The Moderating Effects of Product and Consumer-Brand Relationship on Type of Rewards in Consumer Cocreation

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Abstract

Purpose – *The main objective of this paper is to examine the differential effectiveness of monetary and non-monetary rewards in motivating consumers to participate in co-creation during the process of new product development.*

Method – *Three pre-tests and two experimental design studies were conducted to test the conceptual framework. Study 1 involves a 2 (reward type: monetary vs. non-monetary rewards) X 2 (product type: utilitarian vs. hedonic products) between-subject factorial design to test the moderating role of product type in reward type – WPCC (willingness to participate in consumer co-creation) relationship. Study 2 tests the moderating role of the consumer-brand relationship type in reward type – WPCC relationship. A 2 (reward type: monetary vs. non-monetary rewards) X 2 (consumer-brand relationship type: exchange relationship vs. communal relationship) between-subject factorial design is conducted.*

Findings – *Results of our studies provide empirical evidence that the differential effectiveness of monetary and non-monetary rewards depends on product type and consumer-brand relationship type. Specifically, consumers are more motivated by monetary rewards when they are engaged in the co-creation of utilitarian products; consumers are more attracted by non-monetary rewards when helping develop hedonic products. Moreover, the relationships between consumers and products (in either an exchange relationship or a communal relationship) will also affect the effects of monetary vs. non-monetary rewards on consumer co-creation. In other words, monetary rewards work better in motivating consumers to participate in co-creation when there is an exchange relationship between consumers and products, while non-monetary rewards motivate consumers in a communal relationship better.*

Limitations – *Since our research used student samples, future research could use non-student samples to corroborate the generalization of current research. Moreover, we only* *tested product type and consumer-brand relationship type as moderators. It is plausible that other relevant factors such as cultural differences may play a role in the link between reward type and consumer co-creation performance.*

Implications – *Our research provides important practical implications to marketers and brands that both product type and consumer-brand relationship type should be taken into consideration when brands design their consumer co-creation rewarding mechanism. Companies should use different rewards to promote consumer participation in new product development. Companies, in addition, would benefit by knowing that their existing relationship type with a consumer (exchange or communal) affects the impact of monetary vs non-monetary rewards on consumer co-creation.*

Originality – *This is the first research in marketing, as far as we know, that examines how the two novels but relevant constructs - product type and consumer-brand relationship - may moderate the effects of monetary vs. non-monetary rewards on consumers' willingness to participate in consumer co-creation.*

Keywords: **c**onsumer co-creation, new product development, reward type, product type, consumer-brand relationship type

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Introduction

Since the introduction of service-dominant (S-D) logic (Vargo & Lusch, 2004, 2008), consumer co-creation has been gaining popularity in marketing research and with marketers (Hoyer et al., 2010; Leung et al., 2019; Read et al., 2019; Xie & Jia, 2016). Consumer co-creation refers to "a collaborative new product development activity in which consumers actively contribute and select various elements of a new product offering" (O'Hern & Rindfleisch, 2009, p. 4). It advocates collaborative creation (Prahalad & Ramaswamy, 2000) and marks a shift away from a company-centric view. In a co-creation process, consumers provide knowledge and communicate ideas with brands to develop new products or to improve existing products (Ernst et al., 2010) in an easy and cost-effective way (Hoyer et al., 2010; Xie & Jia, 2016).

The benefits of doing so are abound such as involving consumers in co-creation allows brands to better understand consumer needs, improve customer satisfaction, increase product development efficiency and effectiveness, gain advantages over competitors, and decrease the likelihood of new product failure (Hauser, Tellis, & Griffin, 2006; Hoyer et al., 2010; Leung et al., 2019; Prahalad & Ramaswamy, 2004; Xie & Jia, 2016). Given such benefits, brands have developed programs to motivate consumers to participate in the co-creation process. In these programs, consumers are offered either monetary rewards (e.g., cash awards, coupons, vouchers, etc.) or non-monetary rewards (e.g., recognitions, VIP status, etc.) when their contributions are adopted.

For example, on Lego Ideas, Lego's online community, consumers are able to submit their ideas/designs for new sets. Once a new set idea receives 10,000 votes, Lego reviews the design which, if approved, will be produced, and sold worldwide. The creator (consumer) will be rewarded a certain percentage of sales (monetary reward) and recognition as the creator on all packages (non-monetary reward) (Milbrath, 2016). Lego Ideas has proven to be a powerhouse fueling the brand's continuous innovations and competitive advantages.

After conducting a meta-analysis, Chang and Taylor (2016) summarized four categories of factors that affect the effectiveness of consumer participation in a co-creation process: contextual factors, relationship factors, organizational support factors, and consumer participation design factors. Previous research has been evolving separately, studying individual constructs belonging to the four categories. For example, Franke, Keinz, and Klausberger (2013) studied reward type in the context of consumer co-creation, one of the consumer participation design factors. Witell, Gustafsson, and Johnson (2014) studied product type, one of the contextual factors. Athaide, Stump, and Joshi (2003) studied the consumer-brand relationship, which is one of the relationship factors. However, little research has examined the interaction effects of these factors to date. We hope to fill this gap in the literature. This is important because none of these factors are likely to work exclusively for others. To the best of our knowledge, no research has ever empirically investigated consumer co-creation in the contexts of those variables.

Moreover, most of the participation motive research examined brand community members and focused on the impacts on the effectiveness of consumer co-creation. Franke, Keinz, and Klausberger (2013) called for more research on consumers' initial decision to participate. Our research addresses such issues by examining the impact of reward type, especially the effects of monetary versus non-monetary rewards on consumers' willingness to participate in consumer co-creation (WPCC). In this study, we further propose two moderators, product type and consumer-brand relationship type, and examine their effects on the link between reward type and WPCC.

Our research offers important theoretical and practical value. Our experiments extend the existing marketing literature on consumer co-creation and introduce two important moderators in the relationship between reward type and WPCC. Practically, our results suggest that companies should use different rewards to promote consumer participation in new product development. Companies, in addition, would benefit by knowing that their existing relationship type with a consumer (exchange or communal) affects the impact of monetary vs non-monetary rewards on consumer co-creation.

Literature Review and Hypotheses

Reward Type

Marketing literature on consumer co-creation motives mainly focuses on identifying different motivations (i.e., Xie & Jia, 2016), and discussing factors that affect the effectiveness of consumer co-creation (Chang & Taylor, 2016; Franke, Keinz, & Klausberger, 2013). Literature shows that consumers are motivated to participate in the co-creation process for two reasons: (1) intrinsic motivations such as curiosity, feeling of self-achievement, dissatisfaction with current products, interest in innovation, and altruism (Fuller, Faullant, & Matzler, 2010; Hars & Ou, 2002; Nambisan & Baron, 2009; Xie & Jia, 2016) and (2) extrinsic incentives such as monetary rewards, future return expectation, and the recognition by the corporates and the public (Fuller, Faullant, & Matzler, 2010; Hars & Ou, 2002; Jeppesen & Frederiksen, 2006; Oreg & Nov, 2003; Xie & Jia, 2016).

Consumers are intrinsically motivated if they have an inherent need to feel capable and self-determined (Deci, 1975) and they participate in co-creation for its own sake (Fuller, Faullant, & Matzler, 2010). Consumers are extrinsically motivated if the participation originates from the environment and is driven by rewards (Hars & Ou, 2002). Due to the lack of adequate research in the domain of extrinsic incentives in the context of consumer co-creation, we decided to limit our research to examine the impacts of two types of extrinsic motivations, monetary versus non-monetary rewards.

The rewards consumers receive play a critical role in attracting them to participate (Keh & Lee, 2006). Using rewards consumers do not always necessarily appreciate leads to their hesitation to join the programs (Ruzeviciute & Kamleitner, 2017). Thus, companies need to understand which type of reward can motivate consumers.

There are two types of extrinsic rewards: monetary rewards (e.g., cash awards, coupons, vouchers, etc.) and non-monetary rewards (e.g., recognitions, VIP status, etc.; Franke, Keinz, & Klausberger, 2013) mainly adopted by the companies. Generally, monetary rewards provide "economic benefits" while non-monetary rewards focus more on "experiential or relation-oriented benefits" (Ruzeviciute & Kamleitner, 2017, p. 114).

Researchers have examined monetary versus non-monetary incentives in different contexts. For example, Ruzeviciute and Kamleitner (2017) found that monetary referral rewards are better than non-monetary referral rewards in loyalty programs across various industries. Monetary rewards are valued (Furinto et al., 2009) because of their utilitarian benefits (Ruzeviciute & Kamleitner, 2017) and attention-grabbing (Hubner & Schlosser, 2010), thus they are a better motivator (Hammermann & Mohnen, 2014).

Among the very limited research on the differential effectiveness of monetary vs. non-monetary rewards in a consumer co-creation process, researchers came to different conclusions. For example, monetary rewards, in general, seem to produce better performance than non-monetary rewards, but non-monetary rewards may not incentive everybody to the same degree, due to objective numeracy, or the ability to understand or use mathematical concepts (Svensson, 2019). In addition, Herstatt and Von Hippel (1992) argued that economic benefits were the major reason why consumers were involved in consumer co-creation; while Fuller et al. (2006) indicated that non-monetary rewards had a bigger impact on consumer involvement in co-creation when motivating lead users of BMW automobile accessories. Similarly, exploratory research done by Franke, Keinz, and Klausberger (2013) indicated that featuring the winning consumer's name on the product is one of the most effective ways to increase consumers' willingness to participate through fairness perception of the co-creation process.

WPCC

Consumer participation in co-creation refers to a consumer's involvement in the company's new product development process (Fang, 2008). Since involving consumers in the early ideation stage has a higher impact on new product financial performance than in the later launch stage and the development stage (Chang & Taylor, 2016), our research focuses on consumer participation in the early ideation stage. Most of the research on participation motives uses samples (i.e., brand communities' members) who have already shown interest in participating and focus on the impacts of motivations on the effectiveness and efficiency of co-creation. Franke, Keinz, and Klausberger (2013) posited the importance of more research on willingness to participate in consumer co-creation for two reasons: 1) brand communities need to attract new members constantly due to their "volatile and loose nature" (Franke, Keinz, & Klausberger, 2013, p. 1497) and 2) more consumers are needed since many more companies will launch co-creation programs. Therefore, our research particularly focuses on the effects of WPCC.

Since previous work examining the differential effectiveness of monetary and non-monetary incentives in the consumer co-creation process has shown mixed results, we propose two moderators, product type and consumer-brand relationship type (Chang & Taylor, 2016), which affect reward type – WPCC relationship.

Moderator #1: Product Type

Strahilevitz and Myers (1998) classified products into two types: utilitarian products and hedonic products. Utilitarian products refer to the products purchased to "fill a basic need or to accomplish a functional task" while hedonic products are defined as something for “sensual pleasure, fantasy, and fun” (Strahilevitz & Myers, 1998, p. 436). Both utilitarian and hedonic products rely on consumer co-creation for new product ideas. Using as an example of utilitarian products, DEWALT, a leading manufacturer of power tools (utilitarian products), gathered invention submissions from its insight community with more than 10,000 members (Milbrath, 2016). Lego is an example of a hedonic product using co-creation.

According to the exchange theory framework (Ryu & Feick, 2007), whether consumers are willing to participate in co-creation depends on the perceived benefits and costs of the exchange. The perceived benefits or motivations for participating in co-creation include intrinsic benefits such as the feeling of self-achievement and altruism (Fuller, Faullant, & Matzler, 2010), and extrinsic benefits such as monetary rewards and non-monetary rewards (Fuller et al., 2006). Participating in consumer co-creation also involves costs such as time and effort (Ryu & Feick, 2007) contributing to the co-creation and the potential ego risk if the submission is not accepted.

Chandon, Wansink, and Laurent (2000) developed a benefit congruency framework, arguing that the effectiveness of a sales promotion depends on the congruency between the benefits provided by the sales promotion (utilitarian benefits such as savings vs. hedonic benefits such as opportunities for value expression) and its promoted products (utilitarian vs. hedonic). They further empirically proved that monetary promotions delivered more utilitarian benefits, and thus worked better for utilitarian products than hedonic products while non-monetary promotions were preferred for hedonic products. Based on the benefit congruency framework, we argue that a similar relationship exists in a consumer co-creation process – monetary rewards deliver more utilitarian benefits (Ruzeviciute & Kamleitner, 2017) and work better for utilitarian products; non-monetary rewards deliver more hedonic benefits and work better for hedonic products. On the cost side, we argue that perceived costs would be the same for utilitarian and hedonic products. Therefore, we propose the following hypotheses.

H1a: For utilitarian products, monetary rewards are more effective in enhancing consumers’ WPCC than non-monetary rewards.

H1b: For hedonic products, non-monetary rewards are more effective in enhancing consumers’ WPCC than monetary rewards.

Moderator #2: Consumer-brand Relationship Type

Aggarwal (2004, p. 87) examined two relationships that consumers could form with brands: an exchange relationship in which “benefits are given to others to get something back” and a communal relationship in which “benefits are given to show concern for other's needs”. As argued by Aggarwal (2004), consumers’ evaluations rely on whether brands adhere to or violate the norms of relationships between consumers and brands. As proposed by Clark and Mills (1993) and empirically tested by Aggarwal (2004), exchange relationship norms require prompt, comparable, and monetary benefits in return; however, communal relationship norms expect non-immediate, non-comparable, and non-monetary benefits since it is based on the concerns for consumers' genuine needs rather than simply quid pro quo. Thus, monetary rewards are more effective for an exchange relationship while non-monetary rewards work better for a communal relationship. On the cost side, the perceived costs of consumer participation are not influenced by the consumer-brand relationship. Following the exchange theory framework (Ryu & Feick, 2007), we argue that when consumers are in an exchange relationship with a brand, they will be more willing to participate in a co-creation process if monetary rewards are offered; in a communal relationship, consumers will prefer non-monetary rewards. Therefore, we propose the following hypotheses.

H2a: When consumers have an exchange relationship with a brand, monetary rewards are more effective in enhancing consumers' WPCC than non-monetary rewards.

H2b: When consumers have a communal relationship with a brand, non-monetary rewards are more effective in enhancing consumers' WPCC than monetary rewards.

Figure 1 illustrates the conceptual framework of this research.

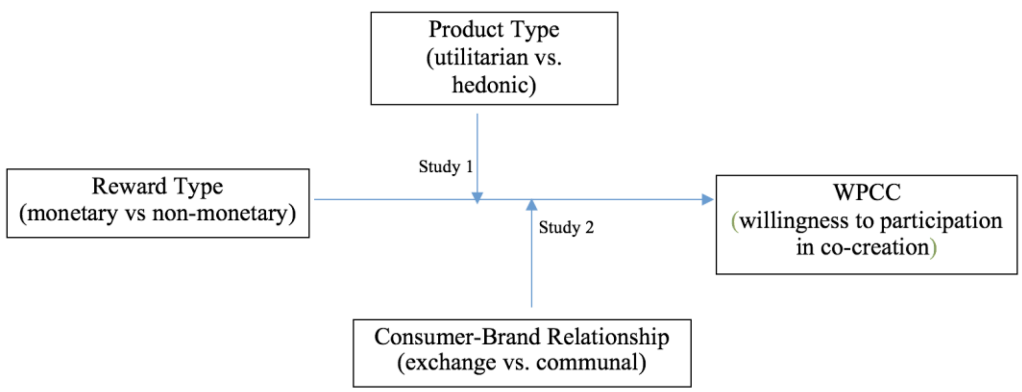

Figure 1: Conceptual Framework

Literature Review and Hypotheses

Pretests

Three pretests were conducted. Ten students in a university were randomly selected and interviewed in Pretest 1. The interviewees were asked to talk about the products they were interested in and willing to get involved in the co-creation process, and the ten most frequently mentioned products were identified.

Then in Pretest 2, another 20 students from the same university were recruited to answer an online survey. After being given the definitions of utilitarian products and hedonic products (Strahilevitz & Myers, 1998), the participants were asked to rate the ten products identified in the first pretest on a 7-point Likert scale (1 = it is definitely a utilitarian product; 7 = it is definitely a hedonic product). Moreover, the attractiveness (Khan and Dhar 2010) of the ten products was also measured. After examining the ratings of all ten products, T-shirts were chosen as utilitarian products ($M_{\text{T-shirts}} = 2.55$) and cameras as hedonic products ($M_{\text{cameras}} = 4.65$). A repeated measures ANOVA with a Greenhouse-Geisser correction indicated mean product type differed significantly between the two products ($F(1,19) = 24.72$, $p < .001$). There was no significant difference between the two products in their attractiveness ($M_{\text{T-shirts}} = 4.75$, $M_{\text{cameras}} = 5.55$; $F(1,19) = 3.51$, $p = .08$). Therefore, T-shirts and cameras were chosen as stimuli used in the following Study 1. Moreover, Pretest 2 identified books as neither a utilitarian nor a hedonic product ($M_{\text{books}} = 3.70$) and showed an acceptable level of attractiveness ($M = 4.15$). Therefore, we chose a bookstore as the stimulus used in Study 2.

Pretest 3 tested the manipulations of two types of consumer-brand relationships – exchange relationship and communal relationship used in Study 2. Following the manipulations of consumers' relationships with a bank (Aggarwal, 2004, p. 91), we revised the scenario descriptions to manipulate consumers' exchange and communal relationships with a bookstore.

Exchange Relationship Scenario Description. You have been visiting Bookstore X for the last three years. You have used the bookstore quite extensively and have been very happy with their efficiency and the quality of their services. The bookstore has a variety of books and you can easily locate the books you want. The bookstore also periodically holds author events and book clubs, in which you may share your thoughts with authors and other readers. In the past, whenever you have gone to the bookstore you have gotten your work done very fast—they respect your time and get the job done fast. Overall your experience with Bookstore X has been excellent.

Communal Relationship Scenario Description. You have been visiting Bookstore X for the last three years. You have used the bookstore quite extensively and have been very happy with the quality of their services. You still remember how thrilled you were when you visited the bookstore for the first time. You have always associated the bookstore with positive feelings since you often visit the bookstore. The bookstore has always treated you well. Over the past few years, whenever you have visited the bookstore you have had a very pleasant and warm interaction. They seem to be taking a personal interest in you and have often taken the initiative to suggest new books in which you are interested in. Overall your experience with Bookstore X has been memorable.

Thirty participants were randomly assigned to one of the two consumer relationship types. After they read the bookstore description, participants answered 10 questions on the consumer-bookstore relationship to form a Net Communality Score by averaging the ratings of the 10 questions (Aggarwal, 2004). The manipulation check showed that the two relationship types were manipulated successfully (M_{exchange} = 3.74, M_{communal} = 4.81; $F(1,28)$ = 20.27, p <.001).

Study 1

A 2 (reward type: monetary vs. non-monetary rewards) × 2 (product type: utilitarian vs. hedonic products) between-subject factorial design was conducted to test the moderating role of product type in reward type – WPCC relationship. One hundred and thirty-two university students (53% female) were recruited and randomly assigned to the four conditions.

Participants were exposed to a description of the scenario: After buying a (*T-shirt/camera*) from company A, you are satisfied with the product. Currently, company A would like to invite you to design a product with a new pattern, color, or shape. Your design/idea will be evaluated by the company. The top three ranked consumers will receive *certain financial rewards or become company A's VIP consumers as the reward*. After reading the description, participants answered the degree to which they were willing to participate in consumer co-creation on a 3-item 7-point Likert scale. The measure of WPCC was adapted from Nambisan and Baron (2009) and was calculated by averaging the ratings on the following three questions (1 = strongly disagree; 7 = strongly agree): I am willing to participate in the company's creation activity; I am willing to submit my design and ideas to the company; I am willing to positively respond to and help other consumers' creation activities (a = 0.84). Demographics were also collected. An ANOVA results showed that cameras ($\text{M}_{\text{cameras}}$ = 5.14) were rated more hedonic than T-shirts ($M_{\text{T-shirts}}$ = 3.29, $F(1,130)$ = 54.43, p < .001). Therefore, the product type was successfully manipulated.

A 2 × 2 ANOVA was performed to test the impacts of product type and reward type on WPCC. Neither the main effect of reward type (M_{monetary} = 4.08, $M_{\text{nonmonetary}}$ = 3.88; F (1,128) = .02, p = .92) nor that of product type ($M_{\text{utilitarian}}$ = 3.84, M_{hedonic} = 4.12; $F(1,128)$ = .04, p = .88) was statistically significant. As predicted by H1a and H1b, a significant interaction effect of reward type and product type on WPCC was identified ($F(1,128)$ = 58.27, p <.001).

The results showed that participants were more likely to be motivated to participate in co-creating utilitarian products by monetary rewards (M_{monetary} = 4.67) than non-monetary rewards ($M_{\text{nonmonetary}}$ = 3.02, $F(1,64)$ = 70.76, p < .001); for hedonic products, non-monetary rewards ($\text{M}_{\text{nonmonetary}}$ = 4.75) worked better than monetary rewards (M_{monetary} = 3.48, $F(1,64)$ = 14.92, p <.001). Therefore, H1a and H1b were supported.

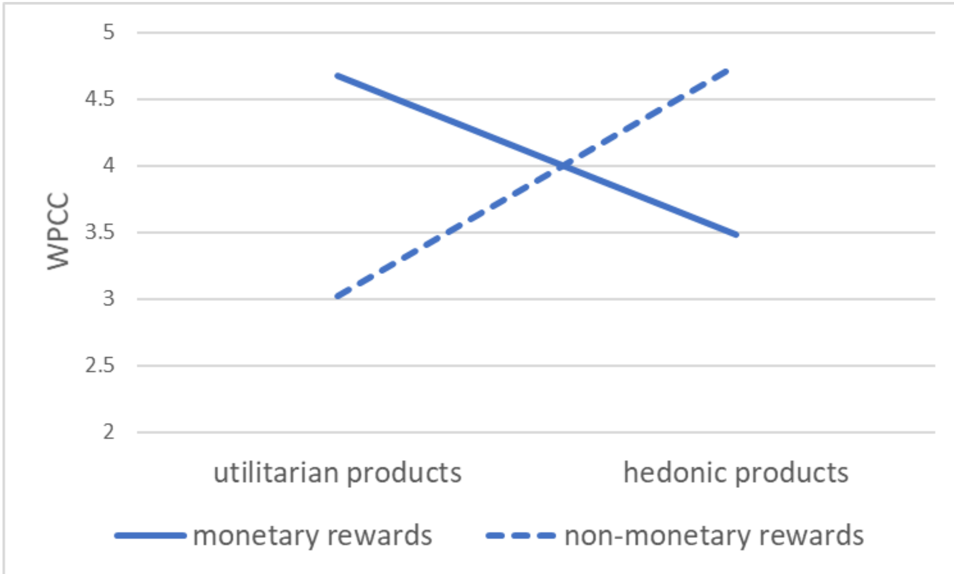

Figure 2: The Moderating Effect of Product Type
in Reward Type – WPCC Relationship

Study 2

The second study tested the moderating role of the consumer-brand relationship type in reward type – WPCC relationship. A 2 (reward type: monetary vs. non-monetary rewards) × 2 (consumer-brand relationship type: exchange relationship vs. communal relationship) between-subject factorial design was conducted. One hundred and thirty-three participants were recruited and randomly assigned to the four conditions. After removing seven incomplete questionnaires, a total of 126 (58.7% female) effective surveys from university students were included for further analyses. Consumer-brand relationship type was manipulated as in Pretest 3 and reward type was same as in Study 1.

After participants read the description of the consumer relationship with Bookstore X (exchange relationship vs. communal relationship), they were told: You are invited to participate in designing a newly expanded area of Bookstore X with book selections, store displays, and store layout. Your design/idea will be evaluated by the bookstore. The top three ranked consumers will receive *certain financial rewards (monetary reward) or become Bookstore X's VIP consumers as the reward (non-monetary reward)*. Then participants answered the questions of the 10-item consumer relationship measure (a = 0.86), the 3-item consumers' WPCC measure (a = 0.77), and demographics. Exchange relationship consumers (M_{exchange} = 3.65) showed a significantly lower communality score than communal relationship consumers (M_{communal} = 4.97, $F(1,124)$ = 79.19, p <. 001). Therefore, consumer relationship type was successfully manipulated in Study 2.

A 2 × 2 ANOVA was performed to test the hypotheses. None of the main effects was statistically significant (reward type: $M_{monetary}$ = 4.79, $M_{nonmonetary}$ = 4.72, $F(1,122)$ = .01, p = .95; consumer-brand relationship type: $M_{exchange}$ = 4.85, $M_{communal}$ = 4.66, $F(1,122)$ = .05, p = .86). A significant interaction effect of reward type and consumer relationship type on WPCC was identified ($F(1, 122)$ = 14.50, p < .001). When participants had an exchange relationship with the bookstore, monetary rewards ($M_{monetary}$ = 5.24) worked better than non-monetary rewards ($M_{nonmonetary}$ = 4.41, $F(1,61)$ = 8.62, p < .05) in motivating consumers to participate in co-creation process; while under the communal relationship, non-monetary rewards ($M_{nonmonetary}$ = 5.01) had a bigger impact than monetary rewards ($M_{monetary}$ = 4.30, $F(1,61)$ = 6.03, p < .05). Therefore, H2a and H2b were supported.

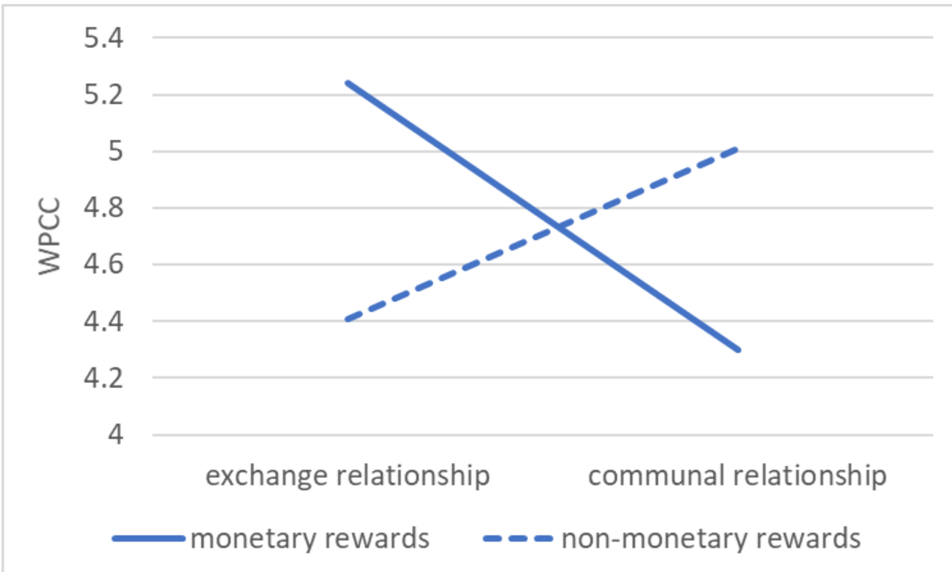

Figure 3: The Moderating Effect of Consumer-brand Relationship Type in Reward Type – WPCC relationship

Discussion and Conclusion

This research tests the differential effectiveness of reward type (monetary versus non-monetary) on consumers' willingness to participate in a co-creation process (i.e., WPCC). We further examine the two factors moderating the effect of reward type on WPCC: product type and consumer-brand relationship.

Study 1 finds that the differential effectiveness of monetary and non-monetary rewards on WPCC exists as a function of product type (utilitarian products and hedonic products). Since monetary rewards provide more utilitarian benefits than hedonic benefits, consumers are more motivated by the monetary rewards when they are co-creating utilitarian products; while non-monetary rewards deliver more hedonic benefits than utilitarian benefits, consumers are more attracted by the non-monetary rewards when helping develop hedonic products. Moreover, the results of Study 2 show that the relationship between consumers and a brand – exchange or communal – also affects the effect of monetary vs. non-monetary rewards in consumer co-creation. Exchange relationship norms favor monetary rewards in return when consumers offer help, therefore, monetary rewards work better in motivating consumers to participate in co-creation when there is an exchange relationship between consumers and companies. Communal relationship norms prefer non-monetary rewards, which motivate consumers in the communal relationship better.

The results of our studies provide important implications for managers. First, we inform brands that need to choose between monetary and non-monetary rewards by motivating consumers in a co-creation process. Different from either Herstatt and Von Hippel (1992) or Fuller et al. (2006), our results indicate monetary and non-monetary rewards showed no difference in affecting cocreation willingness. Given the inconsistent results in the literature, the performance of consumer co-creation depends on various moderators such as market, consumer, and product characteristics (Chang & Taylor, 2016).

Second, brands can increase consumers' participation in co-creation by matching the type of reward with the type of product. If brands would like to invite consumers to co-create utilitarian products, money is a better way to reward consumers; if brands try to motivate consumers to co-develop hedonic products, non-monetary incentives such as recognitions and honors should be provided. Finally, brands should also match the type of reward with the type of consumer-brand relationship when increasing consumers' participation in co-creation: monetary rewards work better for consumers in the exchange relationship; non-monetary rewards are better for consumers in the communal relationship.

In sum, our research suggests that both product type and consumer-brand relationship type should be taken into consideration when brands design their consumer co-creation rewarding mechanism. Since our research used student samples, future research should use non-student samples to enhance the generalization of current studies. Moreover, we only tested two moderators, product type and consumer-brand relationship type. Future research should propose and test the moderating roles of other factors such as cultural differences in the link between reward type and consumer co-creation performance.

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