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What Drives Korean People to Cut the Cord?*

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■ Abstract ■

The traditional media ecosystem is facing major changes with the expansion of over-the-top (OTT) services. While the percentage of people cutting the cord has already exceeded the percentage of people subscribing to pay TV services in the United States, due to the unique characteristics of the Korean market, it is uncertain whether the cord-cutting trend will have an impact on the Korean media industry despite of the advantages of OTT services. Accordingly, this study has directly determined the beneficial and sacrificial factors of switching to OTT services, as well as the personal and external influences behind the Korean OTT service users' intention to switch. To achieve this, the Value-based Adoption Model (VAM) was used to measure the benefits of OTT services with regards to their content and systems, as well as measure the financial and procedural switching costs of cord-cutting; further, personal innovativeness and consumers' social image were added as external variables. The results of this study showed that consumers take the content and system quality of OTT services and procedural switching costs and into consideration, and that their intention to switch was based on social image. These results could serve as data for consumer analysis regarding the expansion of OTT services into the Korean media industry, and also provide the strategic basis for preparing for sudden changes that may occur in the media ecosystem due to cord-cutting.

Keyword : Cord-Cutting, Over-The-Top, Value Based Adoption Model, Cord Coupler, Media Substitution

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1. Introduction

With the advancement of smart phones and the Internet, the television viewing paradigm is changing so that viewing is active, and not constrained by time nor place. The traditional concept of television is being redefined as a post-cable concept due to television's role as a platform for content, and the diversity in viewing methods and uses of television (Lee, 2018).

Over-the-top (OTT) services, defined as online streaming services where vide contents are distributed by online content providers through broadband Internet infrastructure, have totally changed people's viewing behavior (Kim and Shin, 2017; Massad, 2018; Park, 2018). Netflix, a world leading OTT service company, announced that it has over 182 million paid members in more than 190 countries (Netflix, 2020). Along with terrestrial networks like HBO and content producers like Disney, a variety of companies such as Google, Amazon, Apple, and so forth are entering the OTT services industry.

In the Korean OTT service industry, the global company Netflix has the largest presence, and as plans for Disney Plus and Apple TV Plus to enter the Korean market materialize, the changes occurring in the Korean OTT services industry are expected to intensify. Furthermore, Korean OTT services provide users with live TV streaming and video on demand (VOD), with most of its content being sourced from terrestrial and cable networks; they target domestic consumers who are highly loyal to Korea-based content (Hwang, 2018; Shin and Park, 2020).

On the other hand, in the Korean media ecosystem, the percentage of people using traditional pay TV-such as cable TV, Internet Protocol Television (IPTV), and satellite TV-still exceeds 90%, and it is the overwhelmingly dominant platform (Shin, 2018). However, it should be noted that 6.86% of people-mostly of one-person households and households where the head of the family is under 35 years of age-cancelled their pay TV subscriptions in 2017, which was twice as high as the previous year (Kim, 2017). This phenomenon is due to the fact that one-person households are less likely to own a television which leads to a comparatively higher consumption of content through smartphones (Jung, 2019), and also because the widespread ownership of smartphones is increasingly allowing household members to view content individually (Lee and Kang, 2018).

Due to such upheavals in the media ecosystem, the "cord-cutting" phenomenon of OTT services completely replacing pay TV services is now garnering attention. In the United States, where the impact of OTT services has been comparatively strong, previous studies have been conducted on the various forms of the cord-cutting phenomenon, on consumer characteristics, and on the way this service and content characteristics affect consumer behavior (Banerjee et al., 2014; Fuduric et al., 2019; Massad, 2018; Tefertiller, 2018; 2020). In Korea, on the other hand, studies have largely focused on user acceptance factors in terms of OTT services, user satisfaction factors, and the continuation intention of users (Kim and Park, 2016; Shin and Park, 2020; Yi and Chon, 2020; Yoo and Park, 2018).

However, there are differing views regarding the cord-cutting scenario in Korea. One position argues that the cord-cutting phenomenon will not occur to a great extent in the Korean media industry because, despite the OTT services' diver-

sity of contents and ease of use, pay TV services cost less in Korea than in the United States, the size of the OTT service industry is smaller than the television industry, and consumers are highly loyal to Korean content (Choi, 2018; Hwang, 2018; Kim et al., 2019). Another position views cord-cutting in Korea favorably and asserts that the distribution of 5G technology, the widespread use of interactive devices like Smart TVs, and the increase in one-person households that widely use smartphones will cause acceleration in the expansion of OTT services (Kim, 2015; Lee, 2019).

Therefore, this study aimed to directly determine the cord-cutting intentions of Korean OTT service users by identifying such intentions among users who consider the benefits of the OTT services' content and system characteristics while also considering the financial and procedural switching costs, as well as by identifying the effect that personal innovativeness and social image in terms of using OTT services has on users. Additionally, this study aimed to determine the difference between the groups of OTT service users depending on whether they used paid or non-paid services. As there are few studies on cord-cutting that is caused by the expansion of OTT services, it is anticipated that this study could provide a strategic clue regarding the changing media industry.

2. Conceptual Background

2.1 Cord-Cutting

Cord-cutting is a phenomenon where a customer stops using terrestrial TV, IPTV, and satellite TV, and switches to OTT services to enjoy their diverse benefits (Banerjee et al., 2014; Fudurić et al., 2018; Tefertiller, 2018). Cord-cutting is a usual occurrence in the development of media. Fudurić et al. (2018) defined audio cord-cutting as switching from corded to cordless phone and even to Internet telephone services. Likewise, it was found that video cord-cutting occurs in the media industry when people switch from traditional to mobile TV with the introduction of smartphone and digital multimedia broadcasting (DMB) services (Choi et al., 2009). Internet-based media have the advantage of controllability and mobility compared to traditional media (Fudurić et al., 2019; Massad, 2018; Park, 2018). Thus, this study focused on providing more alternatives for viewers considering the diversity in terms of content, video quality, curation, and interactivity with the combination of media and Internet communication technology (ICT). Further, it is possible to establish the customers' intentions in the rapid extension with many domestic and international corporations (Kang, 2019; KOCCA, 2019).

Research on cord-cutting could be divided depending on the determinants and types of cord-cutting. Banerjee et al. (2014) classified cord cutters into three types : cord cutter, cord coupler, cord never, and non-user. Cord cutters are people who completely switch from cord media to OTT services, while cord couplers are people who use both cord media and OTT services. Cord nevers were defined as those who have no experience with traditional media, while non-users are people who stick to using cord media. Additionally, Fudurić et al. (2018), reflecting on viewers' choice and consumption, added two more specific types : cord regretter, couplers but use more cord media, and churner, those who stop watching media. Kim et al. (2019) focused on domestic Korean consumers and revealed that

compatibility, relative mobility, use frequency, and binge watching of online video streams are distinct characteristics of cord couplers.

In previous research on diverse determinants of cord-cutting, Tefertiller (2018) confirmed that in terms of perceived advantages and relatively reasonable costs of OTT services, compatibility, perceived substitutability, and needs of media consumption, only perceived advantages had significant influence on cord-cutting intentions, while needs of companionship was influential in cord-cutting intention based on media substitution theory and uses and gratification theory. In a subsequent study, he confirmed that advertising avoidance has influence on cord-cutting intention (Tefertiller, 2020). Massad (2018) suggested three dimensions of self-efficacy as need for mobility, value, and autonomy, and confirmed their influence on video-streaming propensity. In addition, Fudurić et al. (2020) derived cord-cutting attributes based on media displacement and complementarity and found that use of a portable device, preference of genre, and expenditure on cable TV affects the propensity of cutting the cord among content consumers.

2.2 Value-based Adoption Model

Research on new technology adoption have utilized the Technology Acceptance Model (TAM). This model has also been applied in media adoption or substitution research (Cha, 2013; Jung et al., 2009; Rauniar et al., 2014; Shin, 2009). However, subsequent studies have criticized the fact that TAM lacks explanatory power in upcoming technologies like ICT. The reasons are as follows : it was designed around the 1990s when the environment was quite different from that of today (Davis et al., 1989; Legris et al., 2003; Schepers and Wetzels, 2007); further, it only considers positive aspects of the technologies (Cha, 2013; Kim et al., 2007); therefore, it could be biased in terms of acceptance of innovation. Additionally, the parsimonious TAM did not consider external variables and individual beliefs such as subjective norm and self-efficacy (Cha, 2013; Wu and Lin, 2017).

The Value-based Adoption Model (VAM) approaches the adoption of ICT based on the cost-benefit paradigm (Kim et al., 2007; Hsu, 2014; Kim et al., 2017; Sohn and Kwon, 2020). Different from the TAM, a technology adopter is treated as an individual consumer in the perspective of the VAM. They make decisions according to the benefit and cost of achieving their satisfaction; therefore, they perceive the value of products or services considering both beneficial and sacrificial factors. <Table 1> presents the previous studies adopting VAM with perceived pros and cons in the context. Kim et al. (2007) suggested ease of use and enjoyment of technology as beneficial factors. Ease of use was defined as the degree of convenience in terms of use, while enjoyment was defined as the degree of intrinsic pleasure as a result of adoption. On the contrary, sacrificial factors, and monetary and non-monetary costs were included and measured in terms of perceived fee and technicality (Wang et al., 2013). Based on Zeithaml's (1988) study, perceived value was employed as the most critical variable in VAM; it is defined as customers' general recognition of a product or service based on its benefit and sacrifice. In other words, it is the same as net benefit considering both benefits and sacrifices.

〈Table 1〉 Antecedents of Previous Research on VAM

Reference	Context	Perceived Benefits	Perceived Sacrifices	External Variable
Kim et al. (2007)	Mobile Internet	Usefulness, Enjoyment	Technicality, Perceived Fee	-
Wang et al. (2013)	Online Content Service	Perceived Enjoyment, Perceived Usefulness	Technicality, Perceived Fee	Ethical self-efficacy for Online Piracy
Hsu (2014)	Smartphone platform	Switching Benefit (Emotional, Price, Quality, Social)	Switching Cost (Uncertainty, Loss, Sunk, Transition)	Satisfaction
Kim et al. (2017)	IoT Smart Home	Facilitating conditions, Usefulness, Enjoyment	Privacy Risk, Innovation Resistance, Technicality, Perceived Fee	Variety Seeking
Hsiao and Chen (2017)	E-Book	Perceived Content, Perceived Context, Perceived Infrastructure	Perceived Price	Habit, Environmental Concern
Yu et al. (2019)	Self-customisation service	Perceived Enjoyment, Perceived Usefulness	Technicality, Perceived Fee, Innovation Resistance, Anxiety	Variety Seeking, Social Innovativeness

Although the VAM has been applied in various forms of ICT research to confirm the cause and effect of adoption, external variables are also required to increase its explanatory power (Wang et al., 2013). According to Social Cognitive Theory, individual characteristics and social effects reciprocally influence one's action (Bandura, 1986). This includes personality, personal cognition, and demographic elements as personal attributes and, physical and societal factors as environmental attributes. These concepts have been suggested as antecedents to the use of ICT (Hsiao and Chen, 2017; Lin, 2003; Wang et al., 2013; Yu et al., 2019). Further, Lin (2003) asserted that, in the adoption of interactive communication technology, audience and social factors form the belief and attitude toward innovation adoption. Hence, Cha (2013) extended the TAM to include constructs such as social influences and individual experience and characteristics to predict the substitution between online video platforms and traditional television. In addition, Wu and Lin (2017) focused on the effect of electronic Word-of-Mouth (eWOM), formed by consumer reviews regarding the intention of purchasing an innovative product, in this case, a tablet PC. As a result, it was substantiated that customers' intentions are influenced by the trustworthiness of the site and other people's evaluation.

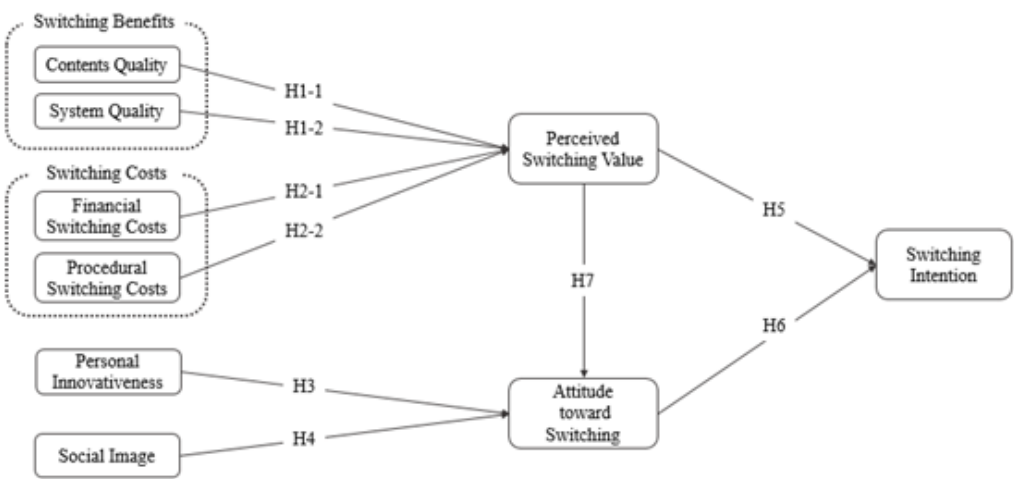
In this research, an attitude variable was employed to cover the social and individual influences. This variable is defined as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor (Eagly and Chaiken, 1993; Kim et al., 2007; Venkatesh et al., 2003). In terms of the VAM, the attitude variable was omitted for its weak mediation explanatory power between beliefs and intention (Kim et al., 2007); however, perceived value also partially reflected affective elements (Hsiao and Chen, 2017; Kim et al., 2017; Sanchez et al., 2006). As individual characteristics and the environment are attributes that do not directly affect service evaluation but directly affect a consumer's feeling, the attitude variable was employed to sum up the whole influence of customers and their surroundings (Hsiao and Chen, 2017; Lu and Hsiao, 2010).

2.3 Research Model and Hypotheses

The research model of this study is illustrated in <Figure 1>. The model is based on the VAM with additional personal and social variables influencing the attitude toward switching. Furthermore, as cord-cutting is a customer's decision to change from the existing service to a new one, the concept of switching was integrated into the model (Hsu, 2014). Further, pay and non-pay customers were compared to confirm the moderating effect of pay subscription.

This study employs the benefit and cost paradigm to elaborate the customer switching decision. First, switching benefit is defined as positive elements that drive customers' decisions of changing from using an existing service to a new one (Bansal et al., 2005; Hsu, 2014; Kim and Kankanhalli, 2009). Video streaming with smart devices is advantageous in numerous aspects : flexibility of choosing the device for watching the video stream (Cha, 2013), richness of contents (Massad, 2018; Park et al., 2015), controllability in terms of going back and forth while playing the video (Lee, 2018; Park et al., 2015; Shin, 2009). Furthermore, as OTT service is based on Internet protocol, it is critical to keep the customer from privacy invasion or hacking (Lin et al., 2013; Shin, 2009).

Further, previous new media adoption studies have confirmed that the content and system quality are the important constructs for the success of a system (Lin and Lu, 2000; Hsiao and Chen, 2017; Shin, 2012). Specifically, Internet-based streaming services are superior in terms of richness of content (Massad, 2018), compatibility (Cha, 2013; Tefertiller, 2018), and relevance (Lee, 2018; Lin et al., 2012). Shin (2009) investigated IPTV adoption intention through system and content quality based on DeLone and Mc Lean (1992, 2003)'s study. Hsiao and Chen (2017) also conducted a study on the relationship between intention to pay for an e-book subscription service and its content, context, and infrastructure. Further, Kim and Park (2018) employed IS success model's six key elements to e-learning adoption research, and service, content, and system quality were considered as control variables



〈Figure 1〉 Research Model

in establishing the impact of personal characteristics on adoption. In light of previous studies, it could be assumed that the content and system quality of OTT services are attractive to potential customers.

Hypothesis 1 : Switching benefits to OTT services are expected to positively influence the perceived switching value of cord-cutting.

Hypothesis 1-1 : Content quality of OTT services is expected to positively influence the perceived switching value of cord-cutting.

Hypothesis 1-2 : Service quality of OTT services is expected to positively influence the perceived switching value of cord-cutting.

Switching costs, defined as monetary and non-monetary costs perceived by customers in the switching decision, were suggested as a sacrificial aspect of cord-cutting (Burnham et al., 2003; Hsu, 2014; Jones et al., 2002). In media substitution studies, switching costs are also confirmed to be influential in customers' decisions (Hsu, 2014; Kim et al., 2016; Kim et al., 2017; Ye et al., 2019). Hsu (2014) found that, in switching to a smartphone platform, switching costs including uncertainty, sunk, transition, and loss costs indirectly influence switching intention through perceived switching value. Kim et al. (2016) also found switching costs to positively strengthen customer loyalty for smartphones. In addition, Kim et al. (2017) confirmed that IPTV service bundling is negatively associated with customer defection in terms of loss costs. In terms of switching from pay TV to OTT services, financial switching costs like sunk, transition, benefit, loss, and uncertainty costs could be generated, and procedural costs like searching, pre-switching search and evaluation, set up, and learning costs are required.

Hypothesis 2 : Switching costs to OTT services are expected to negatively influence the perceived switching value of cord-cutting.

Hypothesis 2-1 : Financial switching costs to OTT services are expected to negatively influence the perceived switching value of cord-cutting.

Hypothesis 2-2 : Procedural switching costs of OTT services are expected to negatively influence the perceived switching value of cord-cutting.

In terms of individual characteristics of consumers, personal innovativeness, defined as the degree of how fast an individual adopts an innovation, has been used to assess a number of innovations (Kim and Park, 2015; Rogers, 1995). Agarwal and Prasad (1998) proposed a construct of innovativeness where consumers could be divided into the categories of "innovator" and "non-innovator" depending on when the new IT technology was accepted, and they presented personal innovativeness in terms of information technology acceptance as a distinct concept in the IT domain (PIIT). Likewise, personal innovative propensity has also been used as a critical attribute in adopting new communication technology (Lin, 2003; Park and Ryoo, 2013; Yu et al., 2016). Specifically, Massad (2018) found that the higher innovative propensity an adopter has, the faster he or she becomes an early adopter of a streaming service.

Hypothesis 3 : Personal innovativeness is expected to positively influence the attitude toward switching for cord-cutting.

The intention to conduct a certain behavior depends on the surrounding environment (Lin et al., 2013), and Lin (2003) emphasized that, when adopting new media, audience factors are shaped in a social environment, therefore, they are also referred to as social factors. For this reason, social image is employed and is defined as the degree to which the use of an innovation is perceived to enhance viewers' social status (Moore and Benbasat, 1991; Venkatesh and Davis, 2000). Kwon and Chon (2009) confirmed that, for the adoption of satellite mobile TV, self-image is the only significant attribute among the social influences of adopting an innovation, and it is strengthened by the viewer's residence and age. Similarly, Yu et al. (2017) found that the social image of using a tablet device significantly affects perceived value considering the tablet's fanciness and brand.

Hypothesis 4 : Social image is expected to positively influence the attitude toward switching for cord-cutting.

Perceived value is the consumers' overall estimation considering the positive and negative attributes of a decision (Kim et al., 2007; Zeithaml, 1988). In other words, perceived value means a trade-off between the benefits and costs of a decision (Kim, 2011; Kim et al., 2017). In previous studies, perceived value has been confirmed to be influential as a mediator for adopting intention (Hsiao and Chen, 2017; Kim and Hyun, 2019; Yang et al., 2016). Likewise, perceived switching value is treated as the overall estimation considering both the benefits and costs of the decision to switch (Hsu, 2014; Kim, 2011; Kim and Kankanhalli, 2009). Consumers tend to maximize satisfaction through their decision-making; the higher perceived switching value customers have, the more switching intention they could have (Cheng et al., 2017; Hsu, 2014). Furthermore, as mentioned above, attitude toward switching is applied separately considering personal characteristics and social influence. Thus, in addition to the relation between perceived value and intention, the impact of perceived switching value on attitude is also suggested.

Hypothesis 5 : Perceived switching value is expected to positively influence the switching intention for cord-cutting.

Hypothesis 6 : Attitude toward switching is expected to positively influence the switching intention for cord-cutting.

Hypothesis 7 : Perceived switching value is expected to positively influence the attitude toward switching for cord-cutting.

This study also focused on the moderating effect of type of subscription among customers of OTT services. Most OTT services offer a free trial period of 1-3 months to customers as a lock-in marketing method. Further, YouTube differentiates the type of users in terms of paying and non-paying customers using compulsory advertising. In addition, telecom companies, in cooperation with video streaming services, launched a bundling service with free OTT services. However, limited studies have been conducted on how non-pay and pay users perceive the service differently.

Hypothesis 8 : Non-pay and pay users are expected to have significant differences in perceiving attributes for cord-cutting.

3. Research Methods and Results

3.1 Data Collection and Participants

For this study, respondents were required to have an experience of using OTT services either through regular payment or free trials, excluding cord-cutters. In other words, regretted cord loyalists and cord couplers were targeted for this research. The survey was conducted online and offline from July to August 2019, and purposive sampling was applied with 300 valid complete responses. The purposed research model was tested using SPSS 25 and AMOS 25.

<Table 2> shows the demographic profiles of the respondents. The gender ratio is quite balanced, and the respondents were classified in terms of age, with the highest number in the 20's category, and the lowest in the 40's. Further, a high rate of respondents are cord couplers (82.7%), but half of those do not pay for OTT services and vice versa. The sum of cord loyalists and non-users is lower than 5% of the total respondents.

〈Table 2〉 Descriptive Statistics of Respondents

Measure	Item	Frequency	Ratio(%)
Gender	Male	171	57.0
	Female	129	43.0
Age (Korean Age)	10~19	77	25.7
	20~29	94	31.3
	30~39	57	19.0
	40~49	23	7.7
	50~00	49	16.3
User Type	Only Cord	10	3.3
	Only Free OTT	38	12.7
	Cord+Free OTT	120	40.0
	Cord+Pay OTT	128	42.7
	Non-user	4	1.3

3.2 Measures

The survey used in this study was made up of 36 questions which were composed using the measurement items of previous verified studies on the acceptance of new media. First, the content and system quality of OTT services were presented as the beneficial factors, which correspond to the antecedent variable of the perceived switching value; questions were adopted from the content and system quality questions from the research by Cheong and Park (2005) and Shin (2009), which were in turn derived from DeLone and McLean (1992)'s IS Success Model of information and system quality, and used in a variety of ways for the acceptance of new media. Three of the content quality questions were used to measure the diversity, usefulness, and suitability of the OTT services' content; five of the system quality questions were used to measure the reliability, responsiveness, and safety of OTT services- and system characteristics were used to measure the services' flexibility and high quality (Lin et al., 2012).

Regarding the sacrificial aspect of the perceived switching value, the financial and procedural costs of switching from pay TV to OTT services were measured using four questions each. Based on the research by Burnham et al. (2003) and Jones et al. (2002), user recognition of the financial costs of switching to OTT services was measured—including the transition, sunk, and newly occurring subscription costs—and the following were measured for procedural costs : searching, pre-switching search and evaluation, learning, and set up costs.

Four questions each were selected for the external variables of personal innovativeness and

social image, and they were referenced from the measurement items of Kim and Park's (2015) research, which in turn utilized two variables derived from the research by Agarwal and Prasad (1998) and Moore and Benbasat (1991) on the continued use of OTT services.

The questions used to measure the perceived value of switching were derived from four measurement items in Hsu's (2014) research, which used the VAM to study the switching of smartphone platforms. Furthermore, four questions regarding user attitude toward switching were derived from the Technology Acceptance Model (TAM) and Push-Pull-Mooring Model (PPM) (Bansal et al., 2005; Davis et al., 1989). Four questions reflected the research by Tefertiller (2018), who was the sole figure that presented cord- cutting intentions as a dependent variable, and also reflected the measurement items of past research regarding the intentions behind switching to new communication services (Hsu, 2014; Park and Ryoo, 2013). All measurement items were measured using a 7-point Likert scale, and a more detailed list of the items is provided in the appendix.

〈Table 3〉 Factor Loadings and Convergent Validity

Construct	Item	Std. Loading	C.R.	Mean	AVE	CR	Cronbach's α
Content quality	CON1	.730	12.020	5.448	.581	.806	.805
	CON2	.757	12.401				
	CON3	.799	-				
System quality	SYS1	.713	10.765	4.935	.528	.817	.815
	SYS2	.729	10.966				
	SYS3	.760	11.333				
	SYS4	.704	-				
Financial switching costs	FIN1	.766	7.992	3.660	.550	.776	.751
	FIN2	.909	7.531				
	FIN3	.488	-				
Procedural switching costs	PRO1	.540	9.121	3.668	.587	.804	.782
	PRO2	.884	12.477				
	PRO3	.830	-				
Personal innovativeness	PI1	.690	13.297	4.958	.651	.881	.878
	PI2	.796	16.275				
	PI3	.863	18.187				
	PI4	.866	-				
Social image	SCI1	.629	9.482	4.108	.553	.784	.751
	SCI3	.899	10.388				
	SCI4	.675	-				
Perceived switching value	SV1	.803	18.291	4.836	.727	.914	.914
	SV2	.802	18.241				
	SV3	.905	23.101				
	SV4	.895	-				
Attitude toward switching	AT1	.848	19.732	4.826	.757	.925	.925
	AT2	.897	21.988				
	AT3	.857	20.112				
	AT4	.877	-				
Switching intention	SI2	.834	20.857	4.039	.820	.931	.930
	SI3	.967	28.136				
	SI4	.910	-				
$\chi^2(398)$ = 814.311; NFI = .868; IFI = .928; TLI = .915; CFI = .927; RMSEA = .059							

〈Table 4〉 Discriminant Validity

Variables	CON	SYS	FIN	PRO	PI	SCI	SV	AT	SI
CON	**.897**								
SYS	.505***	**.903**							
FIN	.009	-.058	**.867**						
PRO	-.141*	-.137*	.278**	**.884**					
PI	.270***	.323***	.089	-.102	**.937**				
SCI	.148*	.180**	.162**	.028	.303***	**.867**			
SV	.445***	.472***	.017	-.190**	.411***	.290***	**.956**		
AT	.496***	.478***	-.069	-.222***	.353***	.357***	.702***	**.962**	
SI	.401***	.238***	.014	-.106	.247***	.274***	.457***	.505***	**.964**

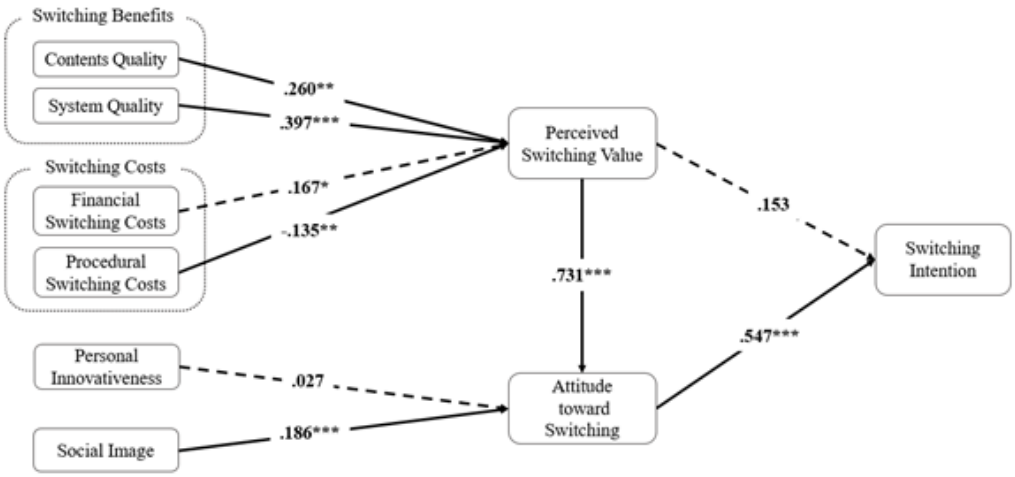
Note : Leading diagonal shows the square root of AVE of each construct.
(*p < 0.05, **p < 0.01, ***p < 0.001, ns : insignificant at the 0.05 level)

3.3 Statistical Analysis

First, in this research, internal reliability was confirmed, and exploratory factor analysis as well as convergent and discriminant validity tests were performed. The internal consistency of all items was evaluated over the cutoff, 0.7 (Fornell and Larcker, 1981). Subsequently, through principle component analysis with varimax, factor loadings of each constructs ranged from .535 to .901, above the acceptable value of 0.5. In this process, SYS5, FIN4, PRO4, SCI2 and SI1 were eliminated. For the structural model, as shown in <Table 3>, confirmatory factor analysis was executed and the indices of model fit were represented as follows : $\chi^2(398) = 814.311$; NFI = .868; IFI = .928; TLI = .915; CFI = .927; RMSEA = .059. As the average variance extracted (AVE) of each construct is greater than 0.5, and the indexes of composite reliability(CR) are greater than 0.7, it could be evaluated that the convergent validity of the purposed research model is acceptable. Even though FIN3 does not meet the cut-off of standard factor loading index, 0.5, it could be allowed if CR and AVE meet the each cut-off (Henseler et al., 2009). Moreover, for discriminant validity of the constructs, correlations and the square roots of AVEs of each variable are compared as shown in <Table 4>. If the least index of square roots of AVEs is higher than any correlation, discriminant validity is demonstrated.

3.4 Results

The result of the testing of the hypotheses is shown in <Figure 2>. First of all, model fit of the structural model is shown as follows : $\chi^2(410) = 891.198$; NFI = .856; IFI = .917; TLI = .904; CFI = .916; RMSEA = .063. The significance is represented with full or dotted lines using path coefficients which are also indicated in <Table 5>. In terms of switching benefits, perceived switching value to OTT services was significantly influenced by content ($\beta = 0.260$, $t = 3.143$) and system quality ($\beta = 0.397$, $t = 4.744$). Further, in the opposite side of switching attributes, financial switching costs unexpectedly have a positive influence on perceived switching costs ($\beta = 0.167$, $t = 2.058$), while procedural switching



〈Figure 2〉 Results of Structural Model Testing

〈Table 5〉 Hypotheses Confirmation

Hypothesis	Path	β	Outcome
H1-1	Content Quality → Perceived Switching Value	.260**	**Supported**
H1-2	System Quality → Perceived Switching Value	.397***	**Supported**
H2-1	Financial Switching Costs → Perceived Switching Value	.167*	Not Supported
H2-2	Procedural Switching Costs → Perceived Switching Value	-.135**	**Supported**
H3	Personal Innovativeness → Attitude toward Switching	.027	Not Supported
H4	Social Image → Attitude toward Switching	.186***	**Supported**
H5	Perceived Switching Value → Switching Intention	.153	Not Supported
H6	Attitude toward Switching → Switching Intention	.547***	**Supported**
H7	Perceived Switching Value → Attitude toward Switching	.731***	**Supported**
$\chi^2(410) = 891.198$; NFI = .856; IFI = .917; TLI = .904; CFI = .916; RMSEA = .063			

(*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, ns : insignificant at the 0.05 level)

costs negatively affect perceived switching value (β = -0.135, t = -.2.830). Therefore, H1 was completely supported; however, H2 was partially supported. Attitude toward switching was not affected by personal innovativeness (β = 0.027, t = 0.665), but was affected by social image (β = 0.186, t = 3.695). Thus, H4 was supported and H3 was not. In the relationship between mediators and determinant variables, perceived switching value had no significant effect on switching intention (β = 0.153, t = 1.162); however, the path from attitude toward switching to switching intention was significant (β = 0.547, t = 4.080). Further, the perceived value had an influence on attitude (β = 0.731, t = 12.423). Even though the direct relationship between perceived switching value and switching intention was found to be insignificant, the indirect relationship was revealed as significant. Thus, H5 was not supported; however, H6 and H7 were supported.

〈Table 6〉 Results of the Multi-Group Analysis

Path			β		Unconstrained model (χ^2(820) = 1424.604)	
			Non-pay (n = 172)	Pay (n = 128)	Constrained Model (df)	$\Delta\chi^2$ (df)
CON	→	PSV	.027	.472***	1432.529 (821)	7.924(1)
SYS	→	PSV	.465***	.204	1426.740 (821)	2.135(1)
FIN	→	PSV	.425**	-.029	1432.462 (821)	7.858(1)
PRO	→	PSV	-.206**	-.068	1426.859 (821)	2.255(1)
PI	→	AT	-.044	.071	1426.477 (821)	1.873(1)
SCI	→	AT	.077	.299***	1429.403 (821)	4.798(1)
PSV	→	SI	.312	.195	1424.770 (821)	0.166(1)
AT	→	SI	.634***	.337	1425.812 (821)	1.207(1)
PSV	→	AT	.826***	.688***	1425.646 (821)	1.042(1)

(*p < 0.05, **p < 0.01, ***p < 0.001, ns : insignificant at the 0.05 level)

In addition, multi-group analysis was performed to confirm the moderating effect of the type of OTT users; the results are indicated in <Table 6>. First, the constrained and unconstrained models were compared. The chi-square index of the unconstrained model was 1424.604 with 820 degree of freedom, while the constrained model had a chi-square index of 1451.114 with 829 degree of freedom. The difference between the chi-square index and degree of freedom of each model was found to be significant at 26.510(9) with a p-value of .002. It was possible to see that the non-pay users are positively influenced by system quality (excluding content quality) and the financial cost of switching, while they were negatively influenced by the procedural cost of switching. However, such users were seen to be unaffected by the surrounding environment or by personal characteristics; their cord-cutting intentions were confirmed by their perceived value of switching and attitude toward switching.

On the other hand, while the pay users' perceived value of switching was found to be based on content quality, and their attitude toward switching was based on social image, they were found to not have completely formed switching intentions.

To determine more detailed differences between the paths in the research model, multi-group analysis was conducted with all paths of the two groups; a significant result was found in three paths, as the difference in chi-square value was more than 3.84 with 1 degree of freedom-as shown in <Table 6>. First, with regard to the perceived value of switching, it was revealed that pay users are more aware of the effects of content quality compared to non-pay users. However, while the differences between the paths stemming from the financial cost of switching were found to be significant between non-pay and pay users, this result was rejected as it opposed the existing hypothesis. Finally, the effect that social image has on user attitude toward switching was only found to have a significant influence on pay users. In result, it can be stated that H8 was partially supported.

4. Conclusion

In this study, the VAM was utilized to determine the cord-cutting intentions of Korean OTT service users by considering the beneficial and sacrificial factors as well as the external influences. Furthermore, the users of OTT services were divided into pay and non-pay users, and the cord-cutting intentions as perceived by the users of each group were compared.

The results of the research model analysis revealed that the diversity in terms of contents, usefulness, and suitability provided by OTT services as well as their reliability, safety, responsiveness, and high-quality characteristics have a positive influence on the perceived value of switching to OTT services. This made it possible to see that users are encouraged to switch to OTT services through which original content that is not provided by traditional pay TV services is produced, and recommendation services are also provided for users. Furthermore, it was found that the fact that users receive high-quality OTT services through various devices such as smart TVs, smartphones, and so forth was perceived as a great advantage.

In contrast, regarding the financial and procedural costs of switching, only the procedural costs were shown to negatively influence the perceived value of switching. From this finding, it can be seen that users judge the present subscription fees of Korean OTT services to be appropriate for the services provided, and the cost-saving benefits (e.g., saving points) provided by traditional pay TV services do not have a major impact on the act of switching services. Regarding the procedural costs, on the other hand, it was inferred that users feel pressured by the process of comparing the content and benefits of different OTT services before making a selection, as well as the process of connecting and setting up new devices to the service.

Furthermore, it was revealed that, in terms of the social image and innovativeness among OTT service users, only the former was found to have a significant effect on user attitude toward switching services. With this, it was possible to determine that although the use of OTT services is already generally accepted by consumers, individuals perceive that they will appear to be more interested in the media and more tech-savvy with the use of OTT services, which showed the difference between individual use and the environmental perception of using OTT services.

In addition, cord-cutting intentions were found to be significant as the perceived value of switching acted as the medium for user attitudes toward switching. This result revealed that the decision among users to cut the cord is not solely based on the high quality of OTT services, and that users must also have the necessary attitude toward switching-which manifests when they judge that their personal image will be improved by cutting the cord—for the formation of their cord-cutting intentions.

Finally, it was revealed—when verifying the regulation effect that the act of paying for OTT services has on cord-cutting—that while non-pay users form cord-cutting intentions regardless of the surrounding environment or user innovativeness, pay users do not form complete cord-cutting intentions even when the perceived value of switching and attitude toward switching are formed. Therefore, it can be understood that non-pay users are highly satisfied with their free OTT services and intend to continue with their

subscriptions regardless of the influence from personal characteristics or the surrounding environment; pay users, on the other hand, can be understood as wishing to maintain their cord coupler status rather than increase their present use of OTT services. This result partially supports the assertion of Banerjee et al. (2014) that most viewers will converge to the cord coupler status in the future.

5. Discussion

5.1 Implications

This study has its theoretical implication in that it employed the VAM to confirm the substitution of the new media, that is, OTT services. Previous research on media substitution usually focused on motivation for media based on the use and gratification theory or intention to adopt new media with advantageous attributes (Cha, 2013; Hsu, 2014). Still, this study employed an extended VAM considering beneficial and sacrificial antecedents of perceived value with individual and social variables. That is to say, this study adds to the field of media substitution through an advanced adoption model.

In addition, it confirmed the critical role of the attitude variable in the adoption of new media. Even though previous studies related to the VAM have overlooked the attitude variable for its lack of influence, the results of this research using this model have confirmed that attitude completely mediates the relationship between perceived value and intention. This result supports the view that the perception of service and the perception of the surrounding environment when using the service can be explained in more detail through the attitude variable (Hsiao and Chen, 2017; Lu and Hsiao, 2010).

With regard to practical implications, it was discovered that domestic consumers favorably view the content, service, and current range of cost of OTT services. The aspect of cost has mostly had a negative impact on the acceptance of new media platforms. However, it can be presumed that, as Korean pay TV services are typically provided by communication service providers as part of a package deal with mobile phone plans, they do not exhibit strong service-related advantages, and users do not feel burdened by the costs of these services. Further, it can be presumed that users find the cost of Korean OTT services to be reasonable or affordable considering that the subscription fees are in the range of 10,000 Korean won, and considering the superior content and system of Korean OTT services-while the cost of pay TV services is made up of license fees in the range of 10,000 to 20,000 Korean won in the Korean market (Kim et al., 2019). With regard to the procedural costs of switching, however, users were found to dislike the time and effort needed to adjust to the user interface unique to each service, and having to evaluate different services to make a selection. Therefore, OTT service providers should continue to invest in the high-quality content and systems they provide-which are superior to those of pay TV services-but also strive to increase the ease of use for users, as well as strive to develop cooperative services that will make it possible for their OTT services to be connected to a variety of devices.

Additionally, attention should be paid to the differences that result depending on whether consumers use paid or free OTT services. Consumers

of free OTT services were revealed to have the intention to switch despite feeling that the OTT service's ease of use is an advantage, despite the fact that the service is not dependent on the pricing system, and despite the procedural inconveniences of switching services. In other words, during the free trial period—which is typically provided to first-time subscribers—users view the cost of OTT services favorably and react more positively toward the system's ease of use than toward the provided content. On the other hand, it has been determined that pay users rate OTT services favorably for the content they provide, and do not have the intention to switch despite taking into consideration the social image they would have by using the OTT services. Through this, it can be expected that the domestic cord couplers who use paid services in Korea will maintain their viewing methods and that the current non-pay users who will subscribe to paid OTT services will also eventually become established as cord couplers. In the case of existing content producers that feel threatened by the expansion of OTT services, they should target cord couplers with a diversified strategy considering the existing methods of content distribution.

5.2 Limitation

This study shed light on some findings in the media industry, but it also has limitations. First, the results of this study cannot be generalized due to the relative shortage of samples. Though it has diverse respondents in terms of age and gender, a sample of 300 respondents is not enough to generalize the cord-cutting phenomenon in Korea. Specifically, as most of the teenagers are male, there could be biasness in terms of the gender aspect. Additionally, as this study focused on the subscription status of OTT service users during a specific period, it was unable to consider the impact that demographic elements have on the cord-cutting phenomenon, as well as the diverse types of cord cutters-such as cord loyalists, cord couplers, cord cutters, and non-users.

Subsequently, as this study applied a cross-sectional survey design, which pertains to a specific point in time, there was a limit in determining the type of usage among OTT service users as well as in determining the changes resulting from the emergence of a new service and the expansion of global services into Korea. Accordingly, monthly cancellation and subscriptions for a designated period should be considered in subsequent studies.

Moreover, this study does not take into account competition with other media and services. Thus, it is suggested that further studies should be conducted on how the characteristics of each service appeal to their viewers and how to treat influences on the other services. Therefore, if the aforementioned suggestions for future studies are taken into consideration, the result could serve to help not only predict consumer behavior following the expansion of the OTT service industry, as well as serve as the core basis of OTT service strategies in the Korean market, but also compare the cross-national new media use studies.

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〈Appendix〉

Construct	Items
Content Quality	1) OTT services provide various information and services. 2) The contents of OTT services are more valuable than those of cable TV. 3) OTT services provides the information and services that I need.
System Quality	1) OTT services provide very reliable services. 2) The speed of OTT services is fast. 3) OTT services are secure to use. 4) OTT services provide high definition contents without disconnection. 5) OTT services are available regardless of place and time.
Financial Switching Costs	1) Switching to OTT services from cable TV would mean that I have to abandon benefits(e.g. points, coupons) that I have had. 2) Switching to OTT services from cable TV would mean that I lose whole up-front costs. 3) I am likely to end up with a bad deal financially if I switch to a OTT services from cable TV. 4) Switching to OTT services from cable TV costs me a lot of money.
Procedural Switching Costs	1) If I were to switch to OTT services, I would have to learn how things work at a new one. 2) Getting used to how OTT service works takes too much time. 3) Comparing the benefits of present service and the benefits of OTT services takes too much time and effort. 4) The process is simple to start the use of OTT services.
Personal Innovativeness	1) If I heard about a new technology, I would look for ways to experiment with it. 2) Among my peers, I am usually the first to try out new technologies. 3) In general, I am not hesitant to try out new technology. 4) I like to experiment with new technologies.
Social Image	1) Using OTT services improves my image within the organization. 2) People in my organization who use OTT services have a high interest in media. 3) Using OTT services gives me innovative image within the organization. 4) Using OTT services would give me more benefits than others in the organization.
Perceived Switching Value	1) Compared to the fee I need to pay, the use of OTT services offers value for money 2) Compared to the effort I need to put in, the use of OTT services is beneficial to me. 3) Compared to the time I need to spend, the use of OTT services is worthwhile to me. 4) Overall, the use of OTT services delivers good value to me.
Attitude Toward Switching	For me, swithcing to OTT services would be 1) A bad idea...A good idea 2) Useless...Useful 3) Harmful...Beneficial 4) Foolish...Wise
Switching Intention	1) I am considering switching from cable TV to OTT services soon. 2) I intend to cancel my cable TV in order to use OTT services in 6 months. 3) I plan to cut the cord on my cable TV so that I can use OTT services to view television content. 4) The likelihood of me switching to OTT services from cable TV is high.

About the Authors

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중앙대학교에서 공학사와 공학석사를 취득하고, 프랑스 파리 6대학에서 통신공학 박사를 취득하였으며, 현재 중앙대학교 경영학부 교수로 재직 중이다. 주요 연구 분야는 산업 생태계, 서비스 모델, 비즈니스 모델이다.

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한동대학교 커뮤니케이션 학부와 ICT 창업학부에서 학사를 취득하고, 중앙대학교 일반대학원 문화예술경영학과에서 석사학위를 취득하였으며, 현재 동대학원에서 박사과정에 재학 중이다. 주요 연구분야는 산업 생태계, 비즈니스 모델 발굴, 문화 경영이다.