. If we got value absolute fit model from default model, with chi-square that

is relatively big value, that is showed by significant probability level ($p < 0.5$) so that, it requires a modification. Model can be stated as good fit model if probability level of chi-square relatively is smaller than in significant probability level ($p > 0.05$).

3.7.8. Validity and Reliability Test

In this study, the function of validity test is to measure and analyze whether each item of instrument could explain the variable observed or not. The effectiveness of the questionnaire as a measurement tool is the most important factor in determining the quality of the research result. This is because the result of this research is fully dependent on the quality of the data obtained.

In this study the researcher will take samples from the total respondents at 5% of significance level. Then the critical value for the validity coefficient is about $r = 0.361$ (Ghozali, 2004). If the validity coefficient of one item is greater than critical value for validity coefficient (0.361), it means the item can be considered as valid. However if the validity coefficient of one item is less than the critical value for validity coefficient (0.361), it means the item is invalid or failed.

Reliability test is also designed to find out the consistency of the measurement tools. It could give the result which is relatively consistent if there is re-measurement in the same subject. The reliability of a measure indicates the extent to which the measure is without bias or error free, and hence, offers consistent measurement across time and

across the various items in the instrument (Sekaran, 2000). A reliable measurement tool will provide a reliable result that is also relevant to the variable used, and if the data is really relevant to the reality condition, the result of any measurement conducted in the next period will always be the same.

The data are collected from the students in Yogyakarta who like to play online games. In order to minimize bias results, the identity of respondents is also provided. In addition, errors, incomplete and missing responses are also filtered. In addition, AMOS software analysis is used to carry out the investigation of the relationship among the variables which can influence customer loyalty.

CHAPTER 4

DATA ANALYSIS AND DISCUSSION

4.1. Validity Test and Reliability

4.1.1. Validity Test

Validity Test in this study uses Amos software version 6.0. This test is used to determine the validity of the unobserved variables that can be measured by using CONSTRUCTS for each observed variable, and using Confirmatory Factor Analysis (CFA) or commonly called factor analysis. If the value of the factor loading of each construct was greater than 0.5 (λ> 0.5), it can be categorized as

valid, or in other words that the unobserved variables can be measured using constructs of each observed variable. Validity test results can be shown in Table 4.1.

Table 4.1

Validity Test Results

Variable	Indicator			CFA	Critical value	Information
Customer Satisfaction	CS1	<---	CS	0.734	0.5	Valid
	CS2	<---	CS	0.704	0.5	Valid
	CS3	<---	CS	0.794	0.5	Valid
	CS4	<---	CS	0.780	0.5	Valid
	CS5	<---	CS	0.724	0.5	Valid
Entertainment	EG1	<---	EG	0.781	0.5	Valid
	EG2	<---	EG	0.781	0.5	Valid
	EG3	<---	EG	0.828	0.5	Valid
	EG4	<---	EG	0.761	0.5	Valid
Sociality	SO1	<---	SO	0.739	0.5	Valid
	SO2	<---	SO	0.750	0.5	Valid
	SO3	<---	SO	0.690	0.5	Valid

	SO4	<---	SO	0.800	0.5	Valid
	SO5	<---	SO	0.709	0.5	Valid
	SO6	<---	SO	0.841	0.5	Valid
	SO7	<---	SO	0.812	0.5	Valid
Challenge	CH1	<---	CH	0.678	0.5	Valid
	CH2	<---	CH	0.764	0.5	Valid
	CH3	<---	CH	0.786	0.5	Valid
	CH4	<---	CH	0.742	0.5	Valid
Control	CO1	<---	CO	0.688	0.5	Valid
	CO2	<---	CO	0.863	0.5	Valid
	CO3	<---	CO	0.869	0.5	Valid
Interactivity	IN1	<---	IN	0.842	0.5	Valid
	IN2	<---	IN	0.890	0.5	Valid
	IN3	<---	IN	0.863	0.5	Valid
Consumer Loyalty	CL1	<---	CL	0.707	0.5	Valid
	CL2	<---	CL	0.794	0.5	Valid

	CL3	<---	CL	0.628	0.5	Valid
	CL4	<---	CL	0.676	0.5	Valid

Source: primary data processed, 2014

From Table 4.1 it can be seen that all the questions have a value of loading factor> 0.5, so it can be stated that all questions contained in the questionnaire that can be declared invalid.

4.1.2. Reliability Test Results

Reliability Test in this study is intended to determine the extent of the measurement results that remain consistent, if measured two times or more of the same symptoms using the same gauge. Researchers conducted a reliability test by calculating Construct Reliability of each item in the variable. An instrument used in the variable is said to be reliable if it has more than 0.7 Construct Reliability (Ghozali, 2011).

The results of reliability testing research variables are presented in Table 4.2 based on of the calculations that have been done with the software AMOS 21:

Table 4.2

Reliability Test Results

Variable	Indicator	Loading	Error	Σ loading^2	Σ Error	Construct Reliability
Customer Satisfaction	CS1	0.734	0.685	13.958	3.233	0.812
	CS2	0.704	0.655			
	CS3	0.794	0.504			
	CS4	0.780	0.613			
	CS5	0.724	0.776			
Entertainment	EG1	0.781	0.441	9.929	2.242	0.816
	EG2	0.781	0.604			
	EG3	0.828	0.542			
	EG4	0.761	0.655			
Sociality	SO1	0.739	0.580	28.526	4.010	0.877
	SO2	0.750	0.620			
	SO3	0.690	0.572			
	SO4	0.800	0.586			
	SO5	0.709	0.667			

	SO6	0.841	0.431			
	SO7	0.812	0.554			
Challenge	CH1	0.678	0.850	8.821	2.789	0.760
	CH2	0.764	0.623			
	CH3	0.786	0.640			
	CH4	0.742	0.676			
Control	CO1	0.688	0.808	5.856	1.518	0.794
	CO2	0.863	0.357			
	CO3	0.869	0.353			
Interactivity	IN1	0.842	0.550	6.734	1.410	0.827
	IN2	0.890	0.375			
	IN3	0.863	0.485			
Consumer Loyalty	CL1	0.707	0.761	7.868	2.815	0.736
	CL2	0.794	0.556			
	CL3	0.628	0.819			
	CL4	0.676	0.679			

Source: primary data processed, 2014

Based on Table 4.2 it can be concluded that all the questions used to measure each variable can be unreliable or reliable research, because it has a value of Construct Reliability required which is above the critical value (> 0.70). Thus all the questions in the study variables are reliable.

4.2. Respondents' Demographic Characteristics

Characteristics of the respondents in this study include, gender, age, place of gaming, internet connectivity, online gaming experience, duration of playing, and frequency of playing online games per week. Characteristics of the respondents can be described as follows:

4.2.1. Respondents' Gender

The results of the focus groups that have been obtained are seen in Table 4.3

Table 4.3

Respondents' Gender

Gender	Frequency	Percentage

Male	170	85%
Female	30	15%
Total	200	100%

Source: primary data processed, 2014

Based on Table 4.3, it can be seen that 85 percent of respondents were male and 15 percent of respondents were female. This suggests that the online game is much favored by male respondents than female.

4.2.2. Respondents' Age

The result of the focus groups is shown in Table 4.4.

Table 4.4

Classification of respondents based on age

Age	Frequency	Percentage
< 20 year old	47	23.5%
21 - 25 year old	122	61%
> 26 year old	31	15.5%
Total	200	100%

Source: primary data processed, 2014

From the above data, it indicates that the majority of respondents who have ever played online games are between 21-25 years old, amounting to 61% (122 people). While the other age distribution that is more than 26 years old of age was 15.5% (31 people), and less than 20 years old is equal to 23.5% (47 people). The fact indicates that respondents who play online games are still young.

4.2.3. Respondents' Location

The classification of respondents based on location is shown in Table 4.5.

Table 4.5

Classification of respondents based on location

Location	Frequency	Percentage
Home	45	22.5%
Campus	40	20%

Cyber kafe/Gamenet/Internet Café	95	47.5%
Etc	20	10%
Total	200	100%

Source: primary data processed, 2014

From the above data, it indicates that the majority of respondents play online games in Cyber cafe / Gamenet / Internet cafe that equal to 47.5% (95 people). While the distribution of the othe r location is home by 22.5% (45 people), campus by 20% (40 people), and the other place is equal to 10% (20 people). This indicates that respondents prefer to play games online in Cyber cafes, Gamenet and Internet cafe.

4.2.4. Respondents' Internet Connectivity

Based on the internet connectivity, the respondents can be classified as in table 4.6

Table 4.6

Classification of respondents based on internet connectivity

Internet Connectivity	Frequency	Percentage
ADSL	52	26%

Modem Cable	51	26%
LAN	76	38.0%
Etc	21	10.5%
Total	200	100%

Source: primary data processed, 2014

From table 4.6, it indicates that the majority of respondents used the Internet connectivity is a LAN that is equal to 38% (76 people). While Internet connectivity is another distribution that is ADSL by 26% (52 people), cable modem by 26% (51 people), and the other connectivities are equal to 10.5% (21 people).

4.2.5. Respondents' Online Gaming Experience

The results of the focus groups have been obtained are as shown in Table 4.7.

Table 4.7

Classification of respondents based on online gaming experience

Online gaming experience	Frequency	Percentage

< 1 year	27	13.5%
1 - 3 year	57	28.5%
3 - 5 year	58	29%
5 - 7 year	40	20%
> 7 year	18	9%
Total	200	100%

Source: primary data processed, 2014

From table 4.7, it indicates that the majority of respondents, have played the online game for 3-5 years that is equal to 29% (58 people). While other respondents are less than 1 year is 13.5% (27 people), between 1-3 years is 28.5% (57 people), between 5-7 years is 20% (40 people) and more than 7 years is equal to 9% (18 people). This shows that the majority of respondents have been long enough to play games online.

4.2.6. Respondents Duration Playing Online Game

The results of the focus groups about the duration of playing the game is shown in table 4.8.

Table 4.8

Classification of respondents based on duration of playing online game

Duration of playing online game	Frequency	Percentage
< 1 hour	33	16.5%
1 - 3 hours	90	45%
> 3 hours	77	38.5%
Total	200	100%

Source: primary data processed, 2014

From the data above, it indicates that the majority of respondents play online game for 1-3 hours per day, that is equal to 45% (90 people), less than 1 hour per day is 16.5% (33 people), and more than 3 hours is 38, 5% (77 people). This shows that the majority of respondents could spend between 1-3 hours playing online games a day.

4.2.7. Respondents' Frequency Playing Online Games Per Week

The results of the focus groups about the frequency of playing game are shown in Table 4.9.

Table 4.9

Classification of respondents based on frequency of playing online games per week

Frequency of playing online games per week	Frequency	Percentage
< 6 hours	26	13%
6 - 10 hours	94	47%
> 10 hours	80	40%
Total	200	100%

Source: primary data processed, 2014

From the data in table 4.8, it indicates that the majority of respondents can play game between 6-10 hours per week, that is equal to 47% (94 people), less than 6 hours per week by 13% (26 people), and more than 10 hours by 40% (80 people).

This shows that the majority of respondents in a week could spend between 6-10 hours playing online games.

4.3. Descriptive Analysis

The answers of the questionaire show that respondents who have ever played online game based on the variables of entertainment, sociality, challenge, control, interactivity, customer satisfaction and consumer loyalty, have the lowest response of "strongly disagree" with a score of 1 and the highest response was "strongly agree" with the score of 7. In determining criteria for student assessment can be performed at intervals as follows:

The lowest score perception is: 1

The Highest score perception is: 7

$$\text{Interval} = \frac{7 - 1}{7} = 0,8$$

In order to obtain limits of perception, the classifications are as follows:

Avarage 1, 00 – 1, 85 : Strongly Disagree

Average 1, 86 – 2, 70 : Disagree

Average 2, 71 – 3, 56 : Slightly Disagree

Average 3, 57 – 4, 42 : Not Sure

Average 4, 43 – 5, 28 : Slightly Agree

Average 5, 29 – 6, 13 : Agree

Average 6, 14 – 7 : Strongly Agree

Table 4.10

Descriptive Results Entertainment Gratifications Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EG1	200	2.00	7.00	4.6650	1.06699
EG2	200	2.00	7.00	4.7450	1.24810
EG3	200	2.00	7.00	4.7250	1.31454
EG4	200	2.00	7.00	4.6900	1.24968
EG	200	2.00	7.00	4.7063	1.03258
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis in Table 4.10, it shows that on average, the respondents' assessment of the entertainment gratifications amounting to 4.71 (slightly agree). While the highest ratings on the item indicator no.2, that is playing games only for entertainment, the average is 4.745 (slightly agree), and the lowest occurred in subsequent assessment items, that is indicator no.1, game is just diversion for them with the average is 4.67 (slightly agree). This means that the consumer have given their assessment as “slightly agree” toward the variable of gratification entertainment, because the interval is range from 4.43 to 5.28. These results indicate that the game is a diversion for respondents. Therefore,

for them playing games is just for entertainment, having fun, and fill their spare time.

Table 4.11

Descriptive Results Social Gratifications Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SO1	200	2.00	7.00	4.7700	1.13292
SO2	200	2.00	7.00	4.5300	1.19425
SO3	200	2.00	7.00	4.7400	1.04780
SO4	200	2.00	7.00	4.7100	1.27831
SO5	200	2.00	7.00	4.6700	1.16096
SO6	200	2.00	7.00	4.6200	1.21779
SO7	200	2.00	7.00	4.7350	1.27787
SO	200	2.00	7.00	4.6825	.95447
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis as in Table 4.11, the average of respondents' assessment of the social gratifications is 4.68 (slightly agree). While the highest ratings on the item no.1 indicator which is playing online games is to seek for friends with the average is 4.77 (slightly agree), and the lowest occurred in subsequent assessment items for indicator no.2, that is meeting with people who have similar interests with average of 4.53 (slightly agree). This means that the consumer have given their assessment as “slightly agree” toward the variable of gratifications social, because the interval is range from 4.43 to 5.28. These results

indicate that the respondents play online games to make friends, meet with people who have similar interest or the same hobby, chatting with others, associate, communicate, and help other players.

Table 4.12

Descriptive Results Challenge Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CH1	200	2.00	7.00	4.7350	1.25805
CH2	200	2.00	7.00	4.8200	1.22684
CH3	200	2.00	7.00	4.5400	1.29878
CH4	200	2.00	7.00	4.6850	1.23018
CH	200	2.00	7.00	4.6950	1.02272
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis in Table 4.12, it shows that on average the respondents' assessment of the challenge is 4.69 (slightly agree). While the highest ratings is for item no.2 indicator, that is playing online games challenge a person to perform their best ability with an average of 4.82 (slightly agree), and the lowest occurred in subsequent assessment items for indicator no.3, playing games

are fun and challenging with the average is 4.54 (slightly agree). This means that the consumer have given their assessment as “slightly agree” toward the variable of flow experience challenge, because the interval is range from 4.43 to 5.28. These results indicate that by playing online games can demonstrate competence, fun, challenge, and can measure the ability of online game players.

Table 4.13

Descriptive Results Control Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CO1	200	2.00	7.00	4.7950	1.24124
CO2	200	2.00	7.00	4.8350	1.18524
CO3	200	2.00	7.00	4.7050	1.20217
CO	200	2.00	7.00	4.7784	1.05851
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis in Table 4.13, it shows that on average the respondents' assessment of the control is of 4.78 (slightly agree). While the highest rating is item no.2 indicator, that is which feeling is dominant when playing online games with an average of 4.84 (slightly agree), and the lowest valuation occurred in item no.3 indicator, they feel curious when playing online games with average of 4.71 (slightly agree). This means that the consumer have given their assessment as “slightly agree” toward the variable of flow experience control, because the interval is range from 4.43 to 5.28. These results indicate that the respondents feel in control when playing game, feeling dominant, and are curious when playing games.

Table 4.14

Descriptive Results of Interactivity Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IN1	200	2.00	7.00	4.7500	1.37731
IN2	200	2.00	7.00	4.7250	1.34851
IN3	200	2.00	7.00	4.6200	1.38390
IN	200	2.00	7.00	4.6985	1.24873
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis in Table 4.14, it shows that on average the respondents' assessment of the interactivity is 4.69 (slightly agree). While the highest rating is the no.1 indicator, that is interaction of the online games is slow and tedious with the average is 4.69 (slightly agree), and the lowest valuation occurred in item no.3 indicator, which is experience lagging response when playing games with the average is 4.62 (slightly agree). This means that consumers have given their assessment as "slightly agree" toward the variable of flow experience interactivity, because the interval is range from 4.43 to 5.28. These results indicate that interaction with the online game sometimes could be slow, so it had a lagging response when play that game.

Table 4.15

Descriptive Results Customer Satisfaction Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CS1	200	2.00	7.00	5.0500	1.22269
CS2	200	2.00	7.00	4.9800	1.14286
CS3	200	2.00	7.00	4.8550	1.17082
CS4	200	2.00	7.00	4.9050	1.25453
CS5	200	2.00	7.00	4.7400	1.28086
CS	200	2.40	7.00	4.9060	.97608
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis in Table 4.15, it shows that the average customer satisfaction ratings of the respondents amounted to 4.91 (slightly agree). The highest ratings on the item no.1 indicator about the online gamers, like the content of game has the average of 5.05 (slightly agree), and the lowest occurred in subsequent assessment item indicator no.5 that is, overall online gamers feeling satisfied with the online games that they already played with the average is 4.74 (slightly agree). This means that the consumer have given their assessment as

"slightly agree" toward the variable of customer satisfaction, because the interval is range from 4.43 to 5.28. These results indicate that the respondents like the content of the online game, and pleased with the quality of service and network that is provided by the online game vendor.

Table 4.16

Descriptive Results Consumer Loyalty Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CL1	200	2.00	7.00	4.7800	1.23663
CL2	200	2.00	7.00	4.9300	1.22990
CL3	200	2.00	7.00	4.7600	1.16585
CL4	200	2.00	7.00	4.7400	1.12192
CL	200	2.00	7.00	4.8025	.93056
Valid N (listwise)	200				

Source: primary data processed, 2014

Based on the results of the descriptive analysis in Table 4.16, it shows that on average the respondents' assessment of the customer loyalty is equal to 4.80

(slightly agree). While the highest ratings on the item no.2 indicator which is willing to recommend the online games to the other people, has an average of 4.93 (slightly agree), and the lowest occurred in subsequent assessment item no.4 indicator which is when playing online game, that game is the first choice, has average of 4.74 (slightly agree). This means that the consumers have given their assestment as "slightly agree" toward the variable of consumer loyalty, because the interval is range from 4.43 to 5.28. These results indicate that the respondents chose the online game compared to other games and make that online game the first choice.

4.4. Statistical Analysis

The statistical analysis used in this study is the analysis of the path or the path Analisys and tested with SEM analysis. Analysis of SEM (Structural Equation Model) is a multivariate technique of combining aspects of multiple regression and factor analysis to estimate a series of dependence relationships simultaneously (Hair et al, 1990). Hypothesis testing is performed using AMOS program to analyze the causal relationships in the structural models proposed. But before the hypothesis testing, it is necessary to analyze the goodness of fit or test the feasibility of the model.

4.4.1. Normality Test

To test the normality of the distribution of the data used in the analysis, researchers used a statistical test that has been provided in the AMOS 21.0 program to test the value Skweness. The assumption of normality is fulfilled if the value of skewness is less than 2 and kurtosis values are less than 7 (Apriando, 2012). Normality test is done by giving the command test for normality and outliers, and the results output by 21.0 Amos program, this result can be seen in table 4.17 below:

Table 4.17

Normality Test

Variable	min	max	skew	c.r.	Kurtosis	c.r.
CL4	2.000	7.000	**-.247**	-1.423	**-.113**	-.327
CL3	2.000	7.000	**-.269**	-1.551	**-.182**	-.526
CL2	2.000	7.000	**-.305**	-1.762	**-.436**	-1.259
CL1	2.000	7.000	**-.328**	-1.892	**-.493**	-1.423
IN3	2.000	7.000	**.166**	.960	**-1.077**	-3.109
IN2	2.000	7.000	**.114**	.661	**-.860**	-2.484
IN1	2.000	7.000	**-.077**	-.443	**-.889**	-2.567

Variable	min	max	skew	c.r.	Kurtosis	c.r.
CO3	2.000	7.000	**-.062**	-.357	**-.456**	-1.316
CO2	2.000	7.000	**-.241**	-1.393	**-.588**	-1.697
CO1	2.000	7.000	**-.113**	-.650	**-.680**	-1.964
CH4	2.000	7.000	**.065**	.372	**-.403**	-1.163
CH3	2.000	7.000	**-.095**	-.548	**-.638**	-1.841
CH2	2.000	7.000	**-.259**	-1.498	**-.487**	-1.407
CH1	2.000	7.000	**-.281**	-1.620	**-.569**	-1.642
SO7	2.000	7.000	**-.075**	-.431	**-.499**	-1.441
SO6	2.000	7.000	**.406**	2.342	**-.389**	-1.122
SO5	2.000	7.000	**-.011**	-.061	**-.331**	-.956
SO4	2.000	7.000	**-.010**	-.059	**-.610**	-1.761
SO3	2.000	7.000	**.114**	.656	**-.078**	-.225
SO2	2.000	7.000	**.204**	1.177	**-.349**	-1.008
SO1	2.000	7.000	**-.372**	-2.147	**-.457**	-1.318

Variable	min	max	skew	c.r.	Kurtosis	c.r.
EG4	2.000	7.000	**-.142**	-.820	**-.497**	-1.435
EG3	2.000	7.000	**-.402**	-2.319	**-.702**	-2.027
EG2	2.000	7.000	**-.302**	-1.743	**-.456**	-1.316
EG1	2.000	7.000	**-.422**	-2.437	**-.126**	-.364
CS5	2.000	7.000	**-.167**	-.967	**-.632**	-1.824
CS4	2.000	7.000	**-.218**	-1.261	**-.648**	-1.871
CS3	2.000	7.000	**.133**	.766	**-.541**	-1.561
CS2	2.000	7.000	**-.103**	-.592	**-.641**	-1.850
CS1	2.000	7.000	**-.162**	-.933	**-.792**	-2.285
Multivariate					106.327	17.159

Based on table 4.17, it can be seen that there are no numbers in the column Skewness values greater than 2 and kurtosis values greater than 7, therefore, it can be conducted that the distribution of the data is normal. So that the test data for the modeling of SEM shown in Table 4.17 through univariate tests, showed normal distribution of the data, therefore, the assumption of normality has been fulfilled and the data is feasible

to use in subsequent estimates.

4.4.2. Goodness of Fit Test (*Goodness of Fit*)

To find out the criteria for a good model (Goodness of Fit), the reasearcher used: Absolute Fit Measured (absolute index measurement), Incremental Fit Measured (additional measurement index) and Parsimonious Fit Measured (Measurement simplicity index). Test goodness of this model using Amos software version 6.0. The following is the goodness of fit index generated after testing:

Table 4.18

Goodness of Fit Index

Goodness of Fit Index	Result	*Cut Off Value*	*Criteria*
Chi Square	428,893	<430.691	Good
Probability	0,057	≥0,05	Good
CMIN/DF	1,117	≤2,00	Good
RMSEA	0,057	≤0,08	Good
GFI	0,922	≥0,9	Good

AGFI	0,915	≥0,9	Good
TLI	0,927	≥0,9	Good
CFI	0,936	≥0.9	Good

Source: Amos Results, 2014

X2 - Chi Square with a significance level of 0.057 whose value p> 0.05. This indicates that there is no difference between the sample covariance matrix with the covariance matrix of the estimated population. This means that the sample covariance matrix to the estimated population covariance matrices are equal, so the otherwise good models.

The minimum Sampel Discrepancy Function - CMIN / DF is an index that measures the suitability parsimonious relationship goodnes of fit models and the number of estimated coefficients that are expected to reach the level of conformance. Results CMIN / DF value is of 1.117, which is smaller than the recommended value of CMIN / DF <2, so that indicates a good model fit.

The Root Mean Square Error of Approximation - RMSEA, is the index used to compensate for the chi-square statistics in a large sample. RMSEA value indicates goodnes of fit that can be expected when the model is estimated in the population. Acceptance of the recommended value is <0.08, while the results of the testing is 0,057 which indicates that the model is good.

Based on analysis toward *goodnes of fit* – GFI reflects the overall level of suitability models. Recommended acceptance level GFI> 0.90. The results show the value of GFI was 0.922> 0.9, so that the model has a good fit.

Adjusted Goodness of fit Index – GFI as AGFI development index, is an index that has been adapted to the degree of freedom ratio of the proposed model with the degree of fredom of null models. The results show the value of AGFI, that is 0.915 whose value is greater than the recommended value of AGFI> 0.9, indicating that this model has a good fit.

Tucker Lewis Index – TLI is an alternative incremental fit index that compares with the baseline models tested. Value recommended as a good level of concordance was> 0.9. The results showed that the value of TLI is 0.927 so that it can be stated that the level of suitability is at a good criteria.

Comparative Fit Index – CFI, an incremental suitability index models tested comparing the null model. CFI recommended values is > 0.95. The test results is 0.936, indicating that the model is good.

From the measurement results of the Goodness of Fit Index above, we can conclude all parameters have met the expected requirements, so that the model of this research has met the suitability for the model.

4.4.3 Hypothesis Testing

The results can be described in AMOS path variable relationship between entertainment, sociality, challenge, control, interactivity, and customer satisfaction on consumer loyalty, as seen in the following:

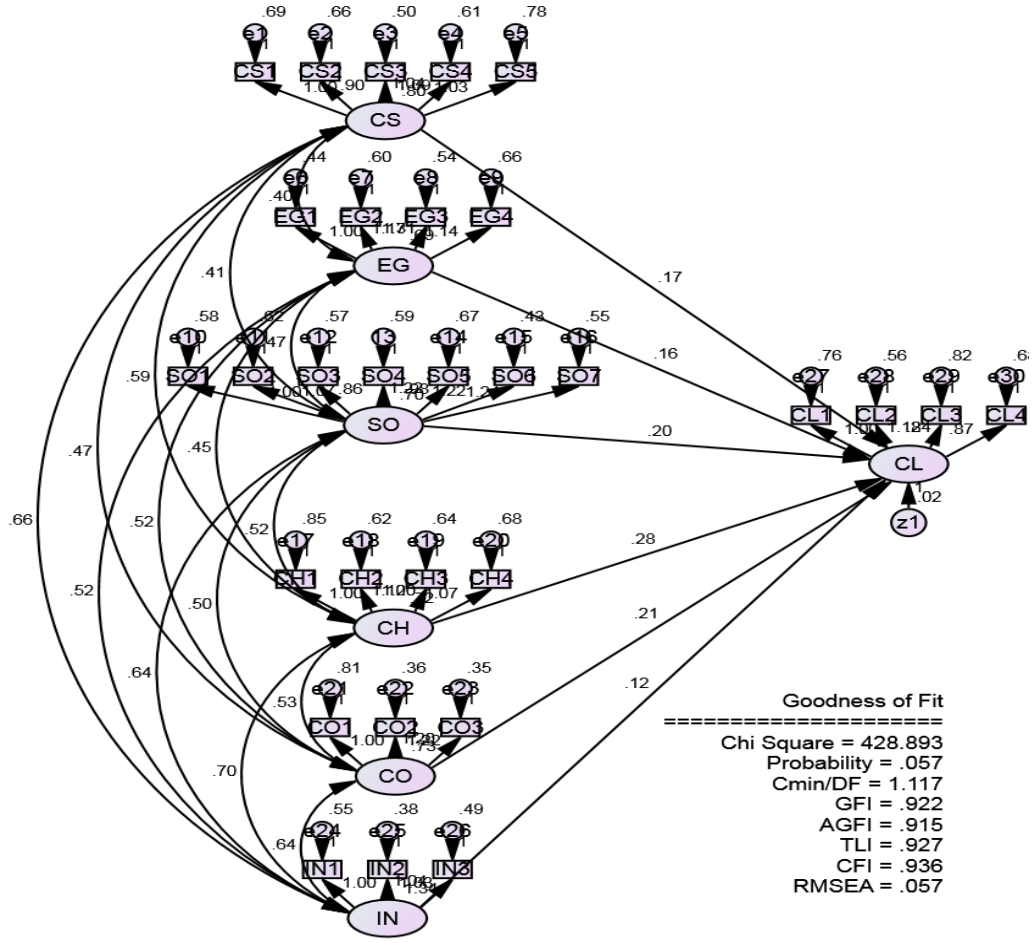


Figure 3: Results Model of SEM analysis

Table 4.19

Amos Results

Relationship Between Variable	Koef. Estimate	S.E.	C.R.	P value	Result
Entertainment	0.156	0.078	2.098	0.036	Significant
Sociality	0.191	0.084	2.363	0.018	Significant
Challenge	0.278	0.121	2.361	0.018	Significant
Control	0.202	0.090	2.311	0.021	Significant
Interactivity	0.161	0.053	2.288	0.022	Significant
Customer Satisfaction	0.170	0.083	2.001	0.045	Significant

Dependent variable: Customer Loyalty

Source; Data Amos, 2014

a. First Hypothesis Testing (H1a)

Based on Table 4.19 shows that entertainment variables proved significant and positive impact on consumer loyalty shown by the coefficient estimate of 0.156 with

probability of p = 0.036 <0.05. So that entertainment has significant and positive impact on customer loyalty, these results support the first hypothesis (H_{1a}).

b. First Hypothesis Testing (H1b)

Based on Table 4.19, it shows that sociality variables proved to be significant and positive impact on consumer loyalty shown by the coefficient estimate of 0.191 with a probability of p = 0.018 <0.05. So that social has significant and positive impact on customer loyalty, these results supports the first hypothesis (H_{1b}).

c. Second Hypothesis Testing (H2a)

Based on Table 4.19, it shows that challenge variables have been proved to have significant and positive impact on consumer loyalty shown by the coefficient estimate of 0.278 with a probability of p = 0.018 <0.05. So that challenge has significant and positive impact on customer loyalty, these results support the first hypothesis (H_{2a}).

d. Second Hypothesis Testing (H2b)

Based on Table 4.19, it shows that the control variables have been proved to be significant and has positive impact on consumer loyalty shown by the coefficient

estimate of 0.202 with a probability of p = 0.021 <0.05. So that control has significant and positive impact on customer loyalty, these results support the second hypothesis (H_{2b}).

e. Second Hypothesis Testing (H2c)

Based on Table 4.19, it shows that interactivity variables have been proved to be significant and has positive impact on consumer loyalty shown by the coefficient estimate of 0.161 with a probability of p = 0.022 <0.05. So that interactivity has significant and positive impact on customer loyalty, these results support the second hypothesis (H_{2C}).

f. Third Hypothesis Testing

Based on Table 4.19, it shows that satisfaction variables have been proved to be significant and positive impact on consumer loyalty shown by the coefficient estimate of 0.170 with a probability of p = 0.045 <0.05. Thus satisfaction has positive significant effect on consumer loyalty, and these results support the third hypothesis (H_3).

4.5 Discussion of Results

Due to playing with the features in the online games would be a form of entertainment that the online gamers could use to fill up his / her unused time when free or waiting. Games online games can be a diversion from all the routines and problems being faced by someone, so it can be entertainment and fun. Sometimes the online games could also spare time.

The use of content based online games can be exemplified by those online gamers who are looking for a specific bit of information or knowledge (eg ancient history, culture, etc.). More perspective based process may be represented by people who spend time playing online games. For example, participants may view the games online gaming as a source of providing entertainment and filling time (Peters et al., 2007). Playing with the features in the online game will be a form of entertainment that can be used for online gamers fill / unused time when they are free or wait.

Gameplay where groups take part in different adventures is what characterizes these games, so they are dependent on high levels of trust and cooperation between gamers in order to function (Chen 2008). Gamers do, however, use these spaces in their own ways and engage in sociality on their own terms (Simon,

Boudreau & Silverman 2009). In this study we take a closer look at the relationship between played and designed sociality in online games from an interaction perspective by looking at sociality in temporary collaboration group.

Someone who can make friends play games that expand their social relationships. Gamers can meet with others who have similar interests or hobbies, and can build a good relationship with that person. Communication between game players can be done directly or through chat, and among game players can help each other to finish the game, so a good social relationship is able to increase customer loyalty in online game context.

Challenge activities are present among the most important predictors of flow (Hoffman & Novak, 2009). Online games usually make a series of challenging tasks virtual interrelated and connected in the simulation game (Rollings & Adams, 2003), and this challenge aims to influence the response of the players, for example, by limiting his or her progress in the game (Kiili, 2005).

The challenge in online game can make person test their skills in playing the game, so that would encourage or motivate players to show all his best. Due to the challenge of making an online game become more interesting and fun so that increasing customer loyalty in online game context.

These results are also in accordance with the opinion of Csikszentmihalyi (2008) stated that individuals tend to experience this challenging situation as rewarding and feel happiest when this challenge match with their skills. It seems that online games allow players to continue to improve their game skills by learning to overcome challenges from which they derive a sense of personal achievement. Therefore, the challenges of maintaining an appropriate level of online gamers continue to be motivated and engaged in the game (Woszczynski et al., 2002; Kiili, 2005; Hoffman & Novak, 2009).

According to Ajzen (2001), perceived behavioral control can be in specific controls to a level of action and can vary in different situations or actions. Online gaming control with limited or feeling free to act in different ways is under certain circumstances in a virtual environment. Online game players sometimes feel controlled when playing games, but players feel completely feel the real experience. Game player can also control the entire game if they can run the game properly, so the players feel dominant and can show his ability. Usually, the higher the level, the higher the difficulty level, but this is what makes the online game players are curious and feel challenged, because it is able to control and control over the game. Given this reality, the higher a person's control over the game then there is a desire to play

that online game again in the future, so that it can make the ability level of play online game also increased.

Online game interactivity indicates the extent to which an individual feels that the game fosters interaction between players is mediated by a virtual environment (Chung & Tan, 2004; Hoffman & Novak, 2009). Interaction design allows players to participate actively in the process through continuous feedback and immediate. In particular, Wang and Wang (2008) claimed that facilitates rapid feedback for funny gamer experience. The term "interactivity" is referring to the concept of a complex and multi - dimensional (McMillan, 2000), which includes other elements such as the way the online game participant moves his / her cursor on the screen or with a joystick, how to game online allows an individual to choose icon in the list, and how to enter text. Online game enable someone experiencing lagging response, and give pleasure if the page in the online games that can be played load quickly, so it is possible make the players not feel bored.

The result of this research related with the opinion of Kotler (1997), who stated that customer satisfaction is one of the main elements in an effort to retain existing customers or to attract new customers. Satisfaction or dissatisfaction is the feeling

of pleasure or disappointment from someone who comes from a comparison between the performances of a product with the impression of other expectations.

Consumers who already get their basic needs when playing online games assume that will increase consumer loyalty, so that consumers will have more confidence in the quality of online games and recommend to others to play online games. Complex relationship exists between customer satisfaction and response actors. Nowadays more players believed that the key to winning the competition is to give satisfaction to the consumer (Tjiptono, 2000). Consumer satisfaction in online game is based on the contents of the games that they are playing, service that is provided by the vendor and the quality of the network, if all customer expectations are fulfilled then the customer satisfaction is achieved so that it will increase customer loyalty toward online games.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Based on analysis and discussions, it can be concluded as follows:

1. There is significant relationship between entertainment and consumer loyalty toward online games shown by the coefficient estimate of 0.156 with probability of p = 0.036 <0.05. It means that better entertainment can make consumer loyalty increase.
2. There is significant relationship between sociality and consumer loyalty toward online games shown by the coefficient estimate of 0.191 with a probability of p = 0.018 <0.05. It means that better sociality can make consumer loyalty increase.
3. There is significant relationship between challenge and consumer loyalty toward online games shown by the coefficient estimate of 0.278 with a probability of p = 0.018 <0.05. It means that better challenge can make consumer loyalty increase.
4. There is significant relationship between control and consumer loyalty toward online games shown by the coefficient estimate of 0.202 with a probability of p = 0.021 <0.05. It means that better control can make consumer loyalty increase.
5. There is significant relationship between interactivity and consumer loyalty toward online games shown by the coefficient estimate of 0.161 with a

probability of p = 0.022 <0.05. It means that better interactivity can make consumer loyalty increase.

6. There is significant relationship between customer satisfaction and consumer loyalty toward online games shown by the coefficient estimate of 0.170 with a probability of p = 0.045 <0.05. It means that better customer satisfaction that consumer got it can make consumer loyalty increased.

5.2. Recommendation

Based on the conclusions above, the following suggestions are proposed:

1. Online game service providers should improve challenge variable, because it proved that challenge had the most significant effect on customer loyalty. The online game vendors should increase the difficulty of the game for each level, so that game players are motivated to continue to demonstrate the ability and skill in playing online games.
2. Respondents in further research should be expanded, not only from students but also from the scope of the general population that may also be in Yogyakarta, and may consider adding other factors that may affect customer loyalty in online game context.

5.3 Limitation

As in the case with any research efforts, the limitations may occur during the data collection. Despite the fact that the results were based on a relatively large, randomly selected, real customer sample, a potential bias may come from the single source data collection procedure. Further, there are also few limitations of the study:

1. The major limitation is the breadth of the sample, the sample only focuses on Yogyakarta online game participants, mostly student samples. To achieve the general objective, future studies should be conducted in other regions of Indonesia
2. Not all people are having the experience of playing online game so that the researcher spread the questionnaires directly to the people visiting the Game Centre or Internet Cafe after asking the management's permission to do so. Regarding with the permission procedures, the researcher had to deal with some appointments and agreements with the management. Although their response was not very well, the researcher was finally succeeded to collect the data from the online game customers.
3. The time limitation which is only 6 months also becomes a consideration for the researcher to do this research. If the research activities extend in a longer time, the result will probably be more optimized.

REFERENCES

Agarwal, R., & Venkatesh, V. (2002). Assessing a firm's web presence: A heuristic evaluation procedure for the measurement of usability [Electronic Version]. *Information System Research, 13*(2), 168-186.

Ajzen, I. (2001), Nature and operation of attitudes. *Annual Review of Psychology*, *52*(1), 27-58.

Anderson, E.W. & Sullivan, M.W. (1993), The antecedents and consequences of customer satisfaction for firms. *Marketing Science, 12*(2), 125-43.

Bryant, J. & Miron, D. (2004), Theory and research in mass communication, *Journal of Communication, 54*(4), 662-704.

Castan˜eda, J.A., Frı´as, D.M. & Rodrı´guez, M.A. (2007), The influence of the Internet on destination satisfaction. *Internet Research, 17*(4), 402-20.

Chen, Y-C., Chen, P.S., Hwang, J-J., Korba, L., Song, R. & Yee, G. (2005), An analysis of online gaming crime characteristics. *Internet Research*, *15*(3), 246-61.

Choi, D. & Kim, J. (2004), Why people continue to play online games: in search of critical design factors to increase customer loyalty to online contents, *CyberPsychology & Behavior, 7*(1), 11-24.

Chung, J. & Tan, F.B. (2004), Antecedents of perceived playfulness: An exploratory study on user acceptance of general information-searching websites. *Information & Management, 41*, 869-81.

Csikszentmihalyi, M. (2008). *Flow: The Psychology of Optimal Experience*. New York, Harper Perennial.

Cyberbullying In Context. [n.d.]. *Insafe*. Retrieved from Insafe: http://www.saferinternet.org/online-issues/parents-and-carers/cyberbullying

Dick, A.S. & Basu, K. (1994), Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 99-113.

Downes, E.J. & McMillan, S.J. (2000), Defining interactivity: A qualitative identification of key dimensions. *New Media & Society, 2*(2), 157-79.

Game Genres. [n.d.] *Australian Centre for The Moving Image*. Retrieved from Acmi: http://www.acmi.net.au/explore_game_genres.htm

Ghozali, I. (2004). *Model Persamaan Struktural, Konsep dan Aplikasi dengan Program AMOS 19.0*. Semarang:Badan Penerbit-Undip

Gray, W.D. & Salzman, M.C. (1998). Damaged merchandise? A review of experiments that compare usability evaluation methods [Electronic Version]. *Human-Computer Interaction, 13*(3), 203-261.

Havitz, M.E. & Mannell, R.C. (2005). Enduring involvement, situational involvement, and flow in leisure and non-leisure activities. *Journal of Leisure Research, 37*(2), 152-77.

Huang Y.L, & Hsieh Y.J. (2011). Predicting online game loyalty based on need gratification and experiential motives. *Internet Research, 21*(5), 581-598.

Hutcheson, G.D. & Moutinho, L. (1998). Measuring preferred store satisfaction using consumer choice criteria as a mediating factor. *Journal of Marketing Management, 14*(7), 705-20.

Jones, T.O. & Sasser, E.J. (1995). Why satisfied customers defect. *Harvard Business Review, 73*(6), 88-99.

Karat, J. (1997). Evolving the scope of user-centered design [Electronic Version]. *Communications of ACM, 40*(7), 33-38.

Kolo, C. & Baur, T. (2004), Living a virtual life: social dynamics of online gaming. *Game Studies: The International Journal of Computer Game Research, 4*(1), Retrieved from: www.gamestudies.org/0401/kolo/.

Kotler, P. (2003) *Marketing Management* (11th ed.). European edition, Prentice Hall.

Liu, C.H. & Chou, S.L. (2008). *Analysis of internet entertaining behaviors in Taiwan*.Taipei: Market Intelligence Center.

Leung, L. (2004). Net-generation attributes and seductive properties of the internet as predictors of online activities and internet addiction. *CyberPsychology & Behavior*, *7*(3), 333-48.

Nielsen, J. (1994). Enhancing the explanatory power of usability heuristics. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems [Electronic Version]. *Internet Research*, 152-158.

Novak, T.P. Hoffman, D.L. & Yung, Y.F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing Science, 19*(1), 22-42.

Oliver, R.L. (1999).Whence consumer loyalty? *Journal of Marketing63*, 33-44.

Peters, C. Amato, C.H. & Hollenbeck, C.R. (2007). An exploratory investigation of consumers'perceptions of wireless advertising. *Journal of Advertising. 36*(4), 129-45.

Peevers, G. Douglas, G. & Jack, M.A. (2007). A usability comparison of three alternative message formats for an SMS banking service [Electronic Version]. *International Journal of Human-Computer Studies, 66*(2), 113-123.

Reichheld, F.F. & Sasser, W.E. (1990). Zero defections: Quality comes to services. *Harvard Business Review 68*(5), 105-11.

Rollings, A. & Adams, E. (2003). Andrew Rollings and Ernest Adams on game design. Indianapolis:New Riders Games

Ruggiero, T.E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society, 3*(1), 3-37.

Sauro, J., & Kindlund, E. (2005). A method to standardize usability metrics into a single score. Proceedings of ACM Conference on Human Factors in

Computing Systems: ACM CHI'05 [Electronic Version], Portland. *Internet Research*, 2-7.

Stafford, T.F., Stafford, M.R. & Schkade, L.L. (2004). Determining uses and gratifications for the Internet. *Decision Sciences, 35*(2), 259-88.

Steinkuehler, C. & Williams, D. (2006). Where everybody knows your (screen) name: Online games as third places. *Journal of Computer-Mediated Communication, 11*(4).

Svennevig, M. (2000). Needs, not nerds: Researching technological change. *International Journal of Advertising, 19*(5), 645-63.

Swanson, D.L. (1992). Understanding audiences: Continuing contributions of gratifications research. *Poetics, 21*(4), 305-28.

Toral, S.L. Martı´nez-Torres, M.R. & Barrero, F. (2009). An empirical study of the driving forces behind online communities. *Internet Research, 19*(4), 378-92.

Wan, C.S. & Chiou, W.B. (2006). Why are adolescents addicted to online gaming? An interview study in Taiwan. *CyberPsychology & Behavior, 9*(6), 762-6.

Wang, Y.S. & Wang, H.Y. (2008). Gender differences in the perception and acceptance of online games. *British Journal of Educational Technology, 39*(5), 787-806.

Whitehead, C. (2006). Evaluating web page and web site usability. *Proceedings of 44th Southeast Conference: ACM SE'06.* Melbourne, 10-12.

Woszczynski, A.B., Roth, P.L. & Segars, A.H. (2002). Exploring the theoretical foundations of playfulness in computer interactions. *Computers in Human Behavior, 18*(4), 369-88.

APPENDICES

KUESIONER

Pernyataan – pernyataan berikut berkenaan dengan penilaian Saudara terhadap loyalitas dalam bermain game online. Tunjukkan pendapat Saudara dengan memberi tanda (√) di kolom yang paling sesuai:

1	2	3	4	5	6	7
Sangat Tidak Setuju	Tidak Setuju	Agak Tidak Setuju	Tidak Yakin	Agak Setuju	Setuju	Sangat Setuju

SECTION A – USE AND GRATIFICATIONS (U&G)

Entertainment Gratifications	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Game adalah pengalihan bagi saya							
Saya bermain game hanya sebagai hiburan							
Saya mendapatkan kesenangan dalam bermain game							
Saya bermain game untuk mengisi waktu							
Social Gratifications (Saya bermain online game untuk …)							
Mencari teman							
Bertemu orang dengan minat / hobi yang sama							
Chatting dengan orang lain							

Berkomunikasi dengan orang lain

Membangun hubungan dengan orang lain

Bergaul dengan orang lain

Membantu pemain lain

SECTION B – PERCEIVED ONLINE FLOW

Tantangan	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Bermain online game dapat menguji dengan baik ketrampilan bermain game saya							
Bermain game menantang saya untuk menunjukan kemampuan terbaik saya							
Bermain online game menyenangkan dan menantang							
Saya menemukan bahwa online game mengukur batas kemampuan saya							

	1	**2**	**3**	**4**	**5**	**6**	**7**
Control							
Saya merasa dikendalikan ketika bermain online game							
Saya merasa dominan ketika bermain online game							
Saya merasa penasaran ketika bermain online game							

Interaktivitas

Berinteraksi dengan online game lambat dan membosankan							
Halaman di online game yang saya mainkan biasanya memuat dengan cepat							
Saya mengalami respon lagging ketika bermain game							

SECTION C1 – CUSTOMER SATISFACTION

Kepuasan konsumer	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Saya suka isi/content permainan dari game online yang saya mainkan							
Saya senang dengan pelayanan yang diberikan oleh vendor game online tersebut							
Vendor game ini berkinerja dengan baik dalam menangani perilaku oportunitas game							
Saya senang dengan kualitas jaringan yang disediakan oleh game vendor tersebut							
Secara keseluruhan, saya puas dengan game online yang saya mainkan							

SECTION C2 - CUSTOMER LOYALTY

Loyalitas konsumer	**1**	**2**	**3**	**4**	**5**	**6**	**7**

Dibandingkan dengan game online yang lain,saya lebih memilih game yang sudah lama saya mainkan

Saya akan merekomendasikan game online yang sering saya mainkan kepada orang lain

Saya akan kembali bermain game online ini ketika saya ingin memainkan nya

Ketika saya ingin bermain game online, game ini adalah pilihan utama saya

SECTION D – DEMOGRAPHIC INFORMATION

Lingkari pilihan yang menurut anda paling sesuai

1. Apakah jenis kelamin Anda:
   a. Laki-laki
   b. Perempuan

2. Berapakah umur anda saat ini:
   a. < 20 tahun
   b. 21-25 tahun
   c. > 26 tahun

3. Dimanakah tempat anda biasa bermain game online:
   a. Rumah
   b. Kampus
   c. Cyber kafe/ Gamenet/ Warnet

d. Lain-lain

4. Konektivitas internet apa yang biasa anda gunakan untuk bermain game online:
   a. ADSL
   b. Kabel modem
   c. LAN
   d. Lain-lain

6. Sudah berapa lama anda bermain game online:

   a. Kurang dari 1 tahun
   b. 1-3 tahun
   c. 3-5 tahun
   d. 5-7 tahun
   e. Lebih dari 7 tahun

7. Berapa jam biasanya anda bermain game online:

   a. Kurang dari 1 jam
   b. 1-3 jam
   c. Lebih dari 3 jam

8. Berapa jam anda biasanya bermain game online dalam satu minggu:

   a. Lebih dari 6 jam
   b. 6-10 jam
   c. Lebih dari 10 jam

REKAPITULASI DATA PENELITIAN

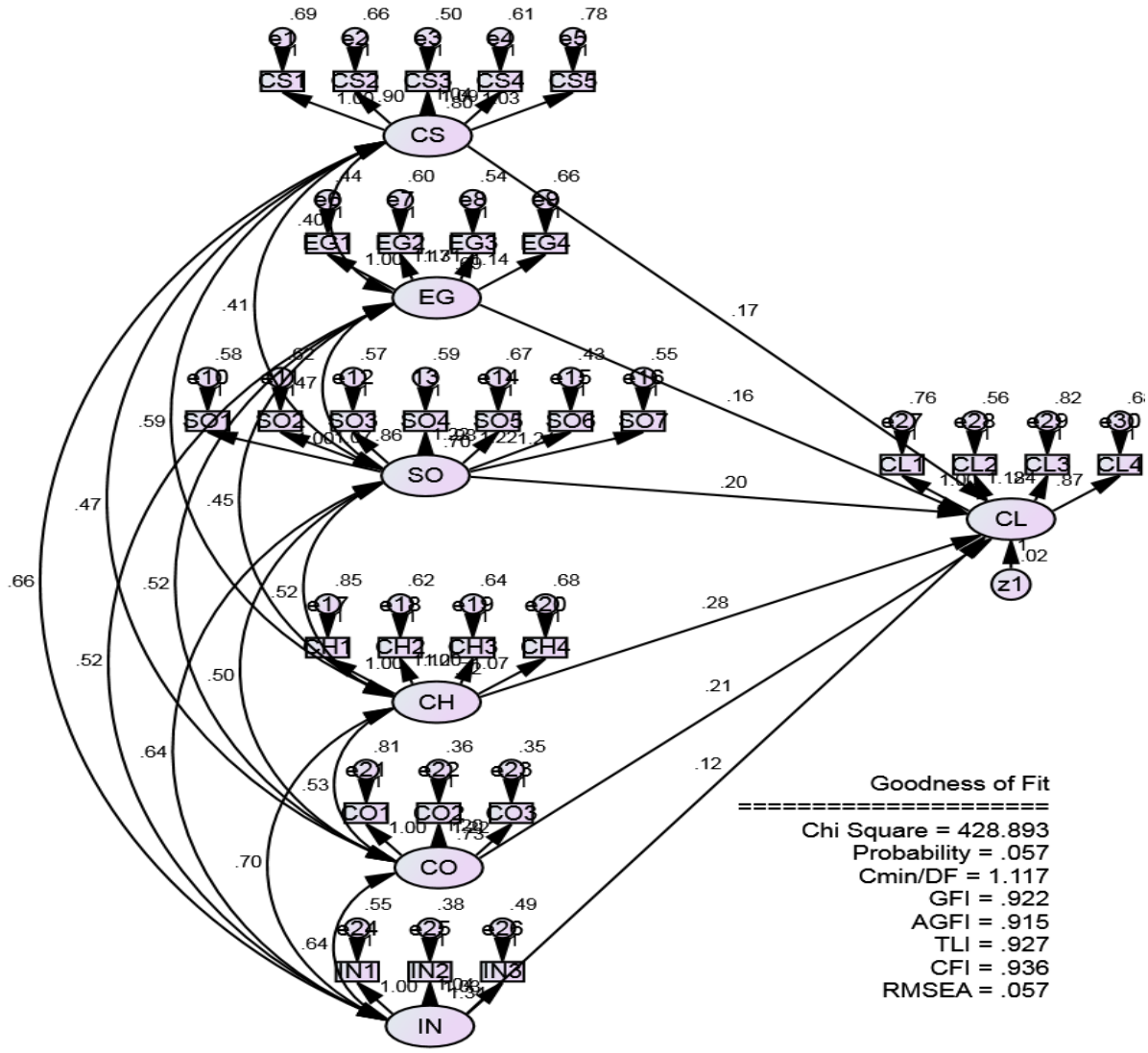
No	EG1	EG2	EG3	EG4	SO1	SO2	SO3	SO4	SO5	SO6	SO7	CH1	CH2	CH3	CH4	CO1	CO2	C
1	2	2	2	2	5	4	5	5	5	4	4	4	5	5	5	3	3	
2	5	5	4	4	4	5	5	5	6	5	6	6	5	5	6	5	5	
3	6	6	6	6	5	5	3	4	5	4	4	5	5	5	6	5	5	
4	5	5	5	5	4	4	4	4	5	3	5	5	5	5	6	4	4	
5	6	6	6	6	6	6	5	6	5	5	5	5	4	6	6	4	6	
6	5	5	4	4	4	5	5	6	5	4	4	4	5	5	5	4	6	
7	5	5	5	6	5	5	5	5	5	5	5	5	5	5	5	5	4	
8	6	5	5	6	5	4	4	4	5	5	5	4	5	4	4	6	6	
9	6	6	6	6	5	5	6	6	5	5	5	6	6	5	4	4	6	
10	6	6	6	6	5	3	4	4	4	4	4	4	4	5	4	4	5	
11	5	5	4	5	5	5	5	5	6	4	5	5	6	5	4	4	5	
12	6	6	5	5	5	4	4	4	4	5	4	4	6	4	5	5	4	
13	4	4	4	4	4	5	4	4	5	4	5	5	4	4	5	4	5	
14	5	5	5	5	6	6	6	5	5	4	5	6	4	5	6	6	5	
15	5	6	7	6	6	5	5	5	5	5	5	6	7	7	7	7	4	
16	4	4	4	4	6	6	6	6	6	6	6	6	6	4	4	4	4	
17	5	4	4	4	3	4	4	3	6	4	6	7	6	4	6	3	3	
18	6	5	4	4	3	4	6	7	4	6	4	6	6	6	4	3	4	
19	5	5	3	4	4	3	6	7	6	6	6	6	4	3	4	4	4	
20	4	4	6	4	6	4	6	4	7	4	6	4	4	6	4	6	4	
21	2	2	2	2	4	4	4	4	4	3	3	3	3	4	3	3	4	
22	5	4	6	4	3	4	4	3	4	4	4	4	3	6	6	6	6	
23	6	5	6	4	5	5	5	5	6	6	5	5	5	5	6	6	6	
24	5	5	5	6	5	4	4	5	3	5	4	5	5	5	4	5	4	
25	6	6	6	6	3	3	4	4	4	5	5	5	4	4	4	3	6	
26	5	5	5	5	5	5	5	4	4	4	4	4	4	4	6	5	4	
27	5	5	4	4	4	5	6	5	5	4	5	5	5	4	4	4	6	
28	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
29	5	5	6	5	6	4	5	4	5	3	6	5	4	4	5	5	5	
30	5	5	4	6	5	5	4	4	4	4	4	6	6	4	6	4	4	
31	6	5	4	5	5	4	4	4	5	4	4	5	5	4	5	4	5	
32	5	5	6	4	6	4	3	4	3	5	4	5	6	4	5	4	6	
33	3	3	3	3	6	4	5	3	5	4	5	6	6	3	5	4	5	
34	5	6	5	5	5	4	4	4	6	4	6	5	6	4	4	4	5	
35	5	5	3	5	6	5	3	4	5	4	5	6	5	4	6	4	5	
36	4	6	4	3	2	3	5	4	4	4	2	6	6	3	3	6	4	
37	5	6	5	6	6	4	5	6	5	4	5	6	5	6	4	6	4	
38	5	6	5	3	4	3	5	5	6	4	5	6	4	3	4	4	4	
39	4	5	4	4	3	3	4	4	4	3	4	6	5	5	4	5	4	
40	6	4	4	6	4	6	4	4	5	5	5	6	5	4	5	6	4	
No	EG1	EG2	EG3	EG4	SO1	SO2	SO3	SO4	SO5	SO6	SO7	CH1	CH2	CH3	CH4	CO1	CO2	C
41	5	4	5	4	5	4	4	3	5	4	5	5	6	3	5	5	4	

42	3	3	3	3	5	4	3	3	5	4	3	4	4	3	4	5	4	
43	6	6	3	4	4	4	4	4	5	4	4	5	6	4	4	4	5	
44	4	6	6	6	6	5	5	5	5	5	5	6	5	5	6	6	5	
45	4	5	5	5	6	5	5	4	3	5	4	6	6	4	6	3	3	
46	4	7	7	7	6	6	6	7	6	6	6	3	3	3	3	6	6	
47	6	7	6	7	6	6	6	6	6	7	7	7	6	7	7	7	7	
48	3	3	3	3	3	4	3	4	3	6	6	7	4	4	4	7	4	
49	4	4	6	4	6	6	6	7	6	6	4	7	6	6	7	7	6	
50	4	4	6	6	6	6	6	6	3	3	3	7	6	4	7	7	6	
51	4	6	3	4	3	3	3	4	3	3	4	6	6	4	7	7	6	
52	6	6	4	6	6	6	4	3	6	4	6	7	7	4	7	7	5	
53	7	7	7	7	6	6	6	4	4	6	6	6	6	6	7	6	7	
54	5	5	6	6	4	5	6	6	5	5	5	5	6	3	6	6	5	
55	4	6	2	5	3	3	5	3	3	3	2	3	3	3	3	6	5	
56	4	6	3	4	4	4	4	3	3	4	3	3	3	3	3	4	3	
57	5	6	6	5	3	3	5	5	5	4	4	6	6	3	6	5	6	
58	6	5	6	5	5	5	4	4	6	5	6	6	5	4	6	5	6	
59	5	5	5	6	5	5	5	5	3	4	4	6	6	3	4	6	5	
60	4	5	4	5	5	3	5	5	5	3	4	6	5	3	4	5	5	
61	6	5	5	5	5	4	5	5	3	5	5	5	4	4	4	4	4	
62	4	4	5	5	4	2	3	3	5	5	5	5	5	3	4	4	4	
63	5	5	6	4	5	2	5	5	4	5	5	5	6	5	4	4	4	
64	5	4	4	6	5	3	5	5	5	5	5	5	5	5	4	5	5	
65	4	4	4	4	5	2	5	6	5	4	5	5	5	4	4	5	5	
66	4	4	5	4	5	5	5	6	4	5	4	5	5	3	4	5	5	
67	4	4	5	5	5	4	5	5	4	4	5	5	6	4	5	5	5	
68	5	4	5	4	6	5	6	6	6	6	6	6	6	6	5	6	6	
69	5	3	4	5	5	2	3	2	4	3	6	5	3	3	6	5	6	
70	4	2	5	6	5	4	5	5	3	4	5	5	5	4	6	5	5	
71	4	3	5	6	3	4	4	5	4	4	4	6	5	5	4	6	5	
72	4	5	5	3	5	5	3	4	5	4	3	6	5	3	4	5	5	
73	5	5	3	5	5	5	5	6	6	5	6	5	6	5	6	6	5	
74	5	5	3	4	3	4	5	6	3	5	5	5	5	5	6	4	6	
75	3	3	3	3	6	4	4	5	4	4	4	4	6	3	4	4	5	
76	6	5	5	3	5	4	4	4	4	4	2	4	6	3	4	4	5	
77	5	5	5	4	6	5	5	5	4	3	5	3	3	3	4	4	3	
78	4	5	5	4	4	5	5	5	4	5	4	4	6	4	4	6	5	
79	5	4	6	4	4	3	5	6	5	3	4	2	2	2	4	4	5	
80	5	4	6	6	4	5	5	5	6	3	5	6	4	6	4	4	5	
81	4	5	4	6	5	4	4	5	5	5	4	3	3	2	3	4	6	
No	EG1	EG2	EG3	EG4	SO1	SO2	SO3	SO4	SO5	SO6	SO7	CH1	CH2	CH3	CH4	CO1	CO2	C
82	5	4	4	5	6	4	5	5	3	4	3	6	6	4	5	4	4	
83	6	5	4	5	5	4	5	5	5	5	5	5	6	5	5	6	4	
84	6	4	4	5	5	6	5	6	4	4	4	6	5	5	6	5	4	
85	3	3	4	3	3	5	5	5	5	4	5	6	4	2	5	3	4	
86	4	5	6	4	5	3	4	4	5	5	3	4	4	3	6	5	4	
87	3	4	3	3	4	4	4	3	3	3	6	5	4	4	4	6	6	

88	6	5	6	4	5	5	5	4	5	5	5	4	4	5	4	5	6	
89	5	6	6	5	5	5	5	5	4	3	6	5	5	3	4	6	6	
90	5	5	5	5	4	3	4	5	5	4	4	4	3	4	4	6	6	
91	4	5	6	5	4	5	5	4	4	3	5	6	5	5	4	5	4	
92	4	6	5	4	4	4	5	6	5	4	6	6	5	5	4	5	6	
93	4	5	6	4	6	4	4	5	5	5	5	5	6	5	4	6	6	
94	4	6	6	5	5	4	5	6	5	4	5	6	6	5	5	5	5	
95	6	4	6	4	4	4	5	4	5	4	5	4	4	5	4	4	5	
96	5	4	6	4	6	4	6	5	3	5	5	6	5	6	3	6	6	
97	6	4	6	4	5	4	3	3	5	4	5	4	4	3	3	6	6	
98	3	4	3	3	5	4	3	3	5	4	3	3	4	3	4	3	3	
99	6	4	5	4	4	4	4	4	5	4	4	6	5	4	4	3	3	
100	5	4	6	5	6	5	4	6	6	6	4	7	6	6	5	5	5	
101	6	4	6	4	5	6	4	5	5	5	4	4	6	4	4	5	5	
102	2	2	2	2	3	3	4	3	2	2	2	2	3	3	3	2	2	
103	2	2	2	2	5	4	4	4	4	4	6	4	3	3	3	2	2	
104	6	6	6	5	5	5	5	5	6	6	4	5	5	5	5	5	6	
105	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
106	5	5	5	3	5	3	3	4	5	5	5	3	3	4	4	3	3	
107	3	3	2	2	5	5	4	5	5	5	5	2	4	2	2	4	4	
108	5	5	5	5	6	5	6	4	4	5	5	5	5	5	5	4	4	
109	4	6	6	5	5	6	4	4	4	5	5	4	6	5	5	5	5	
110	4	4	4	6	6	6	5	4	6	6	6	5	5	5	4	4	4	
111	4	6	5	3	7	7	7	7	4	7	7	6	6	6	4	6	6	
112	6	6	5	6	2	2	3	3	3	4	4	2	2	2	2	4	3	
113	4	4	4	4	6	6	6	6	6	4	6	4	5	5	5	5	5	
114	4	4	4	5	3	4	4	2	4	4	4	4	5	5	4	4	5	
115	6	5	6	5	5	5	4	6	6	4	5	5	5	6	6	6	6	
116	4	3	4	5	4	3	5	4	5	4	4	3	4	4	4	4	5	
117	5	5	5	6	4	6	4	5	5	5	5	2	6	5	5	5	5	
118	4	5	4	4	5	4	5	4	4	4	4	5	5	5	5	4	4	
119	5	5	5	6	5	6	5	5	6	6	5	4	6	5	5	5	5	
120	5	4	4	4	5	4	5	3	4	4	3	4	3	5	4	3	3	
121	6	3	5	3	5	5	5	5	5	5	5	4	4	2	2	5	5	
122	2	2	2	2	3	3	3	3	3	3	2	3	3	3	4	4	4	
No	EG1	EG2	EG3	EG4	SO1	SO2	SO3	SO4	SO5	SO6	SO7	CH1	CH2	CH3	CH4	CO1	CO2	C
123	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	
124	4	3	4	4	4	4	5	4	4	4	5	3	3	4	4	5	3	
125	5	5	6	6	5	6	5	5	5	5	4	4	4	2	2	2	2	
126	4	4	3	4	4	4	5	3	4	4	4	3	4	5	3	3	3	
127	5	5	5	5	5	5	5	4	4	6	5	4	5	6	6	5	5	
128	4	5	3	3	5	4	4	4	4	4	3	3	3	3	3	4	4	
129	6	6	6	6	4	4	5	2	2	6	6	4	5	6	5	5	6	
130	4	4	2	4	5	4	5	4	3	4	3	4	5	5	5	2	2	
131	6	4	6	6	7	7	7	7	7	7	7	5	6	6	6	6	6	
132	4	3	3	4	5	4	4	5	3	4	3	3	5	4	4	2	2	
133	5	5	5	3	6	4	4	5	5	5	5	6	4	5	5	4	5	

134	3	3	3	3	4	4	5	4	4	4	3	4	3	4	4	6	5	
135	4	3	5	5	3	3	4	3	4	3	4	4	4	5	5	5	5	
136	4	5	3	5	4	3	5	3	4	3	4	5	4	4	5	3	4	
137	4	2	5	4	3	4	4	3	4	4	4	3	4	4	4	3	3	
138	4	5	4	4	3	4	4	4	4	3	3	4	5	5	4	4	3	
139	4	3	3	4	4	4	5	5	4	4	3	3	3	4	4	4	4	
140	4	3	3	5	3	3	5	4	4	3	5	4	4	5	5	5	5	
141	4	3	3	5	2	4	4	2	4	4	4	3	4	4	5	4	4	
142	4	5	5	4	4	4	5	4	5	4	4	4	4	2	5	3	4	
143	3	3	4	5	4	4	4	2	4	4	3	3	5	5	5	4	4	
144	4	4	4	3	3	4	5	4	4	3	4	4	4	5	5	4	4	
145	3	5	2	4	3	3	5	5	2	3	3	3	3	3	3	4	4	
146	4	4	3	3	4	4	4	3	3	3	2	4	4	5	4	5	4	
147	4	4	4	4	4	4	5	4	4	4	4	4	5	5	4	5	4	
148	5	5	5	6	5	6	6	6	5	5	5	6	6	6	6	6	6	
149	4	5	4	4	5	4	5	4	4	4	4	3	4	4	5	4	4	
150	5	6	5	5	5	5	6	5	5	5	5	4	4	4	4	4	4	
151	4	3	3	4	5	4	5	4	3	4	3	2	2	2	2	3	3	
152	6	4	5	5	5	5	4	6	6	6	6	5	5	6	6	6	6	
153	4	3	3	3	5	4	4	4	4	4	4	5	5	5	4	3	4	
154	6	5	5	4	5	3	4	5	5	5	5	5	5	5	5	5	6	
155	4	3	3	4	4	3	5	3	5	4	3	2	2	2	2	4	4	
156	2	2	2	2	3	3	3	2	2	2	2	2	2	2	2	3	3	
157	5	6	6	5	6	5	5	6	6	7	7	6	5	6	6	6	5	
158	6	7	7	4	6	4	7	7	7	7	7	5	5	6	7	7	7	
159	6	6	5	7	5	6	7	6	5	5	6	6	7	7	7	6	6	
160	5	6	6	5	6	4	4	6	6	6	6	5	6	6	6	3	6	
161	3	3	4	4	2	2	2	2	2	2	2	3	3	3	3	6	3	
162	5	6	6	5	7	7	7	7	7	7	7	4	4	6	6	6	6	
163	4	5	5	5	5	5	5	5	5	5	5	5	5	7	7	4	7	
No	EG1	EG2	EG3	EG4	SO1	SO2	SO3	SO4	SO5	SO6	SO7	CH1	CH2	CH3	CH4	CO1	CO2	C
164	5	6	7	7	4	5	5	4	4	4	4	4	4	4	4	4	6	
165	5	6	6	7	6	7	7	7	4	7	6	6	7	7	7	4	5	
166	6	6	6	7	6	7	6	6	4	7	6	5	7	7	5	4	4	
167	3	4	3	3	3	4	3	3	4	4	3	3	3	6	5	4	4	
168	6	7	5	6	6	6	6	6	4	7	7	5	7	6	5	7	5	
169	7	7	6	6	3	3	3	4	3	3	3	5	5	5	5	6	6	
170	5	6	6	5	6	5	5	7	7	7	7	6	5	6	3	5	5	
171	5	6	6	5	6	5	5	7	4	6	7	5	6	7	7	7	7	
172	6	7	7	6	6	7	5	6	6	7	7	6	5	5	5	6	6	
173	4	6	6	7	6	6	6	6	6	5	6	4	6	6	5	7	7	
174	5	4	4	4	7	6	5	7	7	7	7	4	6	7	7	6	7	
175	4	5	4	4	4	5	4	5	4	3	3	4	5	5	5	5	5	
176	3	4	4	4	4	4	4	4	4	4	4	5	5	5	5	3	3	
177	5	6	6	6	7	7	7	6	5	5	7	4	4	4	4	6	6	
178	5	5	6	6	6	6	6	6	6	6	6	7	6	6	5	6	6	
179	6	6	6	5	6	5	3	7	7	7	6	6	7	7	7	7	7	

180	5	6	6	7	4	4	4	4	4	4	4	4	4	4	5	6	6	
181	4	7	6	7	6	7	7	6	6	6	7	4	7	7	7	7	6	
182	5	6	6	7	6	5	5	6	6	6	6	4	7	6	6	4	6	
183	5	5	5	7	6	7	6	6	5	5	6	6	7	6	6	6	6	
184	6	5	6	6	5	7	6	6	6	7	7	7	7	5	6	6	6	
185	5	6	6	6	7	7	5	6	6	7	6	4	7	6	6	6	6	
186	2	2	2	2	3	3	3	3	4	4	4	4	3	3	3	6	3	
187	6	7	7	5	6	5	5	7	7	7	7	7	7	7	7	7	7	
188	6	6	6	6	5	5	5	5	5	5	5	5	6	6	3	3	6	
189	5	6	6	6	6	6	7	7	7	7	7	7	7	7	7	6	6	
190	6	7	6	6	6	6	7	7	7	7	7	6	4	6	3	3	6	
191	5	6	4	6	6	6	6	7	7	7	6	6	4	5	5	6	7	
192	5	7	7	5	3	3	3	3	3	3	3	2	2	2	3	5	3	
193	6	7	7	6	6	7	7	6	6	6	6	6	4	5	4	6	6	
194	6	5	6	6	5	7	6	6	6	7	7	5	4	6	4	6	6	
195	6	6	6	7	6	6	7	7	7	7	7	6	5	6	5	7	7	
196	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
197	4	4	5	4	5	5	4	5	4	4	5	4	5	4	4	4	4	
198	4	4	4	4	4	4	4	4	4	4	4	6	6	6	4	6	6	
199	3	3	2	2	4	4	4	4	4	4	4	3	3	3	4	3	3	
200	5	4	5	5	5	5	5	5	5	5	5	6	5	5	5	5	5	



D:\MY DOCUMENT 2014\DANISWARA AMOS GAME ANAS\data amos ok.amw

Analysis Summary

Date and Time

Date: Saturday, May 10, 2014
Time: 8:17:19

Title

data amos ok: Saturday, May 10, 2014 8:17 AM

Groups

Group number 1 (Group number 1)

Notes for Group (Group number 1)

The model is recursive.
Sample size = 200

Variable Summary (Group number 1)

Your model contains the following variables (Group number 1)

Observed, endogenous variables
CS1
CS2
CS3
CS4
CS5
EG1
EG2
EG3
EG4
SO1
SO2
SO3
SO4
SO5
SO6
SO7
CH1
CH2
CH3
CH4
CO1
CO2
CO3
IN1
IN2
IN3
CL1
CL2
CL3
CL4
Unobserved, endogenous variables
CL
Unobserved, exogenous variables

CS
e1
e2
e3
e4
e5
EG
e6
e7
e8
e9
SO
e10
e11
e12
13
e14
e15
e16
CH
e17
e18
e19
e20
CO
e21
e22
e23
IN
e24
e25
e26
e27
e28
e29
e30
z1

Variable counts (Group number 1)

Number of variables in your model:	68
Number of observed variables:	30
Number of unobserved variables:	38
Number of exogenous variables:	37
Number of endogenous variables:	31

Parameter Summary (Group number 1)

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	38	0	0	0	0	38
Labeled	0	0	0	0	0	0
Unlabeled	29	15	37	0	0	81
Total	67	15	37	0	0	119

Assessment of normality (Group number 1)

Variable	min	max	skew	c.r.	kurtosis	c.r.
CL4	2.000	7.000	-.247	-1.423	-.113	-.327
CL3	2.000	7.000	-.269	-1.551	-.182	-.526
CL2	2.000	7.000	-.305	-1.762	-.436	-1.259
CL1	2.000	7.000	-.328	-1.892	-.493	-1.423
IN3	2.000	7.000	.166	.960	-1.077	-3.109
IN2	2.000	7.000	.114	.661	-.860	-2.484
IN1	2.000	7.000	-.077	-.443	-.889	-2.567
CO3	2.000	7.000	-.062	-.357	-.456	-1.316
CO2	2.000	7.000	-.241	-1.393	-.588	-1.697
CO1	2.000	7.000	-.113	-.650	-.680	-1.964
CH4	2.000	7.000	.065	.372	-.403	-1.163
CH3	2.000	7.000	-.095	-.548	-.638	-1.841
CH2	2.000	7.000	-.259	-1.498	-.487	-1.407
CH1	2.000	7.000	-.281	-1.620	-.569	-1.642
SO7	2.000	7.000	-.075	-.431	-.499	-1.441
SO6	2.000	7.000	.406	2.342	-.389	-1.122
SO5	2.000	7.000	-.011	-.061	-.331	-.956
SO4	2.000	7.000	-.010	-.059	-.610	-1.761
SO3	2.000	7.000	.114	.656	-.078	-.225
SO2	2.000	7.000	.204	1.177	-.349	-1.008
SO1	2.000	7.000	-.372	-2.147	-.457	-1.318
EG4	2.000	7.000	-.142	-.820	-.497	-1.435
EG3	2.000	7.000	-.402	-2.319	-.702	-2.027
EG2	2.000	7.000	-.302	-1.743	-.456	-1.316
EG1	2.000	7.000	-.422	-2.437	-.126	-.364
CS5	2.000	7.000	-.167	-.967	-.632	-1.824
CS4	2.000	7.000	-.218	-1.261	-.648	-1.871
CS3	2.000	7.000	.133	.766	-.541	-1.561
CS2	2.000	7.000	-.103	-.592	-.641	-1.850
CS1	2.000	7.000	-.162	-.933	-.792	-2.285
Multivariate					106.327	17.159

Observations farthest from the centroid (Mahalanobis distance) (Group number 1)

Observation number	Mahalanobis d-squared	p1	p2
46	61.437	.001	.000
183	61.089	.001	.000
19	56.712	.002	.000
87	56.094	.003	.000

Observation number	Mahalanobis d-squared	p1	p2
20	56.018	.003	.000
69	54.994	.004	.000
17	54.919	.004	.000
125	53.824	.005	.000
103	52.826	.006	.000
161	52.236	.007	.000
55	51.968	.008	.000
158	51.795	.008	.000
121	51.651	.008	.000
112	50.748	.010	.000
52	50.153	.012	.000
51	50.113	.012	.000
190	49.438	.014	.000
79	49.006	.016	.000
107	48.236	.019	.000
106	48.186	.019	.000
85	47.697	.021	.000
96	47.421	.023	.000
170	45.532	.034	.000
188	45.276	.036	.000
177	44.960	.039	.000
36	44.782	.040	.000
33	44.354	.044	.000
160	43.878	.049	.000
192	43.849	.049	.000
164	43.724	.051	.000
49	42.438	.066	.000
167	41.800	.074	.000
186	41.400	.080	.000
174	41.256	.083	.000
18	41.235	.083	.000
63	40.754	.091	.000
176	40.735	.091	.000
89	40.356	.098	.000
41	40.061	.104	.000
24	39.992	.105	.000
129	39.990	.105	.000
198	38.912	.128	.000
35	38.875	.129	.000
76	38.699	.133	.000

Observation number	Mahalanobis d-squared	p1	p2
182	38.612	.135	.000
166	38.545	.136	.000
193	38.389	.140	.000
86	38.366	.141	.000
84	38.359	.141	.000
171	38.237	.144	.000
32	38.189	.145	.000
111	37.938	.151	.000
110	37.935	.151	.000
53	37.709	.157	.000
26	36.703	.186	.000
180	36.276	.199	.001
168	35.887	.212	.003
185	35.810	.214	.003
191	35.809	.214	.002
172	35.564	.223	.003
81	35.546	.223	.002
6	35.391	.229	.002
22	35.143	.237	.003
80	35.130	.238	.002
16	34.341	.267	.020
75	34.315	.268	.015
100	34.116	.276	.020
155	34.056	.279	.016
165	33.659	.295	.038
98	33.616	.296	.031
91	33.601	.297	.023
74	33.340	.308	.036
163	32.984	.323	.070
31	32.372	.350	.210
72	32.320	.353	.189
181	32.241	.356	.179
115	32.139	.361	.177
65	32.118	.362	.149
40	31.825	.376	.216
64	31.632	.385	.254
70	31.621	.385	.215
62	31.595	.387	.184
77	31.338	.399	.247
97	31.315	.400	.214

Observation number	Mahalanobis d-squared	p1	p2
57	30.617	.434	.520
38	30.100	.461	.743
71	30.038	.464	.726
169	29.768	.478	.803
54	29.602	.486	.830
43	29.583	.487	.799
134	29.565	.488	.765
8	29.509	.491	.747
156	28.979	.519	.904
130	28.743	.531	.936
92	28.714	.533	.922
145	28.441	.547	.954
194	28.271	.556	.964
88	27.816	.580	.991

Models

Default model (Default model)

Notes for Model (Default model)

Computation of degrees of freedom (Default model)

Number of distinct sample moments:	465
Number of distinct parameters to be estimated:	81
Degrees of freedom (465 - 81):	384

Result (Default model)

Minimum was achieved
Chi-square = 428.893
Degrees of freedom = 384
Probability level = .057

Group number 1 (Group number 1 - Default model)

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
CL	<---	CS	.165	.083	2.001	.045	
CL	<---	EG	.164	.078	2.098	.036	
CL	<---	SO	.199	.084	2.363	.018	
CL	<---	CH	.285	.121	2.361	.018	
CL	<---	CO	.207	.090	2.311	.021	
CL	<---	IN	.122	.053	2.288	.022	
CS1	<---	CS	1.000				
CS2	<---	CS	.896	.094	9.535	***	
CS3	<---	CS	1.035	.096	10.769	***	
CS4	<---	CS	1.090	.103	10.583	***	
CS5	<---	CS	1.033	.105	9.816	***	
EG1	<---	EG	1.000				
EG2	<---	EG	1.170	.103	11.381	***	
EG3	<---	EG	1.305	.108	12.140	***	
EG4	<---	EG	1.140	.103	11.036	***	
SO1	<---	SO	1.000				
SO2	<---	SO	1.070	.101	10.599	***	
SO3	<---	SO	.864	.089	9.691	***	
SO4	<---	SO	1.221	.108	11.357	***	
SO5	<---	SO	.984	.099	9.978	***	
SO6	<---	SO	1.224	.102	11.999	***	
SO7	<---	SO	1.239	.107	11.544	***	
CH1	<---	CH	1.000				
CH2	<---	CH	1.099	.115	9.518	***	
CH3	<---	CH	1.197	.123	9.752	***	
CH4	<---	CH	1.070	.115	9.283	***	
CO1	<---	CO	1.000				
CO2	<---	CO	1.198	.111	10.784	***	
CO3	<---	CO	1.223	.113	10.834	***	
IN1	<---	IN	1.000				
IN2	<---	IN	1.036	.067	15.523	***	
IN3	<---	IN	1.031	.069	14.900	***	
CL1	<---	CL	1.000				
CL2	<---	CL	1.117	.102	10.909	***	
CL3	<---	CL	.838	.097	8.641	***	
CL4	<---	CL	.868	.093	9.302	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
CL	<---	CS	.170
CL	<---	EG	.156
CL	<---	SO	.191
CL	<---	CH	.278
CL	<---	CO	.202
CL	<---	IN	.161
CS1	<---	CS	.734
CS2	<---	CS	.704
CS3	<---	CS	.794
CS4	<---	CS	.780
CS5	<---	CS	.724
EG1	<---	EG	.781
EG2	<---	EG	.781
EG3	<---	EG	.828
EG4	<---	EG	.761
SO1	<---	SO	.739
SO2	<---	SO	.750
SO3	<---	SO	.690
SO4	<---	SO	.800
SO5	<---	SO	.709
SO6	<---	SO	.841
SO7	<---	SO	.812
CH1	<---	CH	.678
CH2	<---	CH	.764
CH3	<---	CH	.786
CH4	<---	CH	.742
CO1	<---	CO	.688
CO2	<---	CO	.863
CO3	<---	CO	.869
IN1	<---	IN	.842
IN2	<---	IN	.890
IN3	<---	IN	.863
CL1	<---	CL	.707
CL2	<---	CL	.794
CL3	<---	CL	.628
CL4	<---	CL	.676

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
CS	<-->	EG	.400	.075	5.331	***	

			Estimate	S.E.	C.R.	P	Label
CS	<-->	SO	.405	.076	5.356	***	
CS	<-->	CH	.593	.096	6.164	***	
CS	<-->	CO	.475	.085	5.597	***	
CS	<-->	IN	.661	.108	6.111	***	
EG	<-->	SO	.465	.075	6.182	***	
EG	<-->	CH	.446	.079	5.673	***	
EG	<-->	CO	.518	.083	6.201	***	
EG	<-->	IN	.523	.093	5.641	***	
SO	<-->	CH	.520	.086	6.075	***	
SO	<-->	CO	.495	.082	6.006	***	
SO	<-->	IN	.641	.101	6.355	***	
CH	<-->	CO	.526	.090	5.830	***	
CH	<-->	IN	.699	.112	6.233	***	
CO	<-->	IN	.641	.106	6.026	***	

Correlations: (Group number 1 - Default model)

			Estimate
CS	<-->	EG	.538
CS	<-->	SO	.542
CS	<-->	CH	.778
CS	<-->	CO	.623
CS	<-->	IN	.638
EG	<-->	SO	.670
EG	<-->	CH	.630
EG	<-->	CO	.731
EG	<-->	IN	.544
SO	<-->	CH	.731
SO	<-->	CO	.696
SO	<-->	IN	.664
CH	<-->	CO	.725
CH	<-->	IN	.711
CO	<-->	IN	.651

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
CS	.802	.139	5.775	***	
EG	.691	.110	6.301	***	
SO	.697	.117	5.938	***	
CH	.724	.140	5.190	***	

	Estimate	S.E.	C.R.	P	Label
CO	.725	.137	5.312	***	
IN	1.337	.187	7.144	***	
z1	.019	.026	.724	.469	
e1	.685	.081	8.500	***	
e2	.655	.075	8.740	***	
e3	.504	.065	7.814	***	
e4	.613	.077	8.007	***	
e5	.776	.090	8.586	***	
e6	.441	.055	7.984	***	
e7	.604	.076	7.984	***	
e8	.542	.075	7.200	***	
e9	.655	.080	8.236	***	
e10	.580	.064	8.994	***	
e11	.620	.070	8.925	***	
e12	.572	.062	9.235	***	
13	.586	.069	8.523	***	
e14	.667	.073	9.151	***	
e15	.431	.054	7.987	***	
e16	.554	.066	8.392	***	
e17	.850	.095	8.920	***	
e18	.623	.076	8.206	***	
e19	.640	.081	7.916	***	
e20	.676	.080	8.438	***	
e21	.808	.090	8.953	***	
e22	.357	.055	6.473	***	
e23	.353	.056	6.291	***	
e24	.550	.073	7.553	***	
e25	.375	.061	6.148	***	
e26	.485	.069	7.023	***	
e27	.761	.082	9.271	***	
e28	.556	.065	8.519	***	
e29	.819	.086	9.567	***	
e30	.679	.072	9.411	***	

Matrices (Group number 1 - Default model)

Total Effects (Group number 1 - Default model)

	IN	CO	CH	SO	EG	CS	CL
CL	.122	.207	.285	.199	.164	.165	.000
CL4	.105	.180	.247	.173	.142	.143	.868

	IN	CO	CH	SO	EG	CS	CL
CL3	.102	.173	.238	.167	.137	.138	.838
CL2	.136	.231	.318	.223	.183	.185	1.117
CL1	.122	.207	.285	.199	.164	.165	1.000
IN3	1.031	.000	.000	.000	.000	.000	.000
IN2	1.036	.000	.000	.000	.000	.000	.000
IN1	1.000	.000	.000	.000	.000	.000	.000
CO3	.000	1.223	.000	.000	.000	.000	.000
CO2	.000	1.198	.000	.000	.000	.000	.000
CO1	.000	1.000	.000	.000	.000	.000	.000
CH4	.000	.000	1.070	.000	.000	.000	.000
CH3	.000	.000	1.197	.000	.000	.000	.000
CH2	.000	.000	1.099	.000	.000	.000	.000
CH1	.000	.000	1.000	.000	.000	.000	.000
SO7	.000	.000	.000	1.239	.000	.000	.000
SO6	.000	.000	.000	1.224	.000	.000	.000
SO5	.000	.000	.000	.984	.000	.000	.000
SO4	.000	.000	.000	1.221	.000	.000	.000
SO3	.000	.000	.000	.864	.000	.000	.000
SO2	.000	.000	.000	1.070	.000	.000	.000
SO1	.000	.000	.000	1.000	.000	.000	.000
EG4	.000	.000	.000	.000	1.140	.000	.000
EG3	.000	.000	.000	.000	1.305	.000	.000
EG2	.000	.000	.000	.000	1.170	.000	.000
EG1	.000	.000	.000	.000	1.000	.000	.000
CS5	.000	.000	.000	.000	.000	1.033	.000
CS4	.000	.000	.000	.000	.000	1.090	.000
CS3	.000	.000	.000	.000	.000	1.035	.000
CS2	.000	.000	.000	.000	.000	.896	.000
CS1	.000	.000	.000	.000	.000	1.000	.000

Standardized Total Effects (Group number 1 - Default model)

	IN	CO	CH	SO	EG	CS	CL
CL	.161	.202	.278	.191	.156	.170	.000
CL4	.109	.137	.188	.129	.106	.115	.676
CL3	.101	.127	.174	.120	.098	.107	.628
CL2	.128	.161	.220	.152	.124	.135	.794
CL1	.114	.143	.196	.135	.110	.120	.707
IN3	.863	.000	.000	.000	.000	.000	.000
IN2	.890	.000	.000	.000	.000	.000	.000
IN1	.842	.000	.000	.000	.000	.000	.000

	IN	CO	CH	SO	EG	CS	CL
CO3	.000	.869	.000	.000	.000	.000	.000
CO2	.000	.863	.000	.000	.000	.000	.000
CO1	.000	.688	.000	.000	.000	.000	.000
CH4	.000	.000	.742	.000	.000	.000	.000
CH3	.000	.000	.786	.000	.000	.000	.000
CH2	.000	.000	.764	.000	.000	.000	.000
CH1	.000	.000	.678	.000	.000	.000	.000
SO7	.000	.000	.000	.812	.000	.000	.000
SO6	.000	.000	.000	.841	.000	.000	.000
SO5	.000	.000	.000	.709	.000	.000	.000
SO4	.000	.000	.000	.800	.000	.000	.000
SO3	.000	.000	.000	.690	.000	.000	.000
SO2	.000	.000	.000	.750	.000	.000	.000
SO1	.000	.000	.000	.739	.000	.000	.000
EG4	.000	.000	.000	.000	.761	.000	.000
EG3	.000	.000	.000	.000	.828	.000	.000
EG2	.000	.000	.000	.000	.781	.000	.000
EG1	.000	.000	.000	.000	.781	.000	.000
CS5	.000	.000	.000	.000	.000	.724	.000
CS4	.000	.000	.000	.000	.000	.780	.000
CS3	.000	.000	.000	.000	.000	.794	.000
CS2	.000	.000	.000	.000	.000	.704	.000
CS1	.000	.000	.000	.000	.000	.734	.000

Direct Effects (Group number 1 - Default model)

	IN	CO	CH	SO	EG	CS	CL
CL	.122	.207	.285	.199	.164	.165	.000
CL4	.000	.000	.000	.000	.000	.000	.868
CL3	.000	.000	.000	.000	.000	.000	.838
CL2	.000	.000	.000	.000	.000	.000	1.117
CL1	.000	.000	.000	.000	.000	.000	1.000
IN3	1.031	.000	.000	.000	.000	.000	.000
IN2	1.036	.000	.000	.000	.000	.000	.000
IN1	1.000	.000	.000	.000	.000	.000	.000
CO3	.000	1.223	.000	.000	.000	.000	.000
CO2	.000	1.198	.000	.000	.000	.000	.000
CO1	.000	1.000	.000	.000	.000	.000	.000
CH4	.000	.000	1.070	.000	.000	.000	.000
CH3	.000	.000	1.197	.000	.000	.000	.000
CH2	.000	.000	1.099	.000	.000	.000	.000

	IN	CO	CH	SO	EG	CS	CL
CH1	.000	.000	1.000	.000	.000	.000	.000
SO7	.000	.000	.000	1.239	.000	.000	.000
SO6	.000	.000	.000	1.224	.000	.000	.000
SO5	.000	.000	.000	.984	.000	.000	.000
SO4	.000	.000	.000	1.221	.000	.000	.000
SO3	.000	.000	.000	.864	.000	.000	.000
SO2	.000	.000	.000	1.070	.000	.000	.000
SO1	.000	.000	.000	1.000	.000	.000	.000
EG4	.000	.000	.000	.000	1.140	.000	.000
EG3	.000	.000	.000	.000	1.305	.000	.000
EG2	.000	.000	.000	.000	1.170	.000	.000
EG1	.000	.000	.000	.000	1.000	.000	.000
CS5	.000	.000	.000	.000	.000	1.033	.000
CS4	.000	.000	.000	.000	.000	1.090	.000
CS3	.000	.000	.000	.000	.000	1.035	.000
CS2	.000	.000	.000	.000	.000	.896	.000
CS1	.000	.000	.000	.000	.000	1.000	.000

Standardized Direct Effects (Group number 1 - Default model)

	IN	CO	CH	SO	EG	CS	CL
CL	.161	.202	.278	.191	.156	.170	.000
CL4	.000	.000	.000	.000	.000	.000	.676
CL3	.000	.000	.000	.000	.000	.000	.628
CL2	.000	.000	.000	.000	.000	.000	.794
CL1	.000	.000	.000	.000	.000	.000	.707
IN3	.863	.000	.000	.000	.000	.000	.000
IN2	.890	.000	.000	.000	.000	.000	.000
IN1	.842	.000	.000	.000	.000	.000	.000
CO3	.000	.869	.000	.000	.000	.000	.000
CO2	.000	.863	.000	.000	.000	.000	.000
CO1	.000	.688	.000	.000	.000	.000	.000
CH4	.000	.000	.742	.000	.000	.000	.000
CH3	.000	.000	.786	.000	.000	.000	.000
CH2	.000	.000	.764	.000	.000	.000	.000
CH1	.000	.000	.678	.000	.000	.000	.000
SO7	.000	.000	.000	.812	.000	.000	.000
SO6	.000	.000	.000	.841	.000	.000	.000
SO5	.000	.000	.000	.709	.000	.000	.000
SO4	.000	.000	.000	.800	.000	.000	.000
SO3	.000	.000	.000	.690	.000	.000	.000

	IN	CO	CH	SO	EG	CS	CL
SO2	.000	.000	.000	.750	.000	.000	.000
SO1	.000	.000	.000	.739	.000	.000	.000
EG4	.000	.000	.000	.000	.761	.000	.000
EG3	.000	.000	.000	.000	.828	.000	.000
EG2	.000	.000	.000	.000	.781	.000	.000
EG1	.000	.000	.000	.000	.781	.000	.000
CS5	.000	.000	.000	.000	.000	.724	.000
CS4	.000	.000	.000	.000	.000	.780	.000
CS3	.000	.000	.000	.000	.000	.794	.000
CS2	.000	.000	.000	.000	.000	.704	.000
CS1	.000	.000	.000	.000	.000	.734	.000

Indirect Effects (Group number 1 - Default model)

	IN	CO	CH	SO	EG	CS	CL
CL	.000	.000	.000	.000	.000	.000	.000
CL4	.105	.180	.247	.173	.142	.143	.000
CL3	.102	.173	.238	.167	.137	.138	.000
CL2	.136	.231	.318	.223	.183	.185	.000
CL1	.122	.207	.285	.199	.164	.165	.000
IN3	.000	.000	.000	.000	.000	.000	.000
IN2	.000	.000	.000	.000	.000	.000	.000
IN1	.000	.000	.000	.000	.000	.000	.000
CO3	.000	.000	.000	.000	.000	.000	.000
CO2	.000	.000	.000	.000	.000	.000	.000
CO1	.000	.000	.000	.000	.000	.000	.000
CH4	.000	.000	.000	.000	.000	.000	.000
CH3	.000	.000	.000	.000	.000	.000	.000
CH2	.000	.000	.000	.000	.000	.000	.000
CH1	.000	.000	.000	.000	.000	.000	.000
SO7	.000	.000	.000	.000	.000	.000	.000
SO6	.000	.000	.000	.000	.000	.000	.000
SO5	.000	.000	.000	.000	.000	.000	.000
SO4	.000	.000	.000	.000	.000	.000	.000
SO3	.000	.000	.000	.000	.000	.000	.000
SO2	.000	.000	.000	.000	.000	.000	.000
SO1	.000	.000	.000	.000	.000	.000	.000
EG4	.000	.000	.000	.000	.000	.000	.000
EG3	.000	.000	.000	.000	.000	.000	.000
EG2	.000	.000	.000	.000	.000	.000	.000
EG1	.000	.000	.000	.000	.000	.000	.000

	IN	CO	CH	SO	EG	CS	CL
CS5	.000	.000	.000	.000	.000	.000	.000
CS4	.000	.000	.000	.000	.000	.000	.000
CS3	.000	.000	.000	.000	.000	.000	.000
CS2	.000	.000	.000	.000	.000	.000	.000
CS1	.000	.000	.000	.000	.000	.000	.000

Standardized Indirect Effects (Group number 1 - Default model)

	IN	CO	CH	SO	EG	CS	CL
CL	.000	.000	.000	.000	.000	.000	.000
CL4	.109	.137	.188	.129	.106	.115	.000
CL3	.101	.127	.174	.120	.098	.107	.000
CL2	.128	.161	.220	.152	.124	.135	.000
CL1	.114	.143	.196	.135	.110	.120	.000
IN3	.000	.000	.000	.000	.000	.000	.000
IN2	.000	.000	.000	.000	.000	.000	.000
IN1	.000	.000	.000	.000	.000	.000	.000
CO3	.000	.000	.000	.000	.000	.000	.000
CO2	.000	.000	.000	.000	.000	.000	.000
CO1	.000	.000	.000	.000	.000	.000	.000
CH4	.000	.000	.000	.000	.000	.000	.000
CH3	.000	.000	.000	.000	.000	.000	.000
CH2	.000	.000	.000	.000	.000	.000	.000
CH1	.000	.000	.000	.000	.000	.000	.000
SO7	.000	.000	.000	.000	.000	.000	.000
SO6	.000	.000	.000	.000	.000	.000	.000
SO5	.000	.000	.000	.000	.000	.000	.000
SO4	.000	.000	.000	.000	.000	.000	.000
SO3	.000	.000	.000	.000	.000	.000	.000
SO2	.000	.000	.000	.000	.000	.000	.000
SO1	.000	.000	.000	.000	.000	.000	.000
EG4	.000	.000	.000	.000	.000	.000	.000
EG3	.000	.000	.000	.000	.000	.000	.000
EG2	.000	.000	.000	.000	.000	.000	.000
EG1	.000	.000	.000	.000	.000	.000	.000
CS5	.000	.000	.000	.000	.000	.000	.000
CS4	.000	.000	.000	.000	.000	.000	.000
CS3	.000	.000	.000	.000	.000	.000	.000
CS2	.000	.000	.000	.000	.000	.000	.000
CS1	.000	.000	.000	.000	.000	.000	.000

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	81	428.893	384	.057	1.117
Saturated model	465	.000	0		
Independence model	30	4252.891	435	.000	9.777

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.068	.922	.915	.679
Saturated model	.000	1.000		
Independence model	.649	.149	.090	.139

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.852	.832	.937	.927	.936
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.883	.752	.826
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	244.893	180.050	317.638
Saturated model	.000	.000	.000
Independence model	3817.891	3612.492	4030.608

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	3.160	1.231	.905	1.596
Saturated model	.000	.000	.000	.000

Model	FMIN	F0	LO 90	HI 90
Independence model	21.371	19.185	18.153	20.254

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.057	.049	.064	.087
Independence model	.210	.204	.216	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	790.893	820.786	1058.057	1139.057
Saturated model	930.000	1101.607	2463.718	2928.718
Independence model	4312.891	4323.963	4411.841	4441.841

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	3.974	3.648	4.340	4.125
Saturated model	4.673	4.673	4.673	5.536
Independence model	21.673	20.641	22.742	21.728

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	137	143
Independence model	23	24

Execution time summary

Minimization:	.187
Miscellaneous:	2.480
Bootstrap:	.000
Total:	2.667

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EG1	200	2.00	7.00	4.6650	1.06699
EG2	200	2.00	7.00	4.7450	1.24810
EG3	200	2.00	7.00	4.7250	1.31454
EG4	200	2.00	7.00	4.6900	1.24968
EG	200	2.00	7.00	4.7063	1.03258
Valid N (listwise)	200				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SO1	200	2.00	7.00	4.7700	1.13292
SO2	200	2.00	7.00	4.5300	1.19425
SO3	200	2.00	7.00	4.7400	1.04780
SO4	200	2.00	7.00	4.7100	1.27831
SO5	200	2.00	7.00	4.6700	1.16096
SO6	200	2.00	7.00	4.6200	1.21779
SO7	200	2.00	7.00	4.7350	1.27787
SO	200	2.00	7.00	4.6825	.95447
Valid N (listwise)	200				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CH1	200	2.00	7.00	4.7350	1.25805
CH2	200	2.00	7.00	4.8200	1.22684
CH3	200	2.00	7.00	4.5400	1.29878
CH4	200	2.00	7.00	4.6850	1.23018
CH	200	2.00	7.00	4.6950	1.02272
Valid N (listwise)	200				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CO1	200	2.00	7.00	4.7950	1.24124
CO2	200	2.00	7.00	4.8350	1.18524
CO3	200	2.00	7.00	4.7050	1.20217
CO	200	2.00	7.00	4.7784	1.05851
Valid N (listwise)	200				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IN1	200	2.00	7.00	4.7500	1.37731
IN2	200	2.00	7.00	4.7250	1.34851
IN3	200	2.00	7.00	4.6200	1.38390
IN	200	2.00	7.00	4.6985	1.24873
Valid N (listwise)	200				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CS1	200	2.00	7.00	5.0500	1.22269
CS2	200	2.00	7.00	4.9800	1.14286
CS3	200	2.00	7.00	4.8550	1.17082
CS4	200	2.00	7.00	4.9050	1.25453
CS5	200	2.00	7.00	4.7400	1.28086
CS	200	2.40	7.00	4.9060	.97608
Valid N (listwise)	200				

Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CL1	200	2.00	7.00	4.7800	1.23663
CL2	200	2.00	7.00	4.9300	1.22990
CL3	200	2.00	7.00	4.7600	1.16585
CL4	200	2.00	7.00	4.7400	1.12192
CL	200	2.00	7.00	4.8025	.93056
Valid N (listwise)	200				

Frequencies

Statistics

		Lokasi	Konektivitas	Lama main game	Jenis kelamin	Usia	Waktu main game	Lama gam dalam seminggu
N	Valid	200	200	200	200	200	200	2
	Missing	0	0	0	0	0	0	

Frequency Table

Lokasi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rumah	45	22.5	22.5	22.5
	Kampus	40	20.0	20.0	42.5
	Cyber kafe/Gamenet/Warnet	95	47.5	47.5	90.0
	Lain - lain	20	10.0	10.0	100.0
	Total	200	100.0	100.0	

Konektivitas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ADSL	52	26.0	26.0	26.0
	Kabel modem	51	25.5	25.5	51.5
	LAN	76	38.0	38.0	89.5
	Lain - lain	21	10.5	10.5	100.0
	Total	200	100.0	100.0	

Lama main game

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 1 tahun	27	13.5	13.5	13.5
	1 - 3 tahun	57	28.5	28.5	42.0
	3 - 5 tahun	58	29.0	29.0	71.0
	5 - 7 tahun	40	20.0	20.0	91.0
	> 7 tahun	18	9.0	9.0	100.0
	Total	200	100.0	100.0	

Jenis kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki - laki	170	85.0	85.0	85.0
	Perempuan	30	15.0	15.0	100.0
	Total	200	100.0	100.0	

Usia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 20 tahun	47	23.5	23.5	23.5
	21 - 25 tahun	122	61.0	61.0	84.5
	> 26 tahun	31	15.5	15.5	100.0
	Total	200	100.0	100.0	

Waktu main game

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 1 jam	33	16.5	16.5	16.5
	1 - 3 jam	90	45.0	45.0	61.5
	> 3 jam	77	38.5	38.5	100.0
	Total	200	100.0	100.0	

Lama game dalam seminggu

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 6 jam	26	13.0	13.0	13.0
	6 - 10 jam	94	47.0	47.0	60.0
	> 10 jam	80	40.0	40.0	100.0
	Total	200	100.0	100.0	