Article

The Return of the King: The Importance of Killer Content in a Competitive OTT Market

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Abstract: As the over-the-top (OTT) service market continues to evolve, with new large global players entering the already crowded market, competition between various OTT services for subscribers has intensified. In this study, we aim to investigate the impact of user preference content on the selection of specific OTT services by consumers. Specifically, we employ the conjoint experiment (CE) method to examine consumer utility, relative importance, and marginal willingness to pay (MWTP) for over-the-top (OTT) subscription service attributes. Especially, the presence of users' killer content and its impact on MWTP is the focus of our study. As a result of calculating the MWTP for each attribute, we found that users are willing to pay about 7633 KRW (5.8 USD) for the first-ranked killer content in their first preferred genre. To gain a deeper understanding of users' willingness to pay for OTT services, we further analyzed the data by age group and the number of OTT services in use. Based on the results, we suggest strategic plans for local OTT operators to compete effectively in the fiercely competitive OTT market.

Keywords: OTT service; killer content; conjoint experiment; marginal willingness to pay

1. Introduction

Media technology has enabled users to consume content whenever and wherever they want, thus contributing to the increasing number of Internet streaming-based "over-the-top" (OTT) service users. OTT services have experienced steady growth in recent years and are transforming the way in which consumers engage with media [1]. In addition, they have changed the media market with the advantage of not being constrained by time and place [2,3]. Thanks to this trend, several operators, such as telecommunication and broadcasting, content providers, portal sites, and IT companies, have appeared one after another in the OTT market, and fierce competition for subscribers has begun.

Kwak and Choi [4] examined the competitive relationship among OTT services and identified content, cost, and service quality as the primary areas of competition. However, as OTT services become increasingly popular and undergo continuous competition, most OTT services used in South Korea have achieved a certain level of parity, with only slight differences in cost and technical aspects. For example, in a content recommendation system—a technical part—there is a difference in the degree of recommendation, depending on the algorithm, but most services have it. Additionally, usage fees have been set similarly through ongoing competition, resulting in similar pricing across most services. Consequently, differentiation in video content will be a key factor in future OTT market competition, rather than price and technical aspects.

The direction of future competition can be confirmed through Disney Plus and Netflix, global OTT services. According to Lambkin [5], a leading company that first launched products into the market, this will result in a higher market share than a latecomer. The disadvantages of latecomers are more pronounced in platform markets, such as OTT

services [6]. The OTT service industry leader, Netflix, has already secured many users worldwide. In addition, its content volume, content diversity, and original content investment cost were far ahead of Disney Plus [7]. Nevertheless, Disney Plus is posing a threat to Netflix by rapidly expanding its content offerings and retaining popular content produced by Disney, Pixar, and Marvel Studios. Through its killer content, Disney Plus has demonstrated the dominant power of content in OTT services, fueling competition in this arena.

In response, Netflix invests in producing original content every year to strengthen its competitiveness. Creating original content costs more than buying content copyright from other companies. However, once invested, the content becomes a permanent asset, which is a differentiation strategy that many OTT services have recently implemented. As a result, we can expect high-quality content competition between various operators in the future OTT market. Therefore, securing unique, high-quality killer content that attracts users will become the essential competitiveness between OTT services.

As the media environment changes and technology develops, the media usage patterns of users have also changed significantly. OTT services are relatively free to subscribe to and withdraw compared to paid broadcasting and IPTV [8]. OTT service viewers constantly compared and selected various OTT services as the industry's size grew. Previous studies have mainly explored the intention to continue using OTT services according to the user's motivation or satisfaction. Researchers used variables, such as content diversity, price rationality, customized content recommendation system, image quality, and simultaneous access numbers [3,4,9]. These variables identified why people use the service and their motivation or intention in a broad sense. However, with multiple OTT services emerging and choosing one of them, it is difficult to determine which variables will affect consumer preference. In addition, in today's OTT service environment, studying the contents of OTT services is more critical than variables, such as image quality, simultaneous access numbers, and content recommendation systems. This is because the competitiveness of OTT services depends on what content they have. Although existing studies also mention the importance of content, there is a lack of consideration for the utility of specific killer content by using only the amount of content and diversity as variables. Therefore, this study aims to find out the impact of content on the selection of OTT services by using the presence or absence of the content that the user wants to see as a major variable.

Previous studies revealed users' motivations, satisfaction, and intentions to continue using OTT services based on the uses and gratifications theory [3,9,10]. Shin and Park [11] compared the users' expectations, satisfaction, and dissatisfaction between Netflix and K-OTT (Korea-based OTT). As a result of the study, Korean users have higher expectations and satisfaction with Netflix, a global OTT service, than domestic K-OTT services, reflecting expectations for the diversity of content that Netflix, which has various content libraries. Regarding dissatisfaction between Netflix and K-OTT services, content dissatisfaction was the only significant difference. Through previous study [11], it can be confirmed that content is a significant factor in satisfying the use of OTT services.

However, these days, when numerous OTT services are emerging, few studies examine factors that affect the selection behavior of specific OTT services beyond simple motivation and satisfaction. If many OTT services reveal factors that affect users' adoption of OTT services in a situation where competition is fierce, it will help them better understand users' needs and establish effective OTT service strategies in the future. This study seeks to understand the influence of content on users' paid subscription OTT service selection, noting that the importance of content in the OTT market is increasing. To this end, first, we will redefine the concept of 'killer content', used previously, focusing on users. Afterward, through conjoint analysis, we will examine how killer content, corresponding to the user's preferred genre, affects the service used, depending on whether it exists in the specific OTT service. Furthermore, we will estimate the utility and value of the killer content. Thus, this approach will establish strategies for content supply and demand of individual OTT services by investigating the influence of content in the competition between OTT services.

2. The Literature Review

2.1. The Importance of Content in a New Media Environment

'Killer content' refers to core content that attracts users to a particular market. There are various definitions of killer content. Shin [12] defined it as high-quality, unique content that leads and innovates the market, enabling a company's growth. Kim [13] said that killer content is content that finds sweet spots in users' minds and induces the users' voluntary, active, and continuous participation. Tomsen [14] defined it as content that satisfies users' goals and objectives in exchange for loyalty or purchasing power. Thus, killer content has different meanings, depending on the industry, market, and field. Therefore, this study aims to redefine killer content in the OTT service industry based on previous research.

Before the multi-channel multimedia era, the power of platforms, such as terrestrial broadcasting, was stronger than that of one single television program. As a result, television viewers were required to passively consume content at specific times according to the schedule provided by a television station. Broadcasters had to schedule programs that would appeal to viewers during prime time to increase their ratings. In this situation, the content provided by suppliers was considered the killer content of the platform. In other words, a program produced at a high production cost and aired during prime time had to secure high ratings. Thus, these programs became the broadcasting company's killer content. However, the increasing number of channels and media platforms gradually expanded viewers' options, and television viewing shifted from channel-centered to content-oriented [15]. As a result, television viewers can watch any program they want, regardless of the platform. With the ongoing competition among various platforms, users have a wider range of choices when it comes to content selection. This change enabled users to consume content more actively compared to when content was aired at a fixed time [16]. With the emergence and spread of OTT services, the importance of content is increasing, as changes in media users' media usage patterns accelerate.

Therefore, this study aims to redefine the concept of "killer content" from the provider's perspective to a user-centered definition in the context of OTT services. This is because OTT services allow for active content selection by individuals, unlike traditional media platforms. In addition, even if the OTT service produces blockbuster, high-quality killer content, it may not attract users if it does not meet their individual needs. Since individuals' tastes and preferences are different, most OTT services strive for content; the content that satisfies users will be genuine OTT services' killer content. Thus, this study adopts users' killer content as a major variable affecting the selection of paid subscription OTT services through the operational definition of the killer content concept.

2.2. Motivation for Using OTT Services through Uses and Gratifications Approach

The uses and gratifications approach has identified media users' motives and usage behaviors whenever new media emerges [17]. The main point of the uses and gratifications approach is that media users actively use media to fulfill their specific motivations [17]. This approach's intention included revealing media use motivation based on the psychological needs of users whenever new media appeared. For example, television [18–20], cable television [21], smartphones [22,23], Facebook [24], and VOD [16], contributed greatly to the study of media effects [25].

Understanding media and industry is very important to identify users' motivation. For this purpose, existing OTT service studies have examined users' motivations for using OTT services, satisfaction, and intention to use continuously. Many studies applied the widely used technology acceptance model to explain and predict people's new technology acceptance or adoption as a theoretical model from the viewpoint that OTT services are newly spreading media. The technology acceptance model assumes a link between individuals' subjective perceptions and attitudes in adopting innovative technologies, such as new media, which affects actual behavior [26]. Previous studies on OTT service users tried to explain and predict the usage motivation affecting users' service adoption by

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adding exogenous variables to the technology acceptance model or integrating with other models [9,27,28].

The above studies have great significance that they have revealed various factors affecting OTT users' use satisfaction and intention to continue using OTT services through expansion of the technology acceptance model, which is based on the uses and gratifications approach, but there are also some limitations. First, although the study has the same purpose, it is difficult to draw common research results because it uses different exogenous variables and research models. In addition, OTT service is becoming more standard as time goes by, and there is a difference in the use of OTT for everyone, so even the same variables show different results, depending on time spent or individual characteristics. Second, those studies included all video services through internet streaming because OTT services do not consider the type of OTT services. Today, OTT services have different kinds of platforms, such as advertising-based free services (AVOD), subscription-based paid services (SVOD), pay-per-view pricing (TVOD), and so on. Additionally, even the same type of OTT service has a slightly different feature. Considering that OTT service users tend to compare and select various services differently, it is necessary to divide the OTT service types more specifically to understand OTT service users' motivations and satisfaction. Third, the OTT utilization rate grew from 35.0% in 2016, reaching 66.3% in 2020 (Broadcast and Communication Committee, 2020), becoming a mass medium. Thus, applying the technology acceptance model used in researching innovative technologies or services to OTT service is challenging nowadays. Finally, where multiple OTT services exist, it is necessary to study specific OTT service selection behavior beyond simply comprehensive usage motivation of OTT service.

For this reason, this study seeks to investigate users' adoption of paid subscription OTT service (SVOD), according to killer content, reflecting the limitations of existing studies and the recent growing importance of content in the OTT market.

2.3. Selection of Paid Subscription OTT Services

The OTT industry has experienced growth through innovative advancements that have enabled users to select and view desired content at their convenience, irrespective of time and place [11]. As a result, market competition has intensified with the entry of numerous operators into the OTT industry. In the fiercely competitive environment, operators have developed differentiated strategies to increase the number of subscribers, resulting in the emergence of various OTT services with distinct characteristics. The type of OTT services depends on the operator; thus, this requires users to compare different services and choose the one that best meets their individual needs.

Although previous research has not compared various OTT services, they have examined the factors that influence the selection of OTT services. For example, Kwak and Choi [4] classified users' OTT service selective attributes into contents, price, service quality, and convenience of use; they also examined their relative importance. They found that users perceive price as the most important criterion, followed by content, service quality, and convenience of use. More specifically, the rationality of the price, diversity of genre, quantity of domestic contents, quality of image, and stability are important in order. This finding is consistent with previous studies [3,29–31] that have also reported cost rationality and content diversity as critical factors in the selection of OTT services.

Several existing studies highlighted the importance of content in the selection of OTT services [3,30,32]. For example, Moon and Park [30] found that content diversity is important in OTT services, while Shin et al. [32] emphasized the importance of the number of contents. However, given that it is practically impossible for users to watch the entire content library of an OTT service, the quantity and diversity of content become less significant once they reach a certain level [33]. Therefore, whether there is content that users want to watch—whether there is killer content that satisfies users' needs—is more important in selecting OTT services. However, existing studies have focused only on content diversity and quantitative aspects, without exploring user-preferred individual

content in OTT services and their impact on service adoption or the value of such killer content. Furthermore, most previous studies did not differentiate between OTT service types in their research. Thus, it is critical to investigate how specific content affects the selection of particular OTT services.

Since the content that users prefer differs from one individual to another, this study aims to help establish a content strategy for future competition between OTT services. For this, the study will identify how the presence or absence of killer content affects the adoption or departure of OTT service from the users' point of view. Furthermore, we quantify the value of unobserved attributes in monetary terms by calculating the relative importance of attributes and willingness to pay (WTP). To this end, the study presented a virtual paid subscription OTT service to survey participants and conducted a conjoint experiment to examine which OTT service users adopted based on their preferred genre, killer content, and price. The findings of this study will provide valuable insights into the factors that influence users' adoption of specific OTT services and help operators develop effective content strategies to attract and retain users.

3. Research Question

This study investigated the impact of individual killer content on users' selection of paid subscription-type OTT services, which is in line with the current market situation, where content competition is intensifying. As mentioned in the literature review above, with the entry of multiple operators into the OTT industry, the number of OTT services available in South Korea has increased significantly, leading users to compare and select services that best meet their preferences and maximize their utility. Therefore, this study examined the impact of individual killer content on users' paid subscription-type OTT service selection, given that the content has emerged as a key factor in recent OTT service selections. Moreover, we sought to investigate how the impact of killer content varies depending on users' age groups and the number of paid subscription-based OTT services they are subscribed to. Therefore, our research questions are:

RQ1: How do users' utility, marginal willingness to pay, and relative importance of the attributes affect service selection of paid subscription-type OTT service?

RQ2: How do users' utility, marginal willingness to pay, and relative importance of the attributes that affect service selection of paid subscription-type OTT service differ depending on age group and the number of OTT services in use?

4. Methods

4.1. Conjoint Analysis and Research Procedure

This study used choice-based conjoint analysis to measure consumer preferences for paid subscription-type OTT service attributes. Conjoint analysis is widely used in marketing to analyze consumer preferences for each product or service attribute. The methodology assumes that the total utility of a specific product or service is composed of the sum of the partial utilities of various attributes that make up the product or service and quantitatively analyzes the increase or decrease in the utility of respondents for changes in the level of each attribute [34]. Therefore, through conjoint analysis, we can infer the utility value of each product attribute and use the utility value for monetary value estimation, such as calculating the willingness to pay (WTP) for a specific attribute [35].

Choice-based conjoint analysis has the advantage of convenience over a rate or rank-based analysis by configuring a choice set with several profiles as a single bundle and then presenting each set of choices to respondents to select their favorite profile. The researcher should reproduce the virtual selection situation, similar to the environment, where the respondent selects a product in the real market where consumers select and use products or services to maximize their needs. Even in virtual situations similar to the real ones, consumers will form purchase intentions and willingness to pay by giving up the utility of attributes they consider relatively less important to obtain the utility of attributes they consider more important [36]. With the result of the respondents' selection, it is possible to

understand consumer preference for new products or services composed of core attributes and the partial value of each attribute level.

4.2. Determination of Attributes and Attribute Levels

First, an essential process in performing conjoint analysis involves determining the attributes that make up the product and the level of each attribute. When there are too many attributes and attribute levels, respondents may find it difficult to measure their preferences, which may affect the statistical efficiency and reliability of the analysis results. Therefore, this study selected attributes that can influence users' paid subscription-type OTT service selection in consideration of the current competitive situation in the OTT market.

With recent competition among OTT service providers intensifying, their content has become a critical tool in their bout for supremacy. Of course, variables, such as the amount and diversity of content, service quality, ease of use, and personalized recommendation services used in previous studies, also affect OTT service selection. However, in this study, we tried to understand the influence of killer content on users by focusing on the individual content not previously covered. Therefore, to determine how the paid subscription-type OTT service affects the users' OTT service selection behavior, depending on killer content, this study selected killer content according to the users' preferred genre and monthly subscription fee as the main attributes.

This study did not include attributes other than the users' killer content and usage fee. Because, as the OTT market has experienced rapid growth and ongoing competition in recent years, content is the only thing that is not standardized in most services. In addition, due to the strategy of OTT operators to secure their content, the volume of original and exclusive content viewed only through specific OTT platforms increases. Therefore, this study considered the growing influence of individual content power and the current OTT service market, where each OTT service provider is striving to secure their content. As a result, we selected the following five attributes (See Table 1) as the main attributes of the paid subscription-type OTT service.

Table 1. Attributes and levels used in conjoint analysis.

Attributes	Explanation	Levels
R1G1	Whether the paid subscription-type OTT service provides users' with their rank one killer content in the users' favorite genre	Not provided Provided
R2G1	Whether the paid subscription-type OTT service provides users' with their rank two killer content in the user's favorite genre	Not provided Provided
R1G2	Whether the paid subscription-type OTT service provides users' with their rank one killer content in the users' second favorite genre	Not provided Provided
R2G2	Whether the paid subscription-type OTT service provides users' with their rank two killer content in the users' second favorite genre	Not provided Provided
Monthly fee	Monthly fee of paid subscription-type OTT service	5000 KRW (3.8 USD) 8000 KRW (6.1 USD) 11,000 KRW (8.4 USD) 14,000 KRW (10.7 USD)

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favortie genre; R1G2: Rank one killer content in the second favorite genre; R2G2: Rank two killer content in the second favorite genre.

The first to fourth attributes are those related to killer content provided by the paid subscription-type OTT service. The likelihood of all the content that users desire being

available on a single OTT service is quite low, considering the fact that multiple platforms have segmented various types of content. Consequently, users are more likely to choose an OTT service based on their personal preferences or specific circumstances. The study aimed to replicate a realistic scenario where a user subscribes to a paid OTT service based on their individual content preferences. To achieve this, the research considered the users' choices and preferences for specific types of content. To identify user preferences, the study employed a questionnaire that directly asked respondents about their favored genres and content types. Currently, the primary focus of OTT services is on providing content that is oriented toward certain genres [28]. For example, Netflix deals with most genres, mainly movies and series dramas. On the other hand, OTT services in Korea, such as Wavve and Tving, operate mainly in domestic dramas and entertainment. In addition to provided content, the main genre also played a significant role in the selection of OTT services. Therefore, the study identified four main attributes that included killer content in the user's preferred genre.

The last attribute is 'monthly fee'. In the case of paid subscription-type OTT services, users must pay monthly subscription fees regularly, and these financial costs directly or indirectly affect whether users use products or services [3]. Several previous studies have also emphasized the importance of reasonable prices in using OTT services [3,4,37]. Furthermore, in conjoint analysis, price is a highly significant attribute, as it allows for the quantification of the value associated with each attribute by estimating users' willingness to pay [38]. Therefore, this study defines 'monthly fee' as 'the monthly fee that users have to pay when using a paid subscription-type OTT service', classified into four price levels: 5000 KRW (3.8 USD), 8000 KRW (6.1 USD), 11,000 KRW (8.4 USD), and 14,000 KRW (10.7 USD). We selected the level of the suggested price variables because the monthly fee for paid subscription-type OTT service, mainly used in South Korea, as of 2021, is 9000 KRW (6.9 USD) to 15,000 KRW (11.5 USD), on a premium basis.

4.3. Experimental Design

Conjoint analysis requires a product profile that combines product attributes and attribute levels constructed and presented to respondents. Based on five attributes and attribute levels, this study had 64 possible product profiles ($=2 \times 2 \times 2 \times 2 \times 4$). However, presenting all 64 profiles to respondents and measuring their preferences is a great burden, it is time-consuming, and it is difficult to measure their preferences accurately. Therefore, we performed a fractional factorial design (FFD) to construct the minimum choice sets required for analysis. We extracted 40 product profiles through FFD composed of 10 choice sets of four each. Among some choice sets, the price was relatively low, despite the overwhelming dominance of the attribute level of the product profile. After proper adjustment, we constructed a set of 10 selections in this case. Each selection set has five options, including 'No choice' in the four product profiles. Table 2 shows the choice set of product profiles for conjoint analysis. The table presents a total of 10 such choice sets; respondents chose one of the most desired options from each choice set.

Table 2. A smple of choice sets for conjoint analysis.

Product	R1G1	R2G1	R1G2	R2G2	Monthly Fee (KRW)
Type A	Not provided	Provided	Not provided	Provided	8000
Type B	Provided	Not provided	Provided	Provided	11,000
Type C	Not provided	Not provided	Provided	Not provided	5000
Type D	Provided	Provided	Provided	Provided	14,000
Type E	NONE: I would not choose any of these.				

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favorite genre; R1G2: Rank one killer content in the second-favorite genre; R2G2: Rank two killer content in the second-favorite genre.

We administered the survey online. We presented questions to the respondents, asking about their actual preferred genre and preferred content to give them a sense of reality, similar to the selection situation in the real market, before administering the conjoint survey questions. Firstly, respondents ranked their preferred genres based on the study's four categories: 'domestic movies and dramas', 'overseas movies and dramas', 'entertainment', and 'documentary'. Of course, there are other genres in the OTT service. However, to limit the occurrence of too many attributes due to the nature of the conjoint analysis, we selected only four representative OTT service genres. Afterward, we asked respondents to select two of the contents they wanted to watch the most among the 20 content types, corresponding to their first and second-place genres. The contents were from popular content on Netflix, Wavve, Watcha, and Tving. Finally, respondents conducted a conjoint survey, based on their chosen content, through the previous two questions. In other words, the first-ranked killer content corresponding to the first-preferred genre directly selected by the respondent appears in the 'User's rank one killer content in the user's favorite genre' attribute. We judged that a more realistic and accurate preference measurement would be possible through this process, as the respondent went through a comparison process through content that exists in reality. The sample choice set used in the survey is shown in Appendix A.

4.4. Analysis with Multinomial Logit Model

This study is a choice-based conjoint (CBC) analysis experiment. The respondents repeatedly selected the most preferred alternative among the four virtual alternatives for the paid subscription-type OTT service and the 'do not choose' option in the survey process ten times. The analysis used a multinomial logistic model, generally used when the dependent variable has categorical or discrete characteristics and has three or more selectable alternatives. Researchers use the multinomial logistic model to verify the probabilistic utility of a specific attribute. When the analysis target is categorical or selective, researchers statistically compare the probability with the other selection items by referring to one of the selection items [39].

Looking at the multinomial logit model, according to the random utility model illustrated in Formula (1), we obtained the utility U_{ijt} by respondent i from four paid subscription-type OTT service virtual alternatives (j = 1,2,3,4) in the t-th choice set [40,41]. The following formula (Formula (1)) expresses this utility function.

$$U_{ijt} = V_{ijt} + \varepsilon_{ijt} = \sum_k \beta_k X_{ijkt} + \varepsilon_{ijt} \tag{1}$$

In the above Formula (1), V_{ijt} means the deterministic factors of utility determined by the observed attribute and attribute level, ε_{ijt} means the disturbance term or random factors including unobserved elements, and probability utility U_{ijt} is their sum. In V_{ijt}, X_{ijkt} refers to the k-th attribute and attribute level explanatory variable of the virtual paid subscription-type OTT service alternative j (j = 1,2,3,4) presented to respondent i in the t-th selection situation. β_k is an estimation coefficient that reflects the effect of the explanatory variable X_{ijkt} related to the k-th attribute and attribute level of the virtual paid subscription-type OTT service alternative j on utility. When β_k has a statistically significant positive coefficient value, the existence or increase in the corresponding attribute or attribute level X_{ijkt} increases the respondent's utility and the likelihood of selection. Conversely, if it has a significant negative coefficient value, the existence or increase in the corresponding attribute X_{ijkt} reduces the respondent's utility. If it has an insignificant coefficient value, we can interpret that X_{ijkt} does not significantly affect the paid subscription-type OTT service selection. Therefore, by comparing β_k of each attribute and attribute level X_{ijkt}, it is possible to predict which attribute and attribute level changes will bring greater utility changes to the user.

In the multinomial logit model, we assume that the disturbance term ε_{ijt} follows an iid (independent, identically distributed) type I extreme value distribution. In this case, the

probability $P_{i,t,n}$ that respondent i will select the n-th alternative among $J = 4$ alternatives in the t-th selection situation is derived, as in Formula (2).

$$P_{i,t,n} = Pr(U_{i,t,n} > U_{i,t,j} \forall j \neq n) = \frac{\exp(V_{i,t,n})}{\sum_j^J \exp(V_{i,t,j})} \tag{2}$$

As in Formula (2), when constructing a log-likelihood function using the selection probabilities defined for each virtual paid subscription-type OTT service alternative, we obtain the following (Formula (3)).

$$LL(\beta) = \sum_{i=1}^I \sum_{t=1}^T \sum_j^J Y_{i,t,j} \ln P_{i,t,j}, j = 1, 2, 3, 4 \tag{3}$$

In the above Formula (3), we have a dummy variable value of 1 if the respondent i responded that they most prefer their j-th alternative ($j = 1, 2, 3, 4$) in the t-th selection situation, and, the result is 0 if this is not the case. Finally, we derive the estimation coefficient β_k that maximizes the log-likelihood function value of Formula (3) using the maximum likelihood method.

4.5. Marginal-Willingness-to-Pay and Relative Importance

This study analyzes the marginal-willingness-to-pay (MWTP) and relative importance of each attribute variable by conducting a conjoint analysis. MWTP is the amount a consumer is willing to pay to keep their utility the same as before the amount or quality of the attribute changes when the quantity or quality of the attribute changes by one unit [42]. Therefore, in this study, we can obtain the marginal willingness to pay $MWTP_k$ for the paid subscription-type OTT service attribute level, excluding cost-related factors, by dividing the coefficient value (β_k) of the attribute level k by the coefficient value (β_{cost}) of the rate, and then we multiply by -1 (see Formula (4) below).

$$MWTP_k = -\frac{\beta_k}{\beta_{cost}} \tag{4}$$

Relative importance (*RI*) is a value obtained by calculating the relative influence, based on the part-worth of each attribute level, estimated by asking about the overall preference of the presented product profiles. The sum of the importance values of each attribute equals 100. Conjoint analysis, unlike multiple regression analysis, can be said to be a task of estimating the importance of attributes that contributed to a product's overall preference from respondents' judgments.

The relative importance (*RI*) of attribute l is defined as the proportion of part-worth of attribute l to the sum of part-worth of all attributes (w_s) as in Formula (5). In this case, the part-worth refers to the average preference given to individual attributes by the respondent. Additionally, it is calculated as the product of the estimated coefficient of the attribute and the range of variation of the attribute variable.

$$RI_l = \frac{w_l}{\sum_s^S w_s} \tag{5}$$

5. Results
5.1. Demographic of Participants

This study commissioned the Internet research agency 'Macromille Embrain' to collect data and to conduct an online survey of adult men and women in their 20s and 60s who are currently using paid subscription-type OTT services from 27–29 October 2021. We excluded teenagers and those in their 70s or older from the survey. We judged teenage groups as having relatively low purchasing capacity compared to other age groups and those in their 70s or older with little experience using paid subscription-type OTT services.

We obtained 360 samples through the survey; of the 360 respondents, we had 180 males (50%) and 180 females (50%). The average age was 42.7 (SD = 13.44). By age group, 80 people (22.2%) were in their 20s, 80 in their 30s (22.2%), 70 in their 40s (19.4%), 70 in their 50s (19.4%), and 60 in their 60s (16.7%). The minimum age of the survey subjects was 20, and the maximum was 69.

Since we surveyed paid subscription-type OTT service users, we examined their demographic characteristics and usage patterns of the service. First, the respondents spent an average of 141 min (SD = 85.66) per week using the paid subscription-type OTT service, specifically 114 min (SD = 81.25) on weekdays and 211 min (SD = 126.71) on weekends (SD = 126.71). Comparing age groups, we found that the average usage time on weekdays and weekends was highest for those in their 30s. It was lowest for those in their 40s on weekdays and lowest on weekends for those in their 60s.

Next, as a result of examining the number of paid subscription-type OTT services currently in use, 193 respondents (53.6%) used only one service, 100 respondents (27.8%) used two services, 51 respondents (14.2%) used three services, and 16 respondents (4.4%) used four or more services. About 47% of the respondents were using multiple services together. We can see that individuals use different OTT services as substitutes or complements.

5.2. Analysis of All Samples

Table 3 shows the analysis results of the entire sample concerning RQ 1. All five paid subscription-type OTT service attributes were statistically significant according to the estimated results. Looking at the results, the estimation coefficients corresponding to the first to fourth attributes are all positive values. This means that, if the OTT service provides users with their killer content, this increases their utility and possibility of selection. Conversely, since the estimation coefficient of the monthly fee has a negative value, the lower the cost, the higher the user's utility.

Table 3. Attribute Estimation Results Through Multinomial Logic Model.

Attributes	Estimate	Std. Error
R1G1	1.56963 ***	6.7813×10^{-2}
R2G1	1.20823 ***	5.3611×10^{-2}
R1G2	1.00471 ***	7.3781×10^{-2}
R2G2	0.85846 ***	6.4955×10^{-2}
Monthly fee	−0.00021 ***	1.5562×10^{-5}

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favorite genre; R1G2: Rank one killer content in the second-favorite genre; R2G2: Rank two killer content in the second-favorite genre. *** $p < 0.01$.

We can only know the relative preference for consumer utility through this estimation coefficient, and it is impossible to grasp its economic meaning. Therefore, we also analyzed consumers' marginal willingness to pay (MWTP), which can give economic meaning to each attribute by converting consumers' utility into monetary units. Table 4 shows the marginal willingness to pay by attribute level for the entire sample.

Table 4. Marginal Willingness to Pay by Attribute (Unit: KRW).

Attributes	Marginal Willingness to Pay
R1G1	7633 KRW (5.8 USD)
R2G1	5878 KRW (4.5 USD)
R1G2	4885 KRW (3.7 USD)
R2G2	4174 KRW (3.2 USD)

Comparing the size of the marginal willingness to pay obtained through the conjoint analysis makes it possible to identify which attributes are considered relatively important to the respondents. Considering the definition of the marginal willingness to pay, the

MWTP of the user's rank one killer content in the user's favorite genre is 7633 KRW, which means that the respondent is willing to pay an additional 7633 KRW if the killer content does not provide changes to the provided state. As a result of analyzing the marginal willingness to pay, we found that the users' rank one killer content in the users' favorite genre is worth 7633 KRW, and the rank two killer content is worth 5875 KRW. Considering that the monthly fee for Netflix, the paid subscription-type OTT service most used by respondents, is between 9000 KRW (basic) and 15,000 KRW (premium), and the value of the user's rank one killer content in the users' favorite genre has great value.

Next, Table 5 presents the results of analyzing the part-worth and relative importance between attributes. First, looking at the part-worth by level, when the user had their rank one killer content in their favorite genre, the utility of the paid subscription-type OTT service was 0.789. In terms of cost, the utility of 5000 KRW was the largest at 0.849, significantly different from −1.141, when the lowest utility was 14,000 KRW. As the difference in utility from usage fee is the largest, the costs are most sensitive to users' preferences. In the relative importance of the attributes, the monthly fee (28.9%) was the highest, showing that it is the most important attribute when selecting a paid subscription-type OTT service.

Table 5. Analysis of Part-worth and Relative Importance of Attributes for the Entire Sample.

Attribute	Level	Part-Worth	Relative Importance (%)
R1G1	Not provided	−0.789	22.9
	Provided	0.789	
R2G1	Not provided	−0.639	18.6
	Provided	0.639	
R1G2	Not provided	−0.543	15.8
	Provided	0.543	
R2G2	Not provided	−0.479	13.9
	Provided	0.479	
Monthly fee	5000 KRW	0.849	28.9
	8000 KRW	0.434	
	11,000 KRW	−0.142	
	14,000 KRW	−1.141	

As a result of analyzing the entire sample concerning RQ 1, we found a certain difference in utility, depending on the genre and content preference. The monetary value of the first killer content, which corresponds to the users' first preferred genre, is more than half of the monthly fee of the actual paid OTT service. Thus, it can be seen that the user's killer content has a great influence on the user's choice of OTT service. However, the relative importance between attributes shows that users still value usage fees more when using services.

5.3. Analysis According to Age Group

The following results from an analysis of the attributes affecting the selection of paid subscription-type OTT services according to the RQ 2 age group. The attribute estimation results of the multinomial logit model (Table 6) revealed that the estimation coefficients of all age groups except those in their 50s and 60s were the same as the entire sample. However, in their 50s, the estimated coefficient of the users' rank two killer content in their second favorite genre was higher than their rank one killer content in their second favorite genre. It means that the difference in preference between their rank one and rank two killer content, which is the second favorite genre, is insignificant. On the other hand, the estimated coefficient of users in their 60s rank one killer content in their second favorite genre was higher than their rank two killer content in their favorite genre. This result is thought to have been achieved because people in their 60s have relatively no clear taste in genre or content compared to other age groups.

Table 6. Attribute Estimation Result Through Multinomial Logit Model according to Age Group.

Attribute	Estimate					z-Value					MWTP (Unit: KRW)				
	20s	30s	40s	50s	60s	20s	30s	40s	50s	60s	20s	30s	40s	50s	60s
R1G1	1.715 ***	1.848 ***	1.849 ***	1.093 ***	1.4076 ***	11.183	11.974	11.048	8.0972	9.0318	6673	8990	7780	7561	7334
R2G1	1.254 ***	1.285 ***	1.410 ***	1.052 ***	1.0672 ***	10.706	11.105	11.104	9.0146	8.3213	4881	6250	5932	7277	5560
R1G2	0.998 ***	1.131 ***	1.078 ***	0.7626 ***	1.1286 ***	6.2931	7.0823	6.2385	4.7200	6.2432	3885	5501	4539	5274	5881
R2G2	0.798 ***	0.796 ***	0.867 ***	0.8108 ***	1.1271 ***	5.7867	5.6906	5.7215	5.6548	6.9836	3107	3873	3648	5608	5872
Monthly fee	−0.0003 ***	−0.0002 ***	−0.0002 ***	−0.0001 ***	−0.0001 ***	−7.544	−5.954	−6.323	−4.451	−5.172	-	-	-	-	-

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favorite genre; R1G2: Rank one killer content in the second-favorite genre; R2G2: Rank two killer content in the second-favorite genre. *** $p < 0.01$.

Looking at the marginal willingness to pay by age group, those in their 30s had the highest MWTP for the users' rank one killer content in their favorite genre. The difference was 1200 KRW from the second-highest group, the 40s, and about 2300 KRW from the lowest group, the 20s. In other words, for those in their 30s, when choosing OTT services, whether OTT services provided user's rank one killer content in their favorite genre is an important factor. The marginal willingness to pay for all attributes was lower for those in their 20s than for other age groups. We can attribute this finding to the relatively low ability to pay in their 20s compared to other age groups. In addition, there was no significant difference in the 50s and 60s compared to other groups concerning the marginal willingness to pay for rank one and rank two killer content in their second favorite genres. It follows that people in their 50s and 60s have less distinct content taste than other age groups.

Next, Table 7 summarizes the results of part-worth and relative importance between attributes according to age. Except for those in their 40s, we found the importance ranking the same in all age groups across the entire sample, but there was a difference in their weight. For the 40s group, the importance of the users' rank one killer content in the users' favorite genre (25.4%) was higher than the importance of the monthly fee (24.3%) among all age groups. Those in their 30s had the greatest utility (0.931) in their favorite genre's rank one killer content. However, those in their 40s were less sensitive than those in their 30s about the monthly fee. The age group considering the monthly fee most important included those in their 50s (32.7%), followed by those in their 60s (29.6%). We also found that those in their 20s were the lowest on the marginal willingness to pay scale. According to the previous marginal willingness to pay, those in their 20s were the lowest, but the utility gained from the content was greater than those in their 50s and 60s, so the relative importance of the monthly fee (28.9%) was lower than the 50s and 60s. Taken together, it can be seen that users in their 30s and 40s, who are relatively useful for content and are less sensitive to usage fees, have a greater impact from individual killer content than other age groups.

Table 7. Part-worth and Relative Importance of Attributes by Age Group.

Attribute	Level	Part-Worth					Relative Importance (%)				
		20s	30s	40s	50s	60s	20s	30s	40s	50s	60s
R1G1	Not provided	−0.834	−0.931	−0.881	−0.586	−0.728	22.8	24.3	25.4	21.7	21.1
	Provided	0.834	0.931	0.881	0.586	0.728					
R2G1	Not provided	−0.674	−0.726	−0.692	−0.534	−0.568	18.5	19	19.9	19.8	16.5
	Provided	0.674	0.726	0.692	0.534	0.568					
R1G2	Not provided	−0.568	−0.652	−0.556	−0.360	−0.576	15.6	17.0	16	13.3	16.7
	Provided	0.568	0.652	0.556	0.360	0.576					
R2G2	Not provided	−0.518	−0.524	−0.497	−0.336	−0.556	14.2	13.7	14.3	12.5	16.1
	Provided	0.518	0.524	0.497	0.336	0.556					
Monthly fee	5000 KRW	0.567	0.559	0.641	1.192	1.079					
	8000 KRW	0.558	0.629	0.523	0.270	0.344	28.9	26.1	24.3	32.7	29.6
	11,000 KRW	−0.157	0.103	−0.287	−0.116	−0.102					
	14,000 KRW	−1.543	−1.369	−1.045	−0.573	−0.968					

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favorite genre; R1G2: Rank one killer content in the second-favorite genre; R2G2: Rank two killer content in the second-favorite genre.

5.4. Analysis According to the Number of Paid Subscription-Type OTT Services Currently in Use

Table 8 shows the attribute estimation results through the multinomial logit model, according to the number of paid subscription-type OTT services currently in use. First, according to the number of paid subscription-type OTT services currently in use, we divided the group into those using only one service (193 people), both services together (100 people), and three or more services (67 people). As a result of examining the results of their attribute estimation through the multinomial logit model, all three groups had the same results as the entire sample. Comparing the relative difference between groups by

calculating the marginal willingness to pay, the group using three or more paid subscription-type OTT services had the highest in all attributes, except for the rank two killer content in the second-favorite genre. The group already using three or more OTT services had greater utility from various killer contents than the fee compared to other groups. Therefore, these groups place the highest value on their killer content.

Table 8. Attribute Estimation Result through Multinomial Logit Model According to the Number of Paid Subscription-type OTT Services Currently in Use.

Attribute	Estimate The Number of OTT Services Currently in Use			MWTP (Unit: KRW) The Number of OTT Services Currently in Use		
	One	Two	Three or More	One	Two	Three or More
R1G1	1.6108 ***	1.5346 ***	1.5159 ***	7066	8496	8540
R2G1	1.2218 ***	1.1124 ***	1.3211 ***	5359	6159	7443
R1G2	1.0276 ***	0.9632 ***	1.0030 ***	4508	5332	5650
R2G2	0.8853 ***	0.8568 ***	0.7845 ***	3883	4743	4420
Monthly fee	−0.00022 ***	−0.00018 ***	−0.00017	-	-	-

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favorite genre; R1G2: Rank one killer content in the second-favorite genre; R2G2: Rank two killer content in the second-favorite genre. *** $p < 0.01$.

Table 9 shows the result of the analysis of part-worth and relative importance by attribute according to the number of subscription-type paid OTT services currently in use.

Table 9. Part-worth and Relative Importance of Attributes according to the Number of Paid Subscription-type OTT Services Currently in Use.

Attribute	Level	Part-Worth The Number of OTT Services Currently in Use			Relative Importance (%)		
		One	Two	Three or More	One	Two	Three or More
R1G1	Not provided	−0.813	−0.783	−0.735			
	Provided	0.813	0.783	0.735	22.7	23.4	22.0
R2G1	Not provided	−0.637	−0.606	−0.709			
	Provided	0.637	0.606	0.709	17.8	18.1	21.3
R1G2	Not provided	−0.545	−0.526	−0.569			
	Provided	0.545	0.526	0.569	15.3	15.7	17.0
R2G2	Not provided	−0.475	−0.476	−0.514			
	Provided	0.475	0.476	0.514	13.3	14.2	15.4
Monthly fee (Unit: KRW)	5000	1.007	0.803	0.350			
	8000	0.425	0.379	0.602			
	11,000	−0.233	−0.078	0.065	30.9	28.5	24.3
	14,000	−1.200	−1.103	−1.017			

Note. R1G1: Rank one killer content in the favorite genre; R2G1: Rank two killer content in the favorite genre; R1G2: Rank one killer content in the second-favorite genre; R2G2: Rank two killer content in the second-favorite genre.

As the number of OTT services used increased, people regarded monthly fee less important. The relative importance of providing the users' rank one killer content in the users' favorite genre was largest in the group using the two OTT services. The other three attributes related to content were all significant in groups using three or more OTT services.

6. Discussion and Conclusions

This study analyzed the impact and value of users' killer content in the highly competitive market of paid OTT services. For this purpose, we selected attribute variables, such as killer content and monthly fees, which are believed to influence users' choices of

paid subscription OTT services based on their preferred genre. We then analyzed the effect of each attribute on the users' choice through conjoint analysis. Furthermore, the study identified the users' utility and value of individual killer content by calculating the relative importance and marginal willingness to pay for each attribute, based on utility values for each level of individual attributes.

6.1. Main Findings

The main findings, according to the analysis, are as follows. First, as a result of analyzing the entire sample with RQ 1, the importance ranking of the attribute variables was 'monthly fee', 'users' rank one killer content in the users' favorite genre', 'users' rank two killer content in the users' favorite genre, 'users' rank one killer content in the users' second favorite genre', and 'users" rank two killer content in the users' favorite genre. In the case of killer content attributes, the importance ranking can be a natural result because of the respondents' already-reflected preferences. However, the significance of this study is that the current OTT market situation and subsequent analysis can confirm the trade-off effect of the content reflecting the user's preference when the rate changes. As for the relative importance of each attribute, the 'monthly fee (29.9%)' was the highest, since the paid subscription-type OTT service requires regular monthly payments, which is why the importance of the fee is the highest. However, the importance of providing the users' rank one killer content in the users' favorite genre is also relatively high, at 22.9%. In addition, if the OTT service provides the first and second-rank killer content, reflecting the users' first preference genre, regardless of fees, this content significantly influences the use of OTT services. As a result of converting the influence of this killer content into monetary units through the marginal willingness to pay, the results showed that respondents were willing to pay 7633 KRW for their "rank one killer content in the favorite genre". Compared to the monthly fee of paid OTT services currently mainly used in South Korea, 7633 KRW is nearly half of the monthly fee. Therefore, it is no exaggeration to say that the provision of the user's killer content determines the user's use of OTT services.

Next, applying age group analysis through RQ 2, attribute importance ranking was the same as the entire sample in all age groups, except those in their 40s and 60s. However, there were several notable differences in proportion. First, in the case of people in their 40s, only the relative importance ranking 'whether to provide users' rank one killer content in the users' favorite genre' (25.4%), was higher than 'monthly fee (24.3%)'. It is not a significant difference, but it seems that the utility obtained from contents is larger for those in their 40s than for other age groups. On the other hand, those in their 50s are most sensitive to monthly fees in terms of relative importance alone. This finding seems to be because economic responsibility is relatively high in those in their 50s compared to other age groups. In the case of the 60s, the importance of providing 'the users' rank two killer content in the users' favorite genre (16.7%)' was higher than providing 'the user's rank one killer content in the user's second favorite genre (16.5%)'. Compared with other age groups, the difference in importance between killer content, according to the preferred genre, was the smallest in the 60s group. The difference in utility between the rank one and two killer content is not significant; thus, those in their 60s do not have a clear taste or preference for content.

Furthermore, the marginal willingness to pay for all attributes in their 20s was lower than in other age groups. This finding does not suggest that people in their 20s derive less utility from killer content, but, rather, that they perceive the monthly fee as a heavier financial burden due to their lower ability to pay compared to other age groups. This result is in line with the marginal willingness to pay for those in their 30s for their rank one killer content in their favorite genre at 8990 KRW, which is the highest compared to all age groups. Although there are individual differences, in Korean society, people usually start to earn a certain amount of income starting in their late 20s to 30s. For this reason, from 30s, the willingness to pay for killer content according to individual taste increases rapidly. This availability can give several strategic implications for other paid OTT services. Focusing on

the fact that people in their 30s are willing to pay more for killer content, OTT companies can put forward effective strategies such as focusing on customized content production or adjusting usage fees tailored to the marginal payment of their 30s.

As a result of analyzing according to the number of paid OTT services currently in use through RQ 2, all three groups were the same in importance ranking, but they showed a slight difference in their weight. First, it seems natural that people who use various OTT services do not care much about the monthly fee. Comparing the marginal willingness to pay attribute, the group using three or more paid OTT services was the highest in all three attributes, except for the marginal willingness to pay for "users' rank two killer content in the users' second favorite genre." In the end, these groups still seem to use three or more paid OTT services because the utility obtained from consuming content through OTT services is large and relatively insensitive to usage fees. In this study, 47% of respondents stated that they already use multiple paid OTT services, and the number of people using multiple OTT services is rapidly increasing (Kim, 2020). The reason for using more than one paid OTT service is that the content provided by each OTT service is different. Users no longer feel satisfied with only content provided by one platform and are looking for new content directly. This phenomenon shows that the flow of value has completely shifted from the platform to the content. It reveals that content competitiveness is more important than anything else to survive in the fierce OTT market in the future.

6.2. Implications

This study has academic implications, in that it first investigated the impact of content on the selection of OTT services in the current highly competitive OTT market. Furthermore, the study quantifies the value of content by estimating consumers' willingness to pay for it in monetary terms. Therefore, a significant contribution of this paper is its focus on the quantified value of content for consumers, which provides a valuable supplement to academic speculation about the user perspective. Previous studies have predominantly focused on investigating users' motivation and satisfaction with OTT services. To investigate this, even when selecting the attributes of OTT services, previous studies focused on characteristics, such as the total number of content, content diversity, video quality, and subscription fees, rather than the individual content held by the services. However, this study aims to extend prior research by examining the impact of "killer content"—a concept that has not been thoroughly explored in previous studies—on users' OTT service selection behavior. By focusing on the importance of individual content in shaping users' choices, this study makes a significant contribution to the literature on OTT services. Furthermore, previous academic research on OTT services has been largely disconnected from user-centered research, industry trends, and strategy analysis [43]. Therefore, this study is significant in analyzing current industry trends and strategies through conjoint analysis. Moreover, the empirical analysis provides valuable data for OTT operators to develop strategies for future growth, ultimately enhancing user satisfaction.

There are several implications to consider when devising strategies for local OTT operators in response to global OTT platforms. First, the effect of killer content on users' OTT service selection is quite large; therefore, local operators need to create new content as part of their strategic means. In an industry where content competitiveness is essential, OTT services that cannot produce their own content will not be able to survive the competition. Now, only local operators who can produce content suitable for their size and characteristics will be able to secure a position in the market through a differentiated niche strategy.

Second, this study's empirical findings confirmed that users who subscribed to multiple OTT services were more willing to pay than general users. Recently, the number of users subscribing to multiple OTT services has increased. Even among the survey respondents of this study, many multi-subscribers simultaneously use domestic OTT services, such as Watcha, Wavve, and Tving. Since it is difficult to satisfy content tastes in various genres concurrently with only one service in the OTT industry, each service can substitute and complement each other. In other words, it is possible to secure sufficient users in the local

market only by supplementing global services, rather than stealing users through direct competition with global services. A service with differentiated content and a certain degree of competitiveness could implement a strategy of adjusting the rate, according to the user's marginal willingness to pay to induce multi-subscriptions.

6.3. Limitations and Future Work

This study has several important limitations. First, we were limited in each attribute and attribute level's use due to the conjoint analysis nature. Therefore, we could only adopt killer content corresponding to the user's preferred genre and monthly usage fee as attributes of the paid subscription-type OTT service. Other technical and service aspects may have a greater influence on users' service selection, depending on future OTT market conditions. The presence of killer content, according to the users' tastes, was more important in selecting an OTT service. Therefore, we did not examine the effect of the amount and diversity of content emphasized in the previous study. Thus, future follow-up studies should use a primary screening process for key attributes through a method such as focus group interviews (FGI) with OTT industry experts or users before selecting the main attributes.

Second, this study surveyed with a choice-based conjoint questionnaire that selects the most preferred one among several alternatives. However, in the actual OTT market, the consumption pattern of using a plurality of services that complement each other, rather than using only the most preferred OTT service, is increasing. Therefore, it seems necessary to design subsequent studies to consider individual OTT services as competitive substitutes and complementary products.

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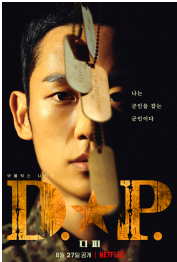**Informed Consent Statement:** Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

See Table A1 here.

Table A1. A sample choice set used in the survey.

Product Profile					Monthly Fee	Choice
Type A	Not provided	Provided	Not provided	Provided	8000 KRW	☐
Type B	Provided	Not provided	Provided	Provided	11,000 KRW	☐
Type C	Not provided	Not provided	Provided	Not provided	5000 KRW	☐
Type D	Provided	Provided	Provided	Provided	14,000 KRW	☐
Type E	NONE: I would not choose any of these.					☐

References

1. Kwak, K.; Oh, C.; Lee, S. Who uses paid over-the-top services and why? Cross-national comparisons of consumer demographic and values. *Telecommun. Policy* **2021**, *45*, 102168. [CrossRef]
2. Sujata, J.; Sohag, S.; Tanu, D.; Chintan, D.; Shubham, P.; Sumit, G. Impact of over the top (OTT) services on telecom service providers. *Indian J. Sci. Technol.* **2015**, *8*, 145–160. [CrossRef]
3. Yoo, J.; Park, J. A Study on the Factors Influencing Continuous Usage Intension based on OTT Service User. *J. Broadcast. Telecommun. Res.* **2018**, *102*, 46–79.
4. Kwak, E.; Choi, J. An Analysis of User's Perception regarding Service Attributes and Competitive Relationship among OTT Services in the Korean Market. *Broadcast. Commun.* **2019**, *20*, 121–169.
5. Lambkin, M.; Day, G. Evolutionary processes in competitive markets: Beyond the product life cycle. *J. Mark* **1989**, *53*, 4–20. [CrossRef]
6. Lieberman, M.B.; Montgomery, D.B. First-mover advantages. *Strateg. Manag. J.* **1988**, *9*, 41–58. [CrossRef]
7. Kim, I. Post Netflix, The Prelude to War: Global OTT Market Status and Prospect. *Broadcast. Cult.* **2019**, *419*, 107–120.
8. Cho, Y. Competitive landscape and policy measures surrounding smart TV: Focusing on OTT operators in the US and Korea. *Korean J. Broadcast. Telecommun. Stud.* **2011**, *25*, 233–266.
9. Kim, D.; Park, N. Effects of OTT Service Users Use Motivations on Satisfaction and Intention of Continued Use. *J. Broadcast. Telecommun. Res.* **2016**, *93*, 77–110.
10. Cho, S.; Chung, D. Factors Influencing Users' Intentions to Use VOD or Real Time Broadcasting of OTT Service. *ITPR* **2017**, *24*, 29–64.
11. Shin, S.; Park, J. Factors affecting users' satisfaction and dissatisfaction of OTT services in South Korea. *Telecommun. Policy* **2021**, *45*, 102203. [CrossRef]
12. Shin, K. The Structure of Ten Million-Movie through Killer Content-Analysis Instruments. *Humanit. Contents* **2013**, *29*, 29–47.
13. Kim, J. *Cultural Contents Production, Thinking&Writing*; Communication Books: Seoul, Republic of Korea, 2007.
14. Tomsen, M.L.; Wu, K.L.; Foreword By-Mathison, D. *Killer Content: Strategies for Web Content and E-Commerce*; Addison-Wesley Longman Publishing Co., Inc.: Boston, MA, USA, 2000.
15. Kim, Y. Impact of OTT Service on the Content Creation, Distribution and Consumption. *Stud. Broadcast. Cult.* **2015**, *27*, 75–102.
16. Kuem, H.; Kim, J. A Study on the Motivations, Viewing Behaviors and Satisfaction of VOD Use. *KICS* **2018**, *91*, 7–40.
17. Katz, E.; Blumler, J.G.; Gurevitch, M. Utilization of mass communication by the individual. In *The Uses of Mass Communications: Current Perspectives on Gratifications Research*; Blumler, J.G., Katz, E., Eds.; Sage: Beverly Hills, CA, USA, 1974; pp. 19–32.
18. Rubin, A.M. Television uses and gratifications: The interactions of viewing patterns and motivations. *JoBEM* **1983**, *27*, 37–51. [CrossRef]
19. Kim, J. An Examination of Television Viewing Motivations of College Students Audience. *KSJCS* **1995**, *35*, 37–70.
20. Hwang, H.; Park, S. Rethinking of TV viewing Satisfaction: Relationships among TV viewing Motivation, Parasocial Interaction, and Presence. *Korean J. Broadcast. Telecommun. Stud.* **2007**, *21*, 339–379.
21. Park, I.; Khang, H. Uses and Gratifications of Digital Cable TV Adopters, and Effects of Potential Variables on Adoption of Digital Cable TV. *Korean J. Broadcast. Telecommun. Stud.* **2007**, *21*, 156–192.
22. Yang, I.; Lee, S. Exploring smartphone early adopters categories on the basis of motivations. *Korean J. Commun. Stud.* **2011**, *55*, 109–139.
23. Joo, J.; Sang, Y. Exploring Koreans' smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory. *Comput. Hum. Behav.* **2013**, *29*, 2512–2518. [CrossRef]
24. Chon, B.; Lee, J. A Study on Dispositional Use Motives for Facebook and Its Positive and Negative Effects: With a Focus on Changes to Interpersonal Networks on Facebook and Facebook Addiction among Users in the Age Groups of 2039 and 4059. *Speech Commun.* **2014**, *24*, 112–140.
25. Choi, S.; Kwak, K.; Lee, W. A Study of Influences on Active Use of N-Screen Service: Use Motives, Perceived Usefulness and Affinity. *KSJCS* **2014**, *58*, 371–401.
26. Davis, F.D. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Q.* **1989**, *13*, 319–340. [CrossRef]
27. Lee, H.; Kim, H.; Hwang, H. A Study on Factors Influencing User's Satisfaction of OTT Service. *JICS* **2017**, *18*, 93–100.
28. Yi, J.; Chon, B. Determinants of user satisfaction and the intention to use OTT services. *Korean J. Broadcast. Telecommun. Stud.* **2020**, *34*, 116–144.
29. Kim, D.; Lee, Y. The Impact of user behavior, contents, functionality, cost on the continued use intention of the N-screen service users. In Proceeding of the Korean Society of Broadcast Engineers Conference, Jeju National University, Republic of Korea, 26 June 2013.
30. Moon, J.; Park, C. An Analysis of Competitive Factors and Strategies that Determine Performance of OTT Business. *Broadcast. Commun.* **2015**, *16*, 5–36.
31. Choi, H.; Kim, S. A Study on User Experience of OTT Service—Focused on Netflix, Watcha and Wavve. *J. Digit. Converg.* **2020**, *18*, 425–431.
32. Shin, J.; Park, Y.; Lee, D. Strategic management of over-the-top services: Focusing on Korean consumer adoption behavior. *Technol. Forecast. Soc. Chang.* **2016**, *112*, 329–337. [CrossRef]

J. Theor. Appl. Electron. Commer. Res. **2023**, *18*

994

33.   Moon, S. *Netlfixed*; Threechairs: Seoul, Republic of Korea, 2017.

34.   Lee, H. A Study on LTE Preference Analysis for Corporate Use and Estimation of Telecommunication Company Switching Cost. Ph.D. Thesis, Seoul National University Graduate School, Seoul, Republic of Korea, 2018.

35.   Green, P.E.; Srinivasan, V. Conjoint analysis in consumer research: Issues and outlook. *J. Consum. Res.* **1978**, *5*, 103–123. [CrossRef]

36.   Eggers, F.; Sattler, H.; Teichert, T.; Völckner, F. *Choice-Based Conjoint Analysis. Handbook of Market Research*; Springer: Cham, Switzerland, 2018.

37.   Shin, S.; Park, J. A study of influences on OTT service users gratification sought, gratification obtained and using behavior: Based on the expectancy value theory. *Korean J. Broadcast. Telecommun. Stud.* **2020**, *34*, 44–75.

38.   Kim, M.S.; Kim, E.; Hwang, S.; Kim, J.; Kim, S. Willingness to pay for over-the-top services in China and Korea. *Telecommun. Policy* **2017**, *41*, 197–207. [CrossRef]

39.   Lee, K.; Kang, S.; Eom, J.; Kim, H.; Lee, K. Analysis of HTX (Hyper Tube eXpress) Preference and Marginal Willingness to Pay Using the Conjoint Theory. *JKSR* **2020**, *23*, 1014–1027. [CrossRef]

40.   McFadden, D. *Econometric Models of Probabilistic Choice, Structural Analysis of Discrete Data with Econometric Applications*; MIT Press: Cambridge, UK, 1981.

41.   Train, K.; Weeks, M. Discrete choice models in preference space and willingness-to-pay space. In *Applications of Simulation Methods in Environmental and Resource Economics*; Springer: Dordrecht, The Netherlands, 2005; pp. 1–16.

42.   Kim, Y.; Lee, J.; Koh, D. Effects of consumer preferences on the convergence of mobile telecommunications devices. *Appl. Econ.* **2005**, *37*, 817–826. [CrossRef]

43.   Jung, S.; Park, J. Niche Analysis of Competition among SVOD (subscription video on demand) OTT Services: Focused on User Gratification. *J. Broadcast. Telecommun. Res.* **2021**, *115*, 49–82.