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?A study on the area of cocreation and the relation to product success?

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Abstract

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Introduction

This paper takes a broader perspective on customer cocreation - the different ways of involvement of end users and customers leading to product value creation across the different stages of New Product Development (NPD) process. It describes how cocreation is associated with user innovation, product- and service innovation and new product development as well as suggests a methodology to further contribute in the area of cocreation and NPD.

The paper reviews the growing body of literature in the field of cocreation and identifies potential research gaps. The cocreation paradigm can be described as a market-driven approach within an open innovation business philosophy. This participation of customers in cocreation activities should impact the innovation outcomes such as innovation cost, time-to-market, new product/service quality and development capacity (Kristensson, Matting, & Johansson, 2007; Nambisan & Baron, 2009; Prahalad, 2008; Ramaswamy & Guillard, 2010).

Research Gap

The project focuses on the cocreation at the product level by examining the relationship between the degree of involvement in cocreation activities across the different stages of the NPD process and the innovativeness and success of their products. Preliminary results from the ?literature search? and combines the lessons learned from the literature with insights from a preliminary qualitative research component including semi-structured interviews with company

managers resulting in the identification of research gaps. Three research gaps are identified: i) distinction between the types of cocreation activities across the different stages in the NPD, ii) insights about the circumstances under which customer input is beneficial (Creusen, 2011), and iii) the managerial perspectives of engagement in the cocreation process in NPD (Interviews with companies 2012)

Method

The first step in the research process was a detailed literature review in which the initial search methodology is based on a keywords search on ISI Web of Knowledge, leading to a set of articles with a summary of emerging subject areas. These subjects are further detailed in a "snow-ball effect" and a refined picture of the cocreation field is created. As the primary focus in the overall PhD study is in the area of new product development and innovation, this will have specific attention in the review and a conceptual refinement of the cocreation and its key characteristics in current literature and driving forces is created.

The second step in the process results in a detailed picture of cocreation derived from preliminary designed unstructured interviews with managers in larger Danish companies to get managerial perspectives of the cocreation in NPD.

The third step consists in the construction of a research model focusing on the relationship between customers' involvement in cocreation activities and product innovation/success. The model will be substantiated in future studies by a thorough definition of the research variables and the development of questionnaire that could be used to verify the research model by means of a larger sample of firms.

Results

The literature search shows a diverse understanding of cocreation. Research has been conducted in the stream of Service design and Virtual Customer Environment, less in the area of NPD and the managerial implications of engaging in cocreation. Existing literature focuses on the conceptual and descriptive parts and less on the more practical and transitioning of cocreation in practice. The preliminary interview in the companies shows that there's a clear need for addressing the relationship between product success and cocreation. The reason being that a very diverse understanding of the cocreation phenomenon is observed and companies are looking for more specific input on the value and operationalization of cocreation and the related engagement in related activities. The two key insights from the interviews are: i) company managers differentiate between customer involvement across the different NPD stages, ii) they see customer cocreation in direct relation to the need of involving other stakeholders such as suppliers and partners. This last insight has resulted in broadening the understanding of cocreation activities by differentiating between two types of activities - the ones necessitating the involvement of suppliers and partners and the ones focusing on interacting with the firm alone.

“A study on the area of cocreation and the relation to product success”

Working paper

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Introduction

The area of cocreation is of growing research interest and attention in both research and business circles - 75% of all publications on this topic have been published within the last three years (on the ISI Web of Knowledge research database there were 261 papers in Dec. 2012 with cocreation in the title and/or in the abstract). The term is widely used in association with open innovation and user innovation – and in some situations this leads to confusions in both research and practice. The term can be equally used in service development, virtual customer environments and new product development. Interestingly, scholars seem to restrain from providing a very specific definition of cocreation. However, there are a few versions of such definitions. For example, Piller and Ihl (2009) define customer co-creation as “an active, creative and social process, based on collaboration between producers (retailers) and customers (users)” where customers are actively involved and take part in the design of new products or services. Its objective is to utilize the information and capabilities of customers and users for the innovation process. O’Hern and Rindfleisch (2010) define cocreation as “a collaborative New Product Development (NPD) activity in which customers actively contribute and/or select the content of a new product offering” and understand products in a broader context including services. Another wider but still very interesting definition specifies cocreation “as a theory of interactions. It involves changing the way organizations interact with individuals, including employees, customers or any stakeholder. Cocreation involves setting up new modes of engagement for these individuals - platforms - that allow these individuals to insert themselves in the value chain of the organization. These platforms can be physical things such as a meeting or a store, or virtual things such as a web site. The idea of cocreation is to unleash the creative energy of many people, such that it transforms both their individual experience and the economics of the organization that enabled it.” (www.FrancisGouillard.com).

Our interactions with different firms have indicated a growing interest in the cocreation paradigm. Some firms have had special cocreation workshops and sessions and are increasingly trying out different activities to engage in the cocreation as well as continuously asking questions on what cocreation actually is and how it should(n’t) be used in a market with demands of more heterogeneous products, shorter time laps between new product introductions and globalized products. Our initial interviews with the companies indicated that in their understanding the relevant cocreators in the different stages of the NPD process can be very diverse. This is why in this cocreation research the customer/user/stakeholder is used in its broadest meaning. The focus, however, is on cocreation with customers and its relationship to the involvement of other stakeholders such as other existing or potential customers, suppliers, partners or other external organizations.

The cocreation paradigm can be described as a market-driven approach within an open innovation business philosophy. The participation of customers in cocreation activities should impact the innovation outcomes such as innovation cost, time-to-market, new product/service quality and development capacity (Bowonder, Dambal, Kumar, & Shirodkar, 2010; Kristensson, Matting, & Johansson, 2007; Nambisan & Baron, 2009; C. K. Prahalad, Krishnan, M.S., 2008; Ramaswamy & Gouillard, 2010). However, there are very few papers dealing with the specific relationship between the degree of firms’ involvement in cocreation at the different stages of the NPD process and product success and innovation. The goal of this paper is to provide a background for the filling up of this gap.

Research method

The objective of this paper is to formulate a research model that would help examining the relationship between the degree of firms’ involvement in cocreation and their product success. Cocreation is considered as the integrative effect of the different ways of customer involvement across the different stages of the NPD process. In this way our approach goes beyond a narrower approach to the study of customers’ innovative contributions focusing predominantly on the early stage user-driven innovation aspects of NPD.

The research methodology was as following;

The first step in the research process was to review the state-of-the-art research literature based on a keyword search on the ISI Web of Knowledge, leading to a set of most relevant articles and a summary of emerging subject areas. These subjects were further detailed in a refined picture of the cocreation field. As the primary focus in the overall PhD study is in the area of new

product development and innovation, NPD will have a special attention in the review and a conceptual refinement of the cocreation concept and its key characteristics in current literature will be suggested and discussed.

The second step consisted of semi-structured interviews with company managers to get a more detailed picture about the perception of the cocreation aspects in firms.

These two parts of the research revealed some interesting research gaps and findings that lead to the third step of building a research model, including an activity framework, new product development process phases and types of cocreators. The final step consisted in developing some preliminary research propositions that could be used in future research.

State-of-the-art research on cocreation

The cocreation paradigm builds on the innovation and new product development literature. In the 1980s and 1990s there was a well-defined stream of research literature focusing on customer involvement in new product development (Eisenhardt & Tabrizi, 1995) and the involvement of customers and users with special characteristics in specific stages of the new product development (Eric von Hippel 1988). The growth of research interest in cocreation was studied by a detailed search in the ISI Web of Knowledge. The combination of keywords used in the search was as follows: “co-creation” OR “cocreation” OR “co-creating” OR “cocreating” OR “cocreator” OR “cocreator.” The results (with no restriction to subject areas or document type) included a total of 734 documents including some or combinations of these keywords. An additional selection of the subject areas ‘business’ and ‘management’ and document type ‘articles’ resulted in a subset of 261 articles. It’s seen that 75% of the articles published are within the last 3 years with primary origin in US and Europe, but also Australia, New Zealand and Brazil are well represented. The distribution of journals concentrate on service management and marketing management, but also new product development management and general business management is represented.

When going through the different articles the search shows a very diverse understanding of cocreation. More research has been conducted in the stream of Service design and Virtual Customer Environments, less in the area of NPD and the managerial implications of engaging into cocreation. Most of the existing literature focuses on the conceptual and descriptive analysis and less on the more practical questions about implementation, transitioning and maturity models.

The analysis of the search results shows several research streams.

One of the streams could be called the “General management perspective” (Etgar, 2008; Payne, Storbacka, & Frow, 2008; C. K. Prahalad, Krishnan, M.S., 2008; C. K. Prahalad & Ramaswamy, 2004). In this stream cocreation is associated with the opportunity to gain competitive advantage by developing unique competences, together with the appropriate organizational resources and technological capabilities, aiming at better satisfying customers’ demands for personalized products, services and experiences. Prahalad and Ramaswamy suggest the DART framework (Dialog, Access, Risk, Transparency) in which the cocreation can be understood as a combination of the four building blocks.

Another stream emerges around topics related to “Virtual Customer Environments” (Nambisan & Baron, 2009). This is a stream where the possibilities of cocreation seem very clear from the perspective of building up different digital platforms to communicate with the customers and establish a learning benefit of these. Furthermore it includes the discussion about how to create and maintain an innovative and creative customer experience environment.

In the area of “Service Dominant Logic” the cocreation perspective appears in a more generic form. It is based on the assumption that all utility of products are based on the service that they enable. The stream is quite established (Kristensson, Matthing, & Johansson, 2008; Payne et al., 2008) and is generally focused on the service perspective of cocreation and less on the direct physical product development.

New Product Development

One of the fastest growing bodies of literature in the cocreation area is around the “New product development and Innovation” (NPDI).

The development of cocreation platforms is increasingly recognized as a promising innovation strategy together with change of innovation in general (Prahalad and Ramaswamy 2003; Nambisan and Baron 2009; Bowonder, Dambal et al. 2010). However, for such platforms to be successful, it is important to recognize the difference in the perceived value, where production is a ‘potential value’, usage is considered a ‘real value’ (cf. Gummesson, 2007; Vargo and Lusch, 2011), which means sometimes objectively measurable, sometimes subjectively perceived. In this sense, the usage value from the customer can influence the firm’s production process, where the firm gets an opportunity to influence the customer’s usage process (Gronroos, 2011). From this

perspective, it might be reasonable to think that the 'co-' in creation occurs, because the production and the customer are of each other's benefit; production gets a greater deal of security for the 'real value' of customers, while customers are interested in influencing the 'potential value' in production. This relationship between production and customer also emphasizes cocreation as a collaborative process between firms and consumers (Hoyer, Chandy, Dorotic, Krafft, & Singh, 2010). For this purpose, there is a need for participatory platforms and cocreation practices to further enhance user innovation, in particular when they are enabled by a broader and more systematic positioning of customers and end users across the entire innovation lifecycle.

The individual cocreation experiences are essential for the emergence of innovation networks through the development, access and dynamic reconfiguration of appropriately designed technological, business process and human resource infrastructures (Prahalad and Krishnan 2008). This paradigm of cocreation can be described as a market-driven approach within an open innovation business philosophy. This participation of customers in cocreation activities should impact the innovation outcomes such as innovation cost, time-to-market, new product/service quality and development capacity (Kristensson, Matthing et al. 2008; Prahalad and Krishnan 2008; Nambisan and Baron 2009; Bowonder, Dambal et al. 2010; Ramaswamy and Gouillart 2010).

The source of value in the cocreation paradigm is actualized through the experience of company-customer interaction events. Here the customer becomes an active stakeholder in defining both the interaction and the context of the event including their specific personal meaning (Prahalad and Ramaswamy 2003). The importance of an active stakeholder also emphasizes the importance of an interactive relationship to the stakeholder, where there is mutual and reciprocal action and influence on each other's practices (Gronroos, 2011). Interactive experiences should also be of a personal nature, which adds new value based on the quality and individual relevance of the interaction events, as well as the opportunity for customers to co-create their own unique products, services and experiences (Franke and Schreier 2008). From a marketing point of view, this includes the opportunities for direct interactions with a customer's practice, for instance through internet-based systems for diagnosing problems and other more service-oriented systems (Gronroos, 2011).

In general, superior value propositions, that are relevant to the supplier's target customers, should result in greater opportunities for cocreation and result in benefits (or 'value') being received by the supplier by way of revenues, profits, referrals, etc. By successfully managing cocreation and exchange, companies can seek to maximize the lifetime value of desirable customer segments (Payne and Frow 2005) (Payne, Storbacka, & Frow, 2008), which is very much in line with Doyle, Kotler (2000), who argues that customers will estimate, which offer will deliver the most value, and they will buy from the firm what they perceive offers the highest customer-delivered value. Customer-delivered value becomes the difference between total customer value and total customer costs. (Lindgreen & Wynstra, 2005)

The potential impact of customer involvement in co-creation appears to be one of the topics that need to be further studied. There is little research focusing on models describing the relationship between the degree of cocreation and product innovation or success. Hoyer et al. (2010) suggested such model by defining the degree of cocreation in the NPD, based on the intensity of the cocreation activities and the scope of the cocreation activities across the different stages of the development process. They also suggest a framework relating degree of cocreation and product success which this project will use as a reference basis.

The model suggested by Hoyer et al. (2010) provides a direct link of cocreation literature to NPD and innovation literature. For example, Gruner & Homburg (2000) are looking into the relationship between product success and the intensity of customer interaction in the different phases of NPD. They have a focus on the particular customer types that are engaged such as technical or financial attractive customers, closeness of relationship with customer and lead user characteristics and the relation to new product success as Quality, Financial, Process quality and inexpensiveness of new product ownership. (Gruner & Homburg, 2000)

Other studies find that when interacting with customers during the NPD, a positive effect on the product performance can only be found when collaborating in the early and late stage of the NPD process. (Gruner & Homburg, 2000) and also Sandmeier (2008) point out that the literature so far hasn't described the customer integration throughout all the different stages of NPD or the specific customer contributions that are relevant in the different stages of the NPD.

Ciccantelli and Magidson (1993) work with general perspectives of Consumer Idealized design and point out that especially in the initial stages of the product development companies could benefit from more focus on the consumer needs and behavior. In their conclusion the recommendations for companies state: "get consumers involved in product and service development as early as possible and at all subsequent stages" (Ciccantelli & Magidson, 1993). Also Hemetsberger and Godula look into the different methods for customer integration in the NPD and have a special focus on how the specific virtual methods in the design and prototyping stage could be used for especially tapping into the customers' tacit knowledge. (Hemetsberger & Godula, 2007)

More research has focused on the integration of customers in the early frontend development of NPD to influence the innovative features of new products. In four case studies Grassmann and Wecht look at the different user types; opportunity sensor, selector, complimentary specialist, specifier and lead users and the integration of those in the early phases of the NPD and how they can contribute in either the change-orientation, creation-orientation or solution-orientation in knowledge creation (Grassmann &

Wecht). Another study of 55 development projects in the computer telephony integration industry shows that there's an inverted U-shape in the importance of customer input dependent to the market newness of a product whereas the technological newness doesn't drop off (Callahan & Lasry, 2004). They also show that based on the different phases in the NPD there's a high correlation of importance of end-user input when making requirements of a new product, whereas the customer input during the development is rather low for again to be important when launching a product.

Cocreation and engagement

Brodie et al. (2011) suggest that the theory of customer engagement draws from 'interactive experience and value cocreation within marketing relationships', also described as 'the service-dominant (S-D) logic' of marketing. Within this S-D logic 'the customer is always a cocreator of value' (Vargo and Lusch 2008a), and the particular kind of interactive, cocreated customer experiences may be interpreted as the act of "engaging" (Lusch, 2010).

However, "the terms of "engage" and/or "engagement" are also linked to customer and/or brand experience, emotion, creativity, collaboration, learning, and/or (brand) community interactions." (Brodie, Hollebeek, Juric, & Ilic, 2011), and it goes beyond a more traditional understanding of customer purchase behavior and transactions (J. van Doorn et al., 2010). Engagement differs from 'involvement' and 'participation' in the sense that it is "based on the existence of a customer's interactive, cocreative experiences with a specific engagement object (e.g., a brand)." (Brodie et al., 2011)

Brodie developed five Fundamental Propositions to define the conceptual domain of Customer Engagement (CE):

1. CE reflects a psychological state, which occurs by virtue of interactive customer experiences with a focal agent/object within specific service relationships.
2. CE states occur within a dynamic, iterative process of service relationships that cocreates value.
3. CE plays central role within a nomological network of service relationships.
4. CE is a multidimensional concept subject to a context and/or stakeholder-specific expression of relevant cognitive, emotional, and behavioral dimensions.
5. CE occurs within a specific set of situational conditions generating differing CE levels.

Proposition 2 is particularly relevant to cocreation and Bodie et. al formulated one of their central research questions relevant for a future research agenda in terms of the relationship between the nature and the optimal degree of value cocreation and degree of customer engagement across its different phases.

It is emphasized that the cocreated value emerges by virtue of focal interactive experiences, recognizing the iterative nature of an engagement process as 'feedback loops over time' (Brodie et al., 2011). The study of this process requires an understanding of the specific type of 'engagement' in these feedback loops, which can be described as the different customer engagement states. Proposition 5 describes these states as residing in a continuum ranging from:

- "nonengaged" (i.e., absence of customer/firm or brand interactive experience);
- "marginally engaged" (i.e., customers being somewhat cognitively, emotionally, and/or behaviorally engaged in a specific interactive experience)
- "engaged" (i.e., ample levels of cognitive, emotional, and/or behavioral CE in a particular interactive experience)
- "highly engaged" (i.e., high levels of cognitive, emotional, and/or behavioral engagement in a specific interactive experience; cf. Shevlin 2007b).

Based on above the cocreation will be defined in this work as an interactive activity between the firm and the cocreator where the cocreator have an engagement that's higher than "marginally engaged" (engaged or highly engaged).

Exploratory Interviews with company managers

As the field of cocreation is still somewhat diverse in its understanding, semi-structured interviews with 6 company managers in larger Danish manufacturing and consulting firms have been conducted to get managerial perspectives of the cocreation in NPD.

The preliminary interviews in the companies show that there's a clear need for addressing the relationship between cocreation and product success. The reason being that a very diverse understanding of the cocreation phenomenon is observed and companies are

looking for more specific input on the value and operationalization of cocreation and the related the engagement in related activities.

The key insights from the interviews are: i) company managers differentiate between customer involvement across the different NPD stages, ii) they see customer cocreation in direct relation to the need of involving other stakeholders such as suppliers and partners. This later insight has resulted in broadening the understanding of cocreation activities by differentiating between two types of activities – the ones necessitating the involvement of suppliers and partners and the ones focusing on interacting with the firm alone. A third insight was related to the need for a better articulation of the innovation related outcomes of cocreation. Although firms are convinced about the need of it, they remain unclear in the quantitative articulation of its benefits in terms of new product success and innovation.

Research gaps

The literature and interviews with managers identified some interesting research gaps and findings.

When looking at the cocreation literature in relation to new product development and the interviews with managers, one could identify three major research gaps: i) distinction between the types of cocreation activities across the different stages in the NPD, ii) insights about the circumstances under which customer input is beneficial (Creusen, 2011), and iii) the managerial perspectives of engagement in the cocreation process in NPD (Interviews with companies 2012). Also it's seen that some studies focus very clearly on such user-driven innovation practices associated with lead user perspectives, while very few take a broader perspective on the "cocreator".

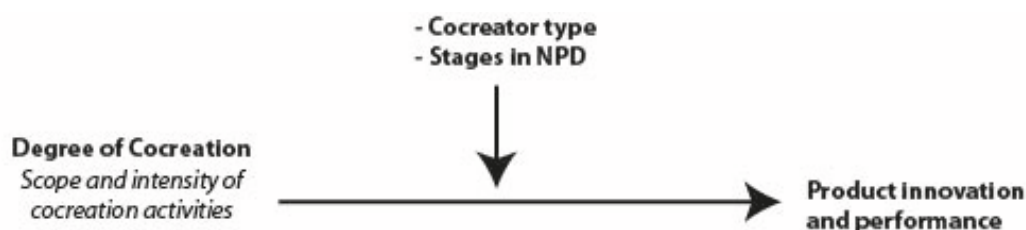
A research model, looking more into the effect of the different cocreation activities across the different stages of the NPD with different cocreators, is therefore developed as given below.

Research model

In this paper, cocreation activities are understood as activities initiated and orchestrated by the firm and its strategy with external parties of the company – primary customers and users, but it can also be suppliers, consultants, universities etc. What separates a cocreation activity from other customer/user involvement activities is the degree of engagement that the cocreator involves in the NPD.

The research model developed is looking into the relationship between the degree of cocreation and the product innovation and performance. It's seen in relation to the type of cocreator involved in the activity (e.g. user or supplier) and in which stage of the NPD the cocreation activity happens.

The degree of Cocreation (Hoyer, 2010) is defined by the scope and intensity of the cocreation activities. The scope is here defined as the number of different cocreation activities used across the different single stages of the NPD process and the intensity as how often one or more cocreation activities happen within a given stage.



Each of the different parts of the research model will be described in the following sections; Stages of NPD, Type of Cocreator, Cocreation activities and the Product innovation and performance.

Stages of NPD

More research has looked into the effect of involving customers or lead users in the early phases and as one of the research gaps found in the literature is a more holistic analysis of the involvement of cocreators in the NPD process from early front-end development to product launch, all phases of the NPD process will be included in this framework (Creusen, 2011; Gruner & Homburg, 2000)

In the NPD process more research has looked into splitting up the process in actionable phases. The number and specific content of phases varies e.g. Song and Montoya-Weiss have 1-6 stages going from strategic planning, idea development and screening, Business and market opportunity analysis, technical development, product testing to product commercialization.

Eisenhart and Tabrizi (1995) works with six phases going from Predevelopment, Conceptual design, Product design, testing, process development to production startup, and Callahan and Lasry have five phases (activities) in their model going from “idea generation and screening”, “requirements definition and design specification”, “technical development” to “trials and testing” and “product launch”. (Callahan & Lasry, 2004; Eisenhardt & Tabrizi, 1995)

To simplify and operationalize the split up of phases across more organizations, the content of the different models have been analyzed and combined with the information from the interviews with managers and it is seen that a cut down to three phases is reasonable.

A common feature of all the different stage models is the fact that they have

-a “pre-development” phase (until the specification is ready)

-a “development” phase (until the product launch)

- a “post development” which covers marketing and product launch.

These three stages “Pre-development”, “Development” and “Post-development” will be used in the framing of the cocreation activities.

The type of Cocreator

Lead users are becoming an established definition of a specific potential source to innovation in user-innovation. However, other externals are less described or defined, why this research model works with different types of cocreators; both literature and the interviews with managers show that more types of externals have potential in NPD and are used in practice today.

In this paper the collaboration partner of the company in the NPD process is understood in its broadest meaning, as it includes but is not limited to innovators as earliest adopters of new products (More 1991), Lead Users who face needs that later will be general in the market (von Hippel 1986), emergent consumers who are capable of applying intuition and judgment to product concepts that mainstream consumers find appealing (Hoffman, Kopalle and Novak 2010) and individual market mavens with a high level of knowledge around products, different facets of the market and an ability to discuss and interact with other consumers (Feick and Price 1987). It’s relevant to have more different types and not e.g. lead users only as the different cocreators can take different roles during the development based on their interest and knowledge like technological knowhow, use experience, trends etc. (Piller, Ihl, & Vossen, 2011)

For this reason, the research model will contain the following groups of cocreators;

- People with personal use benefit of the product e.g. end user (User-buyer)
- People with professional use benefit of the product e.g. nurse with medical products, teachers with learning systems, functional managers (Technical buyer)
- Supplier (Existing and potential suppliers)
- External experts, consultants, domain specialists
- University and government research teams/labs
- Competitors and related organizations
- Others

Cocreation Activities

Cocreation activities are activities, where external parties are involved in the development and design of a new product offering for a firm. The activities are based on a strategy from the firm, and the firm drives the collaboration.

The customer and user input activities are split into three categories; “listen”, “ask” and “build”. (Piller et al., 2011). These categories are used to determine, which activities that are relevant for cocreation and the research model.

When a firm “listen”, it means getting input from their sales organization, look at internet log files and go through the complains from customer service.

“Ask” covers surveys, focus groups and voice of customer activities along with more qualitative interviews.

When going to “build”, a firm is actively engaging external parties in the development process of a new product offering. It could be as idea contests, communities for cocreation or different types of toolkits.

Cocreation can happen when working in the “build” phase where firms engage external people in an active involvement during the development process. Cocreation differs from other collaborations by being an ongoing engagement with dialogue – meaning that collaborations defined as “non-engaged” or “marginally engaged” are in this context understood as other types of collaboration than cocreation (Brodie et al., 2011; Jenny van Doorn, 2011)

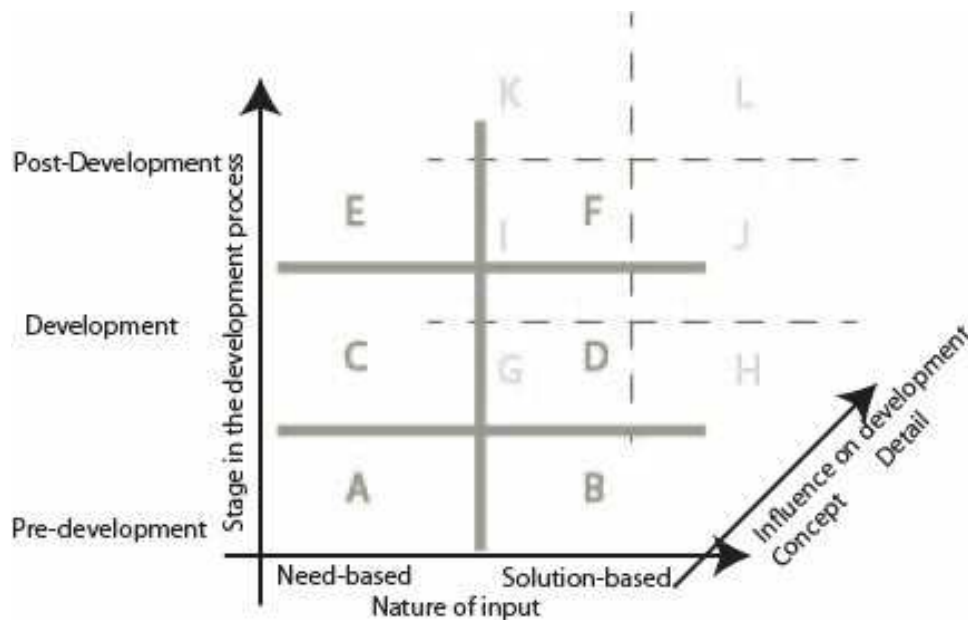
The specific activities that’s included in this model are both in the “ask” and “build” area as it’s seen that when firms involves “ask”-activities in the new product development, it can develop to a “build” activity and therefore have the possibility of cocreation when the cocreator is engaged or highly engaged.

The means that the definitions in this research are as follows;

- Ask activity that happen non- or marginally engaged *is not defined* as cocreation.
- Ask activity that happen engaged or highly engaged is defined as cocreation
- Build activity that happen non- or marginally engaged *is not defined* as cocreation (shouldn’t in practice be possible when you have a build activity)
- Build activity that happen engaged or highly engaged is defined as cocreation

The activities that firms do in the “ask” and “build” phase can both be of need and solution based nature. Need based inputs are inputs from market and users on preferences, needs, motives etc. When having a sufficient set of need information, a company reduces the risk of product failure in the market. Often more of the need based information is seen as “sticky” (Hippel) and a firm therefor needs a very high degree of involvement to be able to get a sufficient insight on the customer requirements and its context. As a way to overcome the “sticky” information, solution based inputs is used. Here the customer or user gives direct inputs on a specific solution to a challenge. The solution based input can be given by idea contests, cocreation workshops, toolkits etc.(Piller et al., 2011)

Activities can therefore be framed as below;



More activities could be relevant in more fields and below a suggestion for activities that in their nature are characterized as “build” - cocreation or at the “ask” level with a potential to become cocreation with increased engagement during interaction between the firm and the cocreator(s);

A; User visits (Ethnographic studies) A, Mock up tests A/B, Video Card Game A/B

B; Lead User method A/B, Mock up tests A/B, Video Card Game A/B, Idea contests B

C; Usability testing, Voice of Customer, Focus Groups, Functional Prototypes testing, Function Puzzle

D; Lead User method, Functional Prototype testing, Function Puzzle, Idea contests

E; Voice of Customer for marketing, Focus Groups for marketing

F; Toolkits, Late variant service

G; User visits (Ethnographic studies), Mock up tests, Video Card Game

H; Lead User method, Mock up tests, Video Card Game, Idea contests

I; Usability testing, Voice of Customer, Focus Groups, Functional Prototypes, Function Puzzle

J;(Functional Prototypes), Function Puzzle, Idea contests

K; Voice of Customer for marketing, Focus Groups for marketing, Late variant service

L; Toolkits, Late variant service

The different methods are based on (Piller et al., 2011; Sandmeier, 2008) Von Hippel 2008 and a pre-qualitative study in a production company in 2010 combined with results from interviews with company managers in 2012.

Product innovation and performance

The product innovation and performance of products developed with cocreation could be measured in several ways. However as this paper looks into the firm perspectives (not necessarily in opposition to the customer), the measures should be on the financial performance (e.g. met sales objectives and the impact on company sales), the market perspectives of the new product (e.g. higher perceived novelty and quality, possibility to new markets) and the product development process performance (e.g. launched on time) (Campbell & Cooper, 1999).

Discussion and proposition development

Existing literature has contradictory conclusions about the innovative impact of customer involvement in company projects (Campbell & Cooper, 1999; Gruner & Homburg, 2000) and which customers or external sources that could be of benefit to collaborate with. Others (Callahan & Lasry, 2004) have pointed out the relevance of the degree of product newness on the potential impact of customers' involvement company projects to transfer knowledge about market and the use and context of the product. We therefore make following propositions;

Proposition 1; There will be a positive relationship between the degree of cocreation and the product performance and innovation in the case of "very new" products.

Proposition 2; There will be a positive relationship between the diversity of groups of cocreators (e.g. both cocreating with users with personal use benefit, users with professional use benefit and suppliers) and the product performance and innovation.

Conclusion

This paper looks into the growing body of cocreation literature and takes a focus on the NPD stream and the related customer engagement literature.

Cocreation activities are defined as activities based on a strategy from the firm, where external parties are involved in the new product development and design of a new product offering for and driven by a firm. The activities are either on the level of Ask" or "Build" and the cocreator is either engaged or highly engaged. The level of engagement is relevant when differentiating cocreation from other involving activities in the NPD.

Both literature and the interviews with managers indicated that there's a need for more knowledge around the implications of cocreation, and in which stages of the NPD it's more relevant. At the same time it becomes important to understand which external partners to cocreate with for the better product performance and innovation.

For this reason, the paper describes a research model that emphasizes the relationship between the firms' degree of cocreation in a product development, and the relationship to the product performance and innovation analyzed across the different stages of the NPD process and with different types of cocreators.

An activity framework has been developed to clearly outline the specific activities that are relevant for cocreation in the pre-development, development and post-development stage of NPD, their need or solution based input and the influence on the final product on the concept or detail.

In this case, the paper justifies the need both in the academic literature and in practice, for a more detailed understanding of the value of cocreation for NPD, and it sets out a framework to be used to further validate cocreation activities in terms of their product innovation and performance.

References

- Bowonder, B., Dambal, A., Kumar, S., & Shirodkar, A. (2010). INNOVATION STRATEGIES FOR CREATING COMPETITIVE ADVANTAGE. *Research-Technology Management*, 53(3), 19-32.
- Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer Engagement: Conceptual Domain, Fundamental Propositions, and Implications for Research. *Journal of Service Research*, 14(3), 252-271. doi: 10.1177/1094670511411703
- Callahan, J., & Lasry, E. (2004). The importance of customer input in the development of very new products. *R & D Management*, 34(2), 107-120. doi: 10.1111/j.1467-9310.2004.00327.x
- Campbell, A. J., & Cooper, R. G. (1999). Do customer partnerships improve new product success rates? [Article]. *Industrial Marketing Management*, 28(5), 507-519. doi: 10.1016/s0019-8501(99)00058-9
- Ciccantelli, S., & Magidson, J. (1993). FROM EXPERIENCE - CONSUMER IDEALIZED DESIGN - INVOLVING CONSUMERS IN THE PRODUCT DEVELOPMENT PROCESS. *Journal of Product Innovation Management*, 10(4), 341-347. doi: 10.1016/0737-6782(93)90076-3
- Creusen, M. E. H. (2011). Research Opportunities Related to Consumer Response to Product Design*. *Journal of Product Innovation Management*, 28(3), 405-408. doi: 10.1111/j.1540-5885.2011.00812.x
- Eisenhardt, K. M., & Tabrizi, B. N. (1995). ACCELERATING ADAPTIVE PROCESSES - PRODUCT INNOVATION IN THE GLOBAL COMPUTER INDUSTRY. *Administrative Science Quarterly*, 40(1), 84-110. doi: 10.2307/2393701
- Etgar, M. (2008). A descriptive model of the consumer co-production process. [Article]. *Journal of the Academy of Marketing Science*, 36(1), 97-108. doi: 10.1007/s11747-007-0061-1
- Grassmann, O., & Wecht, C. Early customer integration into the innovation process.
- Gruner, K. E., & Homburg, C. (2000). Does customer interaction enhance new product success? *Journal of Business Research*, 49(1), 1-14. doi: 10.1016/s0148-2963(99)00013-2
- Hemetsberger, A., & Godula, G. (2007). Integrating expert customers in new product development in industrial business - virtual routes to success. *Innovative marketing* 3(3), 28-39.
- Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer Cocreation in New Product Development. *Journal of Service Research*, 13(3), 283-296. doi: 10.1177/1094670510375604
- Kristensson, P., Matthing, J., & Johansson, N. (2008). Key strategies for the successful involvement of customers in the co-creation of new technology-based services. *International Journal of Service Industry Management*, 19(3-4), 474-491. doi: 10.1108/09564230810891914
- Kristensson, P., Matting, J., & Johansson, N. (2007). Key strategies for the successful involvement of customers in the co-creation of new technology-based services. *International Journal of Service Industry Management*, 19(4), 474-491.
- Lusch, R. F. (2010). REFRAMING SUPPLY CHAIN MANAGEMENT: A SERVICE-DOMINANT LOGIC PERSPECTIVE. *Journal of Supply Chain Management*, 47(1), 14-18. doi: 10.1111/j.1745-493X.2010.03211.x
- Nambisan, S., & Baron, R. A. (2009). Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co-creation Activities. *Journal of Product Innovation Management*, 26(4), 388-406.
- Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83-96. doi: 10.1007/s11747-007-0070-0
- Piller, F., Ihl, C., & Vossen, A. (2011). A typology of customer co-creation in the innovation process.
- Prahalad, C. K., Krishnan, M.S. (2008). *The new age of innovation*: McGraw Hill.
- Prahalad, C. K., & Ramaswamy, V. (2004). *The Future of competition; Co-creating unique value with customers*.
- Ramaswamy, V., & Gouillart, F. (2010). Building the Co-Creative Enterprise. *Harvard Business Review*, 88(10), 100-+.
- Sandmeier, P. (2008). *Customer integration in Innovation projects*: GWV Fachverlage GmbH.
- van Doorn, J. (2011). Customer Engagement: Essence, Dimensionality, and Boundaries. *Journal of Service Research*, 14(3), 280-282. doi: 10.1177/1094670511414585
- van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer Engagement Behavior: Theoretical Foundations and Research Directions. *Journal of Service Research*, 13(3), 253-266. doi: 10.1177/1094670510375599

