Value Co-Creation In Online Shopping

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This research presents a critical analysis of value co-creation in online shopping based on a decade of academic marketing literature. It was carried out with quantitative - bibliometric and bibliographic - and qualitative content analysis. The identification of main theories, paradigms and constructs, as well as research cliques, helps in establishing the theoretical framework necessary for an incipient research field such as this. The analysis identified four main research lines: customers as co-creators within the interaction with companies; customer-employee co-creation issues; customers’ interaction with other clients resulting in co-creation; and the impacts of social network resources in online shopping behavior. A crucial factor regarding co-creation in online settings is that the advances of technology empowered consumers. Additionally, customer co-creation is at the core of online shopping innovations, and the interactivity provided by the online shopping setting is ideal for value co-creation to flourish. Nevertheless, this is still a new research area and relevant studies are scarce. Understanding the latest advances in value co-creation in online shopping and what lies ahead is essential in grasping the structure of digital commerce in the era of service logic.

Keywords: value co-creation; customer co-creation; online shopping; e-commerce; customer empowerment.

Cocriação de Valor no Comércio Eletrônico

Este estudo apresenta uma análise crítica da cocriação de valor no comércio eletrônico, baseado em uma década de literatura de marketing acadêmico. A pesquisa foi realizada com base em análise quantitativa - bibliométrica e bibliográfica - e em análise qualitativa de conteúdo. A análise identificou quatro principais linhas de pesquisa: clientes como cocriadores na interação com empresas; questões de cocriação entre clientes e funcionários; interação dos clientes com outros clientes resultando em cocriação; e os impactos dos recursos de redes sociais no comportamento de compras online. Um fator crítico em relação à cocriação em ambientes online é que os avanços da tecnologia empoderaram os consumidores. Além disso, a cocriação de clientes está no centro das inovações do comércio eletrônico. A interatividade proporcionada pela configuração de compras online é ideal para a cocriação de valor florescer. No entanto, esta ainda é uma área nova de pesquisa, cujos estudos são escassos. Analisar os últimos avanços da cocriação de valor nas compras online e tendências de mercado neste campo é essencial para compreender a estrutura do comércio eletrônico na era da lógica de serviços.

Palavras-chave: cocriação de valor; cocriação de clientes; comércio eletrônico; empoderamento do consumidor.
1. Introduction

Advances in technology have dramatically changed the way services are delivered and experienced (Ostrom et al., 2015). Interactive settings, such as those provided by e-commerce and m-commerce, are appealing to the idea of joint value creation between customers and the firm (Paredes, Barrutia, & Echebarria, 2014).

However, research on value creation in the online commerce context is still scarce. As this is a relatively new research area (See-To & Ho, 2014), most studies are focusing on developing a theoretical framework and measurement instruments; moreover, understanding the value co-creation process in this changing technological landscape is considered a research priority in services (Ostrom et al., 2015).

This research aims at shedding light on both traditions and trends in value co-creation in online shopping, by identifying main theories, paradigms and constructs, possible research cliques, and research avenues for future studies.

According to Barrutia, Paredes, and Echebarria (2016) and Pee (2016), electronic commerce is a particularly interesting context for studying value co-creation given the interaction it provides. Indeed, Web 2.0 technology enabled customers to engage in product recommendations, provide financial resources for product development, and take part in strategic decision-making (Pee, 2016). In short, the technology has enabled customers to engage in co-creation of value.

The characteristics of online shopping that are related to value co-creation are the potential for unique services and personalization, especially as related to the possibility of real-time location based offerings (Gupta & Arora, 2017). Online shopping systems are already able to adapt their behavior to individual usage, automatically recognizing new information about customers (Pantano & Priporas, 2016).

Understanding how value is co-created in online shopping is essential for marketing insights (Pantano & Priporas, 2016) and can be achieved by interpreting and discussing with consumers the fundamental meanings attached to their behavior in such settings. Given its unique characteristics (such as time and space fluid frontiers, instant connectivity, and ubiquity) customer co-creation in e-commerce warrants specific research attention (Pee, 2016).

2. Value Co-Creation

The literature presents the origins of value co-creation as a concept and the major approaches that use value co-creation as a steppingstone to marketing development, such as service-dominant logic (SDL) and service logic. Below, the characteristics of online shopping are discussed from standpoint of value co-creation, focusing on the resources involved in these subjects’ interaction, as proposed by Paredes, Barrutia, and Echebarria (2014).

The concept of value in marketing theory was primarily associated with the costs and benefits from the consumer’s relationship with the market – that is, what each party gains from the commercial transaction. Today this concept has evolved and begun to change customer-firm relationships.

From the consumer perspective, the classical approach considered the existence of a good as proof of value or even a result or a solution, where the value of the transaction could be verified. As Vargo and Lusch (2004) observe, only the company was seen as the producer of value and the consumer was merely the user or hinder of this good.

Since the advent of information and communications technologies (ICT), the development of market relations began to challenge the singular notion of value, and today we work with more comprehensive representations. For example, Normann and Ramírez (1993) argued that value should no longer be seen as a result of a process that occurs during manufacturing, but rather as something that consumers conceive in their own consumption context.

Holbrook (1996), who coined the term ‘consumer value,’ defines it as an “interactive relativistic preference experience.” The author clarifies those characteristics explaining that consumer value is (1) interactive, because it presupposes interaction between product and consumer; (2) relativistic, given the situational and personal characteristics; (3) a preference due to its dependence on an evaluative judgment; and, finally, (4) contained in an experience because the value does accrue from the purchase, but from the experience of use.

But this already differentiated perspective of value still positions its creation in the hand of the supplier and judgement in the eyes of the consumer, who remains outside the value creation process. This view is far from the systems of influence and social networks that people live today and that dictate market dynamics.

Hence, it became necessary to broaden the notion of value and its form of creation, thus resulting in the concept of ‘co-creation’ of value. Several sources cite the text by Prahalad and Ramaswamy (2000) as having first applied the term “value creation” in the marketing context; however, the term was originally coined by Kambil, Ginsberg, and Bloch at Stern School of Business, who pointed to such initiatives as the Ikea model of partnership with consumers, whereby Ikea “assigns to them (drive out of town, shop alone, transport their furniture home, and assemble it)” as value co-creation (1996, p. 20).

Undoubtedly, Prahalad and Ramaswamy (2000) went further and developed the idea, clarifying that the role of the customer underwent an evolutionary process, abandoning their traditional role as consultant and approver of a product (i.e., from whom the firm discerned needs and then the acceptance or not) to become both a co-creator and consumer of a value (2000). Various terms were used to express this new kind of relationship between customers and firms, such as co-developers, collaborators, and even competitors to specify the interaction where, for example, customers contribute to the education of other customers.

Prahalad and Ramaswamy (2004) later explained that “armed with new tools and dissatisfied with the choices available, consumers want to interact with companies and thereby co-create value” and concluded by adding that the co-creation experience was the very basis of value. Thus they proposed the DART (dialogue, access, risk-assessment and transparency) model for companies to grapple with this new reality (2004, pp. 5–7).

For Payne, Storbacka, and Frow (2008) the practical application of the concept of value creation presupposes an analysis comprised of three main components: customer value-creation processes, supplier value-creation processes, and encounter processes, which need to be managed to create successful co-creation opportunities.
It is also important to elucidate the scope of co-creation, a concept that could easily be confused with co-production or collaboration; however, doing so, according to Greer, Vargo and Lusch (2016) would undoubtedly restrict its meaning:

Coproduction is a subset of the co-creation of value in which an exchange partner (customer or firm) is actively involved in developing some of a service offering. Coproduction is optional and includes customers assembling a product (such as with IKEA furniture or Lego with toys) or customers being part of a brand community (e.g., Apple, eBay, Harley Davidson, Nike) and using social media to recommend a brand. (p. 6)

Surely, value co-creation is now one of the major topics in marketing, business, and management, as searching for the terms “co-creation” or “cocreation” at Thomson Reuters Word of Science resulting in 2,642 hits illustrates.

2.1. **Major perspectives using the value creation concept**

**Service-Dominant Logic**

Vargo and Lusch (2004) presented Service-Dominant Logic (S-D Logic) as a new perspective at marketing studies in contrast with product-dominant logic, which views products as the basis of change and value creation at the beginning of marketing studies.

To differentiate itself from the prior logic, S-D Logic differentiates between "operand" (passive) resources like raw materials or natural resources on which actions are performed and "operant" resources, which transform passive resources and produce effects such as (Vargo & Lusch, 2004). In fact, skills and knowledge are the drivers of the changes occurring in the market.

After some constructive interaction with academics, such as Grönroos, Edvardsson, Payne, and many others, Vargo and Lusch reformulated their earlier eight premises to become eleven, and then reduced them to five well-structured and integrated axioms (Vargo & Lusch, 2016, p. 8):

- **Axiom 1**: Service is the fundamental basis of exchange.
- **Axiom 2**: Value is co-created by multiple actors, always including the beneficiary.
- **Axiom 3**: All social and economic actors are resource integrators.
- **Axiom 4**: Value is always uniquely and phenomenologically determined by the beneficiary.
- **Axiom 5**: Value co-creation is coordinated through actor-generated institutions and institutional arrangements.

The theory evolved to reinforce the role of institutional arrangements and presented the service ecosystem proposal, as stated Vargo and Lusch (2016):

It has become evident that the recognition of the central role of institutions and institutional arrangements and the resultant heuristics that emerge that foster cooperative and coordinated behavior among actors in an evolving service ecosystem is central to a more complete and realistic portrayal of markets and marketing (p. 20–21).
Service Logic

Arguing for a different scope and claiming a better way of dealing with this new market modus operandi, Grönroos (2008) argues that a “service logic,” without the preoccupation of dominance, would be a more suitable approach to deal with the value-creation process.

Grönroos (2008) addresses specifically the concepts of value-in-exchange versus value-in-use, indicating that value-in-exchange refers to the resources used as the basis of value to enable satisfaction of customers’ value-in-use, somewhat overlapping Holbrooks’ (1996) definition of consumer value.

To support his reasoning, Grönroos describes three aspects of service: service as an activity (the traditional meaning); service as a perspective on the customer’s value creation (consumer logic); and service as a perspective on the provider’s activities (business logic). He claims that value co-creation only happens when customers are enabled to interact and participate in value-creating activities, otherwise the value is created in use or by the customer (2008; 2011). Lastly, Grönroos and Voima (2013) advance the notion of continuous value creation by accumulating value-in-use over time.

Later Chandler and Vargo (2011) extend this concept of value-in-context to value-in-social-context. Moreover, Edvardsson et al. (2011), clarify that value co-creation is shaped by social forces, reproduced in social structures and can be asymmetric for the actors involved.

2.2. Value co-creation in online shopping

From the late 1990s onwards, technologies have advanced at a furious pace (Parasuraman & Colby, 2015), involving online shopping, social media, automation, mobile payments, and the rise of mobile commerce. Such technologies are enabling consumers to experience shopping differently, and marketers are increasingly aware of the need to deliver new marketing strategies (Pantano & Priporas, 2016). The expansion of the internet has expanded the role of the customer to a creator of demand and driver of innovation (Khansa, Zobel & Goicochea, 2014).

The changes in the shopping experience provided by online/mobile technologies come mainly from two essential online shopping characteristics: interactivity and ubiquitous communication. Ubiquity relates to the portability and possibility of accessing information anytime and anywhere. Instant connectivity represents one of the key advantages of online shopping (Hubert et al., 2017). Instant connectivity relates to perceived ease of use, showing that convenience, mobility (Hubert et al., 2017), and immediacy (Mačiulienė & Skaržauskienė, 2016) in the virtual environment are unique benefits to be explored.

Indeed, business-to-consumer (B2C) e-commerce platforms facilitate reaching customers directly (Pee, 2016); moreover, the instant connectivity provided by mobile devices has empowered and motivated consumers to co-create value (Khansa, Zobel, & Goicochea, 2014). Value co-creation involves exchange, a multiplicity of actors in complex settings, and resource integration (Vargo & Lusch, 2016); hence, the interaction and ubiquity of online shopping settings are ideal contexts for co-creation to evolve.

Online shopping, especially mobile, removed time and space barriers (Pantano & Priporas, 2016; Tang et al., 2016). This is the era of anytime, anywhere shopping. Mobile
shopping allows customers to purchase when they are on the move, with no temporal or spatial constraints (Tang et al., 2016), whereas e-commerce still requires a sitting area to use a PC or notebook. Regardless, shopping is no longer restricted to brick-and-mortar stores during regular business hours.

This removal of barriers has a direct impact on value co-creation. Customer co-creation in online shopping involves a much larger number of customer participants than other forms of co-creation (Pee, 2016). Information technology has made it possible for companies to overcome geographical boundaries. More customers, coming from diverse backgrounds and having different experiences, are more likely to offer a greater variety of ideas (Pee, 2016).

Whereas time and space restrictions are no more, other boundaries have appeared. There are now technological boundaries, including the ability to use the technology and the consumer’s adeptness in handling it (Pantano & Priporas, 2016; Tang et al., 2016). Indeed, what Paredes, Barrutia, and Echebarria (2014) refer to as customers’ resources, have a direct impact on the value co-creation process. From the standpoint of SDL, an online shopping experience can provide value differently according to the customers’ characteristics and contexts (Paredes, Barrutia, & Echebarria, 2014).

2.3. Resources for value co-creation in online shopping

The active role of customers in the value co-creation process in online shopping settings was long taken for granted, with most studies focusing on firm resources in co-creation. However, Paredes, Barrutia, and Echebarria (2014) stress that value creation in e-commerce research should “jointly consider customer resources and firm resources” (p. 112). “Resources are basic and integrate tangible and intangible entities available to firms and customers to co-create value” (p. 10). Consumer resources refer to technology readiness and navigation skills, whereas firm resources regard vendor reputation and website quality. In this co-joint mindset, both companies and customers contribute to the process by integrating their resources. Therefore, when customers apply their knowledge/expertise and skills (operant resources according to SDL) to the resources provided by the electronic site, value is co-created in online shopping (Paredes, Barrutia, & Echebarria, 2014).

3. Method

This exploratory research involved bibliographic and bibliometric reviews. A bibliometric assessment allows the evaluation of quantity (by assessing the numbers of publications) and quality (by looking at citations received) of the published research (Bakri & Willett, 2011). Bibliometrics aims at understanding the production of knowledge. Dealing with the status quo allows us to envisage advances to be made in certain fields of knowledge (Teixeira, Iwamoto, & Medeiros, 2013). The study was conducted in four stages.

First, data was gathered using the Web of Science (WoS) core collection, which includes most journals with high impact factor. A “basic search” was conducted the keywords “co-creation” or “service-dominant logic” and “e-commerce” or “online shopping” or “mobile commerce” or “m-commerce.” Based on a 2010-2019 timespan and limiting the articles to those published in English, we obtained 60 articles.
At this point we commenced the bibliometric analysis. The bibliometric analysis was performed using BibExcel program in order to spot seminal articles, the most-cited authors in the field of study, and collaboration patterns.

In a third stage of the research, the articles' abstracts were analyzed. Those identified as most relevant to the topic were analyzed in greater depth, that is, a total of nine articles. This final selection of papers was separately conducted by two surveys in order to increase reliability (Holbrook & O'Shaughnessy, 1988). Consensus was achieved in work meetings. Finally, in-depth qualitative content analysis of those nine articles was carried out; their most significant findings are discussed below.

4. Results

In a bibliometric survey, citations analysis is the basic measure used to find the articles, authors and journals that are the most influential in a knowledge domain (Zupic & Čater, 2014). To identify the theoretical foundations of the research topic, the ranking of article citations is shown in Table 1.

Table 1 - Value co-creation in online shopping: most cited articles and authors

<table>
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<tr>
<th>Cit.</th>
<th>Authors</th>
<th>Year</th>
<th>Title</th>
<th>Journal</th>
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<tr>
<td>18</td>
<td>Vargo &amp; Lusch</td>
<td>2004</td>
<td>Evolving to a new dominant Logic for marketing</td>
<td>Journal of Marketing</td>
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<td>17</td>
<td>Fornell &amp; Larcker</td>
<td>1981</td>
<td>Evaluating Structural Equation Models with Unobservable Variables and Measurement Error</td>
<td>Journal of Marketing Research</td>
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<td>14</td>
<td>Zwass</td>
<td>2010</td>
<td>Co-Creation: Toward a Taxonomy and an Integrated Research Perspective</td>
<td>International journal of Electronic Commerce</td>
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<td>13</td>
<td>Vargo &amp; Lusch</td>
<td>2008</td>
<td>Service-Dominant Logic - Continuing the evolution</td>
<td>Journal of the Academy of Marketing Science</td>
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<td>12</td>
<td>Prahalad &amp; Ramaswamy</td>
<td>2004</td>
<td>Co-creation experiences: The next practice in value creation</td>
<td>Journal of Interactive Marketing</td>
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<td>8</td>
<td>Payne, Storbacka &amp; Frow</td>
<td>2008</td>
<td>Managing the co-creation of value</td>
<td>Journal of Academy Marketing Science</td>
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<td>8</td>
<td>Yi &amp; Gong</td>
<td>2013</td>
<td>Customer value co-creation behavior: Scale development and validation</td>
<td>Journal of Business Research</td>
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<td>8</td>
<td>Grissemann &amp; Stokburger-Sauer</td>
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<td>Customer co-creation of travel service</td>
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<td>8</td>
<td>Zeithaml</td>
<td>1988</td>
<td>Consumer Perceptions of Price, Quality, and Value</td>
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<td>7</td>
<td>Babin, Darden, &amp; Griffin</td>
<td>1994</td>
<td>Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value</td>
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<td>Fuller, Mühlbacher, Matzler, &amp; Jawecki</td>
<td>2009</td>
<td>Consumer Empowerment Through Internet-Based Co-creation</td>
<td>Journal of Management Information Systems</td>
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<td>6</td>
<td>Huang &amp; Benyoucef</td>
<td>2013</td>
<td>From e-commerce to social commerce: A close look at design features</td>
<td>Electronic Commerce Research and Applications</td>
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The papers by Vargo and Lusch lead the list of seminal works; indeed, S-D Logic, using the co-creation concept as presented by Prahalad and Ramaswamy (2004), seems to be the first theory to elaborate on it.

Gefen, Karahanna, and Straub (2003) analyzed the factors that build trust in online shopping, provided this environment lacked the typical human interaction. On the other hand, in a context of consumer empowerment specifically opposing the lack of trust to perform online shopping, Füller et al. (2009) explores other forms of interaction in the evolution of technology, resulting in a context full of multimedia-rich interaction opportunities and therefore enabling new forms of producer-consumer co-creation experiences.

Regarding methods, we have two seminal works. The first is Fornell and Larcker’s (1981) paper on Structural Equation Models. The other is Eisenhardt’s Case Study Research (1989). From our analysis, a certain tendency of a post-positivist research approach could be identified in relation to treatment of the topic, which mostly relied on quantitative methods.

Comparing the analysis of citations with the co-citation matrix (Table 2), a consistency among the most influential authors is observed. The co-citation matrix enables us to identify how the most-cited authors are interrelated in the theoretical basis of the field, in other words, what the intellectual structure in this field of research is. The co-citation matrix in Table 2 displays the following main pairing patterns: Vargo and Lusch (2004; 2008), as they continued to develop S-D Logic theory; Vargo and Lusch, and Prahalad and Ramaswamy or Vargo and Lusch, and Payne, Storbacka, and Frow (regarding co-creation); Vargo and Lusch, and Grönroos & Voima (also with co-creation although with different approaches); Vargo and Lusch, and Zwass; Zwass and Füller et al (consumer empowerment via co-creation); Gefen, Karahanna and Straub, and Pavlou (trust and TAM in e-commerce).

The ontological characteristic and the evolution of the value co-creation study illustrated by the S-D Logic development path would explain why a significant part of the cited articles are exclusively related to it. The first e-commerce-related article, used as a reference in the articles selected at this study, presents an initial taxonomy of the co-creation elements at online shopping (Zwass, 2010), exposing the newness of this line of research. The nodes represent the communication volume amongst the authors in the network.
Table 2: Co-citation matrix on value co-creation in online shopping.

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The content analysis used the tools provided by Paredes, Barrutia, and Echebarria (2014) in order to address value co-creation in online shopping. Because customer resources in value co-creation is an under-researched topic, it will be the driver of the analysis process.

The content analysis identified four main research lines: (1) customers as co-creators within the interaction with companies (collaboration and innovation); (2) customer-employee co-creation issues; (3) customers’ interaction with other customers resulting in co-creation,
based on recommender systems and eWOM; and (4) the impacts of social network resources on online shopping behavior.

a) Consumers as co-creators via interaction with companies (collaboration & innovation)

Consumer co-creation helps companies do a better job so they can align products with customer needs and expectations (Khansa, Zobel, & Goicochea, 2012). Particularly when it comes to digital technology, managing service innovation is a strategic priority for companies and research (Ostrom et al., 2015). Moreover, service innovation is increasingly taking place within complex ecosystems (Vargo & Lusch, 2016), where clients assume a key role as co-developers. Hsieh (2017) analyzed co-creation in the online-to-offline (O2O) perspective, highlighting the importance of messages that come from other customers with social bonds. Therefore, managing customers’ and partners’ collaboration throughout the service innovation process is key to the value co-creation process.

One of the earliest studies to report empirical evidence for the impact of customer co-creation in e-commerce was performed by Pee (2016) and involved new products development. Interestingly, this research analyzed customer-company co-creation via online shopping product data. The research was based on the premise that consumer co-creation in product innovation involves two tasks: idea generation and idea selection/decision-making. The findings highlighted that co-creation leads to better new products when both ideas and decisions are co-created with customers. Pee argued that this is because when customers contribute ideas, they expect to be involved in decisions as to of which idea to implement (Pee, 2016)

Allowing customers to engage in the decision-making process instills a sense of control (Pee, 2016), thus constituting a form of consumer empowerment necessary for the co-creation process (See-To & Ho, 2014). For Khansa, Zobel, and Goicochea (2012), m-commerce contributed even more to consumer empowerment thanks to its ubiquitous connection.

See-To and Ho (2014) claim there are two important dimensions to the value co-creation process in online settings: behavioral alignment, and empowerment and control. Behavioral alignment refers to when both the customer and the company can communicate effectively and efficiently about new ideas, whereas empowerment and control address a willingness to change others for co-creation, in a system that provides both company and customer with perception of control. Khansa, Zobel and Goicochea (Khansa, Zobel, and Goicochea, 2014) also highlight the importance of consumer empowerment and co-creation for online shopping innovations.

As seen previously at S-D Logic axiom 5, there are now actor-generated ecosystems, which seem to vary in terms of shape, origin, constitution, and many other features. Thus, to integrate resources, it became important to know the types of involvement adopted by the actors and where to find them. Bendapudi and Leone (2003) listed different opportunities for value creation by the beneficiary, including (1) the emotional involvement of customers (e.g., through advertising and promotional activities); (2) the initiative itself; (3) customer engagement in an experience; (4) the use of processes to enable the customer to solve their own problems (e.g., self-diagnosis of computer failure on a website); and (5) active customer engagement with the supplier to help design a product.
The most cited article (253 at the time data collection), Zwass (2010), delivers a mapping of the space of co-creation (or the relationship format) from the e-commerce point of view. The space encompasses virtual communities (more used in IT development); crowdsourcing or collective intelligence; and open innovation initiatives.

From the firm perspective, brand communities are extremely important because they are able to access user knowledge about the brand’s products, surface lead users, and create a commitment to the brand that can lead to an intent to contribute to the development of its products (Zwass, 2010), especially when such products have been autonomously created.

### Table 3: Most prominent researches based on value co-creation theory in e-commerce.

<table>
<thead>
<tr>
<th>Year</th>
<th>Constructs</th>
<th>Representative findings</th>
<th>Authors</th>
<th>Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>Sponsored co-creation and Autonomous co-creation</td>
<td>Content created spontaneously vs. firm content</td>
<td>Zwass; Perks, Gruber, &amp; Edvardsson</td>
<td>Intern. Journal of Electro Commerce</td>
</tr>
<tr>
<td>2010</td>
<td>Intellectual Space of Co-Creation Research</td>
<td>Classification of the spaces where the co-creation occurs</td>
<td>Zwass</td>
<td>Intern. Journal of Electro Commerce</td>
</tr>
<tr>
<td>2012</td>
<td>Consumer empowerment; innovation; sponsored and autonomous co-creation</td>
<td>The importance of consumer empowerment and co-creation for innovations.</td>
<td>Khansa, Zobel, &amp; Goicochea</td>
<td>Intern. Journal of Electro Commerce</td>
</tr>
<tr>
<td>2014</td>
<td>eWOM, value co-creation and trust; behavioral alignment; empowerment and control</td>
<td>eWOM has an impact on value co-creation through consumers' trust.</td>
<td>See-To &amp; Ho.</td>
<td>Computers in Human Behavior</td>
</tr>
<tr>
<td>2015</td>
<td>Online social support; social commerce constructs (online forums, communities, ratings, reviews and recommendations)</td>
<td>Social media enables social support for purchasing, transferring the power from sellers to buyers</td>
<td>Hajli &amp; Sims.</td>
<td>Technological Forecasting &amp; Social Change</td>
</tr>
<tr>
<td>2015</td>
<td>Multi actor collaborative contexts; customer empowerment and customer-dominant value creation</td>
<td>Understanding value creation is one of the top research priorities for service companies.</td>
<td>Ostrom, Parasuraman, Bowen, Patricio, &amp; Voss.</td>
<td>Journal of Service Research</td>
</tr>
<tr>
<td>2016</td>
<td>Crowdsourcing; personality; trust; openness; extraversion; trait competitiveness.</td>
<td>User motivation to engage in crowdsourcing involves monetary benefits and personality traits.</td>
<td>Faullant, Holzmann, &amp; Schwarz.</td>
<td>Intern. Journal of Innovation Management</td>
</tr>
<tr>
<td>2016</td>
<td>Firm resources and outcome quality; consumer resources and type of product</td>
<td>Consumer expertise, process quality and outcome quality significantly affect value</td>
<td>Barrutia, Paredes, &amp; Echebarria.</td>
<td>European Journal of Marketing Electronic Commerce Research</td>
</tr>
<tr>
<td>2016</td>
<td>Co-creation tasks (idea co-creation and decision co-creation) and new product development</td>
<td>The positive impact of customer co-creation in B2C e-commerce is empirically supported</td>
<td>Pee.</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>Customer showrooming practice as co-destruction initiatives</td>
<td>Showrooming behavior comprising differing degrees of accumulative value co-destruction and value co-creation behavior across online and offline channels</td>
<td>Daunt &amp; Harris.</td>
<td>Journal of Retailing and Consumer Services</td>
</tr>
</tbody>
</table>
Despite the relevant efforts of Zwass (2010), there is still no consensus on the relationship arrangement. For Faullant, Holzmann, and Schwarz (2016) crowdsourcing is a powerful instrument to integrate users in product development. The motives for participating in collaborative communities usually involve task fascination, peer-recognition, and social and learning benefits; whereas crowdsourcing usually involves monetary benefits and personality traits, such as openness, extraversion, and trait competitiveness. For Ostrom at al. (2015) crowdsourcing is one of the tools available for companies to foster service innovation. In this regard, Pee (2016) presents Idea Storm (Dell) and Kindle Scout (Amazon) as examples of company interaction with their customers. However, other initiatives, such as the Open Innovation (Unilever) platform actually seek out experts on certain subjects to further develop and collaborate in solving the company challenges (Unilever website, [s.d.]). Moreover, although trust affects online purchasing behavior (Gefen, Karahanna, & Straub, 2003), it does not seem to affect predisposition to engage in crowdsourcing (Faullant, Holzmann, and Schwarz, 2016).

Even if the company is engaged in co-creation in a less systematic way than open innovation or a crowdsourcing initiative, there is still plenty of room for co-creation via customer interaction, i.e., via a strong online presence. The online presence of a brand, such as in a social network such as Facebook, encourages the involvement of consumers in value co-creation (See-To & Ho, 2014).

The potentially massive volume of content created by consumers via blogs, reviews, comments, and ratings provides companies feedback on "how to improve their products to better meet consumers’ preferences" (Khansa, Zobel, & Goicochea, 2012, p. 6). Online comments open up the path to a two-way dialogue between companies and customers, thus improving understanding and helping the company enhance product design (See-To & Ho, 2014). Indeed, online comments present an opportunity for customers to provide innovative ideas and insights, the seed for "both sponsored and autonomous co-creation" (Khansa, Zobel, & Goicochea, 2012, p. 6; Zwass, 2010). E-vendors can offer support to customers via social commerce platforms and its constructs (online forums, communities, ratings, reviews, and...
recommendations). This supportive climate enhances co-creation of value (Hajli & Sims, 2015).

On the other hand, not only is value created within the online shopping experience: it can be destroyed as well, generating what has recently been dubbed “value co-destruction” (e.g., Järvi, Kähkönen, & Torvinen, 2018; Makkonen & Olkkonen, 2017; Quach & Thaichon, 2017). Co-destruction is described as “an interaction process between service systems that results in a decline in at least one of the system’s wellbeing (which, given the nature of a service system, can be individual or organizational)” (Plé & Cáceres, 2010, p. 431). Apart from bad reviews, which are among the more obvious means of value co-destruction, retailers nowadays deal with showroming as another bad customer interaction initiative. Showrooming is a shopping behavior whereby consumers intentionally benefit from the services of a retailer in one channel and then consummate the purchase at a different retailer/channel (Rapp et al., 2015). Nevertheless one retailer’s (or channel’s) loss is another’s gain, meaning co-creation and co-destruction co-occur (Daunt & Harris, 2017).

Both for co-creation (e.g., as a support network) to take place, or for its counterpart, co-destruction to occur, other actors, such as employees, may be involved.

b) Customer-employee co-creation issues

Value co-creation happens in a multi-actor (Ostrom et al., 2015; Vargo & Lusch, 2016), networked, complex, and collaborative context, involving a range of stakeholders. According to Shankar et al (2016), the online shopping journey involves four key entities, that is, shopper, employee, organization, and mobile technology; and three broad stages, that is, before, during and after purchase. Integrating the roles of customers, employees, and technology, in all purchasing stages, is crucial for value creation. Nevertheless, as the social media platforms have strengthened client-to-client interactions, the technology advances have led to a substitution of employees, in a “dehumanization of services” process (Ostrom et al., 2015, p. 8).

“Coordinating the interdependent roles of employees and customers in co-creation” (Ostrom et al., 2015, p. 8) is an important topic companies should address in this rapidly changing technological environment. The management of such interdependencies should include necessary structures, scripts, and shared norms, and employees need to acquire new competencies. Managers can establish new rewarding strategies and back office personnel can engage in data analysis. Employees can work as “enablers,” ensuring that customers are able to perform their given roles in co-production and value creation (Ostrom et al., 2015).

c) Clients educating other clients (interaction with other clients)

The online shopping became a “networked experience” as digital technologies nourish processes of peer recognition, identity and status that are at the core of the experiential side of consumption (Pantano & Gandini, 2018). The interaction of customers with other customers via recommender systems and electronic word-of-mouth (e-WOM) also affects the value co-creation process. Value co-creation affects purchase intention in e-commerce (Liu & Luo, 2019; See-To & Ho, 2014) and m-commerce (Khansa, Zobel, & Goicochea, 2012). Since value creation focus on value as perceived by customers (Ostrom et al., 2015), the perceptions
customers share with other customers affect their service experience. According to Khansa, Zobel and Goicochea’s analysis (2014) of mobile innovations, co-creation of value with and between customers is essential in innovation efforts, as it makes the process more effective, for it facilitates the inflow of knowledge from external entities (Pee, 2016).

Customers are connected to other customers in real time, through instant messaging, commenting, or posting (multiple channels), with autonomy to co-create experiences (Ostrom et al., 2015), in line with what Zwass (2010) refers to as autonomous co-creation. Dennis et al (2017) mention that one of the intangible benefits of co-creation for consumers is related to social integrative benefits, such as a sense of belonging to a community. For the authors, personal interaction is one of the important constructs of the participation dimension of value co-creation.

Some social media platforms, such as Twitter, may be regarded as a form of electronic word of mouth (Chen, 2015). Therefore, marketers can use social media, especially Facebook, as an excellent source of micro-insights in targeted groups, displaying personality traits and cultural backgrounds (Castro & Marquez, 2017). In the cyber word, electronic word-of-mouth in social media is an inexpensive way for marketers to promote their brands (See-To & Ho, 2014), since customers can at any time quickly and easily obtain information from others through social media and Internet searches, often via mobile (Ostrom et al., 2015).

Electronic word-of-mouth is a manifested form of customer engagement (Dellarcos, 2003) and customer engagement influence purchase intention (Payne, Frow, & Eggert, 2017). Consumer reviews add value for other potential customers (Hajli & Sims, 2015b). "E-WOM has an impact on value co-creation through consumers' trust" (See-To & Ho, 2014, p. 186), fostering a richer buying experience (Khansa, Zobel, & Goicochea, 2012).

Empowered consumers make informed decisions. The quantity of content and tools available to consumers today leads them to impose their values and beliefs on firms, pressing, for instance, for no child labor in production lines (Khansa, Zobel, & Goicochea, 2012). More than influencing purchasing decisions, consumers’ comments actually influence the firm’s position on the market (Hajli & Sims, 2015).

d) The impacts of social network resources on online shopping behavior

The integration of e-commerce and m-commerce with social networking sites address the social side of the online shopping experience (Hajli, 2014; Khansa, Zobel, & Goicochea, 2012) and customers’ social resources play a crucial role in value co-creation (Paredes, Barrutia, & Echebarria, 2014). Social interaction of consumers is one of the bases for co-creation (Hajli & Sims, 2015; Zwass, 2010). Besides being a place for social interaction, online communities are considered a source of information for consumers (Annett-Hitchcock & Xu, 2015) and for companies (Castro & Marquez, 2017; Mačiulienė & Skaržauskienė, 2016). Virtual communities (in contrast with regular online reviews) offer consumers a place to share their preferences and concerns with people with similar interests and needs. Therefore, virtual communities add credibility for consumers (Annett-Hitchcock & Xu, 2015).

Especially since 2017, the articles on online shopping behavior are more focused on the impacts of value-cocreation in online shopping behavior. For instance, Festa et al (2019) analyzed whether the most important Italian wineries’ e-commerce websites were oriented...
to value cocreation according to SDL, focusing on whether the resources of such websites allowed for value co-creation. Dennis et al (2017) analyzed the effect that value co-creation has on consumers' shopping behavior, focusing on socially excluded consumers, particularly with mobility disability.

The emergence of social network communities has provided a transfer of power from sellers to buyers, since the interaction provided leads to an online social support (Hajli & Sims, 2015a). Online social support refers to “online actions that individuals carry out by collaborating with peers through social media” (Hajli & Sims, 2015a, p. 352), providing either emotional or informational assistance.

Virtual communities work as an environment for consumers to share personal life experiences (Annett-Hitchcock & Xu, 2015). They are places of rich human interaction. Additionally, the anonymity afforded by virtual environments may on the one hand foster creativity, but, on the other, diminish a sense of responsibility (Mačiulienė & Skaržauskienė, 2016).

The perceptions of others affect different stages of the creation of value process. Pre-purchase, electronic word-of-mouth affects trust in the firm and purchase intentions in different online platforms such as websites, blogs, social media, and online forums (See-To & Ho, 2014). Indeed, in such online systems, the consumers are the main providers of content (Khansa, Zobel, & Goicochea, 2012). Consumers use this content provided by other consumers in social media to support their purchasing decisions (Hajli & Sims, 2015). Post purchase, the approval of peers upon the performed action helps increase the perception of value-in-context experienced (Paredes, Barrutia, & Echebarria, 2014). Cambra and Fierro (2019, p. 6) highlight that “co-creation activities are related to perceived benefits, especially a satisfactory quality of customer experience,” based on the principles of social exchange theory. Thus, the quality of the customer’s experience has a positive impact on customer co-creation.

Mačiulienė and Skaržauskienė (2016) identified three motivation types for participation in online communities: material (financial benefits); intellectual (knowledge); and social (relationships). Indeed, there is a strong social motivation in participating in online communities, related to the bonds and exchanges performed within the group (Mačiulienė & Skaržauskienė, 2016). In these virtual structures, peers provide assistance to peers (Annett-Hitchcock & Xu, 2015); therefore, online communities can be helpful in solving problems that are hard to overcome individually (Mačiulienė & Skaržauskienė, 2016).

Three factors influence consumers’ willingness to co-create with producers: experienced tool support, user involvement, and enjoyment (Füller et al., 2009). The social engagement provided by online shopping (Khansa, Zobel & Goicochea, 2012) entails all three factors to perform the task (Belk, Ger, & Askegaard, 2000), and perceived enjoyment is a critical requirement for consumer engagement in value co-creation.

Cambra and Fierro (2019) highlight the importance of non-transactional behaviors involving product co-creation and word-of-mouth, with customers sharing their acquired knowledge with other customers. Such behaviors have an impact on brand image and reputation. According to these authors, co-creation is a key aspect of non-transactional behavior. Therefore, companies should invest in converting the customer empowerment...
enabled by the digital world into “engines for value creation” (p. 8). Previously, Dennis et al.
(2017) had pointed out customer knowledge and perceived quality as outcomes of co-creation.

The online shopping experience has matured from push strategies to an entertaining
social experience (Khansa, Zobel, & Goicochea, 2012) where consumers are empowered and
have an active role in the co-creation of value.

5. Final Considerations

According to the content analysis, customer co-creation is the core of online shopping
Interactions and customer empowerment is a major construct in most of the papers analyzed.
Value co-creation in online shopping happens within a network perspective. This movement
from a “bilateral supplier–customer service–value co-creation to a multi-actor perspective”
(Ostrom et al., 2015, p. 10) brings the challenge of how to foster and organize such network
structures in order to enhance customer experience.

The consumer of today is able to interact with the world on different levels and to
accomplish activities unthinkable before, which Zwass (2010) defines as “consumer
empowerment” (Khansa, Zobel, & Goicochea, 2012; Zwass, 2010). The technology advances
that came along the Internet played a major role in that, changing the clients’ role from
consumers to co-creators.

Several limitations stem from the data collection (e.g., the use of a single database –
Web of Science) and the methodological approach. The use of other databases should provide
further insights. Plus, for a more comprehensive framework, further research could use the
snowball technique to broaden the sample to include additional referrals.

Because the research in value co-creation in online commerce settings is still incipient,
and understanding co-creation is service research priority (Ostrom et al., 2015), the avenues
for future research are wide open. For instance, there is need for further research specifying
the operationalization of value co-creation whilst enhancing profitability. Showrooming –
visiting offline stores to buy on line (Gensler, Neslin, & Verhoef, 2017) – also presents itself as
a new modus operandi for online shopping. Indeed, Pee (2016) already argued for the
development of better and more comprehensive knowledge of the mechanisms through
which co-creation impacts financial performance.

Social data activity is a plentiful source of data, a fertile ground for discovering
innovative ideas. However, the approaches and methods to explore this ocean of big data
remains a challenging research field. Besides customer design and customer marketing,
customer cocreation could also be stimulated in other stages of the process, such as product
testing and product support.

Customers may think that this amount of content and degree interactivity is helpful
and pleasant, but on the other hand, they may also refuse to contribute all that is expected of
them as a co-creator of value, thus leading to “co-destruction” (Ostrom et al., 2015) – another
fruitful research avenue.

In contrast with prior studies, Pee (2016) found that customer co-creation in the
commercialization process had a negative effect on innovativeness (albeit a positive effect on
sales). Moreover, some authors focused on innovation differentiation, claiming that although

incremental innovation can come from consumers naturally, radical innovation would be less likely (Füller et al., 2009; Gustafsson, Kristensson, & Witell, 2012; Ordanini & Parasuraman, 2011). Further investigation can shed light on this issue.

Ostrom et al., as a relevant research path, point to understanding conflicts between customers’ desire for privacy and their desire for personalized service (2015), possibly related to the co-creation involved in personalizing services. This subject also relates to Grönroos’ (2008) assertion, challenging the notion that co-creation only occurs if the beneficiary so allows it. In fact, it seems that not all consumers understand properly the extent to which they permit online players to interfere with their buying behavior.

Despite all of the foregoing, we can conclude that the ubiquity of online shopping, linked to the interactivity in the generation of photos, videos, audios, and content for social media, creates a rich opportunity for customer value co-creation in which the firm must be fully integrated.

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