

**CUSTOMERS' CO-CREATION EXPERIENCE IN ONLINE COMMUNITIES:
ANTECEDENTS AND OUTCOMES**

Zeynep Didem Nohutlu¹, Basil Englis², Aard Groen³, and Efthymios Constantinides⁴

¹University of Twente, The Netherlands

²Berry College, USA

³University of Groningen, The Netherlands

⁴University of Twente, The Netherlands

Zeynep Didem Nohutlu

PhD Candidate

University of Twente, Faculty of Behavioural, Management and Social Sciences

Research Group Entrepreneurship, Technology, Management / NIKOS, The Netherlands

E-mail: didemnohutlu@hotmail.com / z.d.nohutlu@utwente.nl

Basil G. Englis, Ph.D.

Richard Edgerton Professor of Marketing

Chair, Department of Management, Marketing and Creative Technologies

Campbell School of Business

Berry College

Mt. Berry, GA 30149

NIKOS Research Fellow

University of Twente

Enschede, The Netherlands

E-mail: benglis@berry.edu

Prof. dr. Aard J. Groen

Dean Entrepreneurship

University of Groningen Centre of Entrepreneurship

Faculty of Economics and Business, Dept. Innovation Management & Strategy

Professor of Innovative Entrepreneurship

University of Twente, NIKOS, The Netherlands

E-mail: a.j.groen@rug.nl

Dr. E. Constantinides

Associate Professor Digital Marketing

University of Twente

Faculty of Behavioural, Management and Social Sciences (BMS)

Research Group Entrepreneurship, Technology, Management / NIKOS, The Netherlands

E-mail: e.constantinides@utwente.nl

1. Abstract

Understanding the phenomenon of customer co-creation in online communities is important for businesses involved in innovation trajectories, and product and service improvement efforts. The purpose of this article is to obtain an in-depth insight into the nature and impact of customers' co-creation experiences in online communities and the effects of customer co-creation on innovation processes.

This study is focused on an online co-creation community created by a market research company on behalf of a company. By means of a case study approach and through in-depth interviews, we identify the actual customer experiences and assess the degree of involvement of customer creativity and experience in new idea generation.

The results show a classification of each role the community moderator/community manager and peer online community members perform as antecedents of co-creation experience, highlight the value of group feeling/sense of community/sense of belonging, and homophily/communality in achieving that, the nature of a supportive online platform, and give an overview of positive and negative outcomes of co-creation experience.

2. Keywords

Co-creation, customer experience, online communities, collaborative innovation, digital marketing

3. Introduction

Co-creation is a process in which firms interact with different actors in their various networks to jointly innovate their services and products (Gemser and Perks, 2015; Frow *et al.*, 2015). Companies engage in co-creation with their customers in order to learn from customer experiences with their products and services and to benefit from their innovative ideas for improving their offerings or developing new ones. The term customer co-creation refers to actively involving customers during new product or service development (Hoyer *et al.*, 2010). Customers who have high engagement with a company are willing to contribute to innovation process and co-create value together (Zhang *et al.*, 2018).

Using an online community for co-creation is an effective way of reaching the collective intelligence of a firm's customers all around the world (Antikainen *et al.*, 2010). An online community is a network environment and it enables social interactions between community members who share a common interest (Porter *et al.*, 2011). Considering their governance types, these communities can be firm hosted (e.g., Dell Idea Storm, My Starbucks Idea) or set up and moderated by an independent party such as a market research company. The latter is often labelled as a Market Research Online Community (MROC) or a private online community. Such online communities can lead service or product innovations through jointly formed ideas by their members (Fuller *et al.*, 2007). Co-creation in these communities can focus on different stages of New Product Development (NPD): ideation, design, testing or launch (Hoyer *et al.*, 2010; Russo-Spena and Mele, 2012). Participation in such online communities is voluntary and firms are unable to make demands on the contributions of community members (Priharsari *et al.*, 2020). Therefore a key consideration is how to motivate online community participants (Fuller, 2010; Roberts *et al.*, 2014; Constantinides *et al.*, 2015; Fernandes and Remelhe, 2015) to participate. One suggestion from scholars has been to ensure a compelling co-creation experience that encourages people to have playful moments and high concentration which lead them to perform at their peak levels that result in more creative outputs and more participation (Kohler *et al.*, 2011).

4. Objectives

Ensuring effective co-creation in online communities remains one of the biggest challenges for companies hosting their own online communities as well and market research companies. More understanding is required on, for example, what drives participation of customers for

collaborative innovation activities, where both companies and community members can gain value through their involvement and experience (Akman *et al.*, 2019). Scholars are invited to study the antecedents of co-creation more, in an online context (Frasquet-Deltoro and Lorenzo-Romero, 2019). A recent literature stream emphasizes the importance of examining co-creation experiences and their impact on outcomes such as contributions. For example, Gebauer *et al.*, (2013) found that an enjoyable co-creation experience of community participants had a direct positive impact on their WTP (willingness to pay) for the co-created product, and that dissatisfaction with the selected idea/outcome led to customer misbehavior and protest as a negative outcome. In order to understand those elements that result in a positive co-creation experience, we need to gain insights in the antecedents of customers' co-creation experience and find out which outcomes they lead to.

5. Research Question

This study will attempt to give an answer to the following two questions:

- 1) What are the antecedents of customers' co-creation experience in online communities?
- 2) What are the positive and negative outcomes of customers' co-creation experience in online communities?

6. Conceptual Framework / Literature Review / Research Model

6.1 Co-creation Experience

When we look at the literature related to the co-creation experience, it is obvious that a challenge for many companies is how to maintain the engagement and active participation of participants (Kohler *et al.*, 2011). Kohler *et al.*, (2011) conducted research on co-creation experience in virtual worlds and concluded that a compelling co-creation experience encouraged active participation in ideation. This is essential as the more engaged the online community members are, the more they participate and contribute innovative ideas; active participation during co-creation increases the chance for positive outcomes of a co-creation project. One essential element of ensuring such engagement, and thus stimulating active participation of members, is providing a compelling co-creation experience (Prahalad and Ramaswamy, 2004).

A research stream that focused on the experience of online community members is that of Nambisan and colleagues (e.g., Nambisan and Baron, 2007; Nambisan and Nambisan, 2008; Nambisan and Watt, 2011). This work focused on customers' interaction experiences in virtual environments and product forums. Nambisan and Nambisan (2008) argued that there are four experience dimensions present in these virtual customer environments: "pragmatic, hedonic, usability, and sociability." The interaction experiences of participants were found to shape their actual participation.

6.1.1 Pragmatic Experience

Pragmatic experience refers to the utilitarian experience of participants: participants expect to learn from their participation in the co-creation project. The interactions during co-creation can provide these participants with practical benefits and thereby encourage them to make better contributions (Nambisan and Nambisan, 2008).

6.1.2 Sociability Experience

According to the sociability principle, social interaction is a significant component of participants' engagement in co-creation projects. Getting in touch with peers and the feeling of being a part of a community are other things people expect from such interactions in a community (Nambisan and Nambisan, 2008).

6.1.3 Usability Experience

The usability experience can be defined as customers' ease of use and effectiveness in navigating the online community environment (Nambisan and Watt, 2011). For example, companies that enable the necessary site features, such as chat functionalities, facilitate interactions among participants.

6.1.4 Hedonic Experience

Participants' hedonic experience refers to the fun and enjoyment they feel and the challenge they perceive during co-creation activities. This enjoyment can arise from the task itself, but also through the interactions with others.

The foregoing literature review leads us to the following conclusions concerning antecedents of effective online co-creation communities: 1) factors influenced by the firm which moderates the co-creation process, such as community site features and tools, mechanisms to steer cooperation and competition, creativity techniques, task enjoyment, giving feedback, enabling learning, fostering conversations; and 2) participant-related factors such as peer behavior (cooperative/competitive/both), nature of sharing and interacting, homophily/diversity among community members. Outcomes related to these factors include the number of unique ideas and the quality of ideas contributed (Fuller *et al.*, 2011), word of mouth (Nambisan and Watt, 2011), WTP / purchase intention (Franke *et al.*, 2010), co-creation evangelism (Kohler *et al.*, 2011) as desired positive outcomes and destructive behavior of customers and conflicts or crisis as negative outcomes (Piller *et al.*, 2012; Gebauer *et al.*, 2013).

7. Method

The methodology used in the present research was a case study and in-depth interviews in an online community which was moderated by a reputed market research company. Client brands in our case study wanted to improve their customers' experience and ensure a better service quality which is the point of departure for their co-creation story. The brands' employees were involved in the co-creation process through offline workshops where they provided feedback on the ideas their customers came up with in the online community. These customers were frequent customers who were selected through a screening survey performed by the market research company at the beginning of the project. These customers were from diverse countries, occupational and demographic backgrounds, and participated in the community over a three-week period. They were identified either as innovators or influencers within the community. We selected this community as the case to be studied for as its' primary purpose was the co-creation of service ideas led by the experiences of frequent customers, and there were a large number of interactions and new ideas available in this community to investigate how the interactions and contributions took place.

11 highly active community members/participants, female and male mix with different occupations and innovator and influencer traits, and the moderator/community manager (as a representative from the organizing/moderating company) were interviewed for a total of 12 interviews which was sufficient for the data to reach saturation (see, e.g., Guest *et al.*, 2006). The semi-structured interview questions were shaped around Nambisan and Nambisan's (2008) framework of four dimensions (hedonic, pragmatic, sociability and usability) of co-creation experience and potential antecedents of these dimensions. Questions that arise from the potential antecedents of the mentioned dimensions above were related to participants' roles in the community, role of the moderator and the overall experience. Moreover encouragements and motivations and demotivating factors, dissatisfaction or negative feelings were asked. Peer behavior, factors that encouraged cooperation or competition, experience in interactions and socializing with community members were included as another category of questions. Finally, perceptions of fun and entertainment during co-creation, perceptions of platform functions, game mechanics such as badges and other reward mechanisms, perceived utilitarian benefits, creativity techniques used by the moderator, functionality/usability of the online platform were other discussion topics. Some general questions were also included that asked the occupation of participants, their initial motivations for participation, and perceptions of the positive and negative outcomes of this co-creation project as well as perceptions of the brands' involvement in co-creation process. Moreover, some additional questions were asked in order to understand the respondent's familiarity with co-creation, experience with team work and creative

activities. Interviews ranged between 30 and 60 minutes and each transcription was an average of 12 pages. Next, we used the coding techniques of Strauss and Corbin (1998) and Miles and Huberman (1994) in order to analyze the transcribed interview data. The analysis included an iterative process of first creating concepts and noting memos, and placing those concepts into more comprehensive themes and categories as Corbin and Strauss (1998) suggested in their open, axial and selective coding technique. During open coding, the researcher is engaged in an analytical process where he/she considers several concepts, categories and properties of those categories. Axial coding takes place when the researcher realizes the interconnections between the key categories and their sub-categories. Comparing the categories and identifying and improving connections between the key categories happens during selective coding Corbin and Strauss (1998). Following this technique, we reviewed each sentence of our transcriptions carefully and made note of the concepts that arose (Miles and Huberman, 1994). We then wrote definitions for those concepts, created categories for them and then aggregated them into categories that would cover all transcriptions by involving the categories and concepts of each transcription. The technique of Corbin and Strauss (1998) suggests to use existing concepts but also to come up with non-existing new concepts which fit to the situation under investigation. Being open to new concepts helps to contribute to theory building in a particular field under investigation Corbin and Strauss (1998). Consequently, a framework based on this analysis was generated (**Figure 1**).

8. Findings

During the interviews, we uncovered those factors online community members felt were most important and that made their co-creation experiences more positive. Company executives who want to design and manage their communities more effectively need to make decisions based on which priority areas they will focus on, such as whether to invest more in gamification or other community engagement, collaboration and design tactics. The reason why we propose Figure 1 is because it shows the readers which attributes can gain priority in shaping a positive experience for participants during the co-creation process.

8.1 Antecedents of the co-creation experience

Below we will briefly point out the core elements present in our framework (**Figure 1**). In the framework, the sub-sections of each core element can be found.

8.1.1 Role of the moderator/community manager

The moderator's role was various in the community. We made a classification of these roles which are listed in Figure 1 according to the specific actions taken by the moderator/community manager. This classification is generated through the analysis of the interviews. Interactions between the moderator and the community members helped to boost the members' motivation and their participation in ideation.

8.1.2 Role of the peers

What leads to joint innovation/idea formation is cooperation/collaboration between community members (Hutter *et al.*, 2011). There are several peer-related factors which stimulated cooperativeness and contribution in the community as listed in our framework in Figure 1.

8.2 Intermediary effect of group feeling/sense of community/belonging

The moderator thought that her role in the community diminished when the group feel(ing)/responsibility is high. People who feel more responsible to the community will contribute more. Group feeling is also described as a sense of community and a sense of belonging by the community members. As one of the respondents said: "*We don't know each other but we got a feeling we could work together*", group feeling facilitated the relationship between the antecedents and outcomes of the co-creation experience in this community. We discovered that homophily ("communality" was another way the members named it) was the main factor that enhanced the group feeling in the community. Moreover, it was defined by five triggers that were present in this community as shared experiences, being selected

exclusively for this project, shared topic interest / working towards a common goal, liking same ideas/ thinking in the same way/ supporting same thoughts, discussion of common topics encountered by everyone.

8.3 Moderating effect of a supportive online platform

Since the online platform is the home of an online community, the usability/functionality of this platform is crucial for the success of such a project. The online platform should be easy to navigate and supportive in offering functions that enable cooperation between the peer community members such as voting/liking(thumbs up)/commenting functions or game mechanics that enhance to improve a specific idea.

8.4 Outcomes of co-creation experience

8.4.1 Positive outcomes

The behavior and actions of these actors facilitate positive outcomes such as jointly formed ideas/innovations, favorable attitude towards the brands, obtaining customer feedback/voice and enabling customer learning/utilitarian benefit.

8.4.2 Negative Outcomes

If the process is not managed well, negative outcomes are inevitable, such as unqualified and unshaped ideas, need for additional input from the moderator in enhancing the quality of ideas, disappointment due to the lack of follow-up, disappointment due to the community's end.

9. Discussion

When we examined the community's online platform and the project data which was made available by the market research company, we could see that some factors gave the participants a positive hedonic and sociability experience. For example, a virtual environment which would make the tasks more fun and enjoyable was provided through game mechanics (e.g., collecting points with idea submission, winning a creativity badge, seeing how much an idea is completed by community members with different statuses that show progress (e.g., mining, diamond ring, etcetera). Moreover, there were different online chat rooms integrated where participants could talk about their experiences in order to facilitate a social environment. On the other hand, the pragmatic dimension was present in that the community members could read each other's comments and learn from each other's experiences and perspectives. The online platform was supported with many functions in order to facilitate discussions among the participants. However, in the community, the social experience was more highly valued by participants over other components. Social interactions did not consist of off-topic conversations between the peer community members. They actually referred to all the communication between the actors during co-creation. The effects of how communication between different stakeholders was managed throughout the co-creation process was the most vital factor for successful co-creation outcomes.

10. Conclusion

In our framework, the antecedents of the co-creation experience mostly depend on social interaction and communication-related factors caused by the actors involved in co-creation. Briefly, the antecedents of the co-creation experience in the community consist of the moderator and the peer community members. The role each of these actors plays has an impact on making the customers' co-creation experience more positive (or negative).

Co-creation in the community selected led to 700 unique ideas through the efforts of the online community members, client companies and the inspiring moderation of the market research company. The project helped the client brands understand their customers' experiences, detect their needs and gather insights and ideas in forming the ideal customer experience.

11. Limitations

The community was a focused private online community which was built for 3 weeks and the participants were pre-selected through a screening process. Therefore, that was simply not a group of people but more like a team which was gathered around a shared topic and with a

common goal. Thus, the specific context of this community might have been an advantage to ensure innovative ideas for this co-creation project but could be considered as a limitation as well. Therefore, repeating similar studies in different types of online communities would help us gather new insights into the co-creation experience and its antecedents and outcomes.

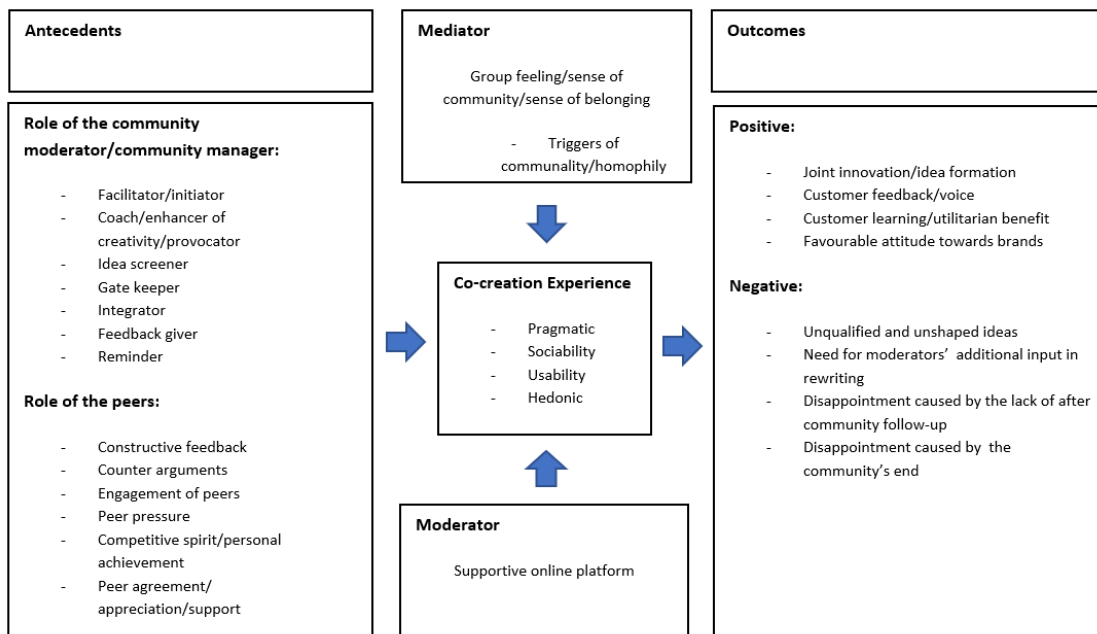
12. Further Research

An important issue to point out for future research is the attention that still needs to be paid to the topic of homophily within the online community context. As Nambisan and Watt (2011) had also suggested, the relation between homophily among community members and their social experience inside the online community still offers fruitful areas to discover. Individual competition versus group collaboration between community members (Zhao *et al.*, 2017), and impact on participant experience and outcomes is an interesting area for further research.

13. Managerial Implications

Our study contributes to the understanding of the antecedents and positive and negative outcomes of co-creation experience. It gives insights in the different roles stakeholders undertake in forming a co-creation experience and how companies can eliminate the negative outcomes this experience may result in. As discussed earlier, outcomes such as the disappointment caused by lack of follow-up and feedback throughout and after the project can be handled by being aware of these negative outcomes and taking timely actions towards them by the companies behind the co-creation project. The moderator's role in steering and motivating the community members and the attitude of peer community members in collaborating and encouraging each other for creative contributions (Amabile *et al.*, 1996) and creating a group feeling/sense of community/sense of belonging by all parties are examples that lead to a more positive engagement and experience.

Figure 1. Antecedents and Outcomes of Customers' Co-creation Experience in Online Communities



14. Bibliography

- Akman, H., Plewa, C., & Conduit, J. (2019). Co-creating value in online innovation communities. *European Journal of Marketing*.
- Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal*, 39(5), 1154-1184.
- Antikainen, M., Mäkipää, M., & Ahonen, M. (2010). Motivating and supporting collaboration in open innovation. *European Journal of Innovation Management*, 13(1), 100-119.

Constantinides, E., Brünink, L. A., & Lorenzo-Romero, C. (2015). Customer motives and benefits for participating in online co-creation activities. *International journal of internet marketing and advertising*, 9(1), 21-48.

Fernandes, T., & Remelhe, P. (2015). How to engage customers in co-creation: customers' motivations for collaborative innovation. *Journal of Strategic Marketing*, 1-16.

Franke, N., Schreier, M., & Kaiser, U. (2010), "The I Designed It Myself Effect", *Management Science*, 56(1), 125-140. Franke, N., & Schreier, M. (2010). Why Customers Value Self-Designed Products: The Importance of Process Effort and Enjoyment. *Journal of Product Innovation Management*, 27(7), 1020-1031.

Frasquet-Deltoro, M., & Lorenzo-Romero, C. (2019). Antecedents and consequences of virtual customer co-creation behaviours. *Internet Research*.

Frow, P., Nenonen, S., Payne, A., & Storbacka, K. (2015). Managing Co-creation Design: A Strategic Approach to Innovation. *British Journal of Management*, 26(3), 463-483.

Füller, J., Hutter, K., & Faullant, R. (2011). Why co-creation experience matters? Creative experience and its impact on the quantity and quality of creative contributions. *R&D Management*, 41(3), 259-273.

Gebauer, J., Füller, J., & Pezzeri, R. (2013). The dark and the bright side of co-creation: Triggers of member behavior in online innovation communities. *Journal of Business Research*.

Gemser, G., & Perks, H. (2015). Co-Creation with Customers: An Evolving Innovation Research Field. *Journal of Product Innovation Management*, 32(5), 660-665.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field methods*, 18(1), 59-82.

Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer co-creation in new product development. *Journal of Service Research*, 13(3), 283-296.

Hutter, K., Hautz, J., Füller, J., Mueller, J., & Matzler, K. (2011). Communitition: The Tension between Competition and Collaboration in Community-Based Design Contests. *Creativity and Innovation Management*, 20(1), 3-21

Kohler, T., Fueller, J., Stieger, D., & Matzler, K. (2011). Avatar-based innovation: Consequences of the virtual co-creation experience. *Computers in Human Behavior*, 27(1), 160-168.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.

Nambisan, S., & Baron, R. A. (2007). Interactions in virtual customer environments: Implications for product support and customer relationship management. *Journal of Interactive Marketing*, 21(2), 42-62.

Nambisan, S., & Nambisan, P. (2008). How to Profit From a Better Virtual Customer Environment. *MIT Sloan Management Review*, 49(3), 53-61.

Nambisan, P., & Watt, J. H. (2011). Managing customer experiences in online product communities. *Journal of Business Research*, 64(8), 889-895.

Piller, F. T., Vossen, A., & Ihl, C. (2012). From social media to social product development: The impact of social media on co-creation of innovation. *Die Unternehmung*, 66(1), 7-27.

Porter, C. E., Donthu, N., MacElroy, W. H. & Wydr, D. (2011), "How to Foster and Sustain Engagement in Virtual Communities", *California Management Review*, 53(4), 80-110.

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of interactive marketing*, 18(3), 5-14.

Priharsari, D., Abedin, B. and Mastio, E., (2020). Value co-creation in firm sponsored online communities. *Internet Research*.

Roberts, D., Hughes, M., & Kertbo, K. (2014). Exploring consumers' motivations to engage in innovation through co-creation activities. *European Journal of Marketing*, 48(1/2), 147-169.

Russo-Spena, T. & Mele, C. (2012), "Five Co-s" in innovating: a practice-based view", *Journal of Service Management*, 23(4), 527-553.

Strauss, A. Corbin (1998) *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks.

Zhang, T., Lu, C., Torres, E., & Chen, P. J. (2018). Engaging customers in value co-creation or co-destruction online. *Journal of Services Marketing*.

Zhao, Z., Renard, D., Elmoukhli, M., & Balague, C. (2017). What affects creative performance in idea co-creation: competitive, cooperative or co-competitive climate?. In *The role of creativity in the management of innovation: state of the art and future research outlook* (pp. 123-148).