Co-Creation

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Definition: Co-creation has gained traction in recent years and various fields, including marketing, product development, and innovation studies, as it leverages the collective expertise and insights of multiple parties to enhance outcomes. Broadly, co-creation refers to the collaborative process of involving stakeholders, such as customers, suppliers, employees, or the public, in creating or improving products, services, or experiences.

Keywords: co-creation; crowdsourcing; new product development; design thinking; open innovation; prototyping

1. Introduction

The concept of co-creation has gained traction in recent years since consumers play increasingly a key role in creating value within the economy [1]. Co-creation's history dates back to early forms of banking, with examples like the colonial scrip in the United States and Credit Agricole in France, where communities or groups came together to create their own financial solutions. In more modern times, co-creation has been applied in various industries, including technology (e.g., Linux, Mozilla Firefox) and consumer goods (e.g., Coca-Cola Freestyle machines, Burberry’s partnership with Salesforce.com, accessed on 10 January 2024) [2,3]. Prahalad and Ramaswamy [2] are often credited for popularizing the co-creation concept, although many authors contributed to its conceptualization since the 1990s, including Hubbert [4] or Kambil et al. [5]. Prahalad and Ramaswamy [2] defined co-creation as a business that emphasizes creating value through interaction between companies and customers. This approach contrasted traditional business models where companies create value and customers consume it. Instead, it involves customers’ active contribution to the business value creation process for mutually beneficial outcomes for both customers and the business.

From a more recent perspective, the concept of co-creation involves not only consumers or end-users but a broader range of stakeholders [6]; while encompassing the idea that not all co-creation efforts are guaranteed to succeed, they do offer the chance to inspire ideas, gain fresh perspectives, and move in the right direction through brainstorming with like-minded individuals. Hence, an updated definition of co-creation refers to it as the active involvement of stakeholders, such as consumers, suppliers, business partners, and even employees, engaging together in the creation of value in various stages of the production process [2,6].

One key area in which co-creation thrives is innovation and product development, where customers or end-users are involved in the design process so that products better meet their preferences and needs [7]. The rationale is that customers, being the end-users, have unique insights that can significantly improve the design and functionality of products. O’Hern and Rindfleisch [8] further refined co-creation in the specific area of digital marketing, defining it as “a collaborative NPD (new product development) activity in which customers actively contribute and/or select the content of a new product offering” (p. 86).
Given the powerful insights that co-creation can provide, organizations from both the public and the private sphere have recourse to it. In the private sphere, businesses like Starbucks, with its My Starbucks Idea program and LEGO's IDEAS platform, have used co-creation platforms to gather customer ideas for new products or improvements. In the public realm, social and community projects have benefitted from co-creation, which involves stakeholders collaborating to address social issues or improve public services.

In sum, co-creation is really all about “seeing value from the eyes of stakeholders”. This idea emphasizes the understanding and meeting of stakeholders’ needs through collaborative practices. This approach is grounded in the belief that stakeholders are not only passive recipients of products and services but rather active participants who can contribute significantly to the value creation process. Key aspects of this idea include stakeholder-centricity, collaborative development, empathy and understanding, mutual benefit, innovation and relevance, agility and responsiveness, as well as the building of relationship and trust.

2. Co-creation and Related Concepts

The relationship between co-creation, creation, value assessment, and sustainability is multifaceted and can be explored through various academic lenses.

2.1. Co-Creation and Creation

Co-creation differs from traditional creation in its approach to value generation. While creation often refers to a more organization-centric process of developing new products or services, co-creation involves collaboration with stakeholders, particularly customers, in the value creation process [2]. This collaborative approach ensures that the outputs are more aligned with user needs and expectations [2]. Academic references that explore this distinction include Prahalad and Ramaswamy’s work on co-creation [2,9,10], which emphasizes the shift from a product-centric to a customer-centric approach in value creation.

2.2. Value Assessment and Co-Creation

Value assessment in co-creation is more complex than in traditional creation processes. It involves evaluating not only the economic value but also the experiential and relational aspects of the created product or service. This evaluation often requires new metrics and approaches, as traditional measures may not capture the full spectrum of value generated through co-creation. Vargo and Lusch’s [11] Service-Dominant Logic provides a framework for understanding value co-creation, emphasizing the role of the customer as a co-creator of value.

2.3. Sustainability and Co-Creation

Sustainability in co-creation refers to the development of products, services, or solutions that are not only economically viable but also environmentally and socially responsible [12]. Co-creation can support sustainability by integrating diverse perspectives, including those of stakeholders (e.g., customers, suppliers, employees) who are increasingly concerned about sustainability issues [12]. This approach can lead to innovations that are more sustainable and better meet societal needs.

2.4. Integrating Co-Creation in Sustainable Value Creation

The integration of co-creation in sustainable value creation involves aligning the collaborative innovation process with sustainability goals. This means considering the environmental, social, and economic impacts of co-created products and services from the outset. Academic literature that explores this integration includes works on sustainable business models and corporate social responsibility, which examine how companies can create value in ways that are beneficial to society and the environment as well as economically viable.
In summary, the relationship between these concepts is centered on how value is conceptualized, created, and evaluated in a modern business context that increasingly values stakeholder engagement, customer-centricity, and sustainability.

3. Co-Creation Methodologies

In their review of novel forms of consumption, Ertz and Quenum [13] provide an identification and classification of value co-creation types, which differ based on the level of customer participation (low to high), return of the company (yes or no), and degree of customer freedom (limited customer freedom or open and creative customer freedom). The most popular co-creation approaches involve crowdsourcing, open innovation, and design thinking. Crowdsourcing consists of gathering ideas, feedback, or solutions from a large group of people, typically from an online community. Chesbrough [14] introduced the concept of open innovation, which suggests that firms can benefit from external ideas and paths to market alongside internal ideas. Open innovation involves active participating customers in the development of new products through generating and evaluating new product ideas, elaborating concepts, discussing and improving prototypes, or testing products in simulations [15]. Design thinking is an idea that advocates for a human-centered design process that encourages empathy with users, creative ideation, and rapid prototyping [16].

Other interesting approaches occurring at the pre-design stage include open source, co-innovation, and co-ideation. To Cooke and Buckley [17], open source refers to the eponymous massive online collaborative approach that seeks to promote progress in the digital realm by sharing intellectual property and allowing the development of large communities of individuals. Co-innovation, on the other hand, is a specific design method based on several people’s different contributions to the innovation process [18]. Through co-ideation, organizations invite customers to make suggestions, even providing customers with specific resources (e.g., software, toolkits, beta versions) in order for organizations to nurture and refine their skills and knowledge as well as increase customer participation in the ideation project [18–21].

4. Co-Creation Theories and Models

Co-creation, a concept where customers or users actively participate in the creation or development of a product or service, is supported by various theories and models from different academic disciplines. Several theories and models explain co-creation. First, the Service-Dominant Logic approach, developed by Vargo and Lusch [11], views service as the fundamental basis of exchange. It suggests that value is co-created interactively between providers and users rather than embedded in products. Second, the Experience Economy proposed by Pine and Gilmore [22] posits that businesses must orchestrate memorable events for their customers, and that memory itself becomes the product. Co-creation in this context is about creating valuable experiences together with the customer. Third, the Value Co-Creation Model, often associated with the work of Prahalad and Ramaswamy [2], revolves around the idea that customers play an active role in creating value. It emphasizes dialogue, transparency, access, and risk assessment as key factors in co-creation. Fourth, the Open Innovation Model introduced by Chesbrough [14] suggests that firms can and should use external ideas as well as internal ideas, and there are internal and external paths to market. Co-creation in this context is about leveraging collective intelligence from outside the organizational boundaries. Fifth, the User Innovation Model, championed by von Hippel [7,19], focuses on the idea that lead users often develop innovations themselves. Companies can benefit by recognizing and leveraging user-driven innovations. Sixth, Customer Relationship Management (CRM) Models, [23] emphasize building long-term relationships with customers. Co-creation here involves customers providing feedback and ideas which are used to improve products and services. Seventh, with the rise of social media, new models (i.e., Social Media and Digital Co-Creation Models) have emerged where companies engage with customers online to co-create products, services, or content.
Finally, Collaborative Networks Theory [24] is also germane to co-creation because it involves the formation of networks of individuals or organizations to achieve shared objectives, often through co-creation.

5. Opportunities and Challenges of Co-Creation

Co-creation can thus be conducted in various ways with different approaches and methodologies. Regardless of the method used, co-creation can lead to increased innovation, better alignment with customer needs, enhanced customer engagement, and stronger brand loyalty [2]. It also allows for more diverse input, potentially leading to more creative and effective solutions. However, despite its benefits, co-creation also poses several challenges, such as managing the intellectual property rights of contributors [8]. Another issue relates to the capacity to ensure effective participation from stakeholders [8]. Finally, leveraging co-creation successfully also entails aligning diverse stakeholder interests [8].

Another aspect worth mentioning refers to the growing necessity of inclusive and diverse stakeholder engagement. First, the growing trend toward more inclusive co-creation suggests the involvement of more diverse groups of stakeholders. This trend has clear benefits in terms of creativity enhancement, finding relevant solutions, and addressing various needs and perspectives [25]. Meanwhile, appropriate leadership and soft skills are needed to manage growing diversity. The global nature of many businesses or societal issues (e.g., climate change pandemics) requires cross-cultural co-creation [26]. Hence, future co-creation will involve stakeholders from different geographical and cultural backgrounds, thus requiring the appropriate management of cross-cultural co-creation and innovation processes.

6. Specific Applications of Co-Creation: Open Innovation

The examination of specific cases of co-creation helps illustrate how this concept is applied in real-world scenarios across different industries and sectors. This sub-section delves deeper into some notable examples of co-creation as investigated by scholarly research. This is a non-exhaustive list of cases that reports on the most famous cases of open innovation, which is a very common form of co-creation involving consumers; yet, by no means are the following cases representative of all the lower-scale, or more geographically, industry, sector or socially circumscribed initiatives of co-creation.

6.1. LEGO Ideas Platform

LEGO Ideas is a prominent example of co-creation in the toy industry. It is an online community where fans can submit their own LEGO set ideas, and the community votes on these submissions [27]. The winning designs are turned into commercial products with the creator receiving recognition and a share of the revenue [27]. According to Antorini et al. [27], this platform harnessed the creativity, knowledge and enthusiasm of longtime Lego users to enhance the company’s product offerings without having to increase long-term fixed costs.

6.2. Starbucks’ My Starbucks Idea

Operating as an open innovation platform between 2008 and 2018 [28], Starbucks’ My Starbucks Idea was an online platform where customers could discuss, submit, and then vote on ideas for new products, improvements in customer journey and experience, as well as corporate social responsibility actions [29]. According to HBS [30], in 2013, there were more than 150,000 ideas submitted between 2008 and 2012 and 2,000,000 votes have been cast on the platform during that same period of time. A few examples of ideas launched across the year include mobile payment through drive thrus, free Wi-Fi, Hazelnut Macchiatto, or free birthday treats [30]. In their study of the platform, Füller et al. [29] analyzed My Starbucks Idea as a case of customer integration into the innovation process, demonstrating the co-creation in enhancing customer engagement and service innovation.
6.3. Nike’s NIKEiD

NIKEiD was created as a part of a platform that Nike created for soccer fans before and during the 2006 World Cup along a social networking platform called Joga.com [31]. Since then, NIKEiD has been renamed Nike By You and operates as a customization service allowing consumers to design their own Nike shoes. The service not only provides a uniquely personalized product that meets individual preferences but also involves customers directly in the creation process, enhancing their connection with the brand. According to Ramaswamy and Gouillart [31], Nike’s co-creation model transforms customer experience and engagement because “through these multiple linked initiatives, Nike connected with and learned from millions of soccer fans around the globe, cultivating customer relationship on a scale as never before” [31] (p. 20).

6.4. Dell’s IdeaStorm

Dell IdeaStorm was a platform launched in 2007 and relaunched in 2011 [32] where customers could suggest ideas for product improvements or for new products. Dell used this platform to gather insights directly from its user base, leading to several product enhancements and new initiatives. According to Bayus [33], the platform represented a shift in corporate innovation strategies by leveraging customer knowledge and suggestions. Bayus’ [33] findings shed light on the individual’s ideation efforts in online communities such as Dell’s IdeaStorm. According to the study results, serial ideators are more likely than regular consumers to generate ideas that the organization finds valuable for implementation. However, ideating successfully seems to be a one-shot experience, as serial ideators are less likely to repeat their early success after their idea is implemented. They will essentially propose subsequent ideas that are close to their similar ideas already implemented, thus generating less diverse ideas. However, ideators who comment more actively on others’ ideas are able to propose quality ideas over time.

6.5. Unilever’s Open Innovation Portal

Unilever’s Open Innovation Portal exemplifies co-creation in the Fast-Moving Consumer Goods (FMCGs) sector. It invites customers, suppliers, and researchers to contribute ideas and technologies to help Unilever meet its innovation and sustainability goals [34]. Chesbrough and Appleyard [34] explored open innovation platforms such as Unilever’s one and emphasized the role of external ideas in enhancing product development and sustainability initiatives. They further stressed that the software industry was the first to experiment with novel business models that harnessed the collective creativity by means of open innovation.

6.6. Philips’ Co-Creation Efforts in Healthcare

Philips has engaged in co-creation within the healthcare sector, particularly in developing patient-centered medical devices and solutions. The organization has collaborated with healthcare professionals, patients, and other stakeholders to design products that better meet the needs of end-users. In their study on the evolution from redesigning the system around the patient to co-designing services with the patient, Bate and Robert [35] showed how co-creation in healthcare can lead to innovations that are more attuned to patient needs and improve overall care delivery following the experience-based design (EBD) approach.

6.7. BMW’s Co-Creation Lab

BMW’s Co-Creation Lab involves customers in the design process of new car models and features. This platform allows customers to submit ideas, participate in contests, and collaborate with BMW’s research and development (R&D) team, influencing the development of new car designs and technologies. To Dewalska and Opitek [36], co-creation initiatives highlight how customer involvement can enhance product development in the automotive industry. Using the BMW Co-creation Lab (as well as Volkswagen’s
People’s Car Project in China), they show that customers can endorse multiple roles in the value co-creation processes (i.e., co-producer, co-distributor, co-promoter, co-manufacturer, co-consumer, experience creator, co-innovator, co-ideator, co-evaluator, co-designer, co-tester) and that these roles differ and different consumers might be assigned different roles [36].

6.8. Cisco’s I-Prize

Cisco’s I-Prize was an innovation contest that invited entrepreneurs and innovators worldwide to submit ideas for new technologies and business models. Winners received funding and support to develop their ideas in collaboration with Cisco organization. According to Diener and Piller [37], such prizes are an example of co-creation through open innovation contests, demonstrating the effectiveness of co-creation in sourcing external ideas and fostering innovations. Those sources of external input for innovation are plentiful and include “market actors like customers, suppliers, competitors; the scientific system of university labs and research institutions; public authorities like patent agents and public funding agencies” [37] (p. 1).

6.9. Procter & Gamble’s Connect + Develop Program

Procter & Gamble’s Connect + Develop program is another example of co-creation in the FMCG industry (after Unilever). It involves collaborating with external innovators, including individual inventors, to co-develop new products and technologies. Huston and Sakkab [38] provide insights into this program, illustrating how P&G leverages external collaborations to accelerate innovation and expand its product portfolio. They notably emphasize how most companies cling to a bricks-and-mortar R&D approach and the thought that innovation must predominantly remain within the company. However, their study of P&G’s model in which the best innovations tended to come from connecting ideas across internal businesses and from outside the organization’s own labs makes the case for a connect and develop (C&D) model instead [38]. However, this does not mean to replace the capabilities of the researchers and support staff altogether but rather to better leverage those assets [38]. In the case of P&G, this meant that about 50% of innovations are acquired outside the company, and another half come from within [38]. Therefore, a hybridized approach may be a fruitful avenue for meaningful innovation, at least in the FMCG industry.

6.10. Mozilla’s Firefox Browser Development

Finally, Mozilla’s development of the Firefox browser is a unique case of co-creation in the software industry. The initiative involves a global community of developers who contribute to the open-source development of the browser, enhancing its features and security. Raymond [39] examines the broader context of open-source software development, including the notorious case of Linux as the “bazaar” model which emphasizes the role of community collaboration in driving innovation in contrast to the “cathedral” model that represents most of the commercial world, which limits interactions with the public.

7. Other Applications of Co-Creation

While often associated with open innovation, co-creation extends beyond it to include various forms of collaboration between companies and stakeholders that are not necessarily focused on developing new technologies or products. The following are examples of co-creation that do not fall under the typical umbrella of open innovation [40].

7.1. Customer Experience Design

Many service-oriented companies engage customers in designing or improving the customer experience. This can involve gathering feedback through surveys, workshops, or focus groups to understand customer needs and preferences and then integrating this
feedback into service design [41]. For example, a hotel chain might use customer feedback to redesign its check-in process or room amenities.

7.2. Community Engagement Projects

Non-profit organizations or social enterprises often co-create projects with communities they serve. This includes involving community members in identifying issues, designing solutions, and implementing projects [42]. This approach ensures that the solutions are culturally appropriate, locally relevant, and more likely to be sustainable.

7.3. Employee-Driven Innovation

Companies may engage their employees in co-creation processes to improve internal processes, work environments, or organizational cultures [43]. This can be through internal innovation labs, suggestion schemes, or hackathons where employees contribute ideas and collaborate on implementation.

7.4. Educational Program Development

Universities and educational institutions sometimes co-create curriculums with students, alumni, or industry professionals [44]. This ensures that the educational content remains relevant, practical, and tailored to the needs of the students and the demands of the job market.

7.5. Brand Development and Marketing Campaigns

Some companies co-create marketing campaigns or branding strategies with their customers, which resembles open innovation efforts [2,9,10]. For instance, a fashion brand might involve customers in designing a new clothing line, or a food company might ask customers to submit new flavor ideas.

7.6. Community-Based Tourism

In the tourism sector, some destinations develop tourism products and experiences through a co-creation process involving local residents, tour operators, and tourists [45]. This approach can lead to more authentic and sustainable tourism experiences.

7.7. Arts and Cultural Projects

In the arts sector, co-creation can involve audiences or community members in the creation of art installations, performances, or exhibitions [46]. This might include interactive art projects where the audience contributes to the creation of the artwork.

These examples demonstrate the breadth of co-creation, highlighting its application across various sectors and its role in fostering collaborative and participatory approaches to problem-solving, innovation, and value creation.

8. Core Principles for Successful Interaction with Users

According to Antorini et al. [27] who examined the LEGO Idea platform, their experience working with the user community resulted in the delineation of a few core principles to collaborate and interact meaningfully with knowledgeable users.

(1) The organization should be clear about the rules and expectations [27] (p. 78): At the start of the LEGO platform, there were very few stated expectations and rules, which resulted in frustration because fans did not know what was expected from them and how far they could go, while the organization realized that it did not receive the kind of input it expected. With time, the company became more specific about its expectations upfront while setting clear company rules and regulations [28]. This resulted in improved experience for both users and company employees.

(2) Ensuring a win–win scenario [27] (p. 78): Users may have needs that diverge from the company’s stated goals. Even though the intrinsic reward of designing and building new products is a stronger motivator than financial rewards and the company should
appeal to those motivations [28], a combination of providing a satisfying contributor experience and rewards is a good practice. Rewards may differ across users depending on their level of services provided. In the case of Lego, the rewards ranged from “experience, access, and Lego products” to “conventional stipend” depending on user involvement throughout the co-creation process.

(3) Recognizing that outsiders are not insiders [27] (p. 78): Users involved in the LEGO platform appreciated the sense of community with other users and the relationships they developed with them. Hence, these user bases are not extensions of the company but entities independent from it. They do not necessarily know or understand the business intricacies behind Lego products; hence, they should not be expected to have the same level of knowledge or proficiency as an employee while bringing original contributions to the company in their own right.

(4) Do not expect one size fits all [27] (p. 78): As identified in the Lego case, different users may require different modes of communication and innovation calls. In the case of Lego, polls and electronic idea boxes were used for everyone, whereas the Lego Digital Design was a more advanced platform for the design of virtual Lego models and digital building instructions. Another platform Lego Cuusoo enables the uploading of designs, while long-term and complex projects are discussed via user panels and virtual project rooms with the few very skilled users.

(5) Be as open as possible [27] (p. 78): Nondisclosure agreements (NDAs) signed by users are important, but the company realized that they were interpreted too narrowly by some users who were thus unwilling to share freely with other contributors who had not signed the NDA. Hence, NDAs should be used more sparingly in order to leave room for users to interact with each other, the most important aspect being that communication remains open [28].

Livescault’s [28] managerial perspective derived from the My Starbucks Idea case resulted in several similar recommendations including: (1) the importance of setting clear limits and guidelines for the co-creation exercise (cf. recommendation 1 from Antorini et al. [27]) and (2) embrace open communication (cf. recommendation 5 from Antorini et al. [27]). They also stress the importance of appealing to the intrinsic motivations of the fans and customers as well as encouraging and rewarding different perspectives.

9. Conclusions and Prospects

With the rise of digital technologies in the context of the Fourth Industrial Revolution, also known as Industry 4.0 [17], social media and collaborative platforms are more prevalent than ever. To Bogers et al. [18], these technological evolutions were poised to enhance the scope and scale of co-creation activities a decade ago. In 2017, Bogers et al. [19] reemphasized that digital technologies facilitate broader and more efficient stakeholder engagement for improved real-time collaboration and feedback. The metaverse and virtual reality [20,21] will create even more immersive co-creation experiences that may spur more effective outcomes while increasing the relevance of the co-creative approach. Other technologies, such as artificial intelligence (AI) and big data, are also poised to play a significant role in co-creation, as these technologies can analyze customer data and market trends, offering insights that personalize customer experiences [27] and inform co-creative processes [28]. More specifically, extant research [27,28] suggests that new technologies are poised to significantly influence the co-creation landscape by enhancing data-driven insights about customer behaviors, preferences, and trends, facilitating personalization and customization, efficiently generating and selecting ideas, improving collaboration tools, automating customer feedback analysis, offering predictive analytics for successful market entry, real-time co-creation, and the democratization of co-creation.

Second, co-creation is increasingly linked to sustainable development and social impact, focusing on creating shared value for businesses and society [29]. Consequently, the integration of sustainability into co-creation is increasingly emphasized. For example, according to Schaltegger and Wagner [30], companies recognize the value of collaborating
with stakeholders to address environmental and social issues, aligning business strategies with sustainable development goals. Likewise, co-creation can be used for social innovation because it involves communities and organizations developing meaningful solutions to complex social issues [31]. All these recent trends demonstrate that co-creation is poised to become an integral part of business strategy.

Finally, some scholars have questioned the merits of customization because it necessitates extensive customer participation [47–50]. Not all co-creation initiatives result in positive outcomes, and the failures in customization such as Levi Strauss’s “Original Spin” jeans or Mattel’s “My Design Barbie” tend to support these doubts [51]. Some consumers also do not have the time, the skills, or the will to engage in lengthy and highly involving co-creation initiatives, or they may fail to see what benefits they may derive from it, so that they prefer the default offerings provided by the producer [52]. These are all common pitfalls and caveats that may impede successful co-creation processes. To overcome those limitations, an organization should first ensure that its customer base or at least, some substantial part of it, is willing to devote time, energy and resources to commit to specific co-creation processes. In addition, good practices as those listed in Section 5 may be helpful in ensuring that the co-creation initiative delivers on the expected results for both the users or customers and the company.

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