

DO THE CONSUMERS PERCEIVE THAT THEY CO-CREATE VALUE? INSIGHTS FROM THE ONLINE PURCHASE EXPERIENCE

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SUMMARY

How to manage collaboration to create value with customers is becoming a key success factor for firms, which has posited the phenomenon of co-creation of value as a focal point in marketing research. However, which are the drivers that motivate customers to co-create value with firms are still not fully determined and little is known about how it influences the purchase experience. Based on service-dominant logic propositions on value, this article offers insights about how co-creation of value processes influence the customer's online purchase behavior. We investigate the role of value co-creation processes during an online purchase, proposing a conceptual model that establishes coproduction and interaction as key drivers of value co-creation during the purchase experience. Our findings reveal the dominant role of coproduction in shaping perceived value co-creation, clarifying the existing relationship between co-creation and coproduction. We also demonstrate that customer participation in creating value has a positive influence on his/her purchase intentions. At a managerial level, the importance of designing co-creative environments to attract highly involved customers is further explained.

Keywords:

Co-creation of value, coproduction, interaction, e-commerce

1. Introducción

Firms are increasingly looking for customer collaboration and involvement in defining and designing their products and services. Companies as Nike, Threadless, Lego, Starbucks, Louis Vuitton or BMW are encouraging their customers to collaborate in the creation of products and services, and share their experiences with other customers. In this sense, dialogue and experience have become key components of customer-firm relationships, and both components have somehow redefined the concept of value for the customer. Besides, information technologies have also contributed to change how consumers interrelate with other actors in the marketplace and have eased the evolution of customers into active participants who determine their experiences and their value configuration. This focus in customer active behavior has been leading practitioners and academics to reconsideration about the locus and configuration of value in the marketplace (Kumar et al., 2010; Vargo and Lusch, 2004).

The concept of the co-creation of value has become research priority in the marketing and service science fields (MSI Research Priorities 2010-2012; Maglio and Spohrer, 2008; Spohrer and Maglio, 2008). This approach to value configuration suggests that firm can only create value by interacting with the customer, highlighting the notion of value as experientially determined, opposite to the traditional idea of value-in-exchange dominant perspective inherited from the industrial era. In this way, how value is configured becomes an important issue in order to understand consumer purchase behavior and to achieve competitive advantages in the marketplace (Vargo et al., 2008). One of the critical points of this approach to value configuration is the distinction between coproduction and co-creation. New developments highlight the relevance of coproduction as part of co-creation of value processes and reinforce the idea of customer participation as a key issue in understanding consumer behavior (O'Hern and Rindfleisch, 2010; Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004; Vargo and Lusch, 2010). Indeed, some works consider coproduction as a critical and inherent activity in value co-creation processes (Grönroos, 2006; O'Hern and Rindfleisch, 2010), though others consider it only an optional activity (Vargo and Lusch, 2008a). The conceptual distinction between co-creation and coproduction and the relationship between the two constructs has not been fully explored to date at an empirical level.

The aim of this paper is twofold. First of all, we provide a conceptualization of co-creation of value processes in the online purchase context and test it empirically, postulating which components are determining consumer co-creation of value perception in the online purchase experience. Furthermore, we clarify the relationship between coproduction and co-creation of value. We propose that perceived value co-creation can be explained on the basis of interactions that occur during the purchase experience and on the basis of the co-production of the offering and/or the experience itself. Secondly, we aim to study the influence of the co-creation of value processes on purchase behavior.

The rest of the article is structured as follows. The next section reviews the literature on the co-creation of value and explains our conceptualization of what we consider the determinant factors of customer co-creation perception: coproduction of the offering and/or of the experience and customer interactions. The following section describes the data and the empirical analysis undertaken to test our proposed hypotheses in the online environment: analysis of variance and causal tests. We then discuss our results and, in the final section, we provide the conclusions and implications of our research as well as outlining some limitations and opportunities for further research in the field.

2. Literature Review

2.1. Value and Value Creation

The concept of value has been repeatedly discussed by academics in different disciplines over time. Adam Smith (1776) discussed value and value creation concepts from an economic perspective of market exchange. According to him, there are two different types of value: "value in use" and "value in exchange". Inherited from this economic perspective, mainly based upon the notion of value in exchange, the Goods-Dominant Logic (GDL) has been the predominant perspective in the marketing

field until recently. This perspective focuses the creation of value mainly in the production and distribution of commodities, while services are considered as enhancers of value or add-ons to products (cited in Vargo and Lusch, 2008a; Vargo et al., 2008).

Contrary to the GDL, there is a growing trend that considers value configuration from a “value in use” perspective. The beneficiary determines value in use, fundamentally, by consumption, so value is intrinsic and fully dependant on the consumer experience. This focus of value has been developed in the marketing field by different researchers (Holbrook, 1994b; Richins 1994a, b) and practitioners (Pine and Gilmore, 1999). Value has been defined as an “interactive relativistic preference experience” (Holbrook, 1994, p. 27), advocating that value resides not in an object but in the consumption experience (Hirschman and Holbrook, 1982; Holbrook and Hirschman, 1982). Other authors have defined value as related to *meanings*, in the sense that customers give meanings to their possessions, which thus becomes a central issue to defining value (Arnould and Thompson, 2005; Peñaloza and Venkatesh, 2006; Richins, 1994a, b).

The Service-Dominant Logic (SDL) has integrated these perspectives into its framework, considering *service* as the fundamental basis of exchange, while goods are merely distribution mechanisms for service provision (Vargo and Lusch, 2004). This logic has devoted several of its fundamental premises to the topic of value configuration. In their work, Vargo and Lusch, consider value as “always uniquely and phenomenologically determined by the beneficiary” (Vargo and Lusch, 2008a, foundational premise 10), clarifying their conceptualization of value as “idiosyncratic, experiential, contextual and meaning laden” (Vargo and Lusch, 2008a, p.7). In this sense, the customer is always considered a co-creator of value, the role of the firm being limited to offering value propositions. Other authors have developed conceptual approaches consistent with this perspective, such as value co-creation (Prahalad and Ramaswamy, 2004), customer participation in production processes (Bendapudi and Leone, 2003), Customer Empowerment (Shankar 2006) and Service Science as a new discipline in which Co-creation of value is the core issue (Spohrer and Maglio, 2008).

2.2. Co-creation of Value

Co-creation of value as a concept is based on the premise of value not created exclusively by the firm but by different actors including the consumer. In contrast with the idea of production as a value creation activity and consumption as a value destruction activity, postmodernist approaches consider consumption as a value-producing activity, positioning both symbolic production and consumption as major areas of community participation (Firat et al., 1993; Firat and Venkatesh, 1995). So, as Normann and Ramirez (2001) have stated, “instead of ‘adding’ value, the partners in the production of an offering create value together through varied types of ‘coproductive’ relationships” (p.29).

One of the most important and comprehensive conceptualizations of co-creation is the one developed by Prahalad and Ramaswamy (2004), who define co-creation in the context of experiential marketing as “the process that allows the individual consumer to determine the design of future products and services, marketing messages and distribution channels where the products will be available”. These authors based their perspective about co-creation on three premises: value is co-created by the firm and customer, co-creation of experiences is the basis of value, and the individual is central to the co-creation experience. According to them, these three premises have several implications. First of all, the locus of value is in the interaction between firms and customers. The second implication refers to the variety of co-creation experiences due to the heterogeneous interactions that take place. The final implication highlights the importance of the personalization of the co-creation experience. Thus, the co-creation of value has been considered as an interactional concept (Vargo and Lusch, 2008a), highlighting its dialogical focus and collaborative essence (Ballantyne and Varey, 2006; O’Hern and Rindfleisch, 2010; Hoyer et al., 2010). This approach deserves special attention in the online environment to enhance consumer experience using tools that favor personalization and interaction during the purchase experience.

One of the most controversial issues regarding co-creation of value is its relationship with coproduction and the consideration of these two concepts as distinct. Vargo and Lusch, in their

first conceptualization of SDL stated “the customer is always a coproducer” (FP6, Vargo and Lusch, 2004). However, in later refinements they changed this premise stating that coproduction is optional for the customer, whereas co-creation of value is contextual (i.e. determined by use), superordinated to coproduction activities, and always occurs (Lusch and Vargo, 2006a; Lusch et al., 2007; Vargo and Lusch, 2008a). So, they suggest a two-component structure of value co-creation: coproduction and value in use, being the first element the one that captures “participation in the development of the core offering itself” (Lusch and Vargo, 2006a). This view of value creation as collaborative and interactional in nature is further explained in their later publications (Lusch and Vargo, 2006b; Lusch and Vargo, 2006c; Vargo and Lusch, 2008a; Vargo and Lusch, 2008c; Vargo and Lusch, 2010).

Other authors have discussed the distinction between coproduction and co-creation of value, highlighting that coproduction is an inherent activity to co-creation of value. The Nordic School takes as its starting point the idea of “service as a process” and, consistent with that, argues “due to the customers’ involvement in these interactive processes, firms and customers are co-producers of the service and co-creators of value” (Grönroos, 2006, p.324). In later works, Grönroos (2011) emphasizes the idea of production and value creation as separate processes that are likely to get intertwined under certain conditions, especially if interactive processes are involved.

Despite the consensus about the existence of a relationship between co-creation of value and coproduction, empirical research about the nature of this relationship is still in its infancy. Furthermore, there is no empirical support about how the customer perceives the co-creation of value and how it influences his/her behavior. We consider this relationship especially relevant in the online environment, where adopting coproduction strategies such as “customerization” has been recommended (Wind and Rangaswamy, 2000) due to the changing role of customers from passive to active co-creators of experience.

3. Theoretical Model and Hypotheses

We define co-creation of value as the processes carried out by the beneficiary (the customer) to integrate his/her available resources and those provided by other actors (the firm, other customers...) in order to generate his/her own value configuration collaboratively and interactively. We present a conceptual model (see Figure 1) that explains the co-creation of value processes in a purchase scenario.

Following Lusch and Vargo (2006a), we take as the starting point for our model the proposition that co-creation of value has two components: coproduction and value in use. Moreover, we posit that, to understand the value co-creation processes in a purchase scenario, it is necessary to consider different stages in the global experience: the purchase experience and the use experience. Both stages play a role in global customer value configuration, since value is defined as experiential in nature (Holbrook, 1994; Vargo and Lusch, 2008a). Considered from a consumer behavior perspective, we propose that coproduction and value in use occur in different stages of the co-creation of value processes in the purchase context. Thus, coproduction plays a role during the purchase experience within firm’s boundaries whereas value in use normally takes place during the use experience outside the firm’s boundaries. We acknowledge that both coproduction and use can take place at the same time in certain offerings (i.e. services), but there are still two differentiated stages at the conceptual level.

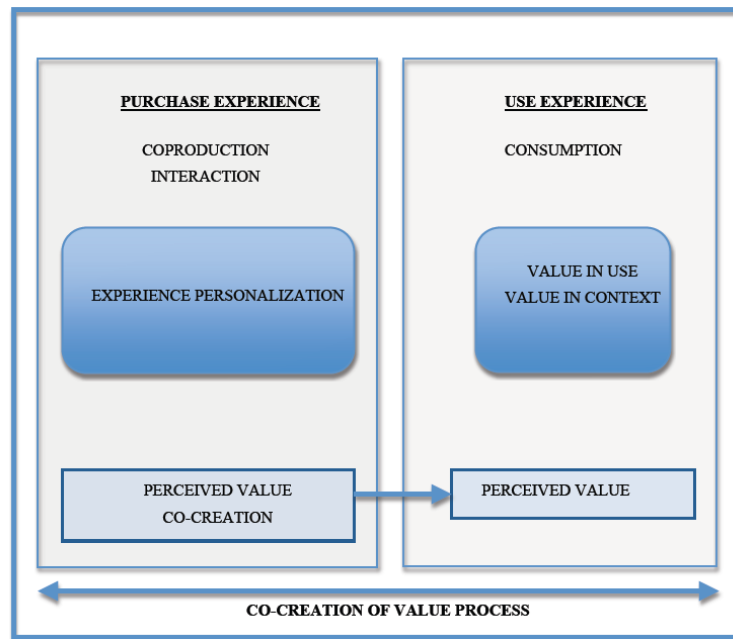
We consider that perceived value co-creation is the first stage to understand both value co-creation processes and value in use configuration from a consumer behavior perspective. Unlike approaches to perceived value measured only at the consumption stage (Sweeney and Soutar, 2001), we propose a conceptual framework that highlights the importance of the purchase experience in perceived value co-creation, which, in turn, is a driver of perceived value in use. We suggest that the purchase experience has a critical influence on perceived value in use, so that, with the aim to properly measuring this value, the whole process has to be taken into account.

Furthermore, the co-creation of value has been characterized as interactional (Grönroos, 2006; Lusch and Vargo, 2006a; Prahalad and Ramaswamy, 2004; Ramaswamy, 2009; Vargo and

Lusch, 2008a), so we propose that interactions during the whole experience are a key issue in order to comprehend the co-creation of value processes.

We focus on perceived value co-creation as a key variable in order to understand consumer behavior with respect to co-creation of value processes. Our focus is supported by other authors, such as Grönroos (2008), that have highlighted the attitudinal component of value in consumer markets where perception is critical, or Vargo and Lusch (2006b, p.44), who stated “there is no value until an offering is used; experience and perceptions are essential to value determination”. According to them, we propose that perceived value co-creation can be determined during the purchase experience by coproduction and interactions with other actors. Therefore, coproduction of and interactions during the purchase experience are critical to foster the value co-creation perceived by the customer.

FIGURE 1
Co-creation of value process framework



Hence, this work presents the following proposition:

Proposition: Perceived value co-creation during the purchase experience can be defined on the basis of coproduction and interactions that occur.

In this paper, we focus on the online environment to empirically test our proposition, as we consider that this environment offers multiple ways for consumers to share opinions and experiences with others. In fact, the development of diverse interactive tools and the social networks has broadened the choices that consumers are facing to coproduce and interact during their purchase.

3.1. Coproduction

Coproduction as customer participation in production processes has been extensively developed in the literature (Fitzsimmons 1985; Lovelock and Young 1979), especially in service research (Van Raaij and Pruyn, 1998). Earlier works about coproduction have focused on the firm perspective, considering customer participation as a source of higher productivity or the customer as an employee (Fitzsimmons 1985). More recently, the focus has been on the customer perspective of coproduction processes, defined as “an explicit result of decision making by consumers reflecting their own preferences” (Etgar 2008, p. 97). Other works have explored the influence on outcome quality and satisfaction with the firm (Bendapudi and Leone, 2003). These further developments establish coproduction as an activity that fosters the

personalization of the individual experience and, consequently, it is likely to have an effect on the co-creation of value during consumption or usage, which is consistent with the SDL approach.

In the online environment, coproduction has been defined as the personalization of design features, also called co-design (Piller et al., 2005; Wind and Rangaswamy 2001). Coproduction favors the increase of choices available to consumers, which is closely linked with customization. Customization is defined as a process that the customer initiates to adapt the product to his/her needs. Wind and Rangaswamy (2001) include a new concept, “Customerization”, considered the highest degree of personalization and which implies that the firm and the customer carry out product creation and design jointly. Thus, the customer plays a key role in the configuration of the firm’s offer as well as in the development of R&D strategies, turning the customer into an active co-producer or “associate” (a similar approach is followed by Prahalad and Ramaswamy 2004). O’Hern and Rindfleisch (2010) consider co-design as one of the types of co-creation activities in the framework of new product development strategies, positing it as the best balance between improvisations and planning as well as a mean of encouraging participation within defined limits.

Hence, we define coproduction in the online setting as the customization of an offering steered by the customer. Coproduction contributes significantly to purchase experience personalization and it is especially relevant in the online environment where there is no physical presence to enhance positive experiences and customer involvement.

H1: Coproduction during the purchase experience influences perceived value co-creation.

3.2. Interaction

Interaction has been recognized as a relevant issue to understand how co-creation of value takes place. Value co-creation has been defined as an interactional process (Gronroos 2006; Vargo and Lusch 2006, 2008), positing interaction as the locus of customer-firm value co-creation (Prahalad and Ramaswamy, 2004). Other authors have highlighted the importance of co-creative interactions in order to have “compelling engagement experiences” (Ramaswamy 2009) and the role of dialogue as a fundamental of co-creation of value and sustainable competitive advantage (Ballantyne and Varey, 2006). Furthermore, several authors have remarked the importance of interactions in the social configuration of value in brand communities (Muñiz and O’Guinn, 2001; Schau et al., 2009; Edvardsson et al., 2010).

In the online environment, the concept of interaction is closely related to interactivity, understanding the latter as a socializing process. Interactivity has been widely analyzed in marketing and computer science literature and is recognized as an important issue in e-commerce. It benefits consumer decision-making, favors consumer relationship marketing, and allows greater personalized marketing strategy (Yadav and Varadarajan, 2005). Moreover, it is closely linked to perceived quality. Thus, it improves customers’ experiences in online interactive retailing (Childers et al., 2001; Kim and Forsythe, 2007). Interactivity increases experiential and instrumental value (Fiore et al., 2005) and its bidirectional nature influence hedonic value creation in e-tailing (Yoo et al., 2010). Similarly, interactivity enhances firm capabilities as well as contributes to e-business value (Zhu and Kraemer, 2005).

In this context, we define interaction in terms of interactivity understood as a socializing process, considering it as an important variable in co-creation processes. Interaction with other customers is a valuable source of information exchange, experience sharing and identification with others, activities that contribute to increasing participation intentions and value perceptions. Furthermore, several researchers have linked interaction to the coproduction of the offering especially in online settings, as interactions facilitate the participation of customers in shaping the offering before the purchase and, thus, co-creating value with the firm (Miceli et al., 2007; Prahalad and Ramaswamy, 2004).

Consistent with this, we propose the following hypotheses:

H2: Interaction during the purchase experience influences perceived value co-creation.

H3a: The effect of coproduction on the perceived co-creation of value is stronger in the presence of interaction during the purchase experience.

H3b: Interaction during the purchase experience influences coproduction.

Lastly, as we posited in our conceptual model, we consider that perceived value co-creation determines purchase intentions and further value-in-use configuration. Dong et al. (2008) explored how participation in service recovery improves user's co-creation intentions and satisfaction. Similarly, Bendapudi and Leone (2003) studied how customer participation on coproduction activities influences on customer's psychological responses and satisfaction. However, whereas the co-creation of value and its behavioral consequences have been developed at the conceptual level, to the best of our knowledge there are no works that have approached this matter applied to customer purchase behavior at an empirical level yet. We propose our last hypothesis as follows:

H4: Perceived value co-creation during the purchase experience influences purchase intentions.

4. Empirical Analyses and Results

We present two different studies to test our hypotheses. Study 1 examines the direct effects of interaction and coproduction on co-creation perception (H1 and H2) and the joint effect of these variables on co-creation perception (H3a). In study 2, we quantify the relationships proposed as well as we test the hypothesized influence of interaction on coproduction (H3b) and test the relationship between co-creation perceptions and purchase intentions (H4).

4.1. Experimental Analysis

Design and Subjects

In our first study, four experimental scenarios were designed with manipulations of interaction and coproduction. The experimental design used was two-way factorial between subjects: two levels of interaction (interaction, no-interaction) and two coproduction levels (coproduction, no-coproduction). We used a sample of 196 university students, aged between 20 and 38 (109 females).

Stimuli

In order to test our hypotheses, an online interface was designed and a purchase situation was simulated. Different online design features were selected to manipulate interaction and coproduction settings in the four experimental scenarios (McMillan and Hwang, 2002; Sicilia et al., 2005; Song, 2008), a website being designed for each scenario based on actual websites. We used a standard model of sneaker in which subjects could select different colors to design different parts of the sneaker as our coproduction manipulation. The interaction manipulation was based on the option to share the sneaker in the website's gallery, vote the sneakers in the gallery, share comments with other users in the forum and share the created sneaker in different social networks or by mail.

Previous to data gathering, the scenarios were pre-tested with a convenience sample of 30 users, in order to improve the websites' design as well as to refine the manipulations used and the scale of perceived co-creation of value.

Procedure and Measurement

The experiments were carried out in the university computer labs in May 2010. Students enrolled in different marketing and management modules participated voluntarily in the experiment. At the end of the task they were rewarded with a refreshment voucher.

Each participant was randomly assigned to one of the four experimental settings. Students first answered questions related to their previous Internet surfing experience and frequency of web use. Then, participants were asked to imagine that they wanted to buy a pair of sneakers, so they visited a fictitious company website called My Favourite Sneaker. They were told to read all the introductory instructions from the screen and an extra instruction sheet was provided. Subjects

were asked to buy sneakers and perform different activities depending on the scenario assigned. After using the interface, participants were asked to complete a questionnaire. In order to check that the manipulations were adequate, the subjects were asked to rate the coproduction and interaction experienced. To measure perceived value co-creation, a scale of consumer participation in creating experiential value was adapted (see Table 2 for Perceived Value Co-creation scale). All the scales were seven-point Likert ones, 1 being the lowest perception. Scale development was undertaken in English using a procedure of back translation afterwards to ensure correspondence between the English scale and the translated Spanish scale, as recommended by Brislin (1980). Additionally, a single index score for the Perceived Value Co-creation scale was computed by averaging the corresponding items.

Results

Forty-nine participants were assigned to each experimental condition. All participants were experienced users and had bought products or services online before.

A reliability analysis for the co-creation perception scale was conducted by calculating Cronbach's α . The value of Cronbach's α for this scale ($\alpha = 0.908$) far exceeds the recommended critical point of 0.70 (Nunnally, 1978).

Manipulation Checks

In order to test the adequacy of the manipulations, independent-means t-test analyses were performed for both manipulations.

For the interaction manipulation, the means were $M_{\text{interaction}} = 5.84$ and $M_{\text{no-interaction}} = 3.57$ ($t_{194} = 10.868$, $p < .001$, $r = .61$), showing that manipulation was successful. Similarly, coproduction manipulation means were $M_{\text{coproduction}} = 5.92$ and $M_{\text{no-coproduction}} = 2.98$ ($t_{194} = 13.168$, $p < .001$, $r = .68$), showing significant different means and effect sizes of the manipulations applied in the experiment. Moreover, we calculate the descriptive statistics of the dependent variables for the four experimental scenarios (see Table 1).

Hypothesis Testing

A two way independent-measures ANOVA (interaction: two levels, presence and absence; coproduction: two levels, presence and absence) was performed on the data. With respect to coproduction, there was a significant main effect ($F_{1,192} = 61.883$, $p < .001$, $\omega^2 = .54$). H1 was supported because subjects that experienced coproduction features reporting higher levels of perceived co-creation ($M_{\text{coproduction}} = 4.72$ and $M_{\text{no-coproduction}} = 3.03$).

A significant main effect of interaction was reported ($F_{1,192} = 15.846$, $p < .001$, $\omega^2 = .23$). Interaction during the purchase experience had a significant effect on the co-creation perception, as the mean was higher in interactive scenarios ($M_{\text{interaction}} = 4.03$ and $M_{\text{no-interaction}} = 3.45$) supporting H2. Furthermore, interaction effect was examined to test H3a. There was a significant effect ($F_{1,192} = 9.635$, $p < .05$, $\omega^2 = .04$), verifying relationship between the two variables.

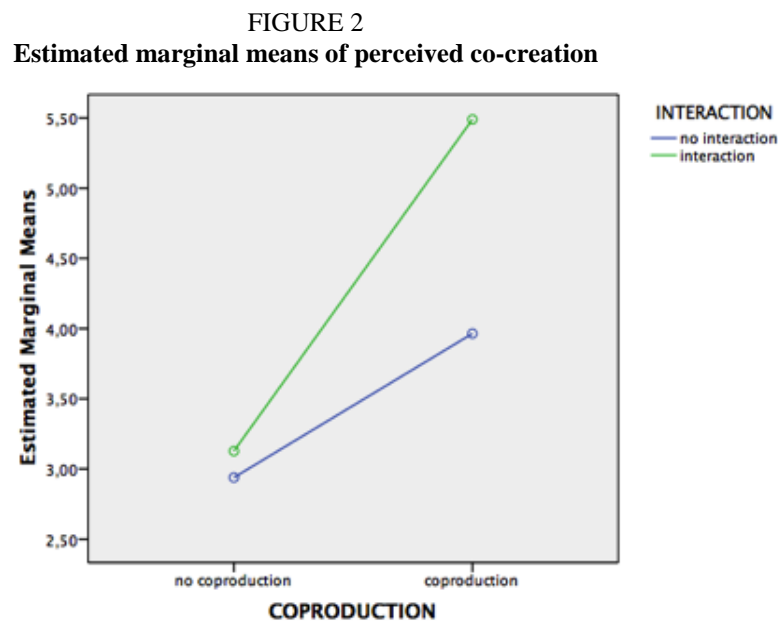
Coproduction was the strongest predictor of the co-creation perception ($\omega^2 = .54$), followed by the interaction variable ($\omega^2 = .23$), and the effect between the two variables ($\omega^2 = .04$) (Kirk, 1982), showing that coproduction is a key driver of perceived co-creation.

TABLE 1
Means and standard deviation for perceived co-creation as function of coproduction and interaction

INTERACTION	COPRODUCTION	Mean	Std. Deviation	N
No-interaction	No-coproduction	2.9388	1.42388	49
	Coproduction	3.9643	1.54364	49
Interaction	No-coproduction	3.1276	1.60494	49
	Coproduction	5.4898	1.44964	49

Based on the above results, a post-hoc analysis was performed to compare mean differences between the four scenarios. Following Keppel (1991), Bonferroni tests were used in order to reduce the probability of type I error. Results revealed that the scenario with coproduction and interaction together reported the highest perceived co-creation scores, followed by the only coproduction scenario (MD= 1.52551, $p < .001$), while the only interaction scenario reported lower scores than any of those that have coproduction (MD= 2.36224, $p < .001$), supporting the positive interaction effect suggested in H3a.

The results obtained in this study verify the main effects of interaction and coproduction on the perceived co-creation of value, as well as the interaction effect between them (as seen in figure 2). A key issue for the completion of this research is to support our results with other empirical studies and quantify the causal relationships identified. In study 2, we run a structural analysis to study the relationships between the variables.



4.2. Causal Analysis

Methodology

The aim of this structural analysis is to study in greater depth the relationship between interaction, coproduction and co-creation of value perceptions during the online purchase experience. We also analyze the hypothesized influence of co-creation perceptions on customer purchase intentions.

To do so, we replicated the same purchase situation as in study 1, using the scenario that encompasses interaction and coproduction in the purchase experience and the same instruction sheet was given to the respondents. At the end of the purchase experience, the participants were asked to complete a questionnaire in order to quantify their perceptions of interaction, coproduction, co-creation and their purchase intentions. All the variables were measured using a 7-point Likert scale and the items included in the survey were adapted from other research (see Table 2). Prior to the data gathering, we pre-tested the scales with a convenience sample of 30 users.

TABLE 2
Measurement scales

VARIABLES (sources)	ITEMS
INTERACTION	INT_1 This application facilitates two-way communication with other users

(Chakraborty et al., 2002; Liu 2003; Mcmillan and Hwang 2002; Wu 1999)	INT_2 This application gives me the opportunity to talk back with other users INT_3 The application facilitates concurrent communication with other users INT_4 The site allows online exchange of information (opinions, recommendations, advice, past purchases...) with other users.
COPRODUCTION (Lee et al., 2009; Merle 2008)	COPRO_1 This application lets me create personalized sneakers COPRO_2 This application lets me produce the pair of sneakers that really meets my expectations. COPRO_3 This application lets me design a pair of sneakers tailored to my tastes COPRO_4 This application lets me customize my sneakers
PERCEIVED VALUE CO-CREATION (Dong et al., 2008; Merle 2008)	COCR_1 I feel that I have participated in the process of creating something COCR_2 During my purchase I felt that I participated in creating something new COCR_3 This application gives me lots of autonomy in creating something I wanted COCR_4 I was able to give complete free rein to my creativity
INTENCIÓN DE COMPRA (Limayen et al., 2000; Pavlou and Gefen 2004; Taylor and Todd 1995)	PURCH_1 Given the chance, I predict that I would consider buying products from this seller in the future. PURCH_2 It is likely that I will actually buy from this seller in the near future PURCH_3 Given the opportunity, I intend to buy in this site

After pre-testing the scales, fieldwork was carried out. The study was performed in June 2010, in the same university computer labs. We obtained a sample of 332 students (135 males) aged between 20 and 38 and all experienced Internet and e-commerce users.

It must be highlighted that the absence of common method bias was corroborated, because Harman's single factor test found that all indicators do not load onto a single factor (Podsakoff et al., 2003; Morgan et al., 2004).

Validation of the Measuring Scales

In order to guarantee measurement reliability and validity, a Confirmatory Factor Analysis (CFA) was carried out by Structural Equation Modeling (SEM), using the robust maximum likelihood estimation method and the statistical software EQS, version 6.1. (Bentler, 1995). The results obtained are shown in Table 3.

Firstly, we progressively eliminated, one by one, the indicators which did not satisfy one or more of the criteria proposed by Jöreskog and Sörbom (1993): weak convergence, strong convergence and explanatory coefficient ($R^2 < 0.4$) (Steenkamp and Van Trijp, 1991). The first item of the coproduction factor (COPRO_1) was excluded, as it did not attain a sufficiently high R^2 . The analysis was subsequently repeated for the items left. The indicators showed acceptable values for the three criteria (Table 3). The next step was to check that the goodness-of-fit indices exceeded the optimal levels recommended by Hair et al. (1999): NFI: .922; NNFI: .923; CFIR: .940; IFI: .940; RMSEA: .094; X^2 normed: 3.94.

TABLE 3
Confirmatory factor analysis

Variable	Indicator	Factor loading	Robust t-value	R ²	Composite reliability	AVE
INTERACTION	INTER_1	.814	15.472	.663	.913	.726
	INTER_2	.924	20.549	.855		
	INTER_3	.869	23.362	.755		
	INTER_4	.795	17.570	.631		
COPRODUCTION	COPRO_1	.866	23.799	.750	.869	.690
	COPRO_2	.866	25.142	.750		
	COPRO_3	.755	15.612	.570		
CO-CREATION	COCRE_1	.676	12.529	.458	.869	.629
	COCRE_2	.678	13.316	.460		
	COCRE_3	.908	27.131	.825		

	COCRE_4	.795	25.276	.776		
PURCHASING INTENTIONS	PURCH_1	.939	26.094	.881	.979	.918
	PURCH_2	.977	30.525	.954		
	PURCH_3	.865	18.926	.748		
Confidence interval	Interaction- Coproduction		(.107 - .343)	Interaction- Purchasing		(.254- .458)
	Interaction- Co-creation		(.102 - .338)	Coproduction- Purchasing		(.361- .549)
	Coproduction- Co-creation		(.864 - .948)	Co-Creation- Purchasing		(.382- .574)

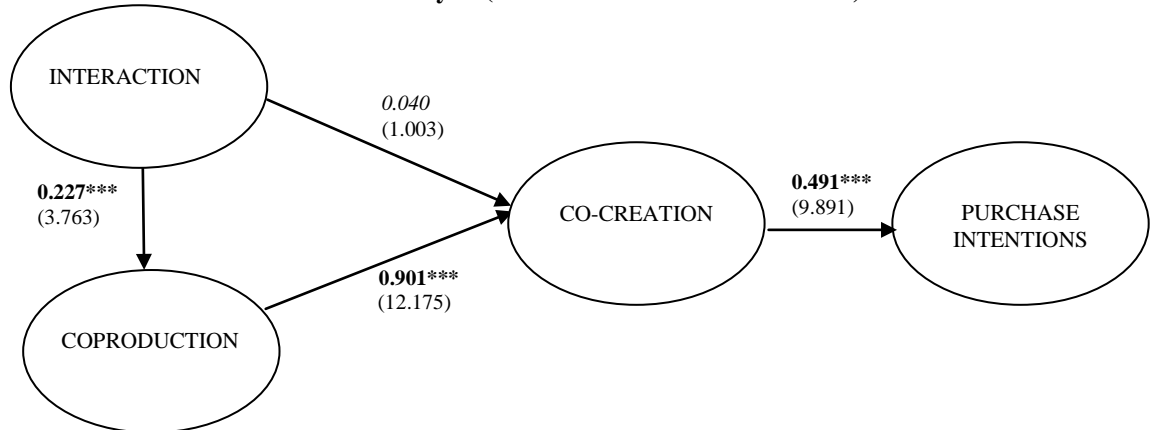
Finally, the reliability and validity of the constructs were analyzed (Churchill, 1979; Gerbing and Anderson, 1988). The reliability of the scales was tested using the Composite Reliability Coefficient and the Average Variance Extracted (AVE). In all cases, the results achieved surpassed the recommended limit of 0.7 (Bagozzi and Yi, 1988) and 0.6 (Fornell and Larcker, 1981), respectively. As for convergent validity, the standardized loadings were higher than 0.5, and they were also significant at the 99% confidence level (Steenkamp and Van Trijp, 1991). Discriminant validity of the measures was established by calculating the 99 per cent confidence interval of the latent factor correlation matrix and verifying that 1 was not included in any of them (Anderson and Gerbing, 1988) (Table 3).

On the basis of these criteria, we conclude that the measures in the study exhibited sufficient evidence of reliability and convergent and discriminant validity.

Structural Analysis

We tested the structural relationships existing between the four concepts using SEM (see figure 3). The results indicate that the data fit our conceptual model acceptably: NFI= .916; NNFI= .919; CFIR= .935; IFI= .935; RMSEA= 0.097; X^2 normed= 4.1.

FIGURE 3
Results of the structural analysis (standardized solution and t-test)



***= p<.001

Firstly, results verified a significant positive effect of interaction on coproduction (H1; $\beta = .227$). This effect also mediates the influence of interaction on the perception of the co-creation of value, reporting an indirect value of 0.205. H3b is verified. The direct effect of interaction turned out to be non significant. We found that coproduction has the biggest impact on co-creation (H2; $\beta = .901$). Regarding the existing relationship with the customer purchase behavior, our results show that perceived co-creation exerts a significant influence on purchase intentions, supporting H4 ($\beta = .491$). Moreover, we can conclude that through co-creation, both coproduction and interaction exert an indirect effect on customer purchase behavior, being greater coproduction (.44) than interaction (.10). The explanatory power achieved of co-creation is 82.9% and of purchasing intentions is 24.1%. In sum, the results obtained demonstrate that

interaction and coproduction play key roles in the co-creation of value perceived by the customers in the online environment and in their purchase intentions.

5. Implications, Limitations and Future Lines of Research

In this study, we have conceptualized the perceived value co-creation factor and defined its main drivers: coproduction and interaction. We also clarify the influence of co-creation of value processes on purchase behavior. The model developed in the present work contributes to the existing discussion about value co-creation processes, demonstrating the importance of the latter on consumer purchase behavior. This work offers a conceptual framework that, in line with current academic discussions about the topic, builds upon the importance of understanding value creation on the basis of customer experiences and the critical role of coproduction and interactions in shaping consumer behavior.

This study offers three main managerial contributions. First, it provides an integrative perspective to manage customer participation in value co-creation processes within firm's boundaries. Including coproduction and interaction tools in the online environment is recommended in order to generate co-creative environments that promote customer involvement during the purchase experience as well as further engagement behaviors in the post-purchase stages. Our study offers a better understanding about how to foster perceived value co-creation during the purchase experience, which is especially important for designing the interfaces in which it takes place. Being able to generate the co-creation perception is a key capability for firms as a mean to manage customer experience during the online purchase. Moreover, perceived value co-creation encourage positive behaviors towards the firm, such as increased purchase intentions that are likely to lead to repurchase behaviors and also generate better and long-lasting firm-customer relationships.

Second, we have demonstrated the importance of combining tools that facilitate interaction with the customer and between customers (e.g. blogging, virtual consumer communities, social networks) as well as others that allow the coproduction of the offering and the experience. Likewise, the firm is likely to generate meaningful relationships generating an ongoing conversation with its customers and gathering valuable information at the same time. These tools are important to the design of communication and social media strategies, providing an enhanced customer purchase experience which leads to increase purchase intentions.

Third, including these tools in the firm's online interface is also a way to undertake customers' segmentation that helps the firm to discern profitable customers from the ones that are less profitable. Customers prone to provide new ideas and share them in the online setting generate referral value and knowledge value, which are relevant in terms of maximizing customer engagement value (Kumar et al., 2010) and measuring the real profitability of the customer for the firm. Being able to identify this kind of customers helps the firm to achieve a better management of its customer base. A consumer that provides new ideas about products and services and, moreover, shares them with the firm and other customers, is a highly engaged customer that can attract and involve other people in co-creative activities. Firms must offer outstanding platforms that provide enough freedom to undertake co-creative activities, trying to address these customers and maximize their profitability.

Our research is limited by the fact that we chose a tangible product (sneakers) to carry out the empirical study. We believe that our conceptual model can be applied to services too, as it is in line with the notion of *service* defined by Vargo and Lusch (2008b), which encompasses traditional distinctions between goods and services. Moreover, the so-called servitization of economies is showing the evolving relationship between products and services. This perspective considers that manufacturing firms should focus on selling integrated solutions or product-service systems (Tukker and Tischner, 2006). In future research, it would be recommended to test the differences (if any) between types of offerings with respect to perceived co-creation of value in the online environment. Empirical research into the co-creation of value is still in its infancy, so more research is needed to understand this concept and its implications more deeply.

REFERENCES

- ANDERSON, J.C. AND GERBING, D.W. (1988). "Structural Equation Modelling in Practice: A Review and Recommended Two-Step Approach", *Psychological Bulletin*, Vol. 103, n° 3, pp. 411-423.
- ARNOULD, E.J. AND THOMPSON, C. (2005). "Consumer Culture Theory: Twenty Years of Research", *Journal of Consumer Research*, Vol. 31, (March), pp. 868-882.
- BAGOZZI, R.P. AND YI, P.R. (1988). "On the Evaluation of Structural Equation Models", *Academy of Marketing Science*, Vol. 16, n° 1, pp. 74-94.
- BALLANTYNE, D. AND VAREY, R.J. (2006). "Introducing Dialogical Orientation to the Service-Dominant Logic of Marketing", in *The Service-Dominant Logic of Marketing: Dialog, Debate and Directions*, Robert F. Lusch, Stephen L. Vargo, eds. New York: M.E.Sharpe, pp. 224-243.
- BENDAPUDI, N. AND LEONE, R.P. (2003). "Psychological implications of customer participation in co-production", *Journal of Marketing*, Vol. 67 (january), pp. 14-28.
- BENTLER, P.M. (1995), *EQS Structural Equations Program Manual*.
- BOLTON, R. AND SAXENA-IYER, S. (2009). "Interactive Services: A Framework, Synthesis and Research Directions", *Journal of Interactive Marketing*, Vol. 23, n° 1, pp. 91-104.
- BRISLIN, R.W. (1980). "Translation and Content Analysis of Oral and Written Materials", in *Handbook of Cross-Cultural Psychology, Vol. 2-Methodology*, H. C. Triandis and J. W. Berry, eds. Boston: Allyn & Bacon, pp. 389-444.
- CHAKRABORTY, G.; LALA, V. AND WARREN, D. (2002). "An Empirical Investigation of B2B Websites' Effectiveness", *Journal of Interactive Marketing*, Vol. 16, n° 4, pp. 51-72.
- CHILDERS, T.L.; CARR, C.L.; PECK, J. AND CARSON, S. (2001). "Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior", *Journal of Retailing*, Vol. 77, n° 4, pp. 511-55.
- CHURCHILL, J.R. (1979). "A Paradigm for Developing Better Measures of Marketing Construct", *Journal of Marketing Research*, Vol. 16, n° 1, pp. 64-73.
- DONG, B.; EVANS, K.R. AND ZOU, S. (2008). "The Effects of Customer Participation in Co-Created Service Recovery", *Journal of the Academy of Marketing Science*, Vol. 36, pp. 123-37.
- Etgar, M. (2008). "A Descriptive Model of the Consumer Co-Production Process", *Journal of the Academy of Marketing Science*, Vol. 36, pp. 97-108.
- FIGORE, A.M.; JIN, H.-J. AND KIM, J. (2005). "For Fun and Profit: Hedonic Value from Image Interactivity and Responses Towards an Online Store", *Psychology & Marketing*, Vol. 22, n° 8, pp. 669-94.
- FIRAT, A.F. AND SCHULTZ II, C.J. (2001). "Preliminary Metric Investigations into the Nature of the "Postmodern Consumer"", *Marketing Letters*, Vol. 12, n° 2, pp. 189-203.
- FIRAT, A.F.; DHOLAKIA, N. AND VENKATESH, A. (1995). "Marketing in a Postmodern World", *European Journal of Marketing*, Vol. 29, n° 1, pp. 40-56.
- FIRAT, A.F. AND VENKATESH, A. (1993). "Postmodernity in the Age of Marketing", *International Journal of Research in Marketing*, Vol. 10, n° 1, pp. 227-249.
- FITZSIMMONS, J.A. (1985). "Consumer Participation and Productivity in Service Operations", *Interfaces*, Vol. 15, n° 3, pp. 60-67.
- FORNELL, C. AND LARCKER, D. (1981). "Structural Equation Models with Unobserved Variables Measurement Error", *Journal of Marketing Research*, Vol. 36, n° 3, pp. 39-50.
- GERBING, D.W. AND ANDERSON, J.C. (1988). "An Updated Paradigm for Scale Development Incorporating Unidimensionality and its Assessment", *Journal of Marketing Research*, Vol. 25, n° 2, pp. 186-192.
- GRÖNROOS, C. (2006). "Adopting a Service Logic for Marketing", *Marketing Theory*, Vol. 6, n° 3, pp. 317-33.
- GRÖNROOS, C. (2011). "A Service Perspective on Business Relationships: The Value Creation, Interaction and Marketing Interface", *Industrial Marketing Management*, Vol. 40, n° 2, pp. 240-47.
- HAIR, J.F.; ANDERSON, R.E.; TATHAM R.L. AND BLACK, W.C. (1999), *Multivariate Data Analysis*, New Jersey: Prentice Hall.
- HIRSCHMAN, E.C. AND HOLBROOK, M.B. (1982). "Hedonic Consumption: Emerging Concepts, Methods and Propositions", *Journal of Marketing*, Vol. 46 (summer), pp. 92-101.
- HOLBROOK, M.B. AND HIRSCHMAN, E.C. (1982). "The Experiential Aspects of Consumption: Consumer Fantasies, Feelings and Fun", *Journal of Consumer Research*, Vol. 9, pp. 132-40.

- HOLBROOK, M.B. (1994). "The Nature of Customer Value: An Axiology of Services in the Consumption Experience", in *Service Quality: New Directions in Theory and Practice*, Roland T. Rust, Richard L. Oliver, eds. Thousand Oaks, CA: Sage Publications, 21-71.
- HOYER, W.D.; CHANDY, R.; DOROTIC, M.; KRAFFT, M. AND SINGH, S.S. (2010). "Consumer Cocreation in New Product Development", *Journal of Service Research*, Vol. 13, n° 3, pp. 283-96.
- JÖRESKOG, K. AND SÖRBOM, D. (1993). *LISREL 8 Structural Equation Modeling with the Simplis Comand Language*, Chicago-Illinois: Scientific Software International.
- KEPPEL, G. (1991). *Design and Analysis: A Researcher's Handbook*, 3rd ed. Upper Saddle River, NJ: Prentice-Hall.
- KIM, J. AND FORSYTHE, S. (2007). "Hedonic Usage of Product Virtualization Technologies in Online Apparel Shopping", *International Journal of Retail & Distribution Management*, Vol. 35, n° 6, pp. 502.
- KIRK, R.E. (1982). *Experimental Design: Procedures for the Behavioural Sciences*, Belmont, CA: Brooks/Cole.
- KUMAR, V.; AKSOY, L.; DONKERS, B.; VENKATESAN, R.; WIESEL, T. AND TILLMANN, S. (2010). "Undervalued or Overvalued Customers: Capturing Total Customer Engagement Value", *Journal of Service Research*, Vol. 13, n° 3, pp. 297-310.
- LIU, Y. (2003). "Developing a Scale to Measure the Interactivity of Websites", *Journal of Advertising Research*, Vol. 43, n° 3, pp. 207-216.
- LIMAYEM, M.; KHALIFA, M.; FRINI, A. (2000). "What makes consumers buy from Internet? a longitudinal study of online shopping", *IEEE Transactions on Systems, Man, and Cybernetics – Part A: Systems and Humans*, Vol. 30, n° 4, pp. 421-432.
- LOVELOCK, C.H. AND YOUNG, R.F. (1979). "Look to Consumer to Increase Productivity", *Harvard Business Review*, Vol. 57 (may-june), pp. 168-78.
- LUSCH, R.F. AND VARGO, S.L. (2006a). *The Service-Dominant Logic of Marketing. Dialog, Debate and Directions*, New York: M.E. Sharpe Inc.
- LUSCH, R.F. AND VARGO, S.L. (2006b). "Service-Dominant Logic as a Foundation for a General Theory", in *The Service Dominant Logic of Marketing: Dialog, Debate and Directions*, Robert F. Lusch, Stephen L. Vargo, eds. Armonk: Sharpe Inc.; 406-420.
- LUSCH, R.F. AND VARGO, S.L. (2006c). "Service-Dominant Logic: Reactions, Reflections and Refinements", *Marketing Theory*, Vol. 6, n° 3, pp. 281-288.
- MAGLIO, P.P. AND SPOHRER, J. (2008). "Fundamentals of Service Science", *Journal of the Academy of Marketing Science*, Vol. 36, n° 1, pp. 18-20.
- MARKETING SCIENCE INSTITUTE (2010). *2010-2012 Research Priorities*, Cambridge, MA: Marketing Science Institute.
- MATHWICK, C.; MALHOTRA, N. AND RIGDON, E. (2001). "Experiential Value: Conceptualization, Measurement and Application in the Catalog and Internet Shopping Environments", *Journal of Retailing*, Vol. 77, n° 1, pp. 39-56.
- MCMILLAN, S.J. AND HWANG, J. (2002). "Measures of Perceived Interactivity: An Exploration of the Role of Direction and Communication, User Control and Time in Shaping Perceptions of Interactivity", *Journal of Advertising*, Vol. 31, n° 3, pp. 29-42.
- MERLE, A.; CHANDON, J.L. AND ROUX, E. (2008). "Understanding the Perceived Value of Mass-Customization: The Distinction between Product Value and Experiential Value of Co-Design", *Recherche Et Applications en Marketing*, Vol. 23 n° 3, pp. 27-50.
- MORGAN, N.A.; KALEKA, A. AND KATSIKEAS, C.S. (2004). "Antecedents of Export Venture Performance: A Theoretical Model and Empirical Assessment", *Journal of Marketing*, Vol. 68, n° 1, pp. 90-108.
- MUÑIZ, A.M. AND O'GUINN, T.C. (2001). "Brand Communities", *Journal of Consumer Research*, Vol. 27, n° 4, pp. 412-32.
- NEWHAGEN, J.E.; CORDES, J.W. AND LEVY, M.R. (1995). "Nightly@nbc.Com: Audience Scope and the Perception of Interactivity in Viewer Mail on the Internet", *Journal of Communication*, Vol. 45, n° 3, pp. 164-175.
- NORMANN, R. AND RAMIREZ, R. (1993). "From Value Chain to Value Constellation: Designing Interactive Strategy", *Harvard Business Review*, Vol. 71 (june-july), pp. 65-77.
- O'HERN, M.S. AND RINDFLEISCH, A. (2010). "Customer Co-Creation: A Typology and Research Agenda", in *Review of Marketing Research*, Vol. 6, Naresh K. Malhotra, ed. New York: M.E.Sharpe.
- PAVLOU, P.A. AND GEFFEN D. (2004). "Building Effective Online Marketplaces with Institution-based Trust", *Information Systems Research*, Vol. 15, n° 1, pp. 37-59.
- PEÑALOZA, L. AND VENKATESH, A. (2006). "Further Evolving the New Dominant Logic of Marketing: From Services to the Social Construction of Markets", *Marketing Theory*, Vol. 6, n° 3, pp. 299-316.

- PILLER, F.; SCHUBERT, P.; KOCH, M. AND MÖSLEIN, K. (2005). "Overcoming Mass Confusion: Collaborative Customer Co-Design in Online Communities", *Journal of Computer-Mediated Communication*, Vol. 10, n° 4.
- PINE, B.J. AND GILMORE, J.H. (1999). *The Experience Economy*, Harvard Business School Press.
- PODSAKOFF, P.M.; MACKENZIE, S.B.; LEE, J. AND PODSAKOFF, N.P. (2003). "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies", *Journal of Applied Psychology*, Vol. 88, n° 5, pp. 879-903.
- PRAHALAD, C.K. AND RAMASWAMY, V. (2004). "Co-Creation Experiences: The Next Practice in Value Creation", *Journal of Interactive Marketing*, Vol. 18, n° 3, pp. 5-14.
- PRAHALAD, C.K. AND RAMASWAMY, V. (2004). "Co-Creating Unique Value with Customers", *Strategy & Leadership*, Vol. 32, n° 3, pp. 4-9.
- RAMASWAMY, V. (2009). "Co-Creating Value through Customers' Experiences: The Nike Case", *Strategy & Leadership*, Vol. 36, n° 5, pp. 9-19.
- RICHINS, M.L. (1994a). "Special Possessions and the Expression of Material Values", *Journal of Consumer Research*, Vol. 21 (december), pp. 522-33.
- RICHINS, M.L. (1994b). "Valuing Things: The Public and Private Meanings of Possessions", *Journal of Consumer Research*, Vol. 21 (december), pp. 504-520.
- SCHAU, H.J.; MUÑIZ, A.JR. AND ARNOULD, E.J. (2009). "How Brand Community Practices Create Value", *Journal of Marketing*, Vol. 73 (september), pp. 30-51.
- SCHNEIDERMAN (1987). *Designing the User Interface: Strategies for Effective Human Computer*, Reading, MA: Addison-Wesley.
- SHANKAR, A.; CHERRIER, H. AND CANNIFORD, R. (2006). "Consumer Empowerment: A Foucauldian Interpretation", *European Journal of Marketing*, Vol. 40, n° 9/10, pp. 1013-1030.
- SICILIA, M.; RUIZ, S. AND MUNUERA, J.L. (2005). "Effects of Interactive in a Web Site: The Moderating Effect of Need for Cognition", *Journal of Advertising*, Vol. 34, n° 3, pp. 31-45.
- SMITH, A. (1776). *The Wealth of Nations*, New York: The Modern library.
- SONG, J.H. AND ZINKHAN, G.M. (2008). "Determinants of Perceived Web Site Interactivity", *Journal of Marketing*, Vol. 72 (March), pp. 99-113.
- SPOHRER, J. AND MAGLIO, P.P. (2008). "The Emergence of Service Science: Toward a Systematic Service Innovations to Accelerate Co-Creation of Value", *Production and Operations Management*, Vol. 17, n° 3, pp. 1-9.
- STEENKAMP, J.P. AND VAN TRIJP, H.C.M. (1991). "The use of Lisrel in Validating Marketing Constructs", *International Journal of Research in Marketing*, Vol. 8, n° 4, pp. 283-99.
- STEUER, J.S. (1992). "Defining Virtual Reality. Dimensions Determining Telepresence", *Journal of Communication*, Vol. 42, n° 4, pp. 73-93.
- TAYLOR, S. AND TODD, P. (1995). "Assesing IT usage the role of prior experience", *MIS Quarterly*, Vol. 19, n° 4, pp. 561-570.
- TUKKER, A. AND TISCHNER, U. (2006). *New Business for Old Europe: Product-Service Development, Competitiveness and Sustainability*, Sheffield: Greenleaf Publishing.
- VAN RAAIJ, W.F. AND PRUYN, A.T.H. (1998). "Customer Control and Evaluation of Service Validity and Reliability", *Psychology and Marketing*, Vol. 15, n° 8, pp. 811-32.
- VARADARAJAN, P.R. AND YADAV, M.S. (2002). "Marketing Strategy and the Internet: An Organizing Framework", *Academy of Marketing Science Journal*, Vol. 30, n° 4, pp. 296.
- VARGO, S.L. AND LUSCH, R.F. (2004a). "Evolving to a New Dominant Logic for Marketing", *Journal of Marketing*, Vol. 68, n° 1, pp. 1-17.
- VARGO, S.L. AND LUSCH, R.F. (2004b). "The Four Service Marketing Myths: Remmanst of a Goods-Based, Manufacturing Model", *Journal of Service Research*, Vol. 6, n° 4, pp. 324-35.
- VARGO, S.L.; LUSCH, R.F.; AKAKA, M.A. AND HE, Y. (2010). "The Service-Dominant Logic of Marketing: A Review and Assesment", *Review of Marketing Research*, Vol. 6, pp. 125-67.
- VARGO, S.L. AND LUSCH, R.F. (2008a). "Service-Dominant Logic: Continuing the Evolution", *Journal of the Academy of Marketing Science*, Vol. 36, n° 1, pp. 1-10.
- VARGO, S.L. AND LUSCH, R.F. (2008b). "Why Service?", *Journal of the Academy of Marketing Science*, Vol. 36, n° 1, pp. 25-38.

- VARGO, S. L. AND LUSCH, R.F. (2008c). "From Goods to Service(s): Divergences and Convergences of Logics", *Industrial Marketing Management*, Vol. 37, pp. 254-259.
- VARGO, S.L.; MAGLIO, P.P. AND AKAKA, M.A. (2008). "On Value and Value Co-Creation: A Service Systems and Service Logic Perspective", *European Management Journal*, Vol. 26, pp. 145-52.
- WIND, J. AND RANGASWAMY, A. (2001). "Customerization: The Next Revolution in Mass Customization", *Journal of Interactive Marketing*, Vol. 15, n° 1, pp. 13-33.
- WOODRUFF, R.B. (1997). "Customer Value: The Next Source for Competitive Advantage", *Journal of the Academy of Marketing Science*, Vol. 25, n° 2, pp. 139-53.
- WU, G. (2000). "The Role of Perceived Interactivity in Interactive Ad Processing", *Unpublished Dissertation, University of Texas, Austin*.
- YADAV, M.S. AND VARADARAJAN, R. (2005). "Interactivity in the Electronic Marketplace: An Exposition of the Concept and Implications for Research", *Academy of Marketing Science Journal*, Vol. 33, n° 4, pp. 585.
- YOO, W.-S.; LEE, Y. AND PARK, J. (2010). "The Role of Interactivity in e-Tailing: Creating Value and Increasing Satisfaction", *Journal of Retailing and Consumer Services*, Vol. 17, pp. 89-96.
- ZHU, K. AND KRAEMER, K.L. (2005). "Post-Adoption Variations in Usage and Value of E-Business by Organizations: Cross-Country Evidence from the Retail Industry", *Information Systems Research*, Vol. 16, n° 1, pp. 61-84.