The Future of Innovation is Customer Co-Creation: A Critical Review

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ABSTRACT
Customer co-creation, where businesses collaborate with customers to jointly create products, services, or solutions, is a promising future strategy, offering benefits like increased innovation, customer loyalty, and deeper understanding of needs. Co-creation also means finding ways to include customers where they haven't been invited in the past. The voice of the customer is "heard" in the process earlier than the typical process of waiting on survey results. Customers benefit from being included in ways that help them feel heard and part of the community. It's great to actually reward customers for participating, too, through simple things like company swag or more complicated reward systems based on participation "points." Customers often participate because they want to help create an experience they want, with a brand they already like.

Research Objective: This study delves into the intricate relationship between customers' willingness to co-create (WCC) and the required level of co-creation (LCC) for effective service innovation adoption. In response to recent findings suggesting a "co-creation sweet spot," beyond which additional co-creation activities have detrimental effects, this research aims to provide both theoretical and empirical insights into this phenomenon.

Keywords: Customer Co Creation, Marketing, Consumer Behaviour

Introduction

New product development (NPD) is an important driver of corporate growth and profitability. Unfortunately, most new products fail to deliver on their objectives. Hence, marketing scholars and practitioners have duly devoted substantial attention toward improving NPD processes. This attention has led to several important advances, including the specification of the Stage-Gate model, the formulation of sophisticated NPD tools such as conjoint analysis and premarket launch forecasting, and advances in knowledge about how best to organize and manage NPD teams. These core topics of NPD research and practice share an important but often unstated assumption that NPD is essentially an internal, firm-based activity. As recently it is observed that novel products and services are developed by manufacturers is deeply ingrained in both traditional expectations and scholarship. Hence, NPD research and practice largely operate under a firm-centered paradigm in which customers are viewed as having little active influence upon NPD activity. While this paradigm may have served academics and practitioners well in the past, it is currently being challenged by the emergence of empowered customers seeking greater input and control over NPD activity [1]. This challenge is ushering in a new paradigm in which firms can enhance corporate growth and profitability by allowing customers to take a more active role in NPD activity. In this newly emerging co-creation paradigm, customers are central and vital participants in the NPD process and, in some cases, are capable of creating new products with little help from firms. For example, many of today's most successful computer applications, including Apache Linux, and Firefox, are open source projects that are managed by self-organizing communities of volunteer programmers. Co-creation, in the context of a business, refers to a product or service design process in which input from consumers plays a central role from beginning to end. Less specifically, the term is also used for any way in which a business allows consumers to submit ideas, designs or content. Another meaning is the creation of value by ordinary people, whether for a company or not. Customer co-creation, in short, is open innovation with customers. It is a product or service development approach where users and

customers are actively involved and take part in the design of a new offering. More specifically, customer co-creation is defined as an active, creative, and social process, based on collaboration between producers and customers [2]. The idea of co-creation is to actively involve customers in the design or development of future offerings, often with the help of tools that are provided by the firm. Co-creation activities are performed in an act of company-to-customer interaction which is facilitated by the company. The manufacturer is either empowering its customers to design a solution by themselves or is implementing methodologies to efficiently transfer an innovative solution from the customer into the company domain. Examples for methods include ideation contests, lead user workshops, consumer opinion platforms, toolkits for user innovation, or communities for social product development. The process a company must tap into in order to really understand their customers is sometimes referred to as presumption. Prosumption is a process in which consumers co-design and co-produce their own products and services. Such processes blur the distinction between consumers and producers, which makes the quality of the consumer as, if not more important than the quality of the service provider. The acceptance of prosumption as a phenomenon implies that, rather than simply being passive constituents of an industry, customers become principal participants in the creation of and competition for value. This study delves into the intricate relationship between customers' willingness to co-create (WCC) and the required level of co-creation (LCC) for effective service innovation adoption. In response to recent findings suggesting a "co-creation sweet spot," beyond which additional co-creation activities have detrimental effects, this research aims to provide both theoretical and empirical insights into this phenomenon.

Literature Review
Need to Customer Co-Creation
Successful NPD requires two essential types of information which are information about customer needs and information about how best to solve these needs. Typically, customers have the most accurate and detailed knowledge about the first type of information, while manufacturers have the most accurate and detailed knowledge about the second type. This disparity creates a condition of information asymmetry. Traditionally, firms have attempted to manage this asymmetry by engaging in various forms of marketing research to obtain better information about their customers' needs. Under this approach, successful innovation rests on first understanding customer needs and then developing products to meet those needs. Unfortunately, customer needs are often idiosyncratic and tacit in nature and, hence, hard to accurately measure and coherently implement. It is suggested that consumers have deep and complex high fidelity needs; however, traditional market research methods often provide managers with only a cursory low fidelity signal of what customers want or need. As a result, most new product failures are attributed to a firm's inability to accurately assess and satisfy customer needs. The ability of consumers to take a more active role in NPD has been significantly enhanced by recent technological advances, most notably the development and growth of the Internet. According to several researchers, consumers have traditionally lacked the technical skills and capabilities that NPD requires. However, the Internet has helped ameliorate this deficiency and empower customers in at least three ways [33]. First, the Internet increases access to

knowledge that can enhance consumers' ability to engage in creative pursuits. For example, consumers interested in learning how to build an electric car can find several websites that contain detailed technical information and user-friendly tutorials on this topic. Hence, through these electronic archived data sources, knowledge that was once tacit and remote has now become codified and proximate. Second, the Internet also facilitates consumers' ability to apply their knowledge by providing access to a variety of online design tools. For example, fans of popular computer games such as Half-Life and The Sims can access Internet-based programs that enable them to create their own modifications and extensions to these games. Similar types of online design tools can also be found for website development, podcasting, and digital audio/video production. Third, in addition to enriching the creative capabilities of individual consumers, the Internet enhances collective co-creation by connecting individual consumers with other stock holders in a manner that allows them to participate effectively in a co-creation community. These communities enable consumers to learn from and teach other consumer-creators and help form collective knowledge and memory systems that transcend the information and skills of any single individual. For example, open source computer software is typically developed via self-organized communities of thousands of contributors who work in a highly collaborative manner and play a variety of different roles. This collective information exchange enables these co-creation communities to create offerings that can equal or surpass traditional firm-based NPD activity in terms of development speed, creativity, and marketplace success. Customers should assume the role of co-developer during the early phases of the service innovation process. Such a role enables customers to suggest the types of ideas that the company should develop, and may even help in the design of an early prototype. When innovation is democratized in such away that customers are encouraged to take the initiative, they will be able to share their inventiveness at locations in which consumption usually takes place. The main claimed benefit of co-creation involves the possibility of developing a differentiated new service with unique benefits and enhanced value propositions for potential users.

Four Types of Customer Co-Creation
The NPD literature suggests that the early stages of developing a new product entail two essential activities which are the contribution of novel concepts and ideas, and the selection of which specific concepts and ideas should be pursued [4]. In many firms, both of these activities are closely guarded and typically conducted by a small number of employees. In most cases, customers are not actively engaged in either activity. Thus, firms can engage in customer co-creation by releasing control of either the contributions made to the NPD process and/or the selection of these contributions. Consequently, the degree of customer autonomy across these two activities forms the conceptual basis for the typology.

As shown in Figure 1, it is depicted contribution and selection as two distinct NPD activities that vary in the degree to which a firm releases control and empowers its customers as active participants. The depiction acknowledges that the balance between control and empowerment lies along a continuum from low to high. Specifically, it is suggested that the type and format of NPD contributions can range from being essentially

fixed by a firm to wholly open to customer input and that the selection of these contributions can be either directed by a firm or directed by customers. When arranged along two dimensions, these activities allow us to derive four distinct types of customer co-creation:

- Collaborating
- Tinkering
- Co-Designing
- Submitting
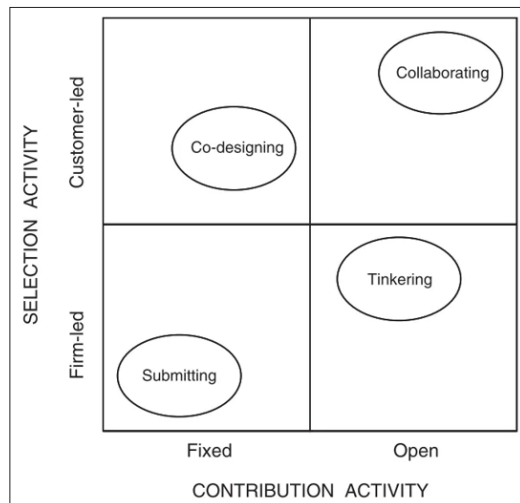
with submitting at one extreme (fixed contribution and firm-led selection) and collaborating at the other (open contribution and customer-led selection). Although non-exhaustive, it is believed that this typology classifies a considerable body of co-creation activity.

Collaborating

Collaborating is defined as a process in which customers have the power to collectively develop and improve a new product's core components and underlying structure [5]. As shown in Figure 1, collaborating is conceptualized as the form of co-creation that offers customers the greatest power to contribute their own ideas and to select the components that should be incorporated into a new product offering. It is the opposite of submitting. The organization is very open to all types of contributions and it relies on the crowd to decide the winner submission. At present, the best examples of collaborating can be seen in open source software initiatives such as Linux, Apache, and Firefox. In contrast to commercial software, which places considerable restrictions on consumer usage, open source software empowers users to make fundamental changes to a program's basic structure that is source code. This openness also influences the way intellectual property is managed, as many open source licenses dictate that program changes be made freely available to other users. In recent years, open source applications have gained widespread adoption and market success.

Tinkering

Tinkering is defined as a process in which customers make modifications to a commercially available product and some of these modifications are incorporated into subsequent product releases. Tinkering is similar to collaborating in terms of allowing customers a relatively high degree of autonomy over NPD contributions. However, firms that employ tinkering usually retain a considerable degree of control over the

selection of these contributions. In this type of co-creation, the customer can contribute in a very creative way to an idea but the contributions are selected by the company. It is having less open contributions than collaborating. Customers are allowed to tinker with the product, but only in certain ways, and to make their creations available to others, but only under certain conditions [6]. At present, tinkering is most apparent in the computer game industry, where user-generated contributions are not only widely tolerated, but actively encouraged. For example, many game manufacturers invite users to make alterations ranging from incremental changes, such as edits to a character's physical appearance, to more radical innovations, such as the creation of a completely new computer game. In order to assist tinkerers in making these changes, several computer game manufacturers provide customers with free or low-cost design tools that are similar or even identical to those used by their in-house software developers. This strategy often leads to unexpected and innovative creations, widespread adoption by other gamers, and marketplace success for the firm that produced the base game. For example, over 90 percent of the content of the widely successful computer game, The Sims, is derived from tinkerer-based modifications.

Co-Designing

Co-designing is defined as a process in which a relatively small group of customers provides a firm with most of its new product content or designs, while a larger group of customers helps select which content or designs should be adopted by the firm. As shown in Figure 1, co-designing is characterized by a relatively fixed contribution approach but a high degree of customer autonomy over the selection of these contributions. Customers have low control over the contribution but they are the ones that in the end select the best one. It is a type of co-creation process in which a number of customers, the co-designers, submit product designs to the firm, with a larger group of customers selecting which designs the firm will produce. With co-designing, there are often relatively strict submission requirements, so it is categorized as having fixed contribution. One of the best examples of co-designing is the online clothing manufacturer Threadless.com. This firm actively solicits original T-shirt designs from current and potential customers and then invites its extensive network of online customers to evaluate and select a short list of prospective new products. Similarly, both the online news service Digg.com and the cable television channel Current TV acquire much of their content directly from their users [7]. In contrast to the standard approach used by commercial news organizations, Digg.com eschews hierarchical editorial control and instead allows its community of over 300,000 registered reviewers to vote on the stories they deem worthy for display. Likewise, Current TV provides amateur film makers with the opportunity to upload their homemade documentaries and gives viewers the chance to select the clips that air on the network. This co-creation approach has been utilized across a wide variety of product categories, including sporting goods, household products, home appliances, and consumer packaged goods.

Submitting

Submitting is defined as a process in which customers directly communicate ideas for new product offerings to a firm. Submitting is differentiated from traditional forms of customer inquiry by both the degree of customer effort required and by the

nature of the input that customers provide to the firm. In contrast to most traditional forms of customer inquiry, which simply ask customers to provide responses to a set of prearranged queries, submitting requires customers to expend considerable energy developing tangible ideas for new product offerings [8]. In addition, while traditional inquiry approaches typically involve customers solely in concept ideation and evaluation, submitting often requires customers to translate general ideas into well-defined processes, detailed graphic depictions, or working new product prototypes. As shown in Figure 1, submitting is conceptualized as the form of co-creation that is characterized by the least amount of customer autonomy in terms of both NPD contribution and selection. Although submitting resembles co-designing, it differs from co-designing because in submitting, the firm retains full control over the NPD selection process. The firm is in control of both the contribution and the selection. It means that people can only contribute for a specific part of a product but not the whole. Concept of submitting is closest to traditional NPD in that the selection of ideas is entirely done by the firm and there are often strict criteria contributions must follow. Submitting is different from traditional market research in that the firm asks people to come up with their own detailed solutions or designs, rather than just answering pre-determined questions. Firms that employ submitting-based co-creation actively solicit input from either current or potential customers. This solicitation often occurs in the form of online invitations for customer-generated content. For example, the Swedish appliance manufacturer Electrolux sponsors an annual submitting competition called Designlab in which participants are asked to submit technical designs and product prototypes for cutting-edge household appliances. This initiative attracts thousands of entries across dozens of countries [9]. From these, Electrolux selects a small set of finalists and invites them to a six-day, company-sponsored retreat, where they participate in workshops, present their inventions, and compete for cash prizes. The Italian motorcycle manufacturer Ducati Motors employed a similar approach via its recent Design Your Dream Ducati contest that encouraged Ducati enthusiasts to submit innovative artistic and technical ideas to an executive team, which then selected the winning contributions.

Differences between Customer Co-Creation and Traditional View

Co-creation can be seen as a new way of thinking about the economical concept of value. Customer co-creation is described as a consumer-centric view in opposition to the traditional company-centric view. In the traditional view, the consumer is not part of the value creation process, while in the consumer-centric view the consumer plays a key role in it. In the traditional view, the company decides on the methods and structure of the process, while in the consumer-centric view the consumer can influence those [10]. In the traditional view, the goal is to extract value money from consumers in the form of money, while in the consumer-centric view, the goal is to create value together for both consumer and company. In the traditional view, there is one point of exchange controlled by the company, while in the consumer-centric view, there are multiple points of exchange where company and consumers come together. Collaboration within design and market research and social science is changing. Product design is moving from a user-centered design process to that of participatory experiences. It's

a shift in attitude from designing for users to one of designing with users. It is a new design movement that will require new ways of thinking, feeling and working. Participatory experience is not simply a method or set of methodologies, it is a mindset and an attitude about people. It is the belief that all people have something to offer to the design process and that they can be both articulate and creative when given appropriate tools with which to express themselves. Listening to what people say tells us what they are able to express in words or explicit knowledge. But it only provides what they want us to hear. Watching what people do and seeing what they use provides us with observable, sometimes unconscious information or observed experience. Seeing and appreciating what people dream shows us how their future could change for the better. It is another form of tacit knowledge that can reveal latent needs that people are not aware of having. Traditional market research techniques use responsive market orientation which concerns a firm's attempts to discover, understand and satisfy the expressed needs of its customers. However, customer co-creation uses proactive market orientation which is described as a customer-driven process in which the firm must discover, understand and satisfy the latent needs of its customers or discover new market opportunities. Traditional market research techniques concentrate on capturing customers' previous experiences with a product or service, have been designed so that the participants respond to stimuli from the company [11]. On the other side, customer co-creation assists in the development of innovative new services that build on gaining greater access to customers' underlying values and behaviours. In traditional market research techniques, reactive methods capture consumers' spoken needs. On the other hand, in customer co-creation, proactive methods seek to capture a wider range of information, in the form of both spoken needs and unspoken or so-called latent needs. Market research techniques that give customers greater leeway to take the initiative and make their own discoveries, and in which value is co-created with the customer, are more likely to contribute to the success of new development projects. One of the main problems with reactive methods is that they focus on understanding the customer's perception of existing concrete attributes rather than their value-serving benefit with using traditional market research techniques. However, in customer co-creation, customers provide an organization with information that has been already processed by customers that have a stronger set of skills related to value-in-use. A future market offering that is being developed is more likely to yield satisfied customers, since proactive research techniques capture a wider range of customer information. Customers participating in traditional market research methods have had to rely on their memories of previous experiences in order to produce ideas. Therefore, traditional market research techniques seem restricted by the fact that users have difficulty imagining or remembering scenarios in which they have experienced certain needs. In spite of this, participants in the co-creation condition appear to have derived their ideas from an experience that has triggered their understanding of how value-in-context can be created, and they generate ideas about where usage takes place or is assumed to take place. Proactive market research techniques have a greater influence on the profits of new products and services than reactive market research techniques. Furthermore, the use of a proactive market research technique is more likely to lead to original ideas than a reactive market research technique.
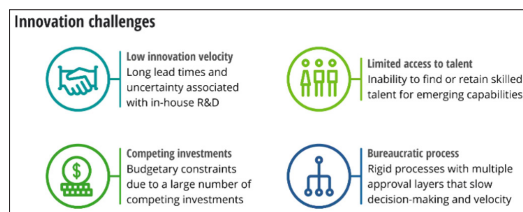
Customer Co-creation Advantages
Increase Innovation Volume
We've all been there: the company product team is sitting around a table brainstorming new ideas only to hit a creative block. Grow the amount of brain-stormers to increase the amount of concepts that can be considered for implementation.

Enhance Product Development
Bring design and development to life based on consumer influence. Products are only worth a customer's perceived value. If you enhance the product, you will improve the value of that product.

Reduce Risk
Listening to consumer input lessens the danger of product rejection [12]. Unlike a company who creates an offering internally, co-creation generates feedback before a product is actually generated and offered, saving money, or could potentially enhance a current item, improving the product.

Engage Consumers and Generate Brand Loyalty
Consumers love to know they are being taken into consideration when the development of an offering occurs. Not only does co-creation generate customer conversation and feedback, it demonstrates the business cares what they have to say and is willing to consider their recommendations. Even better, once you do apply ideas; think of the completed free advocacy potential this customer now holds. Before implementing co-creation a word of caution: co-creation doesn't work for all projects. If you determine it is the right size and type of venture you would like feedback from the consumer on, make sure you have a solid plan in place that outlines the strategy and goals. Connecting with consumers is essential in today's world. Co-creation allows this engagement to take place while letting the consumer take ownership in the brand. Listen and learn from your consumer and grow your business.

The Customer Is Always Right
Deeper customer engagement is nothing new. Since the digitization and migration of businesses to the internet, companies have had to adapt to a climate of greater scrutiny and the expectation of consistent customer feedback. Of course, in most cases, this has led to improved customer services, better targeting, and increased transparency [13]. Today, this advancement in customer engagement is reaching new heights, with some companies co-creating directly with customers. Connectivity is driving this push for customer-centric co-creation. Like so many of the advances brought on by the pandemic a greater proliferation of business apps, the Zoom-boom, the hybrid work model connecting with customers has become easier than ever. Now, customers in countless industries are more proficient with digital communications technologies and, in many cases, more active online, particularly in the e-commerce sector. This shift has created an opportunity to crowdsource ideas and generate improvements through collaborative customer partnerships [14]. And many organizations are taking advantage of the circumstances to give their customers exactly what they want.

Co-Creation Examples
Heineken
Heineken created a groundbreaking design project called "Open Design Explorations," which was presented at the Milan Design Week in 2016. The project extended an invitation to emerging designers hailing from New York City, São Paulo, Tokyo, and Milan to embark on a collaborative and innovative journey. The objective of this initiative is to collectively conceive and create a trailblazing nightclub experience. To infuse this project with creativity and authenticity, Heineken, in collaboration with a prominent market research agency, established an interactive online research community comprising more than 100 clubbers from diverse global locations. Heineken's "Open Design Explorations" was a testament to the power of co-creation, where the collaborative efforts of designers and clubbers converged to shape a nightlife experience that transcends conventional boundaries. Through this initiative, Heineken demonstrated its commitment to leveraging customer insights and design expertise to create a memorable and impactful nightclub experience that resonates with a global audience.

Liebherr
Liebherr's approach to customer co-creation is a structured and comprehensive process that involves multiple phases. The company initiated the "Wine Experience" project, which engaged its customer community in shaping innovative solutions for wine coolers. First, Liebherr formed an online research community with existing and potential wine cabinet customers, identifying their pain points. In the second phase, the company refined these insights with the help of internal teams. The third phase involved launching a customer crowdsourcing campaign, and the final phase included expert evaluation of the generated ideas. This structured approach resulted in a significant number of innovative ideas and enthusiastic support from top management, showcasing the value of customer co-creation.

Result & Findings
- Companies need to conduct in-depth market research to identify the different levels of willingness to co-create among potential customers. They should specifically target segments with a high willingness to co-create, as these individuals are more likely to adopt innovations early and influence others through positive recommendations. Tailoring initial service offerings to these segments, possibly through exclusive access or incentives, can effectively leverage their enthusiasm for broader service adoption.
- Managers are advised to develop marketing strategies and service designs that are aligned with the specific co-creation willingness levels of their customer segments. For customers with a high willingness to co-create, managers should highlight co-creation aspects and offer more advanced options. Conversely, for those less inclined to co-create, it's important to simplify the co-creation process and emphasize ease of use through targeted marketing efforts, such as tutorials or demonstrations, to motivate their participation.

- Service providers must continuously refine their service offerings and co-creation opportunities based on customer feedback and engagement data throughout the adoption process. Initially, offerings should be designed to match customers' willingness to co-create. As customers progress in their journey and become more engaged, service providers should introduce more complex co-creation features to sustain interest and deepen customer involvement. This strategy ensures ongoing engagement and maximizes the likelihood of continuous service usage.

Conclusion

Customer co-creation isn't a mere set of methods; it's a mindset that recognizes everyone's potential to contribute valuably to the design process. It transforms the traditional business-customer relationship, turning passive consumers into active innovation collaborators that can impact the business's success. More and more businesses are shifting from a user-centered design process to a collaborative experience as companies see the potential to benefit from their customer's ideas and suggestions as a way to improve their products and services. This change also involves a shift in perspective from designing for users to designing with users. Such an emerging design movement necessitates a fresh approach to thinking, feeling, and working. Customer co-creation isn't just another design process; it's a mindset and an attitude toward your end users. It's the conviction that each customer has something valuable to contribute to the design process and that they possess the ability to effectively communicate their ideas when provided with the right tools for expression.

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