

EFFECTS OF CO-CREATION ON NON-PARTICIPANTS OF THE CO-CREATION

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Abstract: *Many scholars assert that co-creation with customers in new product and service development will have positive effects on the brand, innovation speed, innovation adoption and loyalty. Looking more closely at these assertions one comes to the finding that the majority of this research applies to the customers that have participated in the co-creation. Only a few studies have investigated the effect of the co-creation on non-participants of the co-creation campaign, like fashion and fast moving consumer goods. This lack of research is remarkable, as co-creators generally only form a fraction of the total customer base of companies. This paper reports on two studies in the effects of co-creation in new product/service development on non-participants. The studies focus on the brand and product effects of co-creation disclosure – the communication by the company that the products have been developed through co-creation with other customers – for complex luxury goods and for consumer services. It is found that co-creation disclosure can have positive, though not necessarily significant effects on brand and product/service perceptions of non-participating consumers.*

Key Words: *Customer co-creation, Open innovation, Brand perception, Behavioral intentions*

1. INTRODUCTION

In the traditional conception of a business, value was created inside the firm and outside the market. Both the firm and the customer had their respective roles of production and consumption. In recent years however, companies have started to recognize the importance of communicating and interacting with customers [27]. Driven by new technology, customers are gradually becoming more powerful with unlimited access to information and the ability to connect with anyone at any time. An important outcome of this development is that many customers have begun to aspire to contribute in the process of new value creation [37]. Consequently, the market is moving away from a system of exchange towards a platform of interaction, where customers and firms cooperate to create new consumption experiences that match their ever changing demands [27, 20]. Advantages can come in the form of reduced research and development costs, superior products and services

[12] and even the creation of powerful advertisements [34]. In an age where it gets increasingly more challenging for companies to differentiate from competitors, a customer-oriented approach such as co-creation is thus regarded as a compelling move both in the eyes of the customer and the firm.

Co-creation has proven to be a viable strategy to cope with these changes. A number of organizations acknowledged the importance of creating interactive platforms to actively engage with customer communities in their innovation activities [10, 29]. Firms invite their customers to participate in multiple stages of the process such as ideation, design, production and even the marketing of their new business offerings [38].

Previous research demonstrated various brand effects of co-creation on customers who participated in the innovation process. The participants show more commitment and trust to the organization [14], exhibit enhanced loyalty and emotional connection [5], have a stronger tendency towards positive word-of-mouth [26], and demand for products that they co-created [29].

However, only few authors empirically tested for the effects on the perceptions of non-participating customers, who are not involved in co-creation [34, 9, 30, 35]. This lack of research is remarkable, since participants in co-creation usually only form a fraction of the total customer base. These previous studies generally show that non-participating customers have a preference for companies that co-create, as compared to those that do not involve their customers in their innovation processes. Only in the case of the co-creation of luxury fashion adverse effects are observed [8]. However, all other studies restrict themselves exclusively to consumer goods and to co-creation effects of the ideation stage of new product development (NPD). This omission leads to the question what effects to expect when communicating the co-creation of other than ordinary consumer goods and of activities beyond mere ideation.

To answer this twofold question, this research executed two studies to look into these effects. They concern new service development (NSD) and the co-creation of luxury goods. While the study on the co-creation of luxury goods can be regarded as a replication of previous studies on co-creation effects in the ideation stage, the other study, i.e. the co-creation effects of new services, will also dive more deeply in the effects of other stages of NSD.

Before elaborating on the research design, the execution, results and discussion of the two studies, a brief review of existing studies will be given in order to provide a context for the effects to be expected. The paper is concluded with a discussion on the implications and limitations of this research.

2. LITERATURE REVIEW

2.1. The brand perception and loyalty behavior

The co-creation concept matches the framework of brand equity creation (van Dijk et al., 2014), in which all types of sources, including places, things, people and other brands can be connected to a brand [16]. Informing people about co-creation might affect factors composing the equity of a brand such as brand awareness, brand image, brand attitude and brand credibility. Brand attitude is of great importance to organizations, as it relies on the individual's brand perceptions, which are viewed as a reliable predictor of consumer behavior. Moreover, according to Liu et al. [19], a positive relationship between brand attitude and brand loyalty exists. Since brand loyalty drives customers to repurchase goods from the same brand, it can increase profits [23].

2.2. The effect of co-creation on non-participants

Extant research demonstrated various brand effects of co-creation on customers who participated in the innovation process. The participants show more commitment and trust to the organization [14], exhibit enhanced loyalty and emotional connection [5], have a stronger tendency towards positive word-of-mouth [26], and demand for products that they co-created [29].

As for the effects on ordinary, non-participating users only a few studies have been executed. Such research does indeed signal changes in the perception of a brand as a result of co-creation [35]. Fuchs and Schreier [9] researched the effect of co-creation awareness on non co-creating consumers and demonstrated an increase in desire for co-created products that were either 'created' or 'selected' by customers. A more recent study by Schreier et al. [30] revealed that consumers perceive a product as more innovative when knowing that it was user designed. The study by van Dijk et al. [35] proves that information on co-creation to the consumer positively impacts product perceptions and behavioral intentions. Non-participating customers have positive purchase intentions towards advertised co-created products [9, 30, 35], show strong willingness to pay, intend to recommend the brand to others [30], and talk about the brand in general [35].

2.3. The product category under investigation

All aforementioned studies show a positive effect of co-creation disclosure or communication on co-creation activities, and tend to generalize these findings to all product categories. They investigate the effects mostly using low-cost and low-complexity goods [35, 30] for which an ordinary user is perceived as capable and sufficiently knowledgeable to co-create, so brand perceptions will undoubtedly improve. One study on the

effect on brand perceptions of co-created luxury fashion brands when communicating co-creation to the public [8], however, found an opposite effect to van Dijk et al. [35] and Fuchs and Schreier [9]: labeling products as user-designed had a negative effect on brand perceptions of non co-creating customers, because co-creation awareness reduces the product and therefore the brand quality in these consumers' eyes. Fuchs et al. [8] explain this effect with the lower perceived quality and the failure of these user-designed luxury fashion items to signal high status to others. Luxury products are symbolic [15], capable of stressing the status and image of a consumer towards others [22]. The importance of the psychological advantages, more than only utilitarian ones, is a major distinction of luxury goods compared to non-luxury goods. Consumers expect luxury brands to provide excellent quality in comparison with non-luxury brands. Luxury products are usually of a complex nature, where ordinary users are perceived as lesser capable to co-create, because they require expertise [30].

2.4. Co-creation of services

Services are different from products in a number of ways. The literature differentiates services through four unique characteristics: inseparability, intangibility, perishability and heterogeneity [25]. According to Alam [1], many service authors believe that these factors influence the innovation processes of service firms. A service innovation can therefore be seen as an advancement that alters one of the characteristics, and is separated from the level of tangibility [11].

Many service companies such as banks, insurance firms, telecommunication providers, airlines and rental services have started to invest in co-creation platforms. The Dutch bank Rabobank is a good example of a company that encourages customers to participate in discussion and co-development of new service ideas. In 2010, the bank set up a project named 'Denk Mee Met Je Bank', in which 100 existing clients were asked to share ideas on improving existing banking services including new savings accounts, mortgage processes and online banking. During a period of three months participants and employees were challenged to collaborate and generate solutions for various local services. It is said that the project turned out to be very successful with the introduction of several innovative improvements, which not only lowered research and development costs, but also built strong community and brand values (Marketingonline, 2015). Unfortunately, these merits are anecdotal, while no empirical proof has ever been given for these claims. As observed previously, studies on the effects of co-creation on non-participants is limited to product innovations.

2.5. Co-creation in NPD stages

According to Hoyer et al. [12], co-creation can be used in all four phases of the NPD: ideation, product development, commercialization and post-launch. Research shows that co-creation in the early stages of the NPD can lead to more innovative ideas [41]. Users are even assumed to have a better ability for idea generation than the employees of a company [17]. It is probably because of this, that the aforementioned research on the

effect of co-creation on non-participants all focus on co-creation in the conception stage of the new product development – where ideas are required – and not on later stages where more product-related expertise is required [39].

3. RESEARCH DESIGN

Because of the aforementioned limitations on product categories and innovation stage in the studies that have looked into the effect of co-creation on non-participating customers, we decided to replicate – though not exactly – these studies for more complex luxury products and consumer services.

The approach was quasi-experimental: Respondents were exposed to fictitious new product/service of the category under examination, which contained information on how it was conceived, developed and finally launched for the market. This information could also contain information on whether it was co-created or not. The sample consisted in both experiments of a control group to which it was not revealed that the product/service was co-created, and one or more groups who were told that other customers have participated in one or more development stages of the product/service. The studies focused on looking at the changes in product and brand perception in case that it was revealed that it was co-created. This revelation was embedded in the product description, which was presented as simple ad or press release to study participants. After the product presentation, participants were surveyed on their product/service and brand perceptions. Both studies were conducted online.

4. STUDY #1: EFFECTS ON LUXURY PERCEPTION AND BRAND EQUITY FOR CO-CREATION OF LUXURY PRODUCTS

The product category that was chosen for this study is the luxury automobile industry. It is not only suitable because of its difference from the fashion category, but also knows a wide co-creation application in practice. Examples are the BMW Co-Creation Lab [28] and “Your Ideas” by Ford [40]. Since this co-creation practice is practically limited to the ideation stage of the new car development, we will also look at only this stage of co-creation.

The effect of co-creation disclosure is measured using a survey with an experimental approach. In order to obtain a neutral and objective picture about what luxury brand to select for the survey, a pre-test was conducted (N=20). The goal of the pre-test was to select a brand that is seen as both luxurious and familiar. Participants were presented X car brands, known in the luxury category. The participants were asked on a 7-point Likert scale to indicate if they considered the brand as luxury and if they were familiar with the brand. The pre-test demonstrated that Mercedes-Benz was considered as most luxurious and familiar, so it was used for the survey.

In the survey, a between-subjects design was used. The participants were randomly assigned to one of the two groups to prevent selection bias. Respondents of both groups were exposed to the same information,

except for the – manipulated – addition of the disclosure of co-creation that was exposed only to one group. After this exposure participants received questions measuring the luxury and brand perception (dependent variables of this study), using Vigneron and Johnson’s [36] five dimensions of perceived luxury¹, and the scale developed by Spears and Singh [33] for brand attitude. The two facets (perceived quality and the signaling of high status) researched by Fuchs et al. [8] do not cover all of the determinants of perceived luxury by the consumer. All items were measured on 5-point Likert scale.



Mercedes-Benz

<p>Scenario 1: No co-creation</p> <p>Mercedes Benz is one of the most well-known automobile manufacturers in the world. This established global brand focuses on delivering their promise to provide "the best or nothing". Next year the organization will introduce a new car. For this car, Mercedes Benz developed new features, which will be announced soon.</p>
<p>Scenario 2: Co-creation</p> <p>Mercedes Benz is one of the most well-known automobile manufacturers in the world. This established global brand focuses on delivering their promise to provide "the best or nothing". Next year the organization will introduce a new car. For this car, Mercedes Benz collaborated with consumers to develop new features, which will be announced soon. Through a virtual platform, Mercedes Benz invited people from all over the world to contribute their suggestions and ideas. Moreover people were asked to evaluate concepts by voting for, and commenting them. Mercedes Benz used these consumers' inputs in developing the new car.</p>

Fig. 1. Messages used in study #1

Before being submitted to the assigned message, participants were asked to indicate whether they had ever co-created with Mercedes-Benz. Participants of the survey were recruited through a convenience sample. The language in use was English, enabling participation from several nationalities. See figure 1 for the two different messages used.

¹ Vigneron and Johnson (2004) developed a theoretical framework for the luxury that consumers perceive in a brand. The dimensions that form the perceived luxury of a brand are of a personal and non-personal nature. The non-personal perceptions that perceived luxury is composed of are formed by conspicuousness, uniqueness and quality. The personal perceptions of perceived luxury are formed by hedonic and the extended self (Belk, 1988).

4.1. Execution

There were originally 332 online responses to the survey, 77 did not complete the survey and 5 other cases were discarded because of their assertion to have previously been engaged in co-creation by Mercedes-Benz, leaving us with a total of 250 completed and useful cases.

4.2. Results

A reliability analysis was done for all variables in order to detect the consistency of the measures [7]. This demonstrated that for three variables, items had to be deleted in order to improve the reliability of the scale: conspicuousness, uniqueness, and hedonism. The other variables showed sufficient internal consistency. Next the data were checked for normality, skewness, and homogeneity of variance; none of these resulted in abnormal findings.

Table 1. Results study # 1, luxury automobiles

	Control group		Experimental group		Significance (p)
	Mean (M)	SE	Mean (M)	SE	
Perceived luxury	4,24	0,07	4,3	0,07	-0,62
Conspicuousness	5,01	0,09	5,04	0,08	0,436
Uniqueness	3,66	0,1	3,68	0,11	-0,16
Quality	4,13	0,09	4,16	0,09	-0,22
Hedonism	3,89	0,11	4,11	0,1	-1,49
Extended self	4,44	0,09	4,51	0,09	-0,58
Brand Attitude	4,98	0,11	5,12	0,09	-1,5
Significant when $p > 0,05$					

The two groups were compared on the outcomes of the dependent variables by using t-tests. For these tests we assumed an effect similar to Fuchs et al. 2013 with luxury fashion co-creation, implying a negative effect on both luxury and brand perception when the co-creation was revealed to participants. Table 1 depicts the results of these tests. Contrary to this assumption we found that disclosure of co-creation resulted in the case of luxury cars in a better luxury and brand perception, although not significant. This effect of a positive change can be observed on all dimensions of perceived luxury as well, although – again – not in a significant sense.

4.3. Discussion

The result that the effect on brand perception is not significant could originate from the situation that consumers did not receive sufficient information to develop a strong opinion concerning the co-creation activities of the brand. Perhaps the information was insufficient to evaluate whether the co-creators had adequate expertise for successfully co-creating the product. This can be aligned to advertising theory, which indicates that

observers of the advertisement search for signals that provide valuable information about the product [18]. However, the information concerning the co-creation of the car existed of only a short explanation. Since there are not many cues here, the participants that were exposed to the co-creation disclosure could have assumed that the car was similar to the previous (luxury) cars of the brand. This could result in less distinction between the groups concerning their (luxury) perception of the brand, since they both took similar products into account.

The positive difference between the groups can also be explained following Liljedal [18]. She considers the parties disclosing co-creation by a brand as a brand alliance. This means that the brand and the co-creating consumers, who are thus viewed as brand as well, communicate towards the public. Liljedal [18] states that a familiar brand could improve the evaluations or perceptions of non co-creating consumers. She draws on literature from Simonin and Ruth [32] who state that, in a brand alliance, the familiar brand can positively affect the unknown brand (co-creators) through a so-called ‘spillover effect’. In this study, this means that the perceived ability of the consumers was positively affected. This could explain the positive direction of the effect of co-creation disclosure on the perceived luxury. It could mean that the luxury of Mercedes-Benz is projected on the co-creation activities of the brand as well, leading to a positive difference in the means between the groups.

Another explanation for the positive direction of the effect on perceived luxury concerns the question why the complexity of the product did not produce a negative effect. The study by Schreier et al. [30] demonstrated the negative influence of high complexity on the valence of the effect of co-creation disclosure. They also state that for low-complex goods, the effect of co-creation disclosure is positive. Since the results of this study had a more positive nature, although insignificant, it could be that the participants perceived the actual task as less complex. One explanation might be that the design of a car is easier to understand for the average person than for example the design of a fashion item, like in the study by Fuchs et al. [8]. Another reason might be that the participants perceive co-creation in the ideation phase as less complex than for example co-creation in the product development stage. So if a more complex phase was communicated, the effect might have been negative. A final explanation for the absence of the negative effect of complexity can be, again, the positive spillover effect [32]. The participants’ positive perceived ability of the co-creating consumers might cause the complexity to lose its importance since the consumers are perceived as able to complete the task successfully.

5. STUDY #2: EFFECTS OF CO-CREATION IN NEW SERVICE DEVELOPMENT

Ostrom et al. [24] explain that multidisciplinary work is needed to find success factors related to the creation and maintenance of service brands. Due to the highly subjective, intangible and personal experience of services, perceptions can vary a great deal from one

another [24]. An example of such a service can be seen within the highly competitive financial sector. Most customers find it hard to distinguish between services such as credit financing or contracting insurances, making it inherently difficult to differentiate with brands [13]. As such, the service brand has to function as a signal that makes the customer understand the intangible, reduce perceived risks and provide them with a meaningful value proposition [4, 31]. Considering the economic downturns and many scandals in recent years, firms in the financial industry have to make great efforts to (re-)establish a sense of credibility to their brands. A number of Dutch banks such as Rabobank, ING, Triodos Bank and Knab recognized that new service development plays an important role in achieving this. In doing so, co-creation strategies are increasingly being adopted, which stresses the importance of further research on related effects in this sector. Companies that use co-creation in their service development claim to achieve great success, although this success has not been proven yet. So we chose the financial services sector as the focus for this experiment.

Co-creating a new service innovation is a process of idea generation and idea screening (i.e. ideation), concept development, business analysis, service development, market testing and commercialization [2]. Studies explain that most empirical research on co-creation commonly contain 'black and white' comparisons (no involvement versus involvement) while this is more diverse in practice [9, 30]. During the initial phases, generated ideas are collectively evaluated and selected for further development. In turn, these ideas are processed in the development phases where design and engineering comes into play. All participants are given the freedom to be creative and use their abilities to jointly generate solution items such as service blueprints and virtual prototypes, or even test service delivery processes in mock scenarios [35, 10]. In the final phases, participants take on the role of customers, collaboratively evaluate the service developments, and help with commercialization.

Hoyer et al. [12] explain that co-creation is a function of both the scope and intensity of activities. The scope refers to the tendency of companies to engage with customers on all the different co-creation stages. Four stages are particularly suitable for customer involvement: ideation, service development, commercialization, and post-launch activities. The intensity of co-creation relates to the degree to which a firm is willing to co- create with customers within a specific stage of NSD. As companies start relying more on their customers, the intensity of the involvement grows accordingly [12]. Organizations base their level of customer involvement on factors such as the co-creation strategy, appropriateness of the market, initiator for the co-creation (firm or customer) and the type of innovation. Only when these factors are determined, should a company decide how customers could play a role in the innovation process [39].

5.1. Research design

The aim of this study was to empirically investigate how the intensity of customer involvement (stages where involved) and brand familiarity influence brand attitude

and behavioral intentions of non-participants. A multifactor 3x2 Vignette experiment between-subject design and control groups was conducted. The independent variables consist of three levels of customer involvement (none, ideation and full) and two service brand levels (well-known familiar and fictitious unfamiliar). The levels of customer involvement differ in the way the service was developed: (1) exclusively by the company, (2) co-created with the customer on an ideation level, (3) or fully co-created with the customer on all levels of the development process. The developed innovation is a new service presented by the well-known corporate bank 'Bank of America' and the fictitious brand 'Kortos Bank'. See also figure 2.

An online experimental Qualtrics survey was used to collect data. Respondents were recruited from Amazon's online panel Mechanical Turk (MTurk). Because these participants were predominately Americans, we decided to use an American brand (Bank of America) as the familiar brand. Several checks were added to ensure high quality responses [6]. Respondents were informed that the questionnaire aimed to get their opinion about the new service and were randomly assigned an advertisement in which was announced that a financial services brand has developed new insurance services. The advertisement consisted of a promotional text as well as a clarifying visual on the background inspired on an existing advertisement by a Dutch bank. The text briefly described the new innovation, the key features and benefits for customers. The main purpose of this promotional text was to manipulate how the firm decided to develop this new service, which was either by co-creation with other customers or by the company itself. For the co-created version, two variants were used, one for the ideation stage of involvement and one for a customer involvement in all NSD stages ('full'), i.e. aside from ideating on possible solutions, the participating customers assisted in testing of the various service features, deciding on the final service design, coming up with a suitable name and even participated in the advertisement development. After being exposed to their specific – randomly assigned – respondents were surveyed on their brand perceptions (10 questions) and behavioral intentions like buying intention and word-of-mouth (8 questions). All question items were measured on 7-point Likert scale.



No involvement or co-creation

The new Bank of America is all about you.
 Bank of America developed an integrated solution for all your banking needs. One of the improved functions of our brand new website is our insurance services, which is now accessible, easy to understand, tailorable to your personal situation, and with on-demand advice from our experts.
Visit our website now and try it yourself.

Ideation involvement

The new Bank of America is all about you.
 Together with our customers we developed an integrated solution for all your online banking needs. Several Bank of America enthusiasts helped us out from the early development stages to generate new ideas for our brand new website. During the collaboration it became clear that there is need for better insurance services, which are accessible, easy to understand, tailorable to your personal situation, and with on-demand advice from our experts. Bank of America selected these promising ideas to be developed further by our experts and making it available to you.
Visit our website now and try it yourself.

Full involvement

The new Bank of America is all about you.
 Together with our customers we developed an integrated solution for all your online banking needs. Several Bank of America enthusiasts helped us out from the early development stages to generate new ideas for our brand new website. During the collaboration it became clear that there is need for better insurance services, which are accessible, easy to understand, tailorable to your personal situation, and with on-demand advice from our experts. After coming up with the ideas, we asked customers to support us with developing these further by testing out new service features, deciding on the design layout, coming up with a suitable name and even the creation of this advertisement.
Visit our website now and try it yourself.

Fig. 2. Messages used in study #2

5.2. Results

The experiment resulted in 320 completed questionnaire responses. With the exception of three all the respondents filled in the entire questionnaire. For the familiar brand condition, 53 respondents were subjected to the ‘no co-creation’ involvement condition, 53 to the ‘ideation’ involvement condition, and 55 to the ‘full’ involvement condition. Likewise for the unfamiliar

brand, 54 to the ‘no’ involvement condition, 53 to the ‘ideation’ involvement condition, 53 to the ‘full’ involvement condition. Both types of familiarity had a total of 160 respondents. Of the 320 respondents 61.2 per cent was male and 38.8 per cent was female. 296 (92.4%) came from the United States, 13 from the Netherlands (4.2%) and the remainder from other European countries 11 (3.4%). The survey results for the six different types of participants are depicted in Table 2.

To check for consistency of questions and scales, a reliability check was conducted. This resulted in Cronbach alphas higher than 0,70 for all items that were measured: no items needed to be discarded. Subsequently the dependent variables were checked for their normal distribution, a check that did not result in any abnormal findings.

Table 2. Results of the six groups

Brand familiarity	Level of involvement	Brand attitude		Purchase intention		Word-of-mouth	
		Mean	SD	Mean	SD	Mean	SD
Familiar	No involvement	4,968	1,16	4,181	1,6	4,201	1,53
	Ideation	5,198	0,98	4,36	1,59	4,575	1,59
	Full involvement	5,351	1,1	5,031	1,4	5,109	1,12
Unfamiliar	No involvement	4,389	0,69	4,574	1,42	4,574	1,15
	Ideation	4,775	0,79	4,203	1,27	4,151	1,03
	Full involvement	5,19	0,81	4,681	1,38	4,723	0,99
Total	No involvement	4,676	0,99	4,379	1,52	4,389	1,357
	Ideation	4,99	0,91	4,283	1,44	4,367	1,35
	Full involvement	5,27	0,97	4,854	1,39	4,914	1,07

To determine whether the different co-creation manipulations were successful, a two-way factorial analysis of variance (ANOVA) was conducted. The test shows that there was a statistically significant difference between the groups of customer involvement with respect to the effect on the manipulation variable. Brand familiarity and the interaction between the two variables however, are proven to be statistically insignificant. Tukey’s post hoc test further revealed that respondents who were placed in the ‘ideation group’ of customer involvement treatment score significantly higher on the manipulation items than the ‘no’ group. Likewise, the respondents assigned to the ‘full’ group of customer involvement show a higher score than the ‘no’ group and ‘ideation’ group. The brand familiarity manipulation was also proven to be successful with a mean of 5,39 for the familiar Bank of America and 1,78 for the unfamiliar Kortos Bank. In general the results prove the manipulation to be successful.

To test whether the different levels of customer involvement had an impact on brand attitude and behavioral intentions for brand familiarity multivariate analyses of variance (MANOVA) were conducted. The MANOVA demonstrated that there is a statistically

significant positive main effect of customer involvement on brand attitude. The test also found a positive main effect of brand familiarity on brand attitude. This means that regardless of the customer involvement level, respondents considered the familiar bank (Bank of America) better than the unfamiliar bank (Kortos Bank). The interaction between the two variables however, is not statistically significant.

In order to determine whether there are differences between the involvement groups, a Tukey's post hoc test was conducted. Results from this test indicate that there is a statistically significant difference between the 'full' group and the 'no' group, and between the 'ideation' group and the 'no' group. However, no significant differences has been found between the 'ideation' group and 'full' group. This demonstrates that the respondents are more positive about a brand when it uses co-creation, although the difference between the two levels of co-creation is not significant. We can conclude that co-creation in financial services can have significant positive effects on brand perception, whether the company restricts itself to ideation or fully engages customer in the whole development process.

As for the effect on behavioral intentions – which consists of two items, purchase intention and word-of-mouth – the MANOVA results show that there is a significant effect of customer involvement on both outcomes. No statistically significant effects were found for brand familiarity on these two outcomes. Comparably, results at the interaction effects were also insignificant for purchase intentions and for word-of-mouth. As for the individual customer involvement levels, Tukey's post hoc test reveals that for purchase intentions there is a significant difference between the 'no group' and the 'full group', and the 'ideation' group and the 'full' group. However, this is not the case between the 'no' group and the 'ideation' group. Similarly, word-of-mouth output reports significance between the 'no' group and the 'full' group, and the 'no' group and the 'full' group, but show no significant difference between the 'no' group and the 'ideation' group. This means that both behavioral intentions only change when respondents are exposed to the 'full' customer involvement information. The ideation-version of co-creation seems to be insufficient to make people want to use the service or speak positive of it.

Finally, we checked for moderation effects of brand familiarity between customer involvement and brand attitude and behavioral intentions by using the SPSS PROCESS macro. No moderation effects have been detected, so we can conclude that co-creation revelation affects brand perception and behavior independently.

5.3. Discussion of the results

In line with similar research by Fuchs and Schreier [9], Schreier et al. [30] and van Dijk et al. [35], the findings of this study suggest that the awareness that a business offering has been co-created has an overall positive effect on brand perceptions. This implies that co-creation changes the way a service brand is perceived and the value it provides to customers. It became clear that brand attitude increased for both the limited 'ideation' condition as well as the 'full' involvement

condition when compared to the traditional innovation strategy. Unlike Schreier et al. [30] and van Dijk et al. [35] who simply measured for two levels (i.e. no involvement and involvement), and Fuchs and Schreier [9] who investigated for intensity dimensions within the ideation and selection phase, this research thus proved similar effects for other stages of the innovation process as well. An interesting finding is that no significant contrast was found between the two levels of co-creation, implying that a brand always will benefit in perception, whether it involves customer in ideation only or in the whole NSD process as a whole.

The behavioral intentions towards the service were both positively affected by co-creation awareness, although the level of involvement did matter: purchase intentions and word-of-mouth will only be affected significantly in case of 'full' involvement. One explanation is that the advertisement insufficiently convinced the customers for the 'ideation' case. According to Money, Gilly and Graham [21], under uncertainty customers tend to search for more information about a service before making decisions. Taking the traditional lack of interest and nature of insurance services into account [3], customers would probably think twice before actively promoting or buying from a brand. Although insurances are widely available, they remain high-involvement services with some sort of threshold that customers have to overcome before taking action. The result therefore may relate back to the ambiguity associated with intangible services and the banking sector. Altogether, it can be argued that while innovating on 'ideation' level has a positive impact on attitude, it may not be enough to persuade customers to actually purchase and advocate the new services of the tested corporate banks.

Finally, no evidence was found for moderation effects of brand familiarity between customer involvement and brand attitude and behavioral intentions. This implies that, aside from the overall value of co-creation as an innovation strategy, involving customers could also be used as a method to improve the perceptions for well known as well as unfamiliar brands. This result is in line with familiarity results by van Dijk et al. [35]. A possible explanation could be that customers have a hard time distinguishing familiar brands in the banking industry. Although the familiar bank (i.e. Bank of America) may have build up a certain level of attitude, it can also be that many customers still do not have a clear image of what the bank stands for exactly. In fact, Balmer et al. [3] argue that the large majority of customers have a hard time differentiating between brands of major banks and insurance companies. The insurance business is characterized by complicated service products, pushy sales people and minimal understanding of branding [3] From this perspective, it can be argued that both unfamiliar and familiar brands equally benefit from co-creation relationships, as it is an entirely new approach to branding and positioning. However, also important to note is that, although the differences between the brands are not significant, it is apparent that familiar brands scored higher in overall co-creation level means than unfamiliar brands.

6. DISCUSSION AND CONCLUSIONS

Brand knowledge and brand associations affect brand equity [16], so it is essential for brands to find out what the consequences are of using and communicating co-creation to the public. Understanding the effect of co-creation information of luxury goods on consumer's perceived luxury and brand attitudes, can be of great value to companies in this market. The same applies to service organizations. Firms might have to either hide or promote co-creation in their communication strategies. This insight is essential for marketers since these customers form the majority of the market [9]. In two experiments we've tested the effect of the disclosure of co-creation on the brand perception of non-participants for these two businesses, i.e. the luxury product industry and the services industry. Along we've also tested the effects of several variants, like the stage (or level) of co-creation level, the brand familiarity. Other effects that were measured were product perception – in the case of luxury products – and behavioral intentions – in the case of service innovation – like word-of-mouth and buying intention.

As for the luxury industry, the findings of the experiment show that no significant effect can be detected for co-creation disclosure on the perceived luxury and brand attitude of non co-creating consumers. A slightly positive direction of the results can however be identified. This is not in line with earlier research in the luxury industry [8], but is more consistent with studies in other product categories [9, 35, 30]. This could mean that the effect of co-creation disclosure will differ between categories within the luxury industry. We cannot generalize our findings for the whole luxury industry. For the luxury automobile industry specifically, this indicates that firms will not harm the brand when using and communicating the use of co-creation in the ideation phase.

As for the services industry, the results show strong evidence in favor of incorporating co-creation in marketing and branding strategies such as advertisements similar to the one in this study. Spreading awareness on NSD customer involvement successfully increased the brand perception of the two corporate banks, whether familiar or not. In addition to existing research on product brands active in the fast moving consumer goods sector, this investigation therefore shows that perceptions can also change towards services and their respective brands. The study also showed that the intense involvement of customers, i.e. throughout the whole NSD process, will yield better results in improved behavioral intentions – word-of-mouth and purchasing intention – than when involving them in only ideation stages. Although no difference was found between 'ideation' and 'full' involvement for brand attitude, it is recommended to repeatedly promote full co-creation improve actual customer behavior over time.

The literature states that empowering customers in value creation has become of high importance due to the shifting demand for more transparent and sincere company behavior. Considering that the economic crisis of 2008 was predominately caused by the financial industry, this demand may be especially relevant for the banking and investment sectors. Therefore, in communicating co-creation to the larger public, it is

recommended to underline the different characteristics belonging customer involvement in which the interaction between the customer and company is clearly described. Overall, it constitutes as a promising branding approach that managers can use to establish a competitive advantage in the market.

In general we observe positive influences of the revelation of a firm's co-creation efforts on the perceptions that non-participants have of a brand or product/service. So, firms are encouraged to engage their customers in co-creation and actively promote this action.

7. REFERENCES

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