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“Promotion Effectiveness of Coupons and Reward Points by Fashion Product Categories at an Online Retailer”_학술논문

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Promotion Effectiveness of Coupons and Reward Points by Fashion Product Categories at an Online Retailer

Sungha Jang*, Ji Hye Kang**, Junghwa Son***

Online retailers promote their products using coupons and loyalty programs just like traditional offline retailers. However, online retailers can take advantage of utilizing their online systems to implement these promotional programs. To maximize the effectiveness of a promotion mix, online retailers need to understand the unique effects of each online promotion method considering the characteristics of the products they carry. As a result, they can allocate limited promotion budgets and resources to different promotion mixes. Using transaction data regarding coupon amounts, reward point amounts, and order amounts of 371 fashion brands sold by an online retailer, we examined the effectiveness of coupons and reward points moderated by six fashion product categories. Our major findings were 1) while both coupons and reward points are effective to increase order amounts, coupons are more effective than reward points and 2) the promotional effects vary with the fashion categories. Our study provides managerial insights on implementing promotions considering promotion methods, product category types, and the association between promotion method and product category.

Keywords: E-commerce, Coupons, Loyalty programs, Promotional effectiveness, Fashion marketing

I. Introduction

E-commerce is one of the fastest growing retail sectors in the world. Korean e-retailers' sales amounts in 2016 reached about \$56 billion, an increase of 20.5% from 2015 (Statistics Korea 2017). Similarly, in the U.S., the e-retailer market increased by 15.1% from 2015 to 2016, and the sales amount in 2016 was \$394.9 billion, which is outstanding growth compared to the 2.9% increase for all retailers in the U.S. (U.S. Department of Commerce 2017a). With this rapid growth, competition in online

retail has become greater. In this highly competitive environment, online retailers, like traditional retailers, provide a promotional mix, such as coupons and reward points, but the mix has a number of unique advantages for online retailers. For example, online retailers can instantly offer online coupons, easily track online transactions, and promptly convert e-shoppers' transaction amounts into reward points. Chen (2016) summarized these advantages into three categories: reduction in advertising and marketing costs, reward to consumers for online participation and purchases, and effective

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impulse-buying triggers.

Considering these advantages related to the consumer purchase process, previous literature has mainly studied the effectiveness of individual promotion methods on financial performance (e.g., Levy, Webster, and Kerin 1983; Yue and Chaturvedi 2000). For instance, consumers can have immediate access to online coupons and are stimulated to make purchases, leading to a positive relationship between price promotion and revenue (e.g., Lu et al. 2013; Sigala 2013). Incentive programs, such as point- and incentive-based premiums and gifts and cumulative discounts or rebates based on purchase amount, are another promotion method to enhance consumers' online shopping experiences (Breitenbach and Van Doren 1998).

However, not all promotion mixes have the same level of positive impact on consumer purchase behavior; reasons for this may include promotion methods, interaction with other marketing mixes, consumer characteristics, product categories, etc. This study, therefore, focused on product categories as the variable moderating the level of promotion impact in the fashion industry. Previous research has evidenced that product categories are one of the variables inducing different impacts of promotion methods (e.g., Banerjee 2009; Sun 2005). The fashion industry has well segmented sub-markets, such as women's wear, men's wear, active wear, etc., and fashion firms' information and general marketing strategies are based on these segmented categories (see www.fashionbiz.co.kr for segmented fashion information). Therefore, it is important for managers to understand the effects of individual promotion methods on retailer performance by

product categories and to implement different promotional mixes according to their effectiveness.

The purpose of this study was to examine the effectiveness of different promotion methods by product category on order amounts. Using integrated monthly transaction data of 371 fashion brands offered by an online retailer, we investigated the effects of coupons (a short-term promotion) and reward points (a long-term promotion) on order amounts. In particular, we looked into the moderating effects of product categories (i.e., accessories, casual, kids', men's, sports, and women's categories) to consider the fact that consumers in each category are different in terms of demographic characteristics and involvement in the product categories.

Our main findings were that, in general, coupons and reward points had positive impacts on order amounts. Between the two promotions methods, however, coupons had a stronger effect on order amounts than reward points did, showing that promotion methods play an important role in determining promotion effectiveness. In addition, we found that product categories moderated a promotion's effects. For example, consumers in the kids'/life and sports categories were more likely to order more products with coupons, while consumers in the men's category were less likely to order more products with coupons. Interestingly, however, consumers in the men's category were more likely to order more products when reward points were available to them.

Our study provides a better understanding of consumers' purchase behaviors in the online fashion market, a market that has grown in size.

Specifically, the total sales of the Korean fashion e-commerce industry were about \$7.5 billion in 2015, with clothing accounting for \$5 billion, footwear for \$0.8 billion, bags for \$0.7 billion, and fashion accessories for \$0.8 billion (Statistics Korea 2017). In the U.S., the fashion e-commerce sales in 2015 were \$52 billion (U.S. Department of Commerce 2017b). However, it is not well known how online fashion retailers should implement the different types of promotions for each product category. Following the conceptual framework proposed by Ailawadi et al. (2009), this study examined the effects of two commonly used promotion methods and contributes to the literature regarding promotions in two ways. First, we investigated the differing effectiveness of two types of online promotion methods – coupons and reward points. Our finding that coupons are more effective confirmed that managers need to actively consider how the budget is proportioned to various promotion methods. Second, we showed that it is important to consider the characteristics of product categories to gain an understanding of consumption behavior. That is, managers can maximize the effectiveness of promotion methods by targeting consumers who purchase in the different product categories.

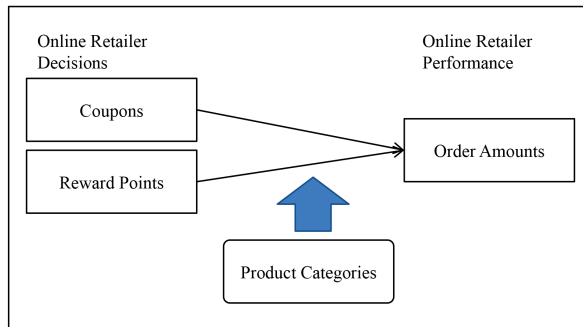
II. Theoretical Backgrounds and Hypotheses

Ailawadi et al. (2009) proposed a conceptual framework that provides comprehensive explanation of the relationships among manufacturer decisions,

retailer decisions, and retailer performance. According to this framework, manufacturer decisions on communication and promotion affect retailer decisions, and vice versa. These decisions of the manufacturer and the retailer affect retailer performance at brand, category, store, and customer levels, which eventually affects manufacturer and retailer decisions. In this framework, retailers make decisions on price promotion, non-price support (e.g., display), coupon, price, advertising, loyalty program, and brand type (i.e., national vs. private label brands). We used this framework as a roadmap of our research model but mainly focused on the effects of coupon and loyalty programs on brand level performance in the context of e-commerce.

Various promotion methods and the framing of deals influence consumer perception and behavior regarding these promotions and deals (Ailawadi et al. 2009). The effectiveness of the promotion can vary across product categories (e.g., Banerjee 2009; Sun 2005), and retailers need to understand how different consumers respond to different promotions (Ailawadi et al. 2009). Given that consumers increasingly use multiple channels, i.e., using both offline stores and online websites (Kushwaha and Shankar 2013), it is important to understand how to promote to consumers utilizing the characteristics of online channels so that consumers can get tailored information that satisfies their needs. Taken together, we extended the existing theoretical framework by considering product category effects in the online retailing context. Specifically, we proposed our research model where online coupon amounts and online reward point amounts each influence order amounts and where product

categories moderate the impacts of the two promotion methods (see Figure 1).



<Figure 1> Conceptual Model

Our study was based on three areas of literature: effects of online coupons, effects of online loyalty programs, and variations of the promotional effects by product category. We reviewed the effects of traditional promotion methods first and extended the application to the e-commerce market with the focus on variations in the promotional effects.

1. Effects of Coupons

The purposes of coupons are to stimulate short-term demand (Levy, Webster, and Kerin 1983), induce consumers to switch brands (Blattberg and Neslin 1990), attract new customers while encouraging existing customers to repurchase (Babakus, Tat, and Cunningham 1988), and promote new products (Zhao et al. 2014). Sometimes, coupon possession itself also induces consumers to purchase products (Sen and Johnson 1997). A high face value of coupons is an important factor to increase the redemption rate, which subsequently leads to an increase in sales (Leone and Srinivasan 1996). In general, coupons are an effective way to attract users

and increase revenue (Chiou-Wei and Inman 2008) because coupons help consumers purchase products at lower prices (Oliver and Shor 2003). Venkatesan and Farris (2012) quantified the effectiveness of retailer coupons into redemption effects and exposure effects. They found that coupons are more effective if they provide higher discounts, are unexpected, and are positioned as especially selected for and customized to consumer preferences. Interestingly, mere exposure to customized coupon campaigns led consumers to visit stores, resulting in a revenue increase.

The disadvantages of traditional paper-based coupons are that consumers need to collect, clip, organize, and take the coupons with them for redemption. In contrast, as online coupons are instantly issued to targeted consumers, those consumers just need to determine redemption. Also, because online shopping can be accomplished privately, consumers are free from a negative self-perception that they can be seen as cheap and/or poor, which can be an obstacle to the use of coupons (Hill and Harmon 2009). That is, online coupons have unique merits while they also have the same effects as traditional coupons.

Consequently, the positive relationship between coupons and financial performance is also found in the online business setting. For example, Lu et al. (2013) found that restaurants that offered online coupons showed higher revenues than those that did not. In the tourism and hospitality industry, Sigala (2013) found that online coupons could support the implementation of revenue management and differential pricing strategies for selling unsold capacity and managing demand fluctuations. In

addition, revenues from online daily deals and discounts sites, including Groupon.com and LivingSocial.com, were projected to top \$2.67 billion in 2011, representing an increase of 138% from \$1.12 billion in 2010 (Rueter 2011). In this study, we proposed the hypothesis as follows, based on the positive relationship between coupons and firms' performance found in the literature.

H1: Online coupon amounts will increase order amounts.

2. Effects of Loyalty Programs

In loyalty programs, reward points are credited to customers for each transaction, and consumers redeem reward points after a certain amount of credits have accumulated. This scheme promotes the 'lock-in' effect, as it makes consumers return to the firm offering the loyalty program. In addition, an effective reward program can encourage customers to make decisions that maximize expected utility over an extended time horizon rather than at each purchase occasion (Lewis 2004). Therefore, loyalty programs play an important role in building long-term relationships and customer value. However, loyalty programs also present the problem that the relationship between behavioral loyalty and profitability is weak (Reinartz and Kumar, 2002).

Similarly, online retailers actively utilize reward points as an important promotion method to stimulate demand. Loyalty programs work well online as the common interest of receiving rewards attracts customers to return to that particular shopping community (Yue and Chaturvedi 2000). Hence, rewards usage is expected to increase online

retailers' financial performance. Note that many firms expend considerable efforts and money on developing and operating loyalty systems (Gomez, Arranz, and Cillán 2006; Meyer-Waarden 2007). However, online shopping malls already operate on web-based systems, and thus running a loyalty program takes less cost and effort than for traditional retailers. Financial performance of loyalty programs would therefore be more cost-effective at online shopping malls. Based on the aforementioned arguments, we proposed the second hypothesis.

H2: Online reward point amounts will increase order amounts.

3. Effectiveness Comparison

Many researchers have found that the effectiveness of a promotion mix can vary due to a number of factors. Regarding coupon usage, for example, Chiou-Wei and Inman (2008) found that redemption rates of online coupons increased as coupon face value increased, implying that online coupons may be more effective for larger-ticket items and durables (Grewal et al. 2011). Chen, Monroe, and Lou (1998) found that framing price promotion messages is important across product categories. For smaller-ticket items, consumers may prefer savings in percentage terms over the same price reduction in dollar terms, while for larger-ticket items, consumers may prefer dollar terms over percentage terms. Banerjee (2009) also found that percent or dollar off coupons are preferred when shoppers have specific shopping goals or want to make smart self-attributions.

Firms generally offer different types of promotion

methods, and consumers often prefer one promotion method over other methods. For example, Chen, Monroe, and Lou (1998) found that coupon promotions produced more favorable evaluations and purchase intentions than did other price discount promotions. Because firms have limited budgets and human resources to carry out promotions, it is important for firms to determine the effectiveness of each promotion method and the resulting budget allocation.

The effectiveness of promotions depends on the amount of effort needed to reach the requirement of a particular reward (Jang and Mattila 2005). Compared to coupons that are available to targeted consumers without their prior effort, loyalty programs require consumers to accumulate a certain number of points. Therefore, consumers are more likely to prefer coupons over reward points. For example, Jang and Mattila (2005) found that restaurant customers prefer immediate rewards (e.g., discount or cash back) to point-system rewards, even if accumulated rewards carry higher values. The effectiveness also depends on consumer loyalty. As consumers accumulate reward credits, they may become more familiar with the online retailer and, as a result, become loyal to the retailer. Loyal consumers are less sensitive toward price-off promotions than are non-loyal consumers (Ramirez and Goldsmith 2009). The possible reason is that loyal consumers tend to make their purchase decisions based on aspects such as quality, internal demands, and personal values rather than price reductions. In this study, we followed the previous literature view that coupons are more preferred by consumers and set up the following hypothesis.

H3: Online coupon amounts will have a higher promotional effect on order amounts than will online reward point amounts.

4. Variations in the Promotional Effects by Product Category

Previous marketing research has confirmed that the promotion types that consumers prefer depend on the product category (Banerjee 2009; Sun 2005). Banerjee (2009) revealed that volume discounts and cash discounts were the first and second most preferred promotion types for consumable products such as detergents and shampoos, whereas freebies and cash discounts were the top two choices for durable products such as clocks and light bulbs. Sun (2005) explained the varying impact of promotion by product category in relation to consumption rates. She found that the promotion-induced additional purchases were consumed at a faster pace for yogurt than for tuna, indicating that the promotion effect on consumption is bigger for product categories that are easily perishable.

We infer the promotion effect in the fashion category could be different than that of the focal products of previous research, which were primarily grocery store products. The previous promotion literature is somewhat irrelevant to explain the fashion promotion effect on the segmented fashion products of women's wear, men's wear, casual wear, etc. Data used in previous research were household products purchased by one or more family members for household consumption. However, each fashion category has target consumer group(s), and fashion products are not purchased for household

consumption. Hence, consumer characteristics and behavior for each product category need to be considered to understand the differences of promotion effects.

It is known, in general, that fashion product consumers are less sensitive to price-related promotions (Ramirez and Goldsmith 2009) as fashion products are considered high-involvement products (O’Cass 2004) for which consumers are likely to undertake sophisticated decision-making processes of information search, alternative comparisons, and tryouts before purchase (Morganosky 1986). However, when promotion effects have been examined by consumer segments, significant differences have been found. In general, female consumers are more involved in fashion products than are male consumers (Swinyard 1993). In addition, consumers with high involvement are more often associated with hedonic shopping rather than utilitarian shopping when they want to purchase fashion products (Morganosky 1986). Stated reversely, males, who are less involved in fashion products, tend to react more to price changes toward fashion items (utilitarian-focused promotions) (Ramirez and Goldsmith 2009). Blackwell and Mitchell (2006) also identified similar gender differences among younger consumers; young male fashion consumers, compared to young females, are more likely to possess store-loyalty and low-price seeking behavior. Therefore, the findings of previous research suggest that price-related promotions are less effective for women’s category than for men’s category as females are solely the dominant consumers purchasing women’s fashions and male

consumers are major consumers for men’s category.

Similarly, as younger consumers tend to frequently purchase products in the casual and accessories categories and Smith (2012) found that millennials increasingly prefer online coupons over any other mode of online promotion, we expect the casual and accessories categories could have a stronger promotion effect than women’s wear, but a weaker effect than men’s wear. Thus, as the response rates and sales impacts of targeted promotions depend on the characteristics of categories and consumers (Osuna, González, and Capizzani 2016), we suggested two hypotheses.

H4a: The relationships between online coupon amounts and order amounts will vary by fashion product category.

H4b: The relationships between online reward point amounts and order amounts will vary by fashion products category.

III. Methodology

1. Model

We set up a random effects model in the equation below, which is also depicted in Figure 1, to examine the effects of brand i ’s coupon amounts and reward point amounts in month t on order amounts in the same month.

$$\begin{aligned} \log Order_{it} = & \beta_{0i} + \beta_1 \log Coupon_{it} + \sum \beta_2 \log Coupon_{it} \times Category_{ij} \\ & + \beta_3 \log Point_{it} + \sum \beta_4 \log Point_{it} \times Category_{ij} \\ & + \sum \beta_{5,k} \log Control Variables_{k,it} + \epsilon_{it} \end{aligned}$$

where j represents six categories (i.e., accessories, casual, kids’/life, men’s, sports, and women’s). We

<Table 1> Descriptive Statistics of Major Variables by Category (Unit: \$1,000)

Category	N	Obs	Order Amounts			Coupon Amounts			Reward Point Amounts		
			Mean	S.D.	Sum	Mean	S.D.	Sum	Mean	S.D.	Sum
ACCESSORIES	126	1103	15.41	81.33	16,999.89	1.38	8.46	1,524.44	0.30	2.15	330.48
CASUAL	62	526	28.80	127.61	15,147.49	2.33	11.42	1,224.91	0.71	4.13	373.55
KIDS'/LIFE	32	308	3.78	14.01	1,164.60	0.11	0.30	33.18	0.01	0.03	4.01
MEN'S	28	277	29.71	61.35	8,229.55	2.06	5.10	570.59	0.58	1.36	161.11
SPORTS	96	877	27.14	83.18	23,802.18	2.43	9.04	2,133.47	0.69	2.27	602.08
WOMEN'S	27	276	45.03	91.47	12,427.79	2.02	4.47	558.39	0.69	1.48	189.87

set the casual category to a base category for comparison. The interaction terms between coupon/reward point amounts and categories capture the effect differences across the categories. For control variables, we included product categories and months variables. Finally, we assumed that the error term follows a normal distribution with zero mean and non-zero variance.

We took the log of order amounts, coupon amounts, and reward point amounts (known as a log-log model) so that we could interpret the parameters of independent variables (e.g., β_1 and β_3) as elasticity. For example, a 1% increase in coupon amount leads to a $\beta_1\%$ increase in order amount. Therefore, we could understand which promote method is more effective by directly comparing the parameters.

2. Data Collection

We obtained the monthly transaction data for one year (2011) of 736 brands in six categories from one of the largest online shopping malls in Korea. Our data included order amounts, coupon amounts, and reward point amounts, with which we examined the effectiveness of different promotion methods. For

control variables, we used the dummy variables of product categories and months. To understand a stable relationship, we excluded the brands with an observation period of less than 6 months. In the end, we used 371 brands with 3,367 observations.

Table 1 presents descriptive statistics of the major variables by fashion product category. The sports category shows the highest sum of order amounts with \$23,802.18K, followed by the accessories category with \$16,999.89K and the casual category with \$15,147.49K. In terms of coupon amounts, while the sums of the sports, accessories, and casual categories are high (\$2,133.47K, \$1524.44K, and \$1,224.91K, respectively), the sums of the men's and women's categories are around \$500K each, and the sum of the kids'/life category is only \$33.18K. The reward point amounts show similar patterns. The sum is highest for the sports category (\$602.08K), followed by the accessories and casual categories, each with over \$300K. The men's and women's categories show sums of less than \$200K, and the kids'/life category shows the lowest level with only \$4K. The existence of similar patterns across order, coupon, and reward point amounts may imply the relationships between the order amounts and the two promotional methods.

<Table 2> Category Order Amounts by Customer Segment (Gender and Age Group, Unit:\$1,000)

Group	Accessories		Casual		Kids'/Life		Men's		Sports		Women's	
	M	F	M	F	M	F	M	F	M	F	M	F
≤19	121	117	39	12	0	0	18	3	60	37	4	9
20-29	770	2,147	751	519	6	9	491	219	1,015	761	76	1,245
30-39	1,505	3,422	2,249	2,741	104	290	1,390	724	3,607	3,021	291	2,687
40-49	908	2,397	1,139	2,062	40	80	1,129	638	2,996	3,404	225	1,689
≥50	339	665	273	396	4	15	563	254	1,135	1,075	148	767

Table 2 presents the category order amounts by customer segment in terms of gender and age, which is given as a summarized table as the original raw data were not available. The table shows clearly that category order amounts are closely related to customer segments. The accessories category amount is high for female consumers across the age groups. Also, the women's category amount is for the female group across age groups. In contrast, the men's category amount is high for male consumers across the age groups. For the casual, kids'/life, and sports categories, there are no large differences between male and female groups, but older customers ordered more than younger customers. That is, some categories are more gender- and age-related, while other categories are more age-related, implying that product categories are associated with customer segments as well.

IV. Hypotheses Testing and Results

The estimation results of the main variables in the hypotheses, followed by those of control variables, are presented in Table 3. The casual category is set to the base category, and the interaction effects between

the promotional methods and product categories are also based on the casual category. Regarding model fit, the log likelihood of the proposed model ($L_{Proposed}$) is -4,088.15, and the pseudo-R² ($= 1 - \frac{\ln L_{Proposed}}{\ln L_{Intercept}}$) is 30.6% (note that $L_{Intercept}$ means the log likelihood of the model with an intercept only and is -5,893.09 in our data).

First, the effect of coupon amounts on order amounts was significantly positive ($\hat{\beta}_1=0.502$), implying that if coupon amounts increased by 1%, then order amounts increased by 0.502%. That is, the availability of coupons at the online shopping mall induced customers to order more. Thus, H1, that coupon amounts will increase order amounts, was supported.

Second, the effect of reward point amounts on order amounts was significantly positive, too ($\hat{\beta}_3=0.278$), showing that if reward point amounts increased by 1%, then order amounts increased by 0.278%. Therefore, customers who used reward points were more likely to order products. This result supported H2 that reward point amounts will increase order amounts.

Third, the effects of coupon and reward point amounts were also different. In general, the effect of

<Table 3> The Estimation Results

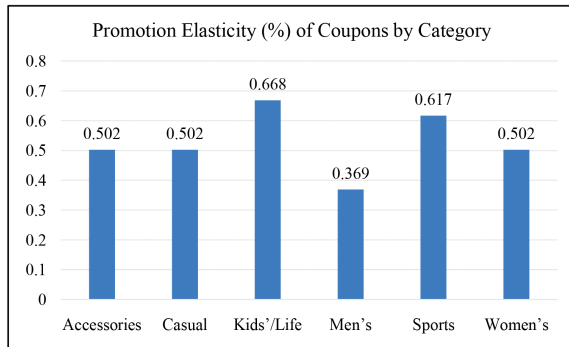
Category	Variable	Coefficient	S.E.
Intercept	Intercept	4.366***	0.098
Coupons	logCoupon	0.502***	0.027
	logCoupon_Accessories	0.051	0.032
	logCoupon_Kids'/Life	0.166***	0.047
	logCoupon_Men's	-0.133***	0.041
	logCoupon_Sports	0.115***	0.035
	logCoupon_Women's	0.063	0.046
Points	logPoint	0.278***	0.037
	logPoint_Accessories	0.028	0.045
	logPoint_Kids'/Life	-0.066	0.064
	logPoint_Men's	0.091*	0.054
	logPoint_Sport	-0.058	0.045
	logPoint_Women's	0.016	0.059
Control	Accessories	-0.291***	0.109
	Kids'/Life	-0.490***	0.162
	Men's	0.790***	0.173
	Sports	-0.671***	0.123
	Women's	0.146	0.193
	January	0.300***	0.079
	February	0.331***	0.073
	March	0.175***	0.067
	April	0.240***	0.064
	May	0.115*	0.061
	June	0.065	0.060
	July	0.005	0.058
	August	0.045	0.059
	September	0.031	0.059
October	0.081	0.059	
November	0.012	0.059	
Log-Likelihood		-4,088.15	

*** p-value < 0.01. ** p-value < 0.05. * p-value < 0.1

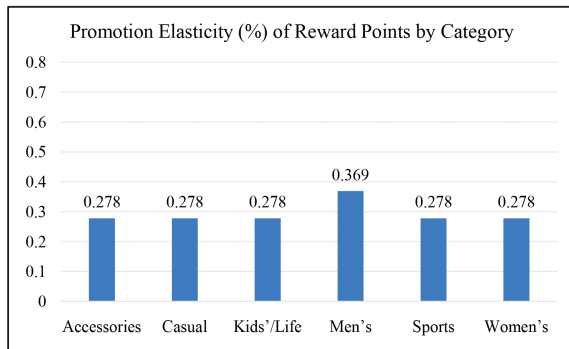
coupon amounts was higher than that of reward point amounts, as the coefficient of coupon amounts was larger in the log-log model. As stated earlier, the coefficient of coupon amounts was 0.502, which is almost two times larger than the coefficient of reward point amounts (i.e., 0.278). The coefficients equality test rejected the null hypothesis that the two coefficients are the same ($t=3.79$, p -value=0.00015). Thus, the difference in effects supported H3 that coupon amounts will have a higher promotional effect on order amounts than will reward point amounts.

Fourth, the effects of coupon amounts varied with product category; Figure 2A presents those differences. Compared to the casual category, the accessories and women's categories did not have a different effect of coupon amounts on order amounts. However, the effect was higher in the kids'/life and sports categories ($\hat{\beta}_2=0.166$ and 0.115, respectively), while the effect was lower in the men's category ($\hat{\beta}_2=-0.133$). That is, customers were more likely to order products if coupons were available in the kids'/life and sports categories (the total promotion elasticities were 0.668% and 0.617%, respectively),

A. Coupon Amounts



B. Reward Point Amounts



**<Figure 2> Total Promotion Elasticity (%)
by Category**

possibly because those categories are more related to specific lifestyles. In contrast, customers who bought products in the men's category might have associated coupons with cheap/poor self-perception (Hill and Harmon 2009) and did not utilize coupons well (the total promotion elasticity was 0.369%). The different effects of coupon amounts supported H4a, the relationships between coupon amounts and order amounts will vary by fashion product category.

The effects of reward point amounts were similar across the product categories as the interaction effects were not significant in many categories, as shown in Figure 2B. The only exception is that the effect of reward point amounts in the men's category was larger ($\hat{\beta}_4 = 0.091$) than the effect of reward point

amounts in all other categories. These findings mean that customers are more likely to purchase products in the men's category if they have reward points (the total elasticity is 0.369%). This significant result in the men's category partially supported H4b that the relationships between reward point amounts and order amounts will vary by fashion product category. In conclusion, the significant interaction effects of coupon amounts for the kids'/life, men's, and sports categories and the significant interaction effect of reward point amounts only for the men's category supported H4 regarding the different promotional effects.

The effects of the control variables are summarized as follows. Compared to the products in the casual category, the order amounts in the accessories, kids'/life, and sports categories were lower ($\hat{\beta}_5 = -0.291$, -0.490 , and -0.671 , respectively), while the order amounts in the men's category were higher ($\hat{\beta}_5 = 0.790$). There was no significant difference between the casual category and the women's category. There were monthly effects, too. Compared to December, the base month, order amounts for January through May were higher. In the rest of the months, there was no significant difference in order amounts.

V. Conclusion and Discussion

1. Summary

The purpose of this study was to understand the effects of promotional mix (coupons and reward points) on order amounts by fashion product

category at an online retailer. Compared to offline shopping malls, online shopping malls have a limitation such that consumers cannot try on fashion products, but they have advantages such that discount-related promotions are easy to implement and consumer reward programs based on transactions are relatively easy to track and manage. Based on these different environments, it is meaningful to understand promotional effectiveness at online retailers to develop an optimal promotion strategy with limited budgets and resources.

Using the actual transactional data of 371 brands of an online retailer, we found that both coupon amounts and reward point amounts increased order amounts and that coupons were twice as effective as reward points to increase orders. Also, the effectiveness of coupons varied with product categories more than did the effectiveness of reward points. Specifically, the kids'/life and sports categories showed the highest coupon effectiveness. The men's category showed the lowest coupon effectiveness, but it showed the highest reward point effectiveness. However, interestingly, the promotion effectiveness levels of coupons and reward points were similar in the men's category. This may be explained by male consumers or men's wear consumers being less involved in fashion items, and thus this category was more robust in terms of price-off strategies.

2. Theoretical and Managerial Implications

Our study extends the retailing literature, such as the review paper by Ailawadi et al. (2009), for making better promotion decisions and performance

in the online retailing context. Comparing the effectiveness of different promotional methods shows that retailers can improve effectiveness by coordinating the various methods, and considering the moderating effects of product categories suggests that retailers need to focus attention on the different values of product categories. Also, our empirical results will lead to directional hypotheses for future studies.

Our findings also provide insightful managerial implications. First, the focal firm can decide the optimal level of coupon amounts considering the expected order amounts. In particular, the effectiveness variations in the different product categories suggest that the firm should utilize the characteristics of each product category. For example, if the focal firm wants to increase order amount in the sports category, coupons are most useful. However, the focal firm needs to consider that consumers who buy products in the men's category are not sensitive to coupons. Therefore, if the focal firm determines coupon amounts in advance, it may need to allocate the coupons amounts to product categories based on coupon effectiveness in the various categories.

Second, the focal firm can also utilize the characteristics of product categories to improve reward point effectiveness. Because the effectiveness is highest in the men's category, the focal company can induce customers to use reward points in the men's category rather than in other categories. For example, the focal firm may offer higher values than actual reward points for the men's category. Also, considering that point effectiveness is lower than coupon effectiveness overall, the focal firm may

need to more optimally allocate its promotion budget into the different promotion types such that it allocates more budget to coupons.

3. Limitations and Future Research

This study has several limitations and issues that need future research attention. First, it is necessary to incorporate more decision variables and retail performance, which were shown in the conceptual framework suggested by Ailawadi et al. (2009). With more decision variables, researchers can examine the interaction effects between different promotional methods or the effects of new types of promotions, such as customized coupons based on loyalty data (Osuna et al. 2016). Also, it is worth investigating how retailer performance adversely affects manufacturer and retailer decisions. Second, the data used were aggregated monthly data on six fashion product categories that the focal firm carried. Thus, we could not understand purchase behavior regarding all fashion product categories, including shoes, beauty, or jewelry products and could not examine individual level behavior. Thus, future studies need to include additional products based on individual transactions. Third, the data did not have correct price information, and thus we could not control price effect in our model. While we found the positive effect of coupon amounts on order amounts, we could not examine whether coupons and reward points positively or negatively contributed to profit because we did not have cost information. This topic is one of the future research directions also raised in the review paper by Ailawadi et al. (2009). Finally, it is necessary to consider a new trend that consumers

use multiple channels (Kushwaha and Shankar 2013). For example, a retail store may offer customers at the offline stores coupons that can be used for online purchases, and vice versa (Neslin and Shankar 2009). In addition, many consumers have moved to using their mobile devices for online shopping (e.g., Wang et al. 2015). Easy access and the convenience of mobile shopping have changed consumer search and purchase behaviors. Thus, firms need to examine the dynamics of promotion effectiveness in the new technology environment.

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온라인 소매점의 패션제품 카테고리별 쿠폰과 보상 포인트의 구매 촉진효과에 관한 연구

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ABSTRACT

본 연구는 패션제품의 카테고리 별로 다양한 구매촉진 효율성에 관한 이해를 높이고자 하는 목적으로 온라인 쇼핑 환경에서 실행되었다. 오프라인 소매점과 마찬가지로 온라인 소매점도 쿠폰이나 보상프로그램과 같은 다양한 프로모션 프로그램을 통해 고객들의 제품 구매를 촉진시킨다. 하지만, 프로모션 프로그램의 효과를 극대화하기 위해서 온라인 소매점이 취급하는 제품의 종류와 특징에 따라 다른 판촉 전략을 사용해야 할 필요성이 있다. 이에 본 연구는 한 온라인 쇼핑몰의 371 패션브랜드의 실제 거래 데이터를 이용하여 쿠폰과 보상 포인트의 사용이 구매금액에 어떠한 영향을 미치는지 살펴보았으며, 패션제품 카테고리별 조절효과 또한 조사하였다. 연구 결과, 쿠폰과 보상 포인트 모두가 구매금액의 증가에 유의한 영향을 미치는 것으로 나타났지만, 쿠폰이 구매를 더욱 촉진시키는 상대적으로 효과적인 프로모션 방법임을 확인하였다. 또한, 패션제품 카테고리별로 쿠폰과 보상 포인트의 사용이 구매금액에 영향을 미친다는 조절효과도 확인하였다. 본 연구의 분석 결과에 기초하여 온라인 소매점들은 보다 효율적이고 적합한 구매촉진 방법의 적용 및 제품 카테고리별로 구매촉진 방법의 차별적 적용 등을 고려할 수 있을 것이라 기대된다.

주제어: 전자상거래, 쿠폰사용, 보상프로그램, 판매촉진 효과, 패션마케팅

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