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Factors affecting streamers' loyalty to live streaming platforms

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1. Introduction

Creating loyalty between customers and brands is the purpose of relationship marketing (Hennig-Thurau, Gwinner, & Gremler, 2002). In much business-related research, loyalty is defined as a willingness to buy a product again or to keep using the same service. This concept is of great importance in an industry where loyalty between brands and customers or users and platforms is essential (Ryu, Kim, & Kim, 2014)

In recent years, loyalty has been crucial in the market for live streaming platforms. In the present field of media studies, live video streaming platforms are defined as services which allow users to share live video content through a web page or a mobile device. Well-known examples are Afreeca TV, Twitch, YouTube, Facebook, Musical.ly and Kakao TV. Live video streaming platforms are different from previous streaming sites such as Netflix or Hulu because streaming platforms provide any users with any chances to broadcast themselves.

Streamers, who broadcast content such as their gameplay or daily life, can generate a video which is streamed through an encoding software for viewers (Cho, Tran-Thi-Thu, & Kim, 2013). Unlike the traditional broadcasting ecosystem where only broadcasting companies can stream shows, anyone can be a streamer on those platforms only with desktops or a smartphone. Streamers can monetize their live videos by direct payment from viewers or allocating a cut of advertisement before the video or sharing a certain amount of money based on the quantity of their subscribers who pay a monthly fee for a platform. Even though most streaming platforms use pre-roll advertisements or aired free, viewers can pay streamers how much viewers want to use a service on the platform.

Streamers are regarded as important resources or assets for streaming platforms because platforms can attract viewers by streamers. As the competition among platforms has intensified and there is no dominant player in the market, platforms have an incentive to retain streamers and streamers have an incentive to leave their current platform to find a better one. In this respect, it is proposed that streamers are clients who can choose a platform to broadcast or move to another platform with improved conditions.

However, previous research has been limited to the analysis of live streaming content, the consumer's motivation to watch, the participatory culture of streaming media, and the

mechanical structure behind streaming services. Even though the relationship between streamers and streaming platforms is important, there is no single study about the factors affecting the relationship and how to manage and sustain it (Rauyruen & Miller, 2007; Ryu, Kim, & Kim, 2014).

As a result, this study chooses the relationship quality approach because it can explain the relationship composed of components located between companies and consumers (Hennig-Thurau, Gwinner, & Gremler, 2002). Therefore, this paper aims to find out the relationship between streamers and platforms. Additionally, the goal of this study is to suggest that streamers' loyalty to streaming platforms is comprised of streamers' satisfaction and trust which are affected by other factors.

2. Literature review

2.1. Live streaming platforms

A game between the Seattle Mariners and the New York Yankees was the first live streaming event which used the internet to broadcast globally for international fans (Zambelli, 2013). Traditionally, streaming was narrowly regarded as a medium which indicates that receivers can consume content simultaneously while downloading (Gelman, Halfin, & Willinger, 1991). As technology such as video quality, broadband speeds, streaming became prevalent so that its meaning broadened to include the cultural phenomenon of live broadcasts of user-generated content (Sjöblom & Hamari, 2017). Sripanidkulchai's finding which claims that enhanced broadband accessibility and multimedia devices dissolves a barrier toward live streaming supports that statement (Sripanidkulchai, Maggs, & Zhang, 2004). After the launch of YouTube in 2005, streaming has become an icon for participatory online media which let traditional viewers into the role of broadcasters or content creators (Cha et al., 2007).

Streaming platforms have been grown rapidly because of higher levels of interaction between streamers and viewers. The platforms offer viewers unique user experience such as direct chatting with streamers and direct payment to streamers which would facilitate participatory and holistic communication between the two (Sjöblom & Hamari, 2017). As a result, it can be suggested that live streaming platforms have advantages in an engagement level and an involvement level which would improve the effect of the advertisement in the video. 25 % of viewers said live streaming platforms provide a chance to feel updated and

20% said the platforms let viewers feel connected to events. 17% believe that live streaming services feel more authentic compared to others (Sullivan, 2017).

Live video streaming platforms are different from previous streaming sites such as Netflix or Hulu because streaming platforms provide any users with any chances to broadcast themselves. In recent years, there has been an increasing interest in the market of live streaming platforms of media industries. The quantity of users in streaming platforms has grown enormously in these days. A survey conducted by Ericsson (2017) claims that the competition among platforms will be increased because streaming services are being used by millennials whom all the company want to attract. According to the survey, 1 in 5 millennial smartphone users (20-34) has watched video contents through live streaming services. Also, 20 percent of all smartphone users in the US said that they are interested in live streaming. For example, Twitch which is famous for its game streaming has 15 million daily visitors and more than 30 million dollars which were raised for charity (Twitch, 2018a). This phenomenon is not limited to the US. China's live streaming market size was reported to be more than 3 billion dollars in 2016, which showed 180% growth compared to 2015 (Xiang, 2017).

Beyond the growth of users in live streaming platforms, live streaming platforms is an increasingly important area for video and advertising market. Marketers have started to embrace live streaming platforms as another marketing area because of the chance to reach consumers in real time, a high level of viewers' engagement (Kirkpatrick, 2017). It is supported by a survey, which found that 80% of respondents prefer live video over blogs and 82% prefer live video over social posts such as a post on Facebook or Twitter (Mediakix, 2017). This is the reason why marketers are lured into streaming platforms to catch new audiences (Shields, 2016). Those platforms highlight the effort to accelerate into video strategy which is a way to take advertising dollars from traditional broadcasting industries (Fortune, 2017).

Facebook opened its live service in 2015, Amazon acquired Twitch for 1 billion dollars in 2014, and YouTube launched live service for streamers in 2017. Generally speaking, this trend about the rising of live streaming platform is global. Afreeca TV has started its service since 2005 and Kakao TV (former Daum Pot) was launched in 2007. Snow, which is a video messaging application by Naver, shows its live streaming function in 2017. Additionally, Tumblr and Vimeo also planned to enter live streaming market (Perez, 2016).

As more companies have entered the market, the competition among them has been increased. It is shown in a race to win broadcasting right for pro sports. Those newcomers

such as Facebook, Twitter, YouTube are eager to have exclusive streaming rights. Twitter bought a right to Thursday Night Football games for 10 million dollars in 2015 (Gallagher, 2017). Facebook bid 600 million dollars to buy the streaming right for Indian cricket league (Venugopal, 2017). It succeeded to purchase the exclusive streaming right for 20 Major League Baseball games. Facebook also made a contract with Blizzard, one of the famous game companies, for gamers to be able to stream their Blizzard game plays directly through Facebook (Kain, 2016).

In this situation, one strategy has been commonly found in different strategies by different companies. Facebook signed a deal with 140 publishers, celebrities, and micro influencers to broadcast their contents through Facebook Live to promote its newly developed service in 2016 (Perlberg, 2016). Mark Zuckerberg said that Facebook would give video creators a share of video views and advertising on its service (Kharpal, 2015). Similarly, Twitch signs lots of exclusive broadcasting rights of progamers to win a competition among platforms. This strategy was proved to be efficient as Faker, who is one of the famous pro gamers in the world, recorded 245,100 concurrent viewers (Howell, 2017). Moreover, Twitch tried to make an incentive for users to broadcast their videos on Twitch as it recently opened a new way for streamers to earn money, which is called an affiliate program to share five percent revenue operated by viewers' game purchase on streamers channel page (Locklear, 2017).

A contract between streaming platforms and streamers are becoming more important in these days. There has been an accident because of contract problems in Korea. There was a conflict between Afreeca TV and Daedoseogwan who is top streamer having more than 1.6 million subscribers on YouTube in South Korea. AfreecaTV banned Daedoseogwan's broadcasting for seven days because of his commercial activity on AfreecaTV. After the ban, Daedoseogwan decided to broadcast only on YouTube and left Afreeca TV (Baek, 2016a).

After his move, many streamers left Afreeca TV and arrived Twitch or YouTube or KakaoTV because of the same problem. This continuous leave from Afreeca TV was even called as an 'Exodus' and the firm's stock price tumbled 20 percent (Baek, 2016). Afreeca TV upgraded its revenue sharing proportion and changed a commercial contract for streamers and improved resolution options for viewers after the conflict.

2.2.Loyalty theory applied to streaming platforms

Since the platforms invested a lot to have the exclusive broadcasting right, it has also

been important for streamers to choose a streaming platform. Each platform offers streamers partnership program including revenue sharing, production assistance (Afreeca TV, 2017; Twitch, 2018b). For example, streamers who are in exclusive partnership with Afreeca TV have higher revenue sharing proportion than other streamers who are not in partnership with Afreeca TV (Afreeca TV, 2017). Even though similar details about the benefits of partnership programs are different, those benefits are found in most platforms (Kakao TV, 2017; Twitch, 2018b; Younow, 2018).

Platforms designed partnership programs to own successful streamers compared to other platforms. As the competition among platforms become fierce and there is no dominant player in the market, platforms have natural incentive to retain streamers and streamers have an incentive to leave a platform to find a better one. In this aspect, it is proposed that streamers are clients who can choose a platform to broadcast or move to another platform with better conditions. The conflict between Daedoseogwan and Afreeca TV supports this claim.

Due to the lack of research about live streaming platforms, there is no demonstration about the relationship. However, this relationship is similar to a relationship between creators and multi-channel network (MCN) and a relationship between developers and mobile operation system (Ryu, Kim, & Kim, 2014; Eun, 2017). Previous research about those relationships argues that the relationship is an exchange relation where creators create contents with a certain amount of revenue in compensation for services provided by platforms (Eun, 2017). Therefore, it can be proposed that streamers broadcast their videos in return for revenues and other services that streaming platforms offer.

This paper investigates previous research in relationship marketing, which contributed to explore how to maintain a successful relation regarding service context (Morgan & Hunt, 1994; Aijo, 1996; Lee et al., 2015). The concept of loyalty in relationship marketing studies is closely related to improving a relationship between streamers and streaming platforms.

3. Research Hypothesis

3.1 Loyalty theory

Since the emergence of the service industry, most of the developed countries have entered information economy (Aijo, 1996). In the era of information economy, there was a new trend in marketing studies which gave rise to relationship marketing (Berry, 1995).

Relationship marketing is a way for marketers to develop and maintain relationships with customers. It helps firms to have long-term economic success with the retention of current customers while attracting new customers simultaneously (Henning-thurau, 2002).

Relationship marketing was supported by many studies. Barsky (1994) found that the cost of securing new customers is five times higher than the cost of retaining existing customers. Moreover, companies can increase profits by 25% to 85% only with reducing customer turnover by 5% (Reichheld & Sasser, 1990). Fornell's study (1992) demonstrated that satisfied customers would feel higher loyalty to firms and they will not move to other companies. Ultimately, the cost of attracting new customers would be reduced with increased corporate image and reputation. Previous studies claimed that customer satisfaction directly leads to customer loyalty and relationship longevity in a positive way (Heskett et al., 1994; Storbacka et al., 1994). In summary, the goal of relationship marketing is to establish customer loyalty among the old customers which is helpful for companies to attract new customers in the long run (Berry, 1995).

Loyalty is a primary object of relationship marketing. It is a concept explaining a continuous repurchase, conducted by commitment, which can resist switching actions induced by competing firms (Oliver, 1999). The concept of loyalty was defined as a behavioral term such as repurchase or purchase frequency (Ball et al., 2004). Then, the concept included attitudinal concept.

Attitudinal loyalty is described as the affection toward the continuance of the relationship with other party or the desire to remain in the relationship (Morgan & Hunt, 1994). It is measured by questionnaires. Behavioral loyalty and attitudinal loyalty is closely related because repurchases lead to positive affect which increase intention to purchase the product again.

Loyalty has been researched in diverse literature from union, media, and business studies to marketing studies. Union loyalty, one's pride in union membership, was found to be positively related to attitudes toward the union and its value (Fullagar & Barling, 1989). In media studies, customer loyalty, which is defined as a customer's continuous purchase behavior motivated by marketers' activities (Henning-Thurau, 2002), is found to increase revenues along the status of the relationship (Dwyer, Schurr, & Oh, 1987). It is important to develop loyal customers because they are much more likely to repurchase the same brand or the product than other customers. With this in mind, it can be proposed that retaining customers by building loyalty is a rational tactic for service providers to win competition in the market.

It seems that streamers' loyalty to streaming platforms is similar to customer loyalty because streamers have a natural incentive to leave one platform to one another with an improved contract as customers switch a product or a service. Therefore, this study defines streamers' loyalty to streaming platforms as a kind of customer loyalty to the platforms, which is attitudinal loyalty because streamers' loyalty is something measured by questionnaires, not by behaviors.

Among several approaches, the relationship quality approach is mainly used to understand loyalty because the approach is multivariate with the assumption that customers' evaluation about a relationship with service providers is a key to decide to continue the relationship or not (Henning, 2002).

Previous studies have suggested that satisfaction and trust are adopted as antecedents of loyalty widely because the relationship quality is comprised of trust and satisfaction with other constructs based on situations (Rauyruen & Miller, 2007; Ryu, Kim, & Kim, 2014; Eun, 2017). Furthermore, many research found that customer satisfaction and trust with service providers are key components of relationship quality (Evans & Cowles, 1990; Dorsch, Swanson, & Kelley 1998; Garbarino & Johnson 1999; Palmer & Bejou 1994;)

As a result, this study chooses the relationship quality approach because the approach can explain the relationship which is composed of several components located between companies and consumers (Hennig-Thurau, Gwinner, & Gremler, 2002). Therefore, this paper suggests that streamers' loyalty to streaming platforms is comprised of streamers' satisfaction and trust which are affected by other factors.

Usually, researchers choose theoretical factors and service-oriented factors simultaneously to investigate the relationship. This study will suggest six factors affecting the relationship between streamers and platforms. Three factors from previous literature in relationship marketing studies are chosen. They are fairness, interactivity, and belonging. This study conducted two interviews to choose service-based factors. One interview was with a streamer who broadcasted himself for 3 months in SNOW within a monthly fee contract. One interviewee was a streamer who broadcasted himself through Twitch. Another interview was conducted with a marketer who planned to develop live streaming in SNOW. The factors chosen from previous studied and interviews are market opportunity, platform convenience, production assistance, reputation and perceived fit.

3.2 Relationship quality

Satisfaction is defined as pleasant fulfillment (Oliver, 1999). In relationship marketing literature, satisfaction is described as customers' affective reaction or evaluation based on the consumption experience with a product or a service (Anderson, Fornell, & Lehmann, 1994; Garbarino & Johnson, 1999). Other researchers demonstrated that customer satisfaction can be understood as customers' reaction toward the gap between service's appraisal and expectation (Oliver 1980; Rust, Zahorik, & Keiningham 1996; Hennig-Thurau, Gwinner, & Gremler, 2002).

In addition to those studies, Sashi (2002) argued that satisfaction during a purchase can follow the intention to make another transaction or the intention to repurchase the same product which is equivalent to the concept of loyalty. Additionally, many researchers found that higher satisfaction is strongly related to higher loyalty (Hallowell, 1996; Stauss & Neuhaus, 1997). Moreover, previous studies demonstrated that specific factors related to each service can influence one's satisfaction toward the service (Flavan et al., 2006; Zviran et al., 2006).

Due to the rapid development of streaming platforms, there is no clear study to clarify the link between streamers' satisfaction and streamers' loyalty to the platforms. However, following previous studies, this research can figure out the link between the satisfaction and the loyalty. Therefore, it is hypothesized that streamers' satisfaction will increase loyalty to streaming platforms.

H1 : Streamers' satisfaction has a positive effect on streamers' loyalty to streaming platforms

Trust is defined as the willingness to stay in a relationship in the expectation that the opponent (trustee) would perform a reciprocative action for the trustor (Mayer, Davis, & Schoorman, 1995). In other words, it is the will to depend on the partnership with a partner in whom one has credibility (Moorman, Deshpande, & Zaltman, 1993). Several researchers regarded trust as an essential component for long term relationships (Doney & Cannon 1997; Ganesan, 1994).

Trust has been focused as an important concept in many areas such as e-commerce (Gefen & Straub, 2004), management studies (Earley, 1986; McAllister, 1995) and public administration (Christensen & Læg Reid, 2005). Trust is comprised of two dimensions. One dimension is cognitive aspect which is belief in the capability to accomplish tasks (Serva et al., 2005). The other dimension is emotional aspect, belief in the benevolence and the favorable relation of the opponent (Mayer, Davis, & Schoorman, 1995).

Customers who do not trust a service provider switch to other providers. It is supported by many researchers who argued that trust is important to explain loyalty and plays a key role to build loyalty (Lim & Razzaque, 1997; Garbarino & Johnson, 1999; Singh & Sirdeshmukh, 2000; Chaudhuri & Holbrook, 2001; Sirdeshmukh, Singh, & Sabol, 2002). It can be suggested that trust exists when a customer believes a service provider as reliable one having integrity (Morgan & Hunt, 1994)

Since streamers choose a platform bearing a partial reduction of their revenue due to the platform's commission, the platform should be trustworthy to fulfill the streamers' expectation that the platform would do its best for them. This research would adopt overall trust, including cognitive and emotional aspect simultaneously, as streamers' trust. Thus, it is hypothesized that streamers' trust will increase streamers' loyalty to streaming platforms.

H2 : Streamers' trust has a positive effect on streamers' loyalty to streaming platforms

Many researchers have demonstrated that trust is an antecedent of satisfaction (Yamaguchi, 2013; Shahin & Rahim, 2014). Many research which adopted the relationship quality approach in service industries have shown that trust is positively related to satisfaction (Román, 2003; Harris & Goode, 2004; Kim, Jin, & Swinney, 2009). It can be explained that trust can affect one's evaluation of an organization or a service by influencing one's satisfaction through advertising (Martinez & del Bosque, 2013). It is suggested that higher level of trust to streaming platforms will positively affect streamers' satisfaction which ultimately leads to loyalty.

H3 : Streamers' trust is has a positive effect on streamers' satisfaction

3.3 Service quality

Researchers should adopt industry-specific factors to reflect the reality. For an instance, Ryu (2014) chose specific factors to examine developers' loyalty to platforms. Therefore, this part would discover and test certain streaming platforms-specific factors to evaluate loyalty. This paper adopted 3 factors in service quality area which directly affects one's trust and loyalty (Ryu, 2014).

3.3.1 Service factors of streaming platforms

(1) Market opportunity

Platform service is an well-known example of two sided markets which focuses on collecting both end users in each side into one platform to make network externalities. It is

important for platform service providers in two-sided market to getting more users on both sides (Eisenmann, Parker, & Van Alstyne, 2006). According to Desai (2000), the higher level of demand is a strong signal to attract new customers. As Anderson and Gabszewicz (2006) pointed out, the media industry is two-sided market where more audiences guarantee more revenues. As developers prefer a platform with a large amount of customers because of its possibility to make money a lot (Ryu, 2014), streamers would choose a platform which has more audiences than others because of profitability. So, it can be inferred that the market opportunity would be a standard for streamers to choose a platform and affect streamers' overall trust, satisfaction and loyalty. In this sense, the following hypotheses are suggested :

H4a : Market opportunity has a positive effect on streamers' satisfaction

H4b : Market opportunity has a positive effect on streamers' trust

(2) Ease of use

In internet service studies, ease of use is defined as the extent to which a user thinks that using a service could be free of effort (Lin & Sun, 2009). Flavian et al (2006) claimed that perceived ease of use has been suggested as an antecedent to satisfaction and trust which are directly related to user's loyalty.

Previous studies have found that elder people are likely to use new technologies which is easy enough to use (Gilly & Zeithaml, 1985) and show higher level of participation in video UCC services (Ryu et al., 2009). Research related to ease of use also escalates customers' satisfaction in the online environment (Poddar et al., 2009; Yang et al., 2008; Verhagen & Dolen, 2009).

Streaming platforms are websites and provide streamers with own developed programs for broadcasting. Each program has own user interface with different input, output methods, and designs. As each platform gives streamers with different programs, streamers will perceive different level of ease of use on each platform. Considering the preceding studies and the characteristics of streaming platforms, this research proposed the hypothesis below

H5a : Ease of use has a positive effect on streamers' satisfaction

H5b : Ease of use has a positive effect on streamers' trust

(3) Production assistance

It is easy to join live streaming platforms as a streamer because there is no big barrier to platforms who are eager to recruit streamers. However, it is difficult to make a success as a streamer because of deepened competition among streamers. Even though it is easy to start a career as a streamer, it costs a lot to sustain and develop it. For example, a streamer needs to solve music copyright problems (Hong, 2017). Additionally, he should buy a mic, an web camera, an advanced graphics card, a capture card, and other video consoles (Kwak, 2014). Moreover, he should be ready to raise planning ability to prepare contents in the future.

Streaming platform providers support streamers in many ways. Afreeca TV announced a plan to open the production assistant center for streamers in 2017 (Baek, 2017). Afreeca TV funded 500,000 dollars to finance the center annually. The aim of the center is to let streamers broadcast anything that was impossible in the past because of the cost. In 2017, 137 streamers were supported to create contents through the center (Oh, 2017). BJ Daeryooknam is a successful example as he planned Christmas traveling contents in Hong Kong through the funding program. He has earned more than 10,000\$. Kakao TV also helps streamers by marketing assistance, support fund, and supplying goods (Kakao TV, 2017). Twitch has the Twitch Music Library to provide free songs to be used in streamers' broadcasting. It provides streamers with legal services.

Mixer, Twitch, and YouTube have supporting programs and provide streamers with rapid Q&A and assistance programs. In Mixer, streamers can get a free code for a game or a ticket to broadcasting or gamer conferences to analyze and advance their contents.

In this context, it can be hypothesized that streamers would consider the chance to be assisted by platforms as they choose a platform. If platforms assist streamers' broadcasting effectively, streamers will be satisfied and will show higher loyalty and trust because of high level of satisfaction. So, this research proposed the hypothesis below

H6a : Production assistance has a positive effect on streamers' satisfaction

H6b : Production assistance has a positive effect on streamers' trust

(4) Reputation

Reputation has been regarded as a strategic resource for a company because it can affect financial performance (Tang, 2002). Reputation is defined as a socially shared impression and a consensus about how the firm would behave in any situations because reputation is socially formed by diverse stakeholders such as present employees, consumers and investors (Bromley, 2002; Helm, 2007). It is based on a collective belief about a company's willingness to satisfy the interest of many stakeholders. Moreover, Fombrun and

Shanley (1990) claimed that reputation means the total attractiveness to journalists, employees, investors, and the public.

Previous studies argued that a company with higher reputation has many advantages to launch new products, to increase product trust because consumers interfere products' quality and value through the company's reputation (Herbig & Milewicz, 1994). A good reputation is positively related to investor and consumer's satisfaction and loyalty. Andreassen and Lindestad (1998) argued that reputation is an antecedent to customer loyalty. Additionally, Ryan et al. (1999), concluded that reputation may be loyalty's strongest driver. It can be explained that consumers who hasn't yet had any experience with a company, consider the company's reputation when they buy a product or a service. In this sense, reputation has a word-of-mouth effect which attracts new consumers. Furthermore, reputation can be used to hire a better applicant or retain current employees because reputation (Tang, 2002).

In Korea, streamers are regarded as an inferior job because of those infamous accidents (Park, 2018). Those accidents were critical for streamers because they damaged streamers' revenue. For example, Afreeca TV limited the amount of maximum donation to 1000 dollars a day due to the accident (Kim, 2018). Considering this situation and previous research that reputation mediates the loyalty between consumers and the company (Bontis et al., 2007), it can be proposed that streamers would choose a platform which has better reputation to others to avoid risk. Indeed, customer loyalty tends to be higher when corporate reputation is favorable (Nguyen & Leblanc, 2001).

In this sense, it can be proposed that corporate reputation is closely related to loyalty. Following previous studies, this research proposed the hypothesis below

H7a : Reputation has a positive effect on streamers' satisfaction

H7b : Reputation has a positive effect on streamers' trust

(5) Perceived fit

Perceived fit is defined as a degree of congruence between a brand and others (Simmons & Becker-Olsen, 2006). It can be composed of numerous characteristics because the congruity can be built from any factor of a mission, product, market, and brand concept (Gwinner & Eaton 1999). The congruence, the value of fit, is important to change attitudes and long-term relationships because similarity can affect the memory. Rifon et al. (2004) argued that the more the two elemental partners fit, the more possibly attitudes will change. Also, better fit leads to a stable long-term relationship between the two (Zdravkovic et al.,

2010). For an instance, job seekers perceive the fit by on organizations' values and make a decision based on the perceptions. Better perceived fit leads to longer relationship (Cable & Judge, 1996).

Previous studies claimed that consumers assign positive feelings to the company whose fit is highly evaluated (Hoeffler & Keller, 2002). High levels of perceived fit were proven to foster better consumers' attitudes toward firms and brands because consumers judge those actions to be suitable thanks to the fit (John, Loken, & Joiner, 1998). Perceived fit ultimately influences brand loyalty as the fit has a positive effect on brand affect, through affecting the attitude. Even consumers tend to have a goodwill motivation and positive feeling toward the brand with higher congruity (Mazodier & Merunka, 2012).

Interviewees emphasized the importance of the fit between platforms and streamers' own content. Each platform has its unique characteristic and streamers should find adequate platform to broadcast themselves to find its maximum audience. In this study, perceived fit is defined as the degree of the congruence between platform's main content and streamers' content. For example, a streamer who broadcasts gaming content would prefer Twitch to others. On the contrary, streamers focusing on daily lives would choose Afreeca TV.

In this sense, it can be proposed that a streamer would feel higher satisfaction with a congruent platform. Following previous studies, this research proposed the hypothesis below

H8a : Perceived fit has a positive effect on streamers' satisfaction

H8b : Perceived fit has a positive effect on streamers' trust

3.3.2 Relationship factors with streaming platforms

(1) Fairness

In relationship marketing studies, fairness is defined as one's perception about the rewards in exchange with others. It should be proportional to one's investments to be perceived as fair (Jambulingam, Kathuria, & Nevin, 2011).

In previous studies, fairness has been found as a key to maximize long-run profits because it plays a role in how people feel, think, and act in a relationship (Thaler, 1985; Sindhav et al., 2006). Feeling that a contract among stakeholders is very important for a relationship to be sustainable (Lind & Tyler, 1988). Many researchers supported this argument. For example, Kumar et al. (1995) found out that the buyer's perception of the fairness of the supplier's procedures and processes affects the revenue. In this context, fairness has been recognized as an aspect to make and sustain the relationship between buyers and sellers (Dwyer, Schurr, & Oh, 1987; Gundlach & Murphy, 1993). Fairness also

affects collaboration among stakeholders. Anderson and Weitz (1992) discovered that distributors collaborated deeply with manufacturers who were regarded fair. This led to more productive result.

In streaming markets, fairness of a contract between streaming platforms and streamers is critical because it is closely related to streamers' revenue. Streamers get a certain portion of the subscription revenue and advertising revenue (Afreeca TV, 2017; Twitch, 2018a). Streamers leave the platform when they feel the contract is unfair. For example, Daedoseogwan who is one of top streamers in Korea flocked to YouTube from Afreeca TV because of the problem of the contract (Baek, 2016). So, it is generally accepted by researchers that fairness of the contracts including revenue share is a central issue to the overall profitability of business activities. As fairness affects loyalty, it can be proposed that fairness affects trust and satisfaction. Streamers who think the relationship is unfair would show low satisfaction and distrust platforms. So, this research proposed the hypothesis below

H9a : Fairness is has a positive effect on streamers' satisfaction

H9b : Fairness is has a positive effect on streamers' trust

(2) Interactivity

Interactivity in a relationship is also important factor. Even though Interactivity is difficult to define because of different meanings in diverse contexts, it is defined as two-way communication between source and receiver, or, more broadly multidirectional communication between any number of sources and receivers in relationship marketing literatures (Pavlik, 2001; McMillan & Hwang, 2002).

Also, researchers in relationship marketing argued that interactivity should be understand in terms of the extent to which the communicator and the audience respond to, or are willing to facilitate, each other's communication needs because interactivity is to enhance the relationship (Ha & James, 1998). Generally speaking, interactivity is effective to build shared contexts among members in a community because interactivity is a fundamental part of communication in successful teamwork (Duncan & Moriarty, 1998). For instance, quick interactions between sellers and buyers through social media has facilitated the process of building trustful relationships which is closely related to customer engagement (Sashi, 2012). Micro-communication in an organization is important because it can bridge the gap between stakeholders (Mora, 2006).

In the streaming platform market, platforms are very close to streamers. Employees in platforms manage their streamers because there are several issues related to live streaming

such as copyrights, harassment, and native advertising (Afreeca TV, 2017). As the government regulates live streaming platforms, more issues to take care have arisen (Cadell, 2016; Lynn, 2016). China and EU make a rule to regulate content on live streaming services. Streamers should act in a hurry with platforms not to go against governmental regulations. As interactivity between platforms and streamers could be understood as an effort to enhance the relationship, higher interactivity can satisfy streamers and improve streamers' trust. As interactivity affects streamers' satisfaction, and trust it can be proposed that interactivity is closely related to loyalty. So, this research proposed the hypothesis below

H10a : Interactivity has a positive effect on streamers' satisfaction

H10b : Interactivity has a positive effect on streamers' trust

(3) Sense of belonging

A sense of belonging is a feeling of connection and attachment to a certain group (Blanchard & Markus, 2004). Usually, a sense of belonging is known to have positive effects on total satisfaction, interaction opportunities, and trust. Also, sense of belonging encourages users' engagement and interaction for online and offline environments simultaneously (Al-Agaga & Nor, 2012). Sense of belonging was important to the success of college students' retention in the college (Winter-Collins & McDaniel, 2000). Higher sense of belonging goes to lower possibility of dropping out of the college (O'Keefe, 2013).

In previous literature, a sense of belonging was found to have a positive impact on customer e-loyalty in Internet banking (Al-Agaga, & Nor, 2012). Additionally, sense of belonging positively influences a customer's repeat purchasing behaviors and loyalty to an online relationship (Juan & Yan, 2009)

Streaming platforms try to make a sense of belonging among streamers by providing hoodies or other goods which are only for their streamers. Afreeca TV promotes its own award festival for streamers annually (Oh, 2016). Twitch also did a year end party for streamers in last December (Busanilbo, 2017). Those things are to enhance emotional bonds among streamers in the platform. As shared value and belongingness has been considered as a predictor of trust and welcoming environment is critical to create a sense of belonging (Morgan & Hunt, 1994; O'keefe, 2013), those events will occur regularly.

As streaming services try to grow a sense of belonging and it has a positive relationship with trust and satisfaction, it can be proposed that belongingness is closely related to loyalty. Following previous studies, this research proposed the hypothesis below

H11a : Belongingness has a positive effect on streamers' satisfaction

H11b : Belongingness has a positive effect on streamers' trust

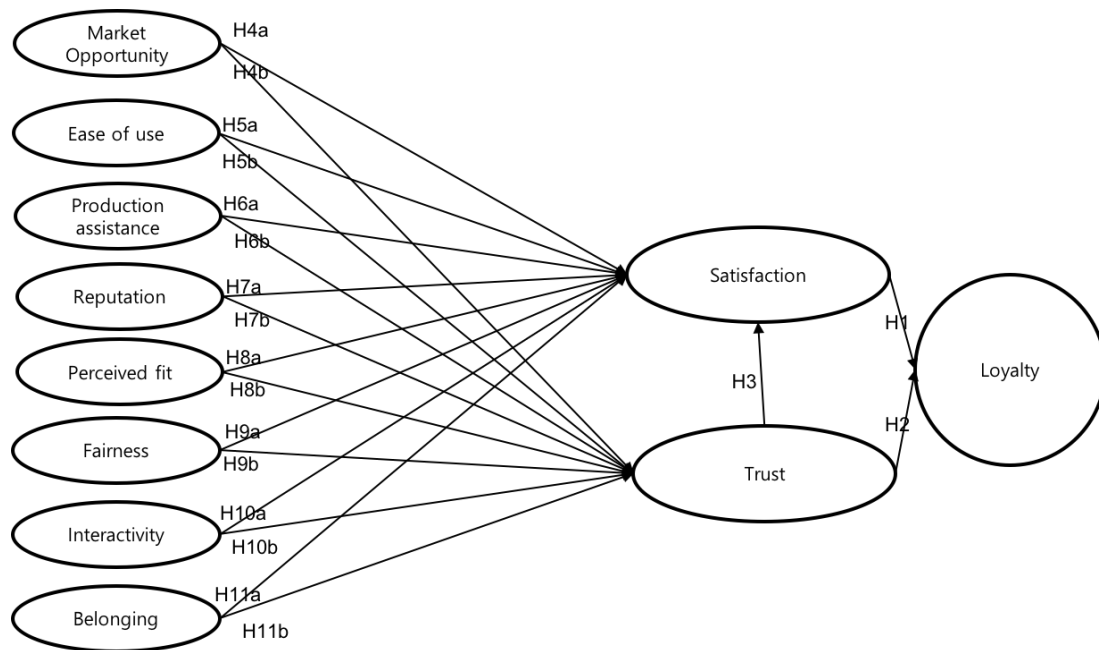


Figure 1 The research model

4. Methodological framework

4.1. Data collection

This research employed a survey by distributing questionnaires to current creators for streaming platforms in Korea. In-depth interviews with streamers was conducted before the survey to develop appropriate questions addressing the factors affecting loyalty to streaming platforms. The survey was spread to concurrent streamers through their electronic mail. The questionnaires were based on previous literature in studies of relationship marketing, loyalty theory, and service industries. A survey was reviewed by current streamers and former manager of SNOW. The measurement items are explained in Appendix A.1. The seven-point Likert-scale from “1- Strongly disagree” to “7-Strongly agree” was adopted.

This study adopted PLSSEM (Partial least squares structural equation modeling) which is one way of SEM. As the streaming industry has grown in recent years, this study has exploratory characteristics. Therefore, it used PLSSEM due to the size of the sample (Gefen, Straub, & Boudreau, 2000). This is the first time that research on the streaming industry and loyalty at the same time has been done, and related industries are in their early stages, and

access to streamer samples is low, so PLS was used to compensate for these shortcomings (Hair, Ringle, & Sarstedt, 2014).

4.2. Test of measurement model

Cronbach's alpha and composite reliability (CR) were checked to examine the internal consistency. 2 items from market opportunity, 2 items from trust and one item from ease of use were removed from the test because of the lack of internal consistency which was below 0.7. After deleting those questions, all the constructs were above 0.7 in terms of Cronbach's alpha and CR as written in Table

In terms of convergent validity, which should show much more correlation to its constructs than others, this study used factor loading, average variance extracted (AVE), and CR. As shown in Table A.2 and A.3, the values of all the constructs were above the acceptable level of 0.7. All the items of the study met the criteria (Table A.4 in Appendix).

5. Results

5.1. Descriptive Statistics

After spreading the survey, 49 responses were used. 39 men and 15 women answered. Most of them (78%) were 20s. The most category of streaming content was game (78%). Half of respondents broadcast themselves 2~4 hours a day. 82% of participants' average daily viewers were less than 500 viewers.

Although the respondent pool of this research is limited, the size of the responses was below the suggested sample size of 84 for a research with 8 latent variables (Wong, 2013).

Table 1 Descriptive information

	Frequency	Percentage
Gender		
Male	34	69%
Female	15	31%
Age		
10s	2	4%
20s	38	78%

30s	9	18%
Above 40	0	0%
Category of streaming content		
Game	38	78%
Social eating	0	0%
Street broadcasting	1	2%
IRL	6	12%
Radio broadcasting	1	2%
Extra	3	6%
Average daily broadcast time		
Less than 2 hours	6	12%
2 ~ 3 hours	10	20%
3 ~ 4 hours	17	35%
4 ~ 5 hours	9	18%
More than 5 hours	7	14%
Longitude of streaming		
Less than 6 months	10	20%
6 ~ 12 months	10	20%
12 ~ 18 months	17	35%
18 months ~ 24 months	3	6%
24 months ~ 30 months	5	10%
30 months ~ 36 months	1	2%
More than 3 years	3	6%
Average daily viewers		
Less than 500 viewers	40	82%
500 ~ 1000 viewers	5	10%
1000 ~ 1500 viewers	0	0%
1500 ~ 2000 viewers	2	4%
More than 2000 viewers	2	4%
Total	49	100%

Table 2 presented the the mean score and the standard deviation of the variables. The average score of all the service related variables was 4.48, which is higher than the average score of all the latent variable (4.44). The average score of relationship factors was 4.38. The

market opportunity variable (M=5.77, SD=1.17) showed the highest score among all the latent variable. Among all the latent variable, the production assistance variable showed the lowest score (M=1.67, SD=1.28). The interactivity variable showed the lowest score in relationship factors (M=2.69, SD=1.04).

Table 2 Descriptive statistics

Construct	Code	M	SD
Market Opportunity	MO	5.77	1.17
Ease of Use	EU	4.84	1.31
Production Assistance	PA	1.67	1.28
Reputation	RP	4.81	1.75
Perceived Fit	PF	5.33	1.04
Fairness	FN	5.03	1.21
Interactivity	IA	2.69	1.74
Belonging	BL	5.41	1.29
Satisfaction	SAT	5.48	0.96
Trust	TR	5.59	0.78
Loyalty	LY	5.60	1.11

5.2.Results

According to the analysis of PLS, this research model is expected to explain 63% of the variance in loyalty of streamers to their platform, 81% of the variance in satisfaction and 70% in trust. The result of bootstrapping process is shown in Table 3 and the result of all the hypothesis is depicted in Figure 2. As a result, four of the nineteen hypotheses were supported.

Table 3 PLS estimates

Hypothesis	Relation	β	t	Result
H1	SAT \rightarrow LY	0.71	4.81***	Supported
H2	TR \rightarrow LY	0.10	0.66	Not supported
H3	TR \rightarrow SAT	0.58	3.23***	Supported

					Not supported
H4a	MO→SAT	0.31	1.69		supported
H4b	MO→TR	-0.29	2.09*		Supported
					Not supported
H5a	EU→SAT	0.10	0.69		supported
					Not supported
H5b	EU→TR	-0.14	1.21		supported
					Not supported
H6a	PA→SAT	0.19	1.92		supported
					Not supported
H6b	PA→TR	-0.01	0.04		supported
					Not supported
H7a	RP→SAT	-0.08	0.92		supported
					Not supported
H7b	RP→TR	0.20	1.76		supported
					Not supported
H8a	PF→SAT	0.10	0.56		supported
					Not supported
H8b	PF→TR	0.41	1.62		supported
					Not supported
H9a	FN→SAT	0.14	0.83		supported
H9b	FN→TR	0.55	2.78**		Supported
					Not supported
H10a	IA→SAT	-0.07	0.70		supported
					Not supported
H10b	IA→TR	-0.03	0.24		supported
					Not supported
H11a	BL→SAT	0.01	0.02		supported
					Not supported
H11b	BL→TR	0.18	0.83		supported

The satisfaction was found to be the most significant variable in explaining the loyalty between streamers and their streaming platforms (H1 supported). Even though the trust variable was ineffective to explain the loyalty directly (H2 not supported), it positively

affected the loyalty indirectly through the satisfaction (H3 supported). All the service related factors were insignificant except for the market opportunity variable. The market opportunity positively affected the trust (H4b supported). In the relationship related factors, only fairness was found to be significant. The fairness variable increased the trust variable (H9b supported).

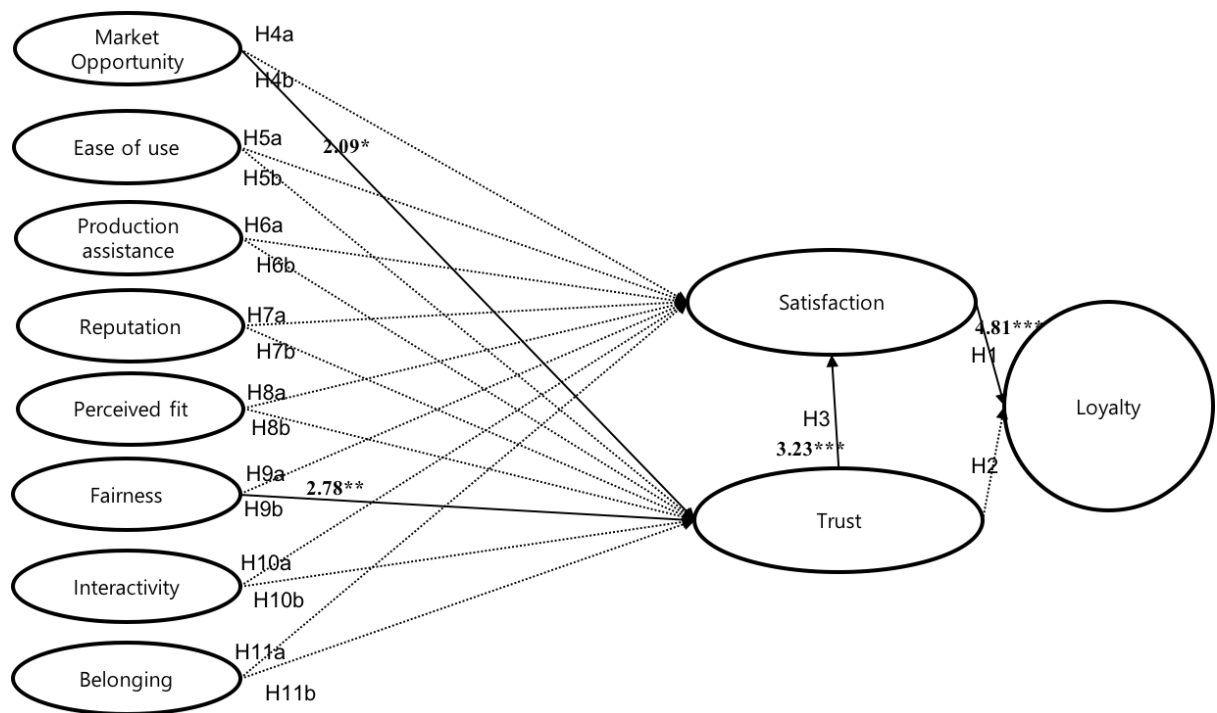


Figure 2 The result of the research model

6. Discussion

This research aimed to explain the loyalty between streamers and their streaming platforms in terms of the perceived quality of streaming service. As the first empirical research to study the live streaming service, this result could provide some research themes in the future.

Satisfaction significantly influenced the loyalty to streaming platforms, which is similar to the results of previous research. On the other hand, the trust variable did not have

an impact on the loyalty in a direct way, but it enhanced satisfaction which indirectly affects the loyalty. It is along with the result of previous research (Martínez & del Bosque, 2013).

The service related variables showed higher mean scores than the score of the relationship factors. In service related variables, the market opportunity has the highest score. It can be explained that streamers put much more weight on the quality of the service, especially the profitability, than the relationship with the staff of the service. Among all the variables, the fairness showed the higher mean score. It can be interpreted that even though streamers put the highest weight on the market opportunity, they are very sensitive to the fair treatment compared to others. This result implies that streaming services should develop diverse business models while they take care of streamers without any discrimination in an emotional way.

The market opportunity and the fairness are variables which is very closely related to the profitability of streamers. In this sense, it is natural that the market opportunity and the fairness variable were significant as an antecedent of trust because the trust is examined as the expectation that the opponent would to perform a reciprocative action. The platform should provide streamers with diverse revenue sourcing models and do not discriminate unreasonably streamers with the proportion of the revenue commission in terms of having integrity.

For streaming platforms, the first object to accomplish is to develop more business models. This finding is aligned with the concurrent action plans of Twitch and Afreeca TV. Twitch just opened new donation model which is called Twip in Korea. Afreeca TV also just adopted monthly subscription model. They should regard the streamers not to feel any discrimination with others. It means that the platforms should design a contract very carefully and persuade streamers deeply to make them feel the security.

As one of the initial attempt to study the live streaming platform, this research provides various topics. More examination of the difference within the streamers could be studied. As streamers try to differentiate their content, the relationship can be different within detailed observation. For example, streamers based on gaming content and IRL streamers would have different interest. Additionally, streamers could show different result according to their level of popularity. It can be hypothesized that streamers with the large audience would be more sensitive to the fairness variable because they have many opportunities for promotional events. Also, future research could examine those conditions with broader samples.

The limitation of this study is the limited access to streamers because there are not enough streamers. This study could not have an access to all the concurrent streamers across all the platform systematically. There could be sample bias in this study. It means that the result could be different if more streamers answered the survey. It would be much more meaningful when all the streaming platforms provided an access to their streamers.

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