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Article

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Cogent Business & Management

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Suggested Citation: Bo-Hyun, Baek (2023) : Using conjoint analysis for a value estimation of the consumption attributes of online performances, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 10, Iss. 3, pp. 1-16, <https://doi.org/10.1080/23311975.2023.2264563>

This Version is available at:

<https://hdl.handle.net/10419/294667>

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To cite this article: Baek Bo-Hyun (2023) Using conjoint analysis for a value estimation of the consumption attributes of online performances, Cogent Business & Management, 10:3, 2264563, DOI: [10.1080/23311975.2023.2264563](https://doi.org/10.1080/23311975.2023.2264563)

To link to this article: <https://doi.org/10.1080/23311975.2023.2264563>



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Published online: 04 Oct 2023.



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Received: 26 February 2023
Accepted: 25 September 2023

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MARKETING | RESEARCH ARTICLE

Using conjoint analysis for a value estimation of the consumption attributes of online performances

Baek Bo-Hyun^{1*}

Abstract: Since online performances are new service, consumer confusion is occurring due to the absence of a product composition strategy. Therefore, this study derived the major attributes of online performance and estimates the value of each consumption attribute. As a result, it was found that the optimal combination of online performance products transmits the genre of “ballad” from the “video streaming platform” to “no audience,” and provides “online merchandising” as an additional service. Furthermore, market segmentation using cluster analysis yielded three groups with significant differences, and optimal-performance products are proposed for each type of audience

Subjects: Korean Studies; Music; Theatre & Performance Studies; Cultural Studies

Keywords: online performance; popular music; conjoint analysis; market segmentation, K-Pop

1. Introduction

Since COVID-19, the scope of performing arts has been expanded from offline to online. Traditionally, a performance is a field art in which the performer and the audience interact in the same time and space (Osipovich, 2006). However, a high probability of contact between the performer and the audience during a performance makes individuals vulnerable to infectious diseases in pandemic circumstances. Therefore, on-site performances were canceled or postponed worldwide, and online performances emerged as a new alternative to revitalize the popular music industry (Swarbrick et al., 2021).

Online performances are digital content-transmitting performance videos via online platforms involving no direct contact between performers and audiences. The production costs of online performances are lower than the expenses required for offline concerts, and performance agencies bear a lower risk of uncertain earnings. Online performances are also highly profitable because there is no space—time constraint, and they can accommodate unlimited audience numbers (Kim & Na, 2020). Additionally, attractive content can be planned through the application of new technologies such as holograms and extended reality (XR), attracting potential audiences in greater numbers by increasing access to performances (De la Vega et al., 2020).

However, business personnel working in the popular music industry cannot prepare a specific marketing strategy for online performances because of the rapid digital transformation. Popular music performances generate revenue by offering a collective experience through face-to-face

encounters between performers and audiences. Their conversion into non-interfacing performances requires the delivery of experiences and values beyond simple video streaming. However, online performance products are being experimentally constructed and are causing consumer confusion because of the paucity of research on types of major transmission platforms, forms of additional services, and the presence or absence of audiences (Baek, 2022).

For example, strong competition to establish platforms exists because online performance fees represent around 40% of ticket prices. Therefore, unified streaming platforms are not available for every concert, and some performances even appear simultaneously on multiple platforms. In addition, unlike offline concerts that only sell tickets, online concert products are sold in conjunction with a wide variety of additional services, such as light sticks and unreleased videos. Therefore, serious consumer confusion results because the range of ticket pricing is too wide. Therefore, it is necessary to research the marketing strategies regarding the composition and sales of online performance products for the growth of the popular music industry.

The research objective is to derive consumer preference attributes for online performances and to propose marketing strategies by segmenting the market. For this purpose, this study seeks to develop the attributes and attribute levels of online performances through expert and consumer surveys based on a literature study and applies the conjoint methodology to examine the utility of each attribute affecting the consumption of online performances. In addition, the present study was aimed at categorizing audience characteristics through market segmentation and proposing marketing strategies for online performances optimized for each group.

2. Literature review

Traditionally, performances have been addressed in the limited context of offline shows, and studies related to online performances are relatively scant because this concept emerged due to the COVID-19 pandemic. The research on online performances can be classified broadly into the following three categories: substitution—complementation relationship studies, business model case analyses, and empirical investigations of audience experience.

First, studies on substitution—complementation relationships may be summarized as follows. Bakhshi and Throsby (2014) and Bakhshi and Whitby (2014) conducted a semi-field experiment addressing live performances to examine whether online performances reduced the attendance of theater-going audiences. They found a positive relationship between the ratios of online and theater ticket reservations and thus rejected the possibility of reduced audience attendance. King (2018) reported a positive correlation between the number of online and offline performances and thus rejected the possibility of audience detraction. Most existing studies have deduced a positive outlook on the relationship between the two performance type (De la Vega et al., 2020; Kim, 2017).

Second, the business model case analysis studies may be outlined as follows. Mueser and Vlachos (2018) classified and conceptualized online performance services in terms of aesthetics, consumption, and social dimensions. In addition, Kim and Na (2020) suggested a method of improving the profitability of the online performance business through a case analysis of the Seoul Arts Center in Korea. These studies are significant because they analyzed the current state of the online performance industry but are limited because they merely conducted case analyses without applying verification procedures.

Third, empirical studies of the audience experiences of online performance are as follows. Swarbrick et al. (2021) reported that audience immersion increased when the artist mentioned COVID-19 during the performance or when a sad song was played. However, the online concert format (live or recorded) was not found to affect the viewing experience.

Furthermore, Onderdijk et al. (2021) experimental study used different settings for the voting element, viewing device, and platform type to identify the composition of online performances

that increased social connection and sense of presence. It found no effect of the voting element but discovered a difference in psychological experience of the audience depending on the viewing device and platform type.

To summarize previous studies related to online performances, varied case studies have been conducted based on the prospect that the online—offline performance industry would coevolve. In addition, diverse experimental studies have been conducted recently to maximize the viewing experience of consumers. These studies have experimented with the use of discrete variables, such as voting elements, viewing devices, platform types, and transmission formats. The limitation that the interaction between selection-related properties cannot be identified is presented in this context (Rao, 2014).

Therefore, the attributes and attribute levels that online performance consumers consider important when selecting content must be derived, and based on them, a conjoint analysis must be conducted targeting respondents experienced in watching online performances. Thus far, studies that derived the preferred attributes of offline performances have been conducted by Gang and Jin (2015), Park and Petrick (2016), Kim et al. (2018), and Ryu (2020). However, the selection-related attributes of offline performances are expected to significantly differ from those of online performances, which form the scope of the present study.

3. Methods

This study used a mixed research design that sequentially applies qualitative and quantitative research methods. First, in the qualitative research stage, open-ended survey was conducted on 20 consumers and 10 experts, respectively. In the quantitative research stage, 324 consumers were surveyed on the main attributes and attribute levels of the confirmed online performance. The consumer groups that conducted open and closed surveys consisted of different respondents.

3.1. Selection of attributes and attribute levels

This study was aimed at deriving the selection-related attributes and attribute levels of online performance products. To this end, it conducted an open-ended survey on the major attributes that affected the consumption of performances with 20 consumers who had watched online performances. As a result of the consumer survey, nine major selection-related attributes were derived, some of which were not suitable for conjoint analysis. There were items that require vector models to be applied (e.g. image quality, ticket price) or items that are expected to be of absolute high utility (e.g. artist casting).

Next, 10 experts were interviewed to select the key attributes to be used for the study because respondents find it difficult to rank too many attributes as the number of survey questions increases. Such difficulties could decrease the reliability of the research results (Green & Srinivasan, 1990; Green et al., 2004). Experts were selected on the basis of the criteria they had accrued over more than 10 years of experience in the popular music industry and were proficient in planning, producing, and distributing online performances. The interviews were conducted from 8 May to 30 May 2022.

In sum, the four attributes most agreed upon by 10 experts were derived. The selection-related attributes and attribute levels for online performances were finalized to include genre (dance, ballad, or trot), audience (no audience or with an audience), and merchandising (online merchandising or offline merchandising) as shown in Table 1.

3.2. Questionnaire composition

This study utilized the full profile method to present respondents with 36 ($3 \times 3 \times 2 \times 2$) virtual online performance profiles created using the four stated attributes. A fractional factorial design was utilized because sequencing all profiles could distort consumer responses. To this end, the orthogonal design method was employed to reduce the number of stimuli to a feasible level while

Table 1. Attributes and attribute levels for online performances

Attributes	Attribute level	Explanation
Genre	Dance	Music genres with fast rhythms and addictive melodies comprising dance, vocals, and rap
	Ballad	Music genre with slow rhythms and lyrical melodies
	Trot	A music genre comprising quadruple meter patterns and simple melodies
Platform	Video streaming platform	Streaming sites that offer diverse paid and non-paid videos (e.g., YouTube, Netflix)
	Agency platforms	An online arena developed and operated by agencies for communication between their artists and the artist's fandom (e.g., Weverse for HIVE Entertainment)
	Online concert platforms	Sites that operate exclusively to stream online concerts (e.g., Beyond Live)
Audience	Without an audience	Online performances without audiences: these performance videos do not include applause, cheers, and viewing behaviors of audiences
	With an audience	Video adaptations of offline performances for live audiences: such performance videos include applause, cheers, and viewing behaviors of audiences
Merchandising	Online merchandising	Digital merchandising is available for online download and collection (e.g., AR photo exhibitions, unreleased videos, unreleased photos)
	Offline merchandising	Merchandising in the form of collectible products (e.g., light sticks, key rings, t-shirts, masks)

maintaining a state precluding interaction between attributes (Cattin & Wittink, 1982). SPSS 26 was used to exclude unrealistic profiles or to omit profiles with duplicated attribute combinations. Ultimately, nine product profiles were constructed as presented in Table 2.

3.3. Investigation and analysis methods

The survey subjects were individuals experienced in watching popular music online performances, and convenience sampling was used for their selection. In this study, questionnaires were distributed to 324 people, and all collected responses were used for analysis. SPSS 26.0 was deployed to analyze the consumer response data.

First, a frequency analysis was performed to analyze the demographic characteristics of the sample and the online performance consumption behavior. The suitability of the conjoint model used in this study was then verified using Pearson's R and Kendall's tau. The importance of the attributes as reported by each respondent and the part-worths and utility for each attribute level were derived through conjoint analysis.

Table 2. Final product profile

Card	Attribute level	Card	Attribute level
Card 1	Trot	Card 2	Trot
	Agency platform		Online concert platforms
	No audience		No audience
	Online merchandising		Offline merchandising
Card 3	Ballad	Card 4	Ballad
	Video streaming platform		Online concert platforms
	No audience		With audience
	Offline merchandising		Online merchandising
Card 5	Ballad	Card 6	Dance-pop
	Agency platform		Online concert platforms
	No audience		No audience
	Online merchandising		Online merchandising
Card 7	Dance-pop	Card 8	Trot
	Video streaming platform		Video streaming platform
	No audience		With audience
	Online merchandising		Online merchandising
Card 9	Dance-pop		
	Agency platform		
	With audience		
	Offline merchandising		

Next, a non-hierarchical k-means cluster analysis was performed on the constant value estimated from the conjoint analysis and the utility values for 11 attribute levels to derive clusters with significant differences. Finally, cross-analysis was conducted to check whether there were differences in demographic characteristics, offline concert consumption patterns, and online performance viewing experience according to the previously derived clusters.

4. Results

4.1. Demographic characteristics

The gender ratio of respondents was similar, with 168 males (51.9%) and 156 females (48.1%). An even age distribution was noted in the study sample: 23 respondents were in their teens (7.1%), 71 were in their 20s (21.9%), 80 were in their 30s (34.7%), 55 were in their 40s (16.7%), 54 were in their 50s (16.7%), 41 were in their 60s and older (12.7%). In terms of occupation of the study sample, office workers were represented by 134 individuals, and this group accounted for the largest proportion (41.4%) of respondents, followed by 51 students (15.7%), 43 housewives (13.3%), 34 self-employed workers (10.5%), 25 professional workers (7.7%), 16 individuals with other occupations (4.9%), 12 part-timers (3.7%), and nine civil servants (2.8%).

4.2. Conjoint analysis result

Conjoint analysis was conducted with all 324 respondents, and the obtained results are shown in Table 3. Among the four attributes of online performance products, genre was the most important (53.725%), followed by platform (21.610%), audience (14.233%), and merchandising (10.422%).

Regarding the part-worth of the attribute levels for each attribute, for genre, ballad was the highest at 0.726, followed by dance at 0.583. Trot was the lowest at -1.310. Currently, the most active online concert productions involve the genre of dance, which includes idols. Nonetheless, this study found a higher part-worth for ballads. This outcome may be attributed to the evenly

Table 3. Part-worth and utility of online performance attribute level

Attribute	Attribute level	Part-worth (A)	Importance (B)	Utility (C=A*B)
Genre	Dance	0.583	53.725	0.313
	Ballad	0.726		0.390
	Trot	-1.310		-0.704
Platform	Video streaming platform	0.228	21.610	0.049
	Agency platform	-0.445		-0.096
	Online concert platforms	0.217		0.047
Audience	No audience	0.1355	14.223	0.019
	With audience	-0.135		-0.019
Merchandising	Online merchandising	0.038	10.442	0.004
	Offline merchandising	-0.038		-0.004

distributed age distribution of the study's respondents, who ranged from teenagers to people in their 60s and older. Conversely, people in their teens and 20s constitute the main consumption age group for idol performances.

For platforms, video streaming and online concert sites showed similarly high values of 0.228 and 0.217, respectively. Agency platforms exhibited low part-worth at -0.445. Video streaming platforms, including YouTube and Netflix, denote representative media platforms on which users can view a variety of video content as well as online performances. Hence, viewers display a superior utilization and awareness of these platforms. In addition, such platforms offer discrete advantages, such as systematic fees, and prevent overloads during simultaneous connections by building large-capacity servers and owning distributed technology.

However, live subtitles for each language, a chat function with artists, a multi-view selection function, light stick Bluetooth functions, and other services required for online concert viewing are installed on the online concert-only platforms (Song, 2021). It appears that the part-worth of the online concert platforms was as high as that of video streaming platforms for this reason. A low partial value would have been assigned for agency platforms developed and operated by specific groups because of the conversion costs arising from the difficulties of viewing performances delivered by artists from other agencies (Baek, 2022).

For the audience parameter, the part-worth of performances without an audience was high at 0.135, and the part-worth of concerts with an audience was -0.135. This result aligns with the outcomes reported by Hong and Kim (2021), Swarbrick et al. (2021), Onderdijk et al. (2021), and Baek (2022), where they have suggested that viewers find it difficult to focus on performances with audiences because of the audible applause, cheers, singalongs, or fan chants from the live audience. Further, performances with audiences were much consumed because such videos were filmed for archiving before COVID-19 and were released at the early stages of social distancing. Producers have found it impossible to attract audiences recently. Therefore, most performances are currently broadcast online without audiences, and respondents are now familiarized with performances without audiences.

The measure of the element of merchandising revealed that the part-worth of online merchandising was high at 0.038, and the part-worth of offline merchandising was -0.038. Merchandising-based sales account for a large percentage of revenue in the popular music performance market. Limited amounts of merchandising products were sold on the days when offline concerts were

held and primarily comprised light sticks, keyrings, pouches, and other such goods (Nurunnisha et al., 2021). However, wallpapers, unreleased photographs and videos, and emoticons have appeared as merchandise sold during online performances, increasing the influence of the online merchandising market (Jeong & Kim, 2020). Therefore, the preference for online merchandising is adjudged higher than the inclination for offline merchandising.

The study also verified the suitability of the applied conjoint model. Pearson's R denotes the correlation value between the utility denominations obtained from an estimated model and the profile rank, and the larger this value the higher the explanatory power of the model (Hauser & Rao, 2004). Kendall's Tau is a value indicating the correlation between the rank obtained by evaluating the profile with the developed model and the rank actually marked by the respondent (Rao, 2014). The data are deemed unreliable if this value is negative. The analyses performed for this study revealed Pearson's R-value of 0.995 ($p < 0.000$) and Kendall's Tau value of 0.944 ($p < 0.000$), confirming the model's suitability.

Finally, utility was calculated using the part-worth of each attribute and attribute level to derive the optimal product conditions for the delivery of online performance to consumers. This analysis disclosed that viewers of online performances on video streaming platforms most preferred the transmission of ballad performances without audiences and favored the distribution of online merchandising.

4.3. Market segmentation using cluster analysis

The importance of an attribute on selecting online performances varies by individual. Therefore, a k-means cluster analysis was performed for this study using the utility values of individual selection-related attributes derived from conjoint analysis as variables. K-means is a representative cluster analysis method that sets the object that best expresses the characteristics of the group and forms a cluster in a way that includes one object close to it (Lee, 2015). In conclusion, three clusters with significant differences were derived. The findings revealed that all three groups considered the attribute of genre to be paramount, followed by platform, audience, and merchandising. Table 4 displays the attribute positions assigned by each group and the part-worth of the attribute level. Pearson's R was 0.9 or higher, confirming the model suitability apropos all groups.

Group 1 comprised 96 people and accounted for 29.62% of the total market. Group 1 exhibited a high preference for the trot genre at 1.191, online concert platform at 0.517, performances without audiences at 0.536, and offline merchandising at 0.208. Group 1 was deemed the group desiring to immerse itself in listening to music and watching videos because unlike the other groups, they favored online concert platforms without audiences.

Group 2 included 91 people and represented 28.08% of the total market. Group 2 was highly inclined toward ballads at 2.421, video streaming platforms at 0.601, performances without audiences at 0.044, and online merchandising at 0.195. Just as Group 1, Group 2 fancied performances without audiences, but it was more inclined toward video streaming platforms. In addition, this group favored online merchandising.

Group 3 encompassed 137 people and accounted for 42.28% of the total market. Group 3 displayed a high preference for the dance genre at 2.579, video streaming platform at 0.388, performances with audiences at 0.086, and online merchandising at 0.106. Just as Group 2, Group 3 preferred the video streaming platform, but it was the only group attracted to performances with audiences. This group was also partial to online merchandising.

The demographic characteristics and viewing frequencies of the segmented markets were analyzed to identify the characteristics of each group with more clarity. Table 5 presents these results.

Attribute	Attribute level	Group 1 (n=96)		Group 2 (n=91)		Group 3 (n=137)		F
		Part-worth	Importance (%)	Part-worth	Importance (%)	Part-worth	Importance (%)	
Genre	Dance	- 1.691	42.658	-0.022	56.307	2.579	59.766	734.746***
	Ballad	0.500		2.421		-0.241		186.156***
	Trot	1.191		-2.399		-2.338		508.068***
Platform	Video streaming platform	-0.281	24.635	0.601	22.588	0.338	18.840	22.463***
	Agency platform	-0.236		-0.681		-0.436		6.099***
	Online concert platforms	0.517		0.086		0.101		9.891***
Audience	No audience	0.536	20.058	0.044	10.760	-0.086	12.435	17.557***
	With audience	-0.536		-0.044		0.086		17.557***
Merchandising	Online merchandising	-0.208	12.649	0.195	10.344	0.106	8.960	11.745***
	Offline merchandising	0.208		-0.195		-0.106		11.745***
Pearson's R		0.944***		0.999***		0.999***		-

With 70 men, mostly between their 30s and 60s, Group 1 comprised more males (72.9%) than females. Of the respondents in this group, most earned more than 4 million won (37 people, 38.5%), with a similar ratio reporting earnings of 2–3 million won and 3–4 million won, and with a small proportion earning lower incomes. The prevalence of high incomes was attributed to the higher average age of the sample. Combined, the demographic characteristics of Group 1 reveal a high-income and higher age group that primarily consisted of office workers and self-employed individuals.

Group 2 encompassed 39 males (42.9%) and 52 females (57.1%), displaying a slightly higher proportion of females. In terms of age distribution, 37 people (40.7%) were in their 30s, followed by 26 (28.6%) in their 20s, and 16 (17.6%) in their 40s. This group incorporated very few to no members in their teens or their 60s. Office workers comprised the highest number of members at 50 (54.9%), and fewer responses were obtained for other occupations. Most members of Group 2 (44 people, 48.4%) reported incomes of less than 2–3 million won, followed by 21 (23.1%) who earned more than 4 million won. The amalgamated demographic characteristics of Group 2 elucidate a middle-income group primarily comprising office workers in their 20s and 40s.

There were 59 males (43.1%) and 78 females (56.9%) in Group 3, which included a relatively large number of females. In terms of age, 45 (32.8%) members were in their 20s, and 40 (29.2%) were in their 30s. Unlike the other groups, this group incorporated 23 teenage respondents (16.8%), of whom office workers were the highest in number at 58 people (43.3%), just as in Group 2. This group also included 33 students (24.1%), with fewer responses for other occupations. Most members of this group (35 people, 25.5%) reported incomes of more than 4 million won, and a similar proportion earned less than 1 million won and 2–3 million won each at 30 people (21.9%). The merged demographic characteristics of Group 3 showed a group consisting mostly of young people in their teens and 30s, who were predominantly students and office workers.

A Chi-square analysis was subsequently conducted to determine whether a difference existed between market segments in their online performance consumption experiences. These results are shown in Table 6.

First, in the answer to the question on the types of online performance they watched, trot was most viewed by Group 1 members at 61 people (63.5%), ballad was most popular with Group 2 at 53 people (58.2%), and dance was overwhelmingly viewed by Group 3 members at 111 people (81.0%). It can be seen that the most preferred genre for each market segment and the performance genre that the person watched are the same.

Differences were also noted between groups with regard to whether members had joined a fandom or participated in fandom-related online and offline activities. An elevated number of respondents from Group 1 (61 people, 64.5%) and Group 2 (52 people, 57.1%) answered in the negative to the question of whether they had joined fandoms of the performers of the online performances they had viewed. An overwhelmingly higher number (115 people, 83.9%) of Group 3 members had joined fandoms than the members of other groups had done.

Responding to whether they had participated in fandom activities, such as hash-tagging, relaying stories, and real-time voting, a higher number of subjects in Group 1 (59 people, 61.5%) and Group 2 (59 people, 64.8%) stated that they had never participated in such activities. However, 88 people in Group 3 (64.2%) said they had participated in online fandom activities, allowing the assertion that Group 3 members displayed relatively higher fandom affiliation rates and higher participation in fandom activities than members of Groups 1 and 2.

In response to the question regarding with whom they watched the online performances, most Group 1 members (71 people, 74%) said that they viewed online performances with their families, and there were a few other response selections. However, 28 people (30.8%) in Group 2 stated that they watched online performances with friends, 24 people (26.4%) viewed such content with

Table 5. Demographic characteristics and viewing frequencies by market segment

Division	Group 1 (n= 96)		Group 2 (n=91)		Group 3 (n=137)	
	Frequency	Ratio	Frequency	Ratio	Frequency	Ratio
Gender	Male	70	72.9	42.9	59	43.1
	Female	26	27.1	57.1	78	56.9
Age	Teens	0	0	0	23	16.8
	20s	0	0	28.6	45	32.8
	30s	8	8.1	40.7	40	29.2
	40s	21	21.9	17.6	18	13.1
	50s	33	34.4	12.1	10	7.3
	60s and older	39	40.6	1.1	1	0.7
Occupation	Student	2	2.1	17.6	33	24.1
	Office worker	26	27.1	54.9	58	42.3
	Professional worker	9	9.4	4.4	12	8.8
	Civil servant	2	2.1	5.5	2	1.5
	Self-employed worker	22	22.9	3.3	9	6.6
	Part-time worker	4	4.2	3.3	5	3.6
	Housewife	26	27.1	9.9	8	5.8
	Other	5	5.2	1.1	10	7.3
	1 million won	2	2.1	8.8	30	21.9
	Less than 1–2 million won	14	14.6	8.8	19	13.9
Income	Less than 2–3 million won	22	22.9	48.4	30	21.9
	Less than 3–4 million won	21	21.9	11.0	23	16.8
	More than 4 million won	37	38.5	23.1	35	25.5
	Total	96	100.0%	100.0%	137	100.0%

family members, 22 people (24.4%) selected alone, and 17 people (18.7%) viewed online concerts with their lovers. In Group 3, 85 people (62%) answered that they watched online performances alone, followed by 27 who viewed them with family members (19.7%) and 18 who consumed such content with friends (13.1%).

All three groups selected the cast as the most influential determinant of their choice of online performance product. However, differences were observed in their ratios: 53 people (55.2%) in Group 1 selected performances based on the cast members, but many (32 people, 33.2%) also marked the music genre as a determinant; a similar number of Group 2 subjects responded to cast and music genre at 35 (38.5%) and 31 (34.1%) people, respectively. Of the three groups, the highest proportion of 87 people (62%) in Group 3 reported that they selected online performances based on the cast, followed by the determinant of price discounts with 28 people (20.4%), and the music categories with 16 people (11.7%).

Finally, the participants were asked to indicate areas in which online performance products could be improved. Group 1 members most often (36 people, 37.5%) responded with a technical element, displaying their unfamiliarity with technical devices vis-à-vis the viewing process. Event content and interaction with artists were both positioned at first place in Group 2, with 21 people (23.1%). In Group 3, interaction with artists received the highest number of votes with 45 people (32.8%). In sum, it may be inferred that the members of Groups 2 and 3 hoped for an ameliorated interactive event experience with the performance artists.

4.4. Marketing strategy recommendations by each market segment

As shown in Table 7, marketing strategies are recommended according to the characteristics of the three groups through the three perspectives of promotion, price, and service.

First, Group 1 is an older and high-income group composed mainly of office workers and self-employed individuals. This generation is relatively more familiar with offline billboards, TV advertisements, radio commercials, and other such mass communication channels. Hence, traditional advertising media would be more suited to this cohort than online marketing (Byun, 2017; Kim & Park, 2021) would be. In addition, 74% of the members of this group viewed online performances in the company of children or parents, a proportion much higher than that of members of other groups. Therefore, event-type social media marketing should be conducted to simultaneously target the younger generations.

Further, numerous studies have evidenced that high-income categories such as Group 1 are not significantly affected by performance prices (Colbert, 2003; Willis & Snowball, 2009). Willis and Snowball (2009) explained this price insensitivity as resulting from a low viewing frequency for online performances by this high-income group because members have less leisure time; hence, they align the prices of performances with their worth and view them regardless of the prices. In fact, their response to price discounts was the lowest, at 63% vis-à-vis the consumption determinants queried during this study. Therefore, if Group 1 represents the primary target customer classification, a reputation price strategy would be more effective than a discount strategy, and only family discounts should be offered, if any.

Further, Group 1 showed low fandom affiliations and fandom activity participation rates at 36.5% and 38.5%, respectively, and this cohort favored performances without an audience. It can thus be construed that Group 1 members would like to become fully immersed in good music or videos rather than interacting with artists or other audience members as they view online performances. Studies conducted by Onderdijk et al. (2021) and Vandenberg et al. (2021) found the chat function and the sounds of applause and cheers incorporated into online performances to promote interactivity while viewing were rather distracting for audiences. These studies found that this sense of disruption increases in congruence with the age of the audience. Therefore, producers of online performances should attend to good sound and picture quality and stage composition for

Table 6. Online performance consumption experience by market segment

Division	Group 1 (n= 96)			Group 2 (n=91)			Group 3 (n=137)			Chi-square (p-value)
	Frequency	Ratio		Frequency	Ratio		Frequency	Ratio		
Online performance genres	Dance-pop	5	5.2	32	35.2		111	81.0		204.759*** (0.000)
	Ballad	30	31.3	53	58.2		17	12.4		
	Trot	61	63.5	6	6.6		9	6.6		
Joined a fandom	Yes	35	36.5	39	42.9		115	83.9		64.831*** (0.000)
	No	61	63.5	52	57.1		22	16.1		
Participation in fandom activities	Yes	37	38.5	32	35.2		88	64.2		23.869*** (0.000)
	No	59	61.5	59	64.8		49	35.8		
Accompanying audience	Me	6	6.3	22	24.2		85	62.0		132.451*** (0.000)
	Family	71	74.0	24	26.4		27	19.7		
	Friend	11	11.5	28	30.8		18	13.1		
	Lover	6	6.3	17	18.7		5	3.6		
		2	2.1	0	0.0		2	1.5		
	Club									
Consumption determinants	Cast	53	55.2	35	38.5		87	63.5		45.094*** (0.000)
	Music genre	32	33.3	31	34.1		16	11.7		
	Agency	0	0.0	1	1.1		2	1.5		
	Evaluation	5	5.2	14	15.4		4	2.9		
	Price discount	6	6.3	10	11.0		28	20.4		
Improvements	Music	0	0.0	0	0.0		1	0.7		54.274*** (0.000)
	Video	5	5.2	9	9.9		8	5.8		
	Event	20	20.8	21	23.1		8	5.8		
	Price discount	18	18.8	18	19.8		24	17.5		
	Interaction with the artist	13	13.5	21	23.1		45	32.8		
	Interaction between the audience	4	4.2	5	5.5		28	20.4		
Technical factor		36	37.5	17	18.7		23	16.8		-
		96	100	91	100		137	100		
Total										

Group 1, focusing on famous songs rather than attempting excessively to forge a relationship with the audience. According to these characteristics, this study aims to define Group 1 as a content-oriented group.

In addition, 37.5% of Group 1 members cited technical experience as the major improvement area for online performances. Therefore, if Group 1 were to be served as the main customer group, content generators should include efforts to familiarize viewers with platform functions before the start of the performance to enable a smoother viewing experience for them. Finally, the members of this group prefer offline merchandise, such as photos, clothes, or bags. Thus, organizers should plan their merchandising offers in the form of practical rather than digital products.

Second, Group 2 represented a middle-income group in their 20s and 40s and primarily encompassed office workers. The professions, ages, and income levels were evenly distributed for this group. Group 2 members viewed online performances with varied company, such as family members, lovers, or friends. Therefore, organizers should focus on social media marketing because people in their 20s and 40s most actively use Twitter, Facebook, Instagram, and other such sites. Discrete types of effective discounts should also be planned for the companions of Group 2 members. According to these characteristics, Group 2 be referred to as a relationship-oriented group.

Table 7. Overall market segment characteristics

Division	Group 1 (Content-oriented group)	Group 2 Relationship-oriented group	Group 3 (Artist-oriented group)
Optimal product composition	<ul style="list-style-type: none"> - Trot - Online concert platform - No audience - Offline merchandising 	<ul style="list-style-type: none"> - Ballad - Video streaming platform - No audience - Online merchandising 	<ul style="list-style-type: none"> - Dance - Video streaming platform - With audience -Online merchandising
Demographic characteristics	<ul style="list-style-type: none"> - High-income group of members between their 40s and 60s primarily encompassing office workers and self-employed individuals 	<ul style="list-style-type: none"> - Middle-income group of people in their 20s and 40s comprising mainly office workers 	<ul style="list-style-type: none"> - Young group of people in their teens and 30s composed mainly of students and office workers
Online performance viewing experience	<ul style="list-style-type: none"> - Low rate of participation in fandom activities - Viewing with family - Cast and genre are determinants of consumption 	<ul style="list-style-type: none"> - Less participation in fandom activities - Viewing with various people - Cast and genre are determinants of consumption 	<ul style="list-style-type: none"> - Very high rate of participation in fandom activities - Very high rate of viewing alone - Cast and price discounts are determinants of consumption
PR strategy	<ul style="list-style-type: none"> - Traditional media promotion - Social media marketing targeting to children's generations 	<ul style="list-style-type: none"> - Social media marketing 	<ul style="list-style-type: none"> - Social media marketing - Fandom platform marketing
Pricing	<ul style="list-style-type: none"> - Reputation pricing strategy - Family discount strategy 	<ul style="list-style-type: none"> - Accompanying discount strategy 	<ul style="list-style-type: none"> - Merchandising segmentation
Service strategy	<ul style="list-style-type: none"> - Avoid excessive interaction - Composition of performances suitable for listening to music - Explanation of platform features 	<ul style="list-style-type: none"> - Casting of artists who are generally well-liked - Various event planning - Performance planning without an audience 	<ul style="list-style-type: none"> - Actively promote the interaction between artists and audiences - Plan performance with the audience - Make-believe strategy

A low percentage of Group 2 members belonged to fandoms, and 38.5% of them considered the cast as a consumption determinant, a figure lower than that of members of Groups 1 and 3. Additionally, this group evaluated performance (15.4%) and price discounts (11%) as more important than the other groups did. It is thus presumed that this group represents viewers who like to consume inexpensive performances with good reviews, as well as varied events, rather than watch performances by specific artists as fans. Therefore, if Group 1 were to be served as the main customer group, it would be effective to cast artists well-liked by all genders and ages and recognized for their singing abilities and qualities as artists. Varied event planning is also suggested.

Third, Group 3 signified youth in their teens and 30s and was composed mainly of students and office workers. This group reported overwhelmingly high fandom membership and activity rate. Therefore, promoting online performances on fandom platforms operated by entertainment companies (such as Hive's Weverse) along with social media marketing would exert maximal impact on this cohort. In addition, the members of Group 3 were highly price-sensitive because they were in their teens and 20s. Therefore, it would be effective to subdivide the merchandising into diverse products across various price spectrums.

Finally, Group 3 preferred performances with audiences and indicated that online performances would be enhanced through interactions between artists and audiences. People who experience a sense of belonging and interaction tend to cooperate and bond more than those who do not (Kurtin et al., 2019). Therefore, online concerts are not events where they can merely watch performances or listen to music. Rather, such events tend to become meeting places for the members of Group 3, at which they can communicate with the artists and other audience members. Therefore, a service strategy that promotes interaction is mandated when online performances target Group 3. Based on these characteristics, in this study, Group 3 is defined as artist-oriented groups.

Despite the usual considerable distance between the audience and the stage at offline performances, physical proximity exists because audiences and the artists exist in the same space and time. However, the same cannot be said of online performances. Therefore, a make-believe strategy that can replace this sense of physical distance with a sense of psychological distance is needed. For example, self-camera content from artists, video call tickets, backstage introductions, and other such tactics, may be deployed. Virtual settings can also be introduced, for instance, a housewarming or a dating situation. Further, online performances with audiences could be effectively and continuously produced even after the pandemic so that online and offline performances can both be simultaneously promoted.

5. Conclusions

While the performance sector of the popular music industry faced a significant crisis due to COVID-19, this segment is achieving symbolic results of business expansion through online performances. Therefore, this study examined the important attributes influencing audience decisions in choosing online performances for viewing. In so doing, it aimed to describe an optimal product and to recommend marketing strategies by analyzing the characteristics of each consumer group.

The results of the conjoint analysis revealed that audiences evinced a substantial and sequential genre preference for ballads, dances, and trots. The video streaming platform was most preferred because the respondents could view online performances, as well as other types of audiovisual content, in the largest numbers. This preference was followed by online concert and agency platforms. Performances with no audiences were favored more than performances with audiences were, and online merchandising goods were desired over offline products. In sum, the viewers of online performances generally preferred ballad performances without audiences on video streaming platforms, along with the distribution of online goods.

The market segmentation analysis confirmed the efficacy of offering online performances without audiences on Internet-based concert platforms with offline goods for older and high-income viewer groups (Group 1). The offering of online goods along with performances without audiences delivered on video streaming platforms was found effective for middle-income viewer groups (Group 2) in their 20s and 40s who liked ballads. Finally, young and low-income viewers (Group 3) like dance and would opt for online performances with audiences delivered via video streaming platforms along with digital merchandising goods. It was hence confirmed that discrete consumer segments consuming online performances favored different product attributes and genres.

This study offers the following implications. Since online performances represent a relatively new service. Hence, no study has yet investigated preference attributes. According to previous studies, audiences have various needs and preferences in consuming onsite performing arts (Kim et al., 2018). Therefore, it is of academic significance to identify the characteristics of online performances and develop the optimal product composition for each group of audiences. The results of this study help to understand the various choices that consumers make when selecting online performances.

However, this study entails the following limitations. There are many genres of popular music, but this study limited its genre-based ambit to trot, ballad, and dance. The market status and consumer characteristics differ for every music genre. Future studies should posit specific marketing strategies for each genre by studying audience experiences and product attributes. Further, this study could not establish a comprehensively diverse list of attributes and attribute levels for online performances because it would be difficult for respondents to evaluate their preferences if the number of product profiles was increased. Therefore, it is necessary for the prospective research initiatives to contemplate attributes and attribute levels not addressed in this study. Also, this study has a limitation in that it used the convenience sampling method. In subsequent studies, a valid sampling method should be used. Finally, since there is no conjoint study on online performances, the results of previous studies and analysis could not be compared and interpreted.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

Citation information

Cite this article as: Using conjoint analysis for a value estimation of the consumption attributes of online performances, Baek Bo-Hyun, *Cogent Business & Management* (2023), 10: 2264563.

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