

The Effect of Gender Perception of Online Fashion Platform and the Intention to Use Curation Service on the Attitude toward the Online Fashion Platform

-Focusing on the moderating effect of consumers' biological sex-

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Abstract This study investigates the influence of gender perception of online fashion platform, consumers' biological sex, and the intention to use curation service (high/low) on consumers' attitude toward the online fashion platform. The gender perceptions of online fashion platforms were categorized into four types: masculine, feminine, androgynous, and genderless. For the study, online fashion platforms Musinsa, W Concept, and 29CM were selected. An online survey was conducted with 441 consumers aged 19-34. The three online fashion platforms were found to have different gender perception, Musinsa having significantly high masculinity and low femininity compared to the other two platforms. Results of one-way ANOVA revealed that gender perceptions of online fashion platforms had a significant effect on consumers' attitude toward the fashion platform. Attitude was significantly high for the fashion platform that was perceived to be androgynous and was the lowest for the fashion platform that was perceived to be genderless. 3-way ANOVA was implemented to examine the interaction effects of gender perception, consumers' biological sex and the intention to use curation service (high/low). Consumers' biological sex and gender perception had as significant interaction effects on the attitude toward the online fashion platform. Implications and suggestions for future research are discussed.

Keywords Online fashion platform, Gender perception, Gender characteristics, Curation service, Androgynous

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Introduction

Due to convenience and price competitiveness, online retail platforms have become major consumer purchase channels (Chu, 2018). In South Korea, Internet shopping malls emerged in the late 1990s. Since it was relatively easy to enter the market at this time, many online malls appeared, and competition intensified (Han, 2007). Today, online

fashion platforms are increasingly popular due to their diversity, convenience, and expertise (Seo, 2019). Online fashion stores are new types of retail platforms that collect and sell a variety of fashion brands (Hwang, Yuan & Lee, 2020) to reflect consumers' tastes and preferences.

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COVID-19 has increased the number of users and sales of online fashion platforms (B. R. Kim, 2021; Xie & Youn, 2020). During the first half of 2021, Musinsa and WConcept reported a 40% and 34% increase in turnover, respectively, compared to the previous year (Shim, 2021). Accordingly, competition between online fashion platforms has intensified. In response, online fashion platforms are expanding their businesses by increasing their customer bases and product categories to drive growth. For example, WConcept has developed its private label brand, increased its product range to include luxury goods and beauty, and strengthened its menswear collection (W. Lee, 2020). Meanwhile, Musinsa has increased its womenswear brands to bolster competitiveness (N. Lee, 2021).

Despite the rapid growth of online fashion platforms and their subsequent business expansion, the previous research has only focused on the general service characteristics of online fashion platforms (Cha, 2019; Kim, 2016; Lee & Ahn, 2016). Meanwhile, the research has ignored the practical implications of consumers' perceived gender characteristics of online fashion platforms. Therefore, it is necessary to explore how these gender perceptions can affect the platforms' performance, and what fashion platforms should consider when attempting to expand their target audience to include both male and female consumers.

Accordingly, this study empirically investigates the effect of consumers' gender perceptions of online fashion platforms and intent to use curation services on their attitudes toward the platforms. In addition, we identify the role of consumers' biological sex on these relationships. Our study presents practical insights for online fashion platforms that are expanding their businesses by broadening their customer base. We also provide insight into the effective marketing strategies required to adapt to the rapidly changing online business environment.

Literature Review

Online Fashion Platform

An online fashion platform is a retail channel that sells products from more than two brands on a single website

(Kim, 2016). Though they contain a collection of many brands, online fashion platforms aim to establish themselves as having distinct identities via strategic curation. Due to the shift in consumers' shopping patterns from offline to online, the online fashion platform industry is growing rapidly (Chun, Kim & Youn, 2019). This can be seen from the Korean fashion industry's digital transformation; accordingly, we examine Korean online fashion platforms that sell purely online (i.e., they do not have brick-and-mortar stores).

At present, Musinsa, WConcept, 29CM, Seoul Store, A-Land, and Hiphoper are online fashion platforms that have the most sales in South Korea (Hwang, 2021; Jung, 2019). Our study focuses on Musinsa, WConcept, and 29CM, which are referred to as "The Three Online Fashion Platforms" (Jung, 2019; Lee, 2017; W. Lee, 2021); further, Musinsa and WConcept are the top two platforms with the highest number of sales (Min, 2020).

Musinsa started as a fashion community for shoe enthusiasts in 2001, and has since established itself as the largest online fashion platform in Korea and contains over 3,000 fashion brands. Musinsa allows customers to keep up with young street fashion trends through a ranking system and provides a wide range of reasonably priced branded products.

WConcept is an online fashion platform that focuses on women's designer brand fashion items. Established in 2006 with the goal of enabling real communication between designers and consumers, WConcept pursues a direct communication strategy by allowing its products to be chosen by consumers rather than selling products through conventional brand advertising strategies. WConcept collaborates with various designers and plans exclusive projects every season (Lee, 2017; Min, 2020; Y. Lee, 2021).

The 29CM online platform was established in 2011 to introduce various categories of domestic and foreign brands. It seeks to provide consumers with various domestic and foreign brands that are relatively unknown, and delivers the products' values to consumers through "storytelling" content (Jung, 2019) via mobile and web environments to provide a new shopping experience (S. Kim, 2021). The platform includes men's and women's apparel as well as a variety of

trend items from more than 700 brands, including accessories, living, leisure goods, books, and music.

Accordingly, these three major online fashion platforms have distinct characteristics and histories. Musinsa pursues a young street style and emphasizes practicality, WConcept focuses on designer brand products, and 29CM provides lifestyle products based on storytelling. Based on these characteristics, these platforms have experienced short-term rapid growth and have become influential in the Korean fashion market (Chun et al., 2019). Based on the notion that consumers' perceptions of online platforms' gender characteristics should also be included when examining the characteristics of online fashion platforms, we focus on consumers' gender perceptions of online fashion platforms and consumers' attitudes toward the platforms.

Brand's Gender Characteristics

Brand personality refers to the "set of human characteristics associated with a brand" (Aaker, 1997). However, Grohmann (2009) suggested that this construct was insufficient for measuring the personality traits associated with gender, and instead examined the gender dimensions of brand personality. Grohmann (2009) defined the gender dimensions of brand personality as the "set of human personality traits [that are] associated with masculinity and femininity applicable and relevant to brands." She developed a two-dimensional descriptive adjective scale containing six items for masculine brand personality (MBP) (i.e., "adventurous," "aggressive," "brave," "daring," "dominant," and "sturdy") and six items for feminine brand personality (FBP) (i.e., "expressing tender feelings," "fragile," "graceful," "sensitive," "sweet," and "tender"). Grohmann's (2009) scale is a diagnostic tool that can be used to measure consumers' perceptions of the gender characteristics associated with brands.

According to the previous research on the antecedents of brand personality as masculine or feminine, the gender of a brand's spokesperson will influence a consumer's perception of the brand's gender, while a brand's salesperson will play a role in forming a consumer's image of the brand (Bhattacharya & Sen, 2003; Grohmann, 2009). In the online fashion platform context, the platforms' logos, user interface (UI), and provision of services may act as the platforms'

spokespeople and salespeople, which will affect consumers' gender perceptions of the platforms.

Meanwhile, Grohmann (2009) suggests that when a brand's gender personality is congruent with a consumer's gender identity, then a consumer's response, such as purchase intention, will be enhanced. Yang (2007) also suggests that male consumers tend to have more favorable attitudes toward masculine brands, while female consumers tend to have more favorable attitudes toward feminine brands. However, most of these studies have manipulated the gender characteristics of brands, while the gender characteristics of fashion stores or retailers remain underexplored. In addition, most studies have simply classified brand gender image as "masculine" or "feminine."

Since consumers' gender perceptions have diversified and modern society's desirable image of gender has changed, the research on gender characteristics should be conducted using more delicate classifications that move beyond the simplistic "masculine" or "feminine" dichotomization. According to Bem's (1974) androgyny theory, sociopsychological gender can be classified into four types: (1) masculinity, (2) femininity, (3) androgyny, and (4) genderless. Depending on the degree of masculinity and femininity, a person can be classified as being masculine or feminine if they have a strong masculine or feminine trait; androgynous if they have strong masculine and feminine traits; and genderless if both traits are weak (Kim, Lee & Lee, 2019).

In modern society, cultures that have different characteristics can coexist in harmony (Choi, 2010); this concept can also be applied to fashion. Our study recognizes the importance of a brand's gender personality dimensions as perceived by consumers, and investigates the effect on attitudes toward the online fashion platforms. We first measure online fashion platforms' masculine and feminine traits using Grohmann's (2009) MBP/FMP scale, and then identify the gender perceptions of online fashion platforms (i.e., masculine, feminine, androgynous, or genderless) based on their degrees of masculinity and femininity.

Consumer's Attitude toward the Online Fashion Platform

Fishbein and Ajzen (1975) define attitude as "a learned

predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object.” Since attitudes are formed regarding specific objects, attitudes toward brands, products, product advertisements, and advertising models may vary. As a relatively stable and consistent concept, attitude is used to understand and predict consumer behavior. Choi and Kwon (2009) report that the congruence of a brand’s personality and self-image leads to consumers’ positive brand attitude, while brand attitude positively influences consumers’ brand satisfaction and purchase intention. As attitude is formed and accumulated through individuals’ experiences and circumstances, it is an important antecedent of consumers’ purchase behavior, satisfaction, and loyalty.

Attitudes toward online fashion platforms will depend on various factors, such as brand attitude formed while using a platform, and will significantly influence purchase intention, satisfaction, and loyalty. Therefore, we define platform attitude as the tendency to respond to a certain online fashion platform in a consistently favorable or unfavorable manner. We investigate how consumers’ gender perception of the fashion platforms influences their attitudes toward the platforms according to the consumers’ biological sex and intention to use curation services. Based on the above, we posit the following hypothesis:

H1: Consumers’ attitudes toward online fashion platforms will differ according to their gender perception of the fashion platforms.

The previous studies have investigated the relationship between a consumer’s gender identity and a brand’s gender characteristics. Lee (2015) suggests that the congruence between a brand’s gender characteristics and a consumer’s gender identity will lead to favorable brand attitude. An, Heo, and Lee (2012) demonstrate that consumers tend to have positive attitudes and purchase intention toward brands that have congruent gender images with a consumer’s gender identity. Accordingly, we classify consumers based on their biological sex—which is consumer information that is available to online retailers—and hypothesize that the effect of the gender perception of the online fashion platforms on

the attitude toward the platforms will differ depending on consumers’ biological sex. We posit the following:

H2: The effect of the gender perception of the online fashion platforms on the attitude toward the fashion platforms will differ according to consumers’ biological sex.

Intention to Use Curation Service

The ability to easily obtain information has resulted in the rapid growth of the online retail market, yet this flood of information has also made it difficult for many consumers to make choices. Curation services, which reduce the time and cognitive effort required in the collection and selection of information for consumers who have difficulties in decision-making, have attracted much attention (Rosenbaum, 2011). Fashion curation involves reconstructing or producing valuable information about fashion products that reflect a consumer’s taste, and will influence the consumer’s decision-making process (Kim, Jung, Kim & Oh, 2017). Fashion curation services enable consumers to select and view only the content that is related to their interests from numerous online fashion content (Park & Kim, 2017). In the online space where numerous products are displayed, online fashion platforms enhance consumers’ shopping convenience by providing curation services.

In general, female consumers tend to shop for longer, search for more information, and enjoy shopping hedonically (Choi, 2008; Jackson, Stoel & Brantley, 2011), while male consumers react less to retail entertainment and tend to shop with a distinct goal (Park, 2014). Since these consumption behaviors differ, the intention to use curation services and their influences may be different in males and females. Moreover, while Park and Kim (2017) verified the influence of curation service use on purchase intention, few studies have examined such influences by dividing consumers into male and female groups. Thus, we hypothesize that the influence of the gender perception of online platforms and consumers’ biological sex on the consumers’ attitudes toward the platforms will differ depending on the consumers’ intention to use curation services. We posit the following:

H3: The interaction effect of the gender perception of online fashion platforms, consumers' biological sex, and intention to use curation services will have a significant effect on consumers' attitudes toward the fashion platforms.

Methods

Research model

This study attempted to examine the effect of consumer's gender perception toward the online fashion platform on attitudes toward fashion platforms, also examine the moderating effect of consumers' sex and intention to use curation service intention. Figure 1 illustrates our research model.

Survey Procedure

To empirically test our research model and hypotheses, we conducted a quantitative study of 467 males and females aged 19–34 who were familiar with more than one of the three representative Korean online fashion platforms: Musinsa, WConcept, and 29CM. We administered a survey through Embrain, a survey company with a representative consumer panel in Korea. Our survey was conducted from July 29–August 5, 2020. The participants were presented

with one of the three platforms randomly and then asked how familiar they were with it. Only those who responded that they “knew” or “knew it well” were asked to provide their gender perceptions and attitudes toward the online fashion platform. If a participant had no knowledge of any of the three platforms, then the survey was terminated. Overall, 467 questionnaires were collected. After deleting insincere responses, 435 responses were obtained.

The respondents' demographic information was as follows: 39.2% (n=173) were males and 60.8% (n=268) were females. In total, 139 (51 males, 88 females) responded to 29CM, 154 (52 males, 102 females) responded to WConcept, and 142 (64 females, 78 males) responded to Musinsa. Overall, 22.8% (n=99) were aged 19–22 years, 27.1% (n=118) were aged 23 years, 26.4% (115) were aged 26 years, and 23.7% (n=103) were aged 31–34 years.

Measurement

Based on Bem's (1974) study, we classified consumers' gender perceptions of the online fashion platforms as masculine/feminine/androgynous/genderless. Consumers' biological sex (male/female) and intention to use curation services were the control variables, and consumers' attitude toward the platform was the dependent variable. The questionnaire's measurement items were adapted from previous studies, and we changed some of the wording to suit the current study's context.

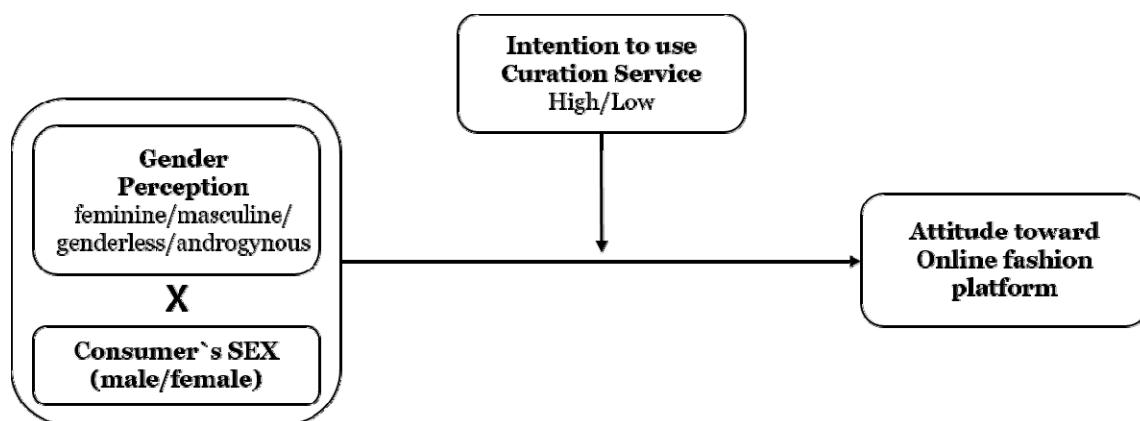


Figure 1. Research model

The scale items for *gender perception* were adapted from Grohmann's (2009) MBP/FBP scale and translated into Korean; the original English text was included in parentheses to help understanding. The scale items used to measure *attitudes toward the online fashion platform* were adapted from Park (2018) and Kim (2015). The scale items used to measure *intention to use curation services* were based on the curation service characteristics from Park and Kim (2017) and Choi, Cha and Choi (2018). All questions, excluding demographic characteristics, were answered on a five-point Likert-type scale (1=*strongly disagree*, 5=*strongly agree*). The respondents' *biological sex* (male or female) was included as a demographic question.

Results

Homogeneity Tests between Groups

Considering that the respondents' sex can affect measuring gender perception toward online fashion platform, chi-square analysis was conducted to test the homogeneity of the gender distribution of respondents for each platform. As a result, there was no significant difference in male/female ratio between three platforms, so it was confirmed that the three groups showed the same male/female ratio (Table 1).

Additionally, if respondents have preferences for a specific platform, it can affect the results as well, so one-way ANOVA was conducted to confirm whether there is a difference in consumers' attitude toward each three platform. As a result, it was confirmed that there was no significant difference in consumers' attitude according to the online fashion platform ($p=.172$, $F=1.767$).

Testing the Reliability and Validity of Research Variables

The results confirming the reliability and validity of the measurement items are as follows. The principal component analysis (PCA) using varimax rotation revealed that the gender perception of the online fashion platforms comprised of two factors, namely masculine and feminine. Both factors had eigenvalues greater than 1, which accounted for 62.1% of the total variance (Table 2). The PCA using varimax rotation revealed that the respondents' attitudes toward the online fashion platforms item was extracted as a single factor, and explained 75.823% of the total variance (Table 3). Finally, the PCA using varimax rotation revealed that the curation service intention item was extracted as a single factor, and the validity of the scale was verified because it explained 64.859% of the total variance (Table 4). Cronbach's α for the items in each factor exceeded 0.7, indicating that the items were internally consistent.

Table 1. Results of chi-square analysis

Types of online select shop	Musinsa	29CM	Wconcept	χ^2	p
Number of samples	148 (male: 64, female: 78)	139 (male: 51, female: 88)	154 (male: 52, female: 102)		
Total	435			4.241	0.120

Table 2. Exploratory factor analysis for gender perception

Factor Name	Item	Factor Loading	Eigen value	Variance Explained % (Cumulative variance %)	Cronbach's α
Masculinity	M1: This platform gives a brave feeling.	0.835	2.567	32.091 (32.091)	0.811
	M2: This platform gives a daring feeling.	0.803			
	M3: This platform gives a adventurous feeling.	0.796			
	M4: This platform gives a aggressive feeling.	0.741			
Feminity	F1: This platform gives a tender feeling.	0.816	2.407	30.090 (62.181)	0.773
	F2: This platform gives a fragile feeling.	0.781			
	F3: This platform gives a sensitive feeling.	0.781			
	F4: This platform gives a sweet feeling.	0.693			

Table 3. Exploratory factor analysis for attitude toward online select shop

Factor Name	Item	Factor Loading	Eigen value	Variance Explained % (Cumulative variance %)	Cronbach's α
Attitude toward online select shop	ATT1: I'm satisfied with platform.	0.900	3.033	75.823	0.882
	ATT2: I like this platform.	0.890			
	ATT3: I feel friendly toward this platform.	0.881			
	ATT4: I'm attached to this platform.	0.809			

Table 4. Exploratory factor intention to use curation service

Factor Name	Item	Factor Loading	Eigen value	Variance Explained % (Cumulative variance %)	Cronbach's α
Intention to use curation service	CS: I will consider the products curated by the platform for shopping.	0.865	2.594	64.859	0.815
	CS: I will consider the brands curated by the platform for shopping.	0.802			
	CS: I will consider the styling that the platform suggests for me.	0.778			
	CS: I am willing to use a customized product recommendation service (e.g., based on recently viewed products or recently purchased products).	0.773			

Hypothesis Test

Consumers' attitudes toward gender perception type. We classified gender perception as masculine/femininity/androgynous/genderless based on the average score of the masculinity perception (2.83) and femininity perception (3.00). We combined the high and low scores of perceived masculinity and femininity to classify a low score in both masculinity and femininity as "genderless," a low score in masculinity and a high score in femininity as "feminine," a high score in masculinity and a low score in femininity as "masculine," and a high score in both masculinity and femininity as "androgynous." In total, 108 respondents perceived the online fashion platforms to be "genderless," 115 respondents perceived them to be "masculine," 84 respondents perceived them to be "feminine," and 128

respondents perceived them to be "androgynous" (Table 5).

Based on their gender perceptions toward the online fashion platforms, the consumers' attitudes were as follows: genderless ($M=3.208$, $SD=0.673$), masculine ($M=3.354$, $SD=0.740$), feminine ($M=3.557$, $SD=0.626$), and androgynous ($M=3.930$, $SD=0.532$). The results show that consumers' attitude scores were the highest when they perceived a platform to be androgynous (Table 6).

We conducted a one-way ANOVA to determine if there was a significant difference in consumers' attitudes according to their gender perceptions toward the online fashion platforms. We found a significant difference in consumers' attitudes toward the platforms according to the gender perception type; thus, H1 is supported ($p=.000$, $F=28.217$). After conducting Scheffe's post-hoc test, we found no significant difference in consumers' attitudes when

Table 5. Classification of gender characteristics

	High masculinity	Low masculinity
High femininity	Androgynous (128)	Feminine (84)
Low femininity	Masculine (115)	Genderless (108)

Table 6. Mean differences in attitudes depending on perceived gender characteristic of online selectshop

Gender perception	Mean	F	p
Genderless	3.208 ^c	28.217	0.000
Masculine	3.354 ^b		
Feminine	3.557 ^b		
Androgynous	3.930 ^a		

Scheffe test: difference between groups in a, b, c (a>b>c)

Table 7. Three-way ANOVA test results for attitude by sex, intention to use curation service and gender perception

Variance sources	SS	df	MS	F
Sex (A)	0.585	1	0.585	1.515
Intention to use curation service (B)	12.090	1	12.090	31.342***
Gender perception (C)	21.112	3	7.037	18.244***
AxB	1.729	1	1.729	4.482*
AxC	3.365	3	1.122	2.908*
BxC	1.532	3	0.511	1.324
AxBxC	0.169	3	0.056	0.146
Error	161.624	419	0.386	
Total	5624.125	435		

* $p < .05$, *** $p < .001$

they perceived online fashion platforms as feminine and masculine ($p=.191$). However, when they perceived the platforms as androgynous, they showed a significantly higher ($p_{feminine}=.001$, $p_{masculine}=.000$) attitude score toward the online fashion platforms than those who perceived the platforms as masculine or feminine. Moreover, the consumers' attitude scores toward the platforms were the highest when the platforms were perceived as androgynous and the lowest when the platforms were perceived as genderless (Table 6).

Consumers' attitudes toward gender perception, consumers' biological sex, and curation service use intention.

We conducted a three-way ANOVA to test the effect of consumers' gender perception (masculine/feminine/androgynous/genderless), biological sex, and intention to use curation services on consumers' attitudes toward the online fashion platforms (Table 7).

Respondents were classified into two groups—high curation service use intention and low curation service use intention—by centering on the average value of curation

service use intention (3.70). The three-way ANOVA showed that the main effect of both the curation service use intention ($F=31.342$, $p=.000$) and gender perception type ($F=18.244$, $p=.000$) on attitudes toward the platforms were significant, but the effect of consumers' biological sex ($F=1.515$, $p=.219$) on attitudes toward the platforms were not significant. The interaction between consumers' biological sex and their gender perception toward the online fashion platforms type was significant; therefore, H2 is supported ($F=2.908$, $p=.034$). H3 is rejected because the interaction between consumers' biological sex, gender perception type, and curation service use intention was not significant ($F=0.146$, $p=.932$), but the interaction between biological sex and curation service use intention is significant ($F=4.482$, $p=.035$).

The interaction effect between consumers' biological sex and their gender perception types on attitudes toward the online fashion platforms. The interaction between consumers' biological sex and their gender perception types

had a significant effect on their attitudes toward the online fashion platforms ($F=2.908, p=.034$). When a platform was perceived as androgynous, both male and female consumers had the highest scores ($M_{\text{male}}=3.896, M_{\text{female}}=3.959$) for attitude toward the platforms (Figure 2). This result shows that the awareness of androgyny has spread in modern society, and indicates that the androgyny advocated by many designers has a strong bond with the younger generation's youth culture (Geczy & Karaminas, 2018). In addition, it infers that an online fashion platform that has both masculine and feminine traits will be perceived by consumers as having a higher level of expertise, which will lead to a higher consumer attitude score. It is also noteworthy that female consumers showed clear differences in their attitudes toward online fashion platforms according to the platforms' gender characteristics. Female consumers showed a significantly stronger preference for feminine than masculine platforms. However, male consumers showed no significant difference in attitude when they perceived the platform as masculine or feminine (Figure 2).

Unlike the past when gender was considered binary, "male" and "female" awareness of androgyny is spreading in modern society. Our results suggest that, in accordance with this social trend, online fashion platforms should emphasize androgynous characteristics to provide a positive platform image for both male and female consumers. Specifically, strengthening the perception of femininity can have a more

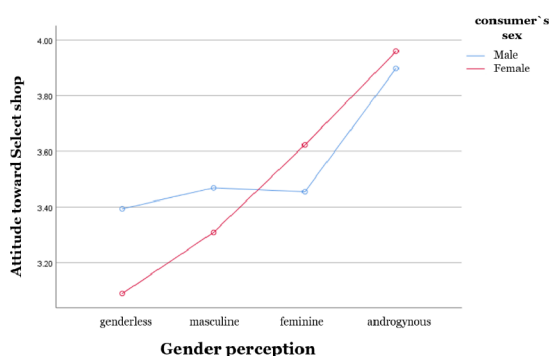


Figure 2. Interaction of gender perception of online select shop X consumer's sex

positive effect when targeting male consumers. Therefore, online fashion platforms should convey diversified gender characteristics to consumers through site UI or visual elements without being biased toward either gender. Meanwhile, female consumers showed a difference in attitude scores when the platforms were perceived as masculine and feminine. This suggests that females will think negatively about an online platform that only emphasizes masculinity.

The interaction effect between consumers' biological sex and curation service use intention on the attitudes toward online fashion platforms. H3 is rejected because the three-way interaction between gender perception, consumers' biological sex, and curation service use intention was not significant, but the interaction effect between biological sex and curation service use intention on attitude toward online platforms was significant ($F=4.482, p=.035$). Figure 3 shows that the overall attitudes toward the platforms were higher in the group with high curation service use intention than in the group with low use intention ($M_{\text{low}}=3.239, M_{\text{high}}=3.658$). Moreover, the group with low use intention showed no difference in attitude according to consumers' biological sex ($M_{\text{low_male}}=3.295, M_{\text{low_female}}=3.297$), while the group with high use intention showed a significant difference in the attitudes toward online fashion platforms according to biological sex ($M_{\text{high_male}}=3.846, M_{\text{high_female}}=3.562$). Moreover, the difference in the male consumers' attitude

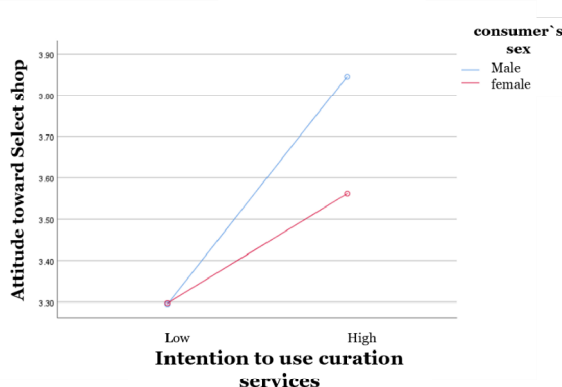


Figure 3. Interaction of consumer's sex X consumer's intention to use curation service

Table 8. Differences in online select shops` Masculinity

Online select shop	Mean	F	p
29CM	3.11 ^b	12.486	0.000
Wconcept	3.06 ^b		
Musinsa	3.45 ^a		

Scheffe test: difference between groups in a, b (a>b)

Table 9. Differences in online selectshop`s femininity

Online select shop	Mean	F	p
29CM	3.19a	27.999	0.000
Wconcept	3.32a		
Musinsa	2.70b		

Scheffe test: difference between groups in a, b (a>b)

scores was larger than that of the females' scores according to high or low curation service use intention. Regarding male consumers, the higher their curation service use intention, the more positive their attitudes are; therefore, online platforms that consider male consumers as their target consumers should consider marketing strategies to promote their use of curation services.

Analysis of each platforms; Musinsa, 29CM and Wconcept

The above analysis explored the effect of gender perception, consumers' biological sex, and curation service use intention on attitudes toward the online fashion platforms regardless of the type of online fashion platform. Musinsa, 29CM, and WConcept are representative Korean online fashion platforms, so it will be valuable to conduct an additional analysis of each platform.

Masculinity and femininity comparison for each platforms: Musinsa, 29CM, and Wconcept. We first conducted a one-way ANOVA to determine whether there was a significant difference in the perception of masculinity and femininity depending on the platform; we found a significant difference (Tables 8 and 9). Consumers' perceived masculinity of each platform was as follows: Musinsa (M=3.45, SD=0.75), WConcept (M=3.06, SD=0.80), and

29CM (M=3.11, SD=0.80). Scheffe's post-hoc test revealed that consumers' perceived Musinsa to have significantly higher masculinity than the other platforms ($p=.000$), while there was no difference in perceived masculinity for WConcept and 29CM ($p=.871$). Meanwhile, consumers' perceived femininity of each platform was as follows: WConcept (M=3.32, SD=0.69), 29CM (M=3.19, SD=0.75), and Musinsa (M=2.70, SD=0.73). Scheff's post-hoc test revealed that consumers' perceived significantly higher femininity for WConcept and 29CM than Musinsa ($p=.000$), and there was no significant difference in the perceived femininity for WConcept and 29CM ($p=.286$).

Each Platform's Effect Regarding Gender Perception, Consumers' Biological Sex, and Curation Service use Intention on Attitudes Toward the Platforms. We conducted an additional analysis on how gender perception, consumers' biological sex, and the intention to use curation services for each platform affected attitudes toward the platforms. Since only two consumers perceived Musinsa as feminine, an additional analysis was only conducted on the genderless, masculine, and androgynous perception types. First, the results showed that the main effect of the curation service use intention, consumers' biological sex, and gender perception type (genderless/masculine/androgynous) on the attitude toward Musinsa was significant (Table 10). Regardless of

Table 10. Ancova test results for attitude by sex, intention to use curation service and gender perception (Musinsa)

Variance sources	SS	df	MS	F
Sex (A)	2.093	1	2.039	4.207*
Intention to use curation service (B)	3.225	1	3.225	6.654*
Gender perception (C)	5.677	2	2.839	5.857***
AxC	1.167	2	0.584	1.204
Error	64.459	133	0.485	
Total	1772.750	140		

* $p < .05$, ** $p < .005$, *** $p < .001$

Table 11. Ancova test results for attitude by sex, intention to use curation service and gender perception (29cm)

Variance sources	SS	df	MS	F
Sex (A)	0.052	1	0.052	0.152
Intention to use curation service (B)	6.715	1	6.715	19.818***
Gender perception (C)	5.390	3	1.797	5.302**
AxC	2.037	3	0.679	2.004
Error	44.045	130	0.339	
Total	1884.875	139		

* $p < .05$, ** $p < .005$, *** $p < .001$

Table 12. Ancova test results for attitude by sex, intention to use curation service and gender perception (W concept)

Variance sources	SS	df	MS	F
Sex (A)	0.113	1	0.113	0.383
Intention to use curation service (B)	4.800	1	4.800	16.244***
Gender perception (C)	8.936	3	2.979	10.080***
AxC	2.108	3	0.703	2.378
Error	42.850	145	0.296	
Total	1936.438	154		

* $p < .05$, ** $p < .005$, *** $p < .001$

their biological sex, consumers who perceived Musinsa as androgynous showed a favorable attitude toward the platform. This suggests that even if Musinsa is known as an online fashion platform that is centered on menswear, it would be advantageous to maintain an androgynous image by highlighting its femininity and masculinity.

Regarding 29CM and WConcept, the main effects of the curation service use intention and gender perception (genderless/male/feminine/androgynous) on the consumers' attitudes were significant, but biological sex showed no significant effects on the attitudes toward the platforms (Tables 11 and 12). For both 29CM and WConcept, the

higher the curation service use intention, the more favorable the attitude toward the platform, and there was also a significant difference in attitude depending on the gender perception type of the platform. However, there was a subtle difference in attitudes according to the gender perception type (Figure 4). Both platforms had the most positive attitudes when consumers perceived them to be androgynous; however, female consumers showed more positive attitudes toward WConcept when the platform was perceived as feminine, while male consumers showed the same trend as H2. However, male consumers had a more positive attitude toward 29CM when the platform was perceived as feminine.

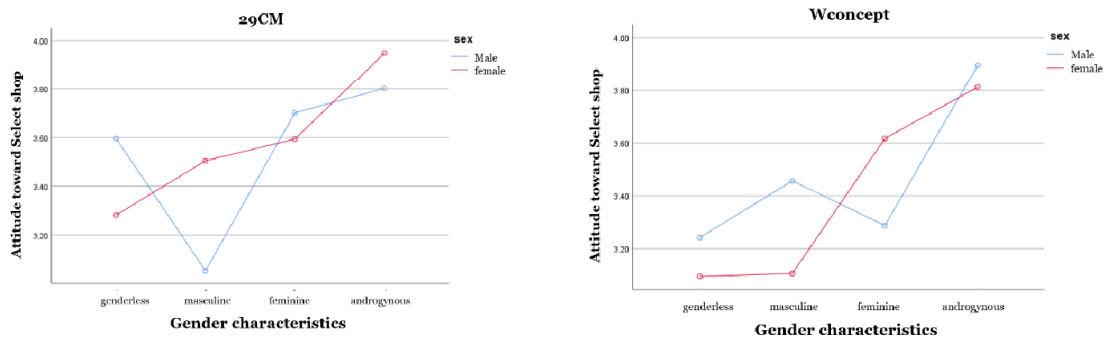


Figure 4. Interaction of gender perception of online select shop X consumer's sex (left: 29cm, right: Wconcept)

Conclusion and Implication

This study began with the assertion that Musinsa, WConcept, and 29CM each have different gender characteristics. Moreover, since each platform is expanding its assortment of men's and women's brands, we conducted this study to make meaningful suggestions regarding the platforms' strategic judgments regarding expansion. We studied the effect of the consumers' perceived gender characteristics of the online fashion platforms, curation service use intention, and consumers' biological sex on their attitudes toward the platforms. We found a significant difference in consumers' attitudes toward the online fashion platforms according to the consumers' perceived gender characteristics of the platforms. Specifically, the lowest perceived consumer attitude was "genderless" and the highest was "androgynous." These results confirm the importance for online fashion platforms to have gender characteristics. It is noteworthy that the consumers' had the highest attitude scores for androgynous online fashion platforms, regardless of consumers' biological sex. While it is important for these platforms to present a biased gender identity toward the gender of their target consumer base (Kim, 2012; Lee, 2015), our results suggest that the platforms should incorporate both male and female consumer groups rather than target one gender. Moreover, since consumers' needs are becoming more diverse, it is important for online fashion platforms to embrace consumers who have varying tastes and gender identities. Until now,

many platforms have pursued a one-sided gender identity because it is difficult to successfully build an androgynous platform image. However, as the online fashion platform market increases in maturity and complexity in the future, these platforms should strive to pursue androgynous images.

In fact, Musinsa, a male-orientated online fashion platform, is expanding its target consumers by launching a female-centered online fashion platform named "Wusinsa." In addition, WConcept, a female-centered online fashion platform, is expanding its target consumers to include males by launching "Distance" (N. Lee, 2021; W. Lee, 2020). Our results suggest that online fashion platforms' identities should unify both masculine and feminine traits rather than simply secure new customers through the launch of new shopping platforms. For example, an online fashion platform could effectively secure both male and female consumers by demonstrating an androgynous identity. Moreover, it is possible to allow consumers to shop for both men's and women's clothes in one shopping mall rather than have two completely different shopping malls that are separated by gender. Accordingly, online platforms should strive to increase consumers' staying time by adding various interesting factors so that consumers can delicately perceive the platforms' masculine and feminine traits.

We also found that consumers' biological sex had a moderating effect on curation service use intention and attitudes toward the online fashion platforms. When curation service use intention was high, consumers showed a

favorable attitude toward the platform overall; in particular, male consumers formed more positive attitudes toward the platforms because their curation service use intention was higher than that of female consumers. Accordingly, our results suggest that online male-orientated fashion platforms who want to recruit new male consumers should pay more attention to offering curation services as a marketing strategy because male customers are goal-oriented shoppers rather than hedonic shoppers (Choi, 2008; Jackson et al., 2011). Therefore, curation services will help male consumers to more quickly find their desired products as it reflects their shopping orientation.

The previous studies have pointed out that it is difficult to distinguish the service content of the curation commerce from general shopping malls in Korea (Hong & Nah, 2015). Accordingly, featuring curation services on online fashion platforms would more effectively enable a platform to show its identity. By using big data's accumulation of product information, consumer log data, and sales data, the recommendation services that use AI have become more sophisticated (Kwon, Baek, Jeon & Ahn., 2018), so it is important to provide curation services that reflect the unique characteristics of the online platforms and consumer data. For example, Musinsa is characterized by its "Young Street" sensibility (Jung, 2019), so the site's provision of curation services should consider this characteristic as well as consumers' tastes.

Our study is meaningful in that it explores online fashion platforms that are making changes in attempt to keep up with their increasing growth, and considers the ways that these platforms should move forward by focusing on consumers' gender perceptions of the platforms. However, this study has several limitations. First, we translated Grohmann's (2009) MBP/FBP scale into English and then used it to measure the consumers' gender perceptions toward the platforms. Although the original English text was included in parentheses to enable understanding, there were questionnaire items that were eliminated during the analysis process because they did not fit the study purpose. For example, the vocabulary used for some masculinity measures, such as "Dominant" and "Sturdy," can be negatively interpreted by today's consumers, while phrases

such as "Expresses tender feelings" are unrelated to gender. Therefore, Grohmann's (2009) scale does not fit today's consumer sentiment and or reflect the current sociocultural context. Accordingly, further studies should develop gender characteristic measures that reflect the current sociocultural contexts and trends. Further, changes in traditional gender roles change are reflected in various sociocultural aspects, including fashion (Kim & Yim, 2015). Therefore, this study is limited in that it simply analyzes the relationship between consumers' biological sex and their gender perceptions of online fashion platforms. The future research should consider consumers' gender perceptions of online fashion platforms that focus not only on consumers' biological sex but also on the consumers' gender identity.

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