

## APPLICATION OF VALUE CO-CREATION CONCEPT IN E-SERVICE SYSTEMS

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### *Abstract-*

Value co-creation is a concept that has been used in marketing for evaluation. Service system is a configuration of people, technologies, and other resources that interact with other service systems to create mutual value. Services evaluate by value co-creation concept through use. But these days, e-service uses more instead of traditional ones. In this way e-service is a benefit providing object of transaction that can be characterized as an intangible process that is at least partially produced, marketed and consumed in a simultaneous interaction through electronic networks. This study attempts to investigate the application of value co-creation in e-service system. The method which used in this study is assessing the documents related to this area and the technique which applied in this way is systematic literature review. Results show that investigations of this concept in e-services are still limited.

**Keywords-** *value co-creation- service system- e-service system, systematic literature review*

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## 1. Introduction

According to Järvinen and Lehtinen (2004) “e-service is a benefit providing object of transaction that can be characterized as an intangible process that is at least partially produced, marketed and consumed in a simultaneous interaction through electronic networks”. During the last ten years a large amount of e-services have been launched to electronic markets and the same kind of development will certainly continue. In so many situations, electronic services replace instead of traditional ones. According to Rowley (2006) “E-service was predicted to revolutionize the way of doing marketing in a short period of time... However, the development has been slow, but the trend towards e-services is clear”, so e-service needs to investigate and evaluate more from market perspective. In this case value co-creation found as a concept for evaluation in market. So the history of this important concept explains as follow for better overview.

This history arises from co-production to co-creation activity. The academic study and research about that back to 1979 which Bendapudi and Leone (2003) mentioned that and also they come up with the literature about customer involvement in production. Studies and researches in this area “Business firm centric approach” done and the results of analyzing customer involvement recorded as documents from 1979 till 1990. In the early 1980's and in the late 1970's scholarly people those were more worried about productiveness gains through go a crossing on projects from the business firm to the consumer. At that time framework for *Self Service* became well known. However a slow change over beginning in the middle of 1980's detected, involvement of consumer started to be understood by a new point of view which called less accounting type metrics. Mills and Morris in 1986 imagine the customers as employees and also on the other word Goodwin in 1988 finds involving customer in production helps to increase quality.

New issues arise in 1990. As Czepiel (1990) proposed that “customer’s participation may lead to greater customer’s satisfaction”. Kelley *et al.* (1990) said that “our studies are dealing with productiveness but propose other ways to look at customer involvement, quality, employee’s performance, and emotional responses”. Song and Adams (1993) offered that “customer participation should not be examined under the aspect of cost-minimization, Instead it can be seen as an opportunity to differentiate”. As Version Normann and Ramírez (1993) mentioned that “successful companies do not focus on themselves or even on the industry but on the *value*

*creating system*” which was not reviewed by Bendapuli and Leone (2003) and this conception is proximate to the Vargo *et al.* (2008).

Vargo and Lusch (2004) understand the importance of Normann idea on their works and approved about the similarity between co-production and co-creation. They notify that Normann improved and enriched service dominate logic by “density” idea which offer through that. Schrage (1995) sends a letter to the editor of *Harvard Business Review* in reaction to an article by Pine, Peppers and Roger and said, “Do you want to keep your customers forever”. He disputed and gave reasons about this matter which the customers are not all the same in ability and rolls to bring knowledge for the firm.

He uses the word “co-creation” in his letter and then expresses “at the core of collaboration is co-creation. Customers are not just customizing but also they are collaborating with vendors to create unique value”. Firat *et al.* (1995) presented customization concept and express, “enables consumers to serve as the co-producer of the product and service offering”. In spite of that Bendapudi and Leone (2003) mentioned that, “the assumption of greater customization under co-production may hold only when the customer has the expertise to craft a good or service to his or her liking. Particularly interesting within the framework of customer-perceived value is the conclusion that a customer who believes he or she has the expertise and chooses to co-produce may be more likely to make self-attributions for success and failure than a customer who lacks the expertise. A customer who lacks the expertise but feels forced to coproduce, may make more negative attributions about co-production”.

Prahalad and Ramaswamy (2000) helped to develop idea of Version Normann and Ramirez by discovering a critical part of work. This critical part is nothing except relations and impacts of customer roles with the firm which is changed or shifted. By using allegory of “theater”, they had shown that customers have very important roles. Even though researchers do not understand the source, they recommend that any revision and change in the business environment will case change customer from a passive audience to active players. They suggested to the companies control the ability of their customers and which will be done by using four basis as follow, “engage in dialogue with customers, mobilize communities, manage customer diversity and co-

create personalized experiences with customers". In a specific written they said, "Personalization is about the customer becoming a co creator of the content of their experiences".

Prahalad and Ramaswamy (2004) still work on their idea from 2000 and do more study on it. They use the word "value co-creation" in their recently paper. They understand marketing offers cannot be supported all the times. According to them "the origin of this shift is to be seen in the increasing bargaining power of buyers due to the emergence of communication between customers".

Also they said "co-creation of value as an initiative of the customers who are dissatisfied with available choices, want to co-create value and thereby co-create value". The co-creation of value is conceptualized thanks to a model called DART which is a summary of Dialogue, Access, Risk-Benefits, and Transparency. At that time Vargo and Lush (2004) also come up with the good study about service dominant logic of marketing. From their publication which mentioned about ten Fundamental Premises the concept of value co-creation mentioned on it with the number of six as they mentioned it FP6. Against to the goods-dominant logic and the service-dominant logic Lush and Vargo (2006) found that "the customer is always a co-producer", and thereby they change FP6 to "the customer is always a co-creator".

From the beginning of Lush and Vargo's innovation the difference between Goods-Dominant Logic (GD Logic) and the Service-Dominant Logic (SD-Logic) appeared. In Goods-Dominant Logic maximum output and best results is the time that value represents to the customer and before that customer has no interaction in this logic. They mentioned that "the consumer is always involved in the production of value. Even with tangible goods, production does not end with the manufacturing process; production is an intermediary process".

Then Prahalad (2004) had refund on their publications and found that they did not narrow down to the issue about Fundamental premises six. He tries to complete the gap about customer engagement in order to coproduction and during his survive found five ways conduction to coproduction. He said, "Although work and risks increasingly are shared, the firm decides how it will engage the customer" which is for him a piece of evidence that this coproduction process

stays firm-centric. Prahalad (2004) identifies that “Increased connectivity, convergence of technologies and globalization of information as opportunities to escape the firm and product/service centric view of value creation”.

From 2004, publications on co-creation of value lean in to renewal for the sake of Lush and Vargo’s ideas resources. The main step in research was attend to in Lush and Vargo’s book which was collections of papers with the title of “the service-dominant logic of marketing: dialog, debates and directions” and published in 2006. Jaworski and Kohli (2006) answer Prahalad’s analyst which done in 2004 and suggested to “co-create the voice of the customer”. The hypothesis was really tempted and the context rightly chosen, but the model proposed ends up in being a series of very theoretical guidelines which may be difficult to apply in B2C markets.

One of the most important hypotheses made is indeed that the customer is looking for a dialog with the firm. Although this may be true in B2B, one may doubt that the majority of the B2C customers will see dialogs with firms as a priority in their lives. Moreover, following the authors’ statement that, “A common premise underlying many approaches to uncovering needs of customers is that they know what they need or want, one may wonder whether focusing the dialog on those consumers who seek it may not result in a bias. The purpose of the firm should indeed be to fulfill the needs of a majority of consumers and not dialoging with the silent majority may result in biased conclusion as far as needs and wants are concerned”.

Also Kalaiganam and Varadarajan (2006) follow Prahalad’s ideas and suggestion in the same book and detailed on the IT implications on coproduction. As they said, “Developments in information technology enable customers to create value by collaborating with the firm”. The main beneficitation of their articles was a conceptual model of the intensity of customer participation as function of product characteristics, market and customer characteristics and firm characteristics. Finally they come up with the summary about three new issues as future works which is really important as follows, “First propose to study supply-side issues and how increasing communication, participation from the customers and the emergence of communities enable customers to interact between them, sometimes leading to new creations. Second *locus of*

*innovation* as interest and in particular how the shift of firm-centric networks to user-centric networks can lead to increased innovation capabilities. Third whether demand-side issues may not result in negative consequences on satisfaction”. The third topic was previously presented by Bendapuli and Leone (2003) as they said, “A customer who believes he or she has the expertise and chooses to co-produce may be more likely to make self-attributions for success and failure than a customer who lacks the expertise. A customer who lacks the expertise but feels forced to co-produce, may make more negative attributions about co-production”.

Also Oliver (2006) recommends his opinion on V and L’s FP6 and tenders that “customer’s expectations on the firm should be counterbalanced by firm’s expectations on the customer. The underlying idea is of course that consumers should be seen as a co-creative part of the firm and the latter should therefore get something in return and set expectations”. Even though Oliver’s suggestion was properly designed, it was not really radical. He says the idea is, “basically that the firm should monitor the customer co-creation and therefore set KPI’s (Key Performance Indicator) on it”.

After that more important publication arises by Grönroos (2008), which asked “if customers are co-creators of value, what is the role of the firm? Are firms the main creator of value, or what are they?” after more than two decades of generating co-creation. The authors highlighted that, “the debate around co-creation has somewhat blurred the *entity* at the origin of value”. Following the ideas of V and L, Grönroos (2008) thinks that value-in-use is bigger than value-in-exchange because customers add skills, knowledge, processes when using a good and therefore transforming it into a service. The view that customers are co-creators only and not creators results from the confusion between the customer and a production resource.

After Schrage (1995) which mentioned “the need for tools to analyze co-creation” Payne et al. (2008) proposed a framework around value co-creation in the context of S-D logic. The framework is based on processes which the authors see as central in value co-creation. They said “It consists of three components. First are customer value-creating processes where the value relies on *practices*, Second are supplier value-creation processes based on co-creation opportunities through technological breakthrough, changes in industry logics, changes in

customers' preferences and lifestyles, planning, implementation and metrics and finally Third are encounter processes".

Nenonen and Storbacka (2010) introduced value co-creation as a common thread in the modern marketing theories and investigated business models as a broader conceptualization of value co-creation. Then Frow *et al.* (2011) introduced 12 types of co-creation and come up with a conceptual framework for co-creation design. Grönroos (2011) founded that service-dominant logic do not fully support an understanding of value creation and co-creation in a way that is meaningful for theoretical development and decision making in business and marketing practice and revised them again. After that many authors describe definition for value co-creation and tried to present framework and or solve gaps related to that but less study attempt to use it for e-service. So following section summarized the studies that don for value co-creation in e-service system.

## 2. Method

This study has been undertaken systematic literature review. In this way the goal of review is to assess related documents to the concept of value co-creation in e-service system.

### 2.1 research questions

The research questions addressed by this study are:

RQ1: How many studies have been done for the concept of value co-creation in e-service systems?

RQ2: Is value co-creation capable to use in e-service systems?

RQ3: Why value co-creation can or cannot use in e-service systems?

RQ4: How many of organizations might best develop their e-service capability?

These research questions try to find the studies that worked on the concept of value co-creation in design of e-service systems and also understand the reason of use it in e-service systems, if it

is capable to use and finally how many of organizations known to develop their e-service capability by this concept.

## 2.2 Data Collections

The data extracted from each study were main topic area, summary of the study, whether the study referenced the concept of value co-creation in e-service systems, whether the study referenced is it capable to use, whether the study referenced why it is capable, whether the study referenced how many known about it and how many studied were used value co-creation in e-service systems.

## 2.3 Data Analysis

The data was tabulated to show the number of publications that worked on the co-creation of e-service systems, the capability of using value co-creation in e-service systems, the reason of use or not use of value co-creation in e-service systems and the number of organizations that know how to use it.

## 3. Results

This section summarized the results of the study:

Eight articles identified by this search process. Table 1 summarized these eight articles by referring to the year of publication, titles and the articles' findings.

Table 1: Selected Papers

Authors	Title	Findings
<b>Singh et al. (2005)</b>	The Semantic E-Business Vision	Introduced value co-creation concept of marketing for digital economy and introduced web technology, e-business processes and knowledge management as the knowledge resource that distributed among people and software systems.
<b>Kelleher and Peppard (2010)</b>	The Web Experience – Trends in e-Service.	Founded that less known about how organizations must develop their service/e-service capability or customize the experience and then introduced service



		quality and measurement
<b>Adeleke and AbdulRahman (2011)</b>	Co-creation of Value: Applying the paradigm to Government e-Service.	Introduced a conceptual framework to explore value between service provider and the customer when they engage in service use
<b>Subbiah and Ibrahim (2011)</b>	Value Co-Creation Process: A Case of E-Services for G2C in Malaysia	Introduced a framework based on Service Dominant Logic to co-create the value
<b>Adeleke and AbdulRahman (2012)</b>	Co-creation of Value Practices in Government Agency	Introduced DART model to improve e-services by practice with citizen and found Dialog as the main one
<b>Adeleke and AbdulRahman (2012)</b>	An Integrated Framework for Co-creating Government e-Service Value	Introduced a framework to assess the values of public e-services
<b>Ahrar and AbdulRahman (2012)</b>	Role of value Co-Creation Concept in e-services.	Value co-creation has an improvement role in e-services
<b>Ahrar and AbdulRahman (2012)</b>	Value co-creation attributes which influence on e-services: The case of UTM Institutional Repository	Introduced a list of attributes to assess e-services by value co-creation

#### 4. Discussion

In this section, the answers to research questions discussed.

4.1 How many studies have been done for the concept of value co-creation in e-service systems?

As can be seen from table 1, just eight articles founded in this case. It is important to note that co-creation of value in e-service systems is different from co-creation e-services. This study try found value co-creation in e-service systems.

#### 4.2: Is value co-creation capable to use in e-service systems?

As can be seen from Table 2, all articles mentioned that value co-creation capable to use in e-service systems and the reason back to the role of value co-creation. This concept use for evaluation in marking and the recent articles attempt to use it in case of e-service systems and made organizations to evaluate their e-service systems by a competitive advantage.

Table 2: Usage of value co-creation in e-service systems

<b>The usage of value co-creation in e-service systems</b>	<b>Number of publication</b>
Use	8
Do not use	0

#### 4.3: Why value co-creation can or cannot use in e-service systems?

As mentioned earlier all articles mentioned in different ways that value co-creation is an important concept that capable the organizations to use its competitive advantages to evaluate their e-service systems based on their user perception and consequently improve it to gain the user satisfaction and being successful.

#### 4.4: How many of organizations might best develop their e-service capability?

Just five articles out of eight discussed about this issue. Table 3 represented the summary of results relate to this research question. As can be seen these five articles found in different ways that little know about this significant.

Table 3:

<b>How many of organizations might best develop their e-service capability</b>	<b>Number of publication</b>
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Many Know	0
Little know	5
Nobody know	0

Table 4 designed to summarized the results of discussion

Table 4: Summary of the Results

The usage of value co-creation in e-service systems	Reason of using value co-creation in e-service systems	Number of publication	How many of organizations might best develop their e-service capability	Number of publication
Use	Important	8	Many Know	0
			Little know	5
			Nobody know	0
Do not use	Not important	0		0

## 5. Conclusion

In conclusion this study investigated the use of value co-creation in e-service system. Results show that investigations of this concept in e-services are still limited. This study discussed the four questions relate to this objective and founded that using value co-creation concept in e-service system is important capable the organizations to use its competitive advantages to evaluate their e-service systems based on their user perception and consequently improve it to gain the user satisfaction and being successful. But little know how to use this concept to develop their e-service capability which leads further investigation to answer this significant. The method which used in this study was assessing the documents related to this area and the technique which applied in this way is systematic literature review.

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