A resource mapping framework for value co-creation in social media

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A resource mapping framework for value co-creation in social media

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Abstract: It is a common problem for companies to sustain high levels of customer satisfaction in social media where customer opinions and attitudes propagate through a large population quickly. The value of customer participation has been emphasized in order to improve the information exchanging between customers and companies. Value co-creation is one of the most important ways to achieve that goal; and resources are the key issues towards value co-creation processes. To enhance competition power and improve the customer satisfaction, companies must have a deep insight of value co-creation, especially from the perspective of resources. In this paper, a resource mapping framework in social media has been given based on the value co-creation theory. The value co-creation processes have been split into three sub-processes: company resource-mapping processes, customer resource-mapping processes and encounter resource-mapping processes. At last, an instance has been analyzed to prove the proposed framework applicability.

Keywords: social media, value co-creation, resources mapping framework

1. INTRODUCTION

In 2009, in order to express his protest against United Airlines on how his guitar was broken during a trip and the subsequent reaction from the airline company, a Canadian musician created a MV and uploaded it on YouTube. That MV got 40 million hits over 4 days. As a result, the stock of United decreased for about 10\% and 180 million dollars as lost incomes. An unbelievable power drove the United to apologize and admit its mistakes. According to a survey conducted by Neilson, about 47\% of overall customers post their dissatisfaction in the social media; comparatively to call centers, about 33\% users of social media tend to use social media platform rather than call center to fix the problems that they face while experiencing the products or services [1]. For usability and convenience, customers express their opinions, (dis)satisfaction and attitude online. The UGC generated by customers have brought huge marketing shocks to companies. However, Customer solutions managers have realized the necessity to keep their activity in the social media [2].

A great quantity of resources has been invested into the companies’ internal information management system in order to maximize the customer service capability [3]. Nonetheless, some scholars suggested that decreased customer satisfaction and declined profits were caused by the lack of ability to extract the external information [4]. In the social media platforms, new information diffusion mechanism and discourse power further alter the approach of customer-company interaction and bring the opportunities and risk together. Value co-creation theory has been proposed to emphasize customer interactivity and participation, in the context of service-dominant logic to improve customer satisfaction. The key issue of value co-creation is about integrating and sharing collaborators’ resources [5]. The attention of companies should be shifted from internal efficiency to external resources exploration and leverage, in order to gain more co-created value [6]. How to design an effective resource mapping model to face the UGC shocks in social media has become an emergent problem. Despite its importance, research of resource mapping in value co-creation theory is still in an early stage.

UGC constitute the external resource surrounding in social media platforms. In order to face the challenges brought by UGC, value co-creation online should not only integrate the internal resources existing in company’s

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information management system, but also leverage the external resources (UGC) outside of company; such as customer’s online review, comments, opinions, which may be more important [7]. Studying the elements, components and relationships of resources from both companies’ and customer’s perspective can guide toward the process of value co-creation. The purpose of this article is to further develop a resource-oriented mapping conceptual model for understanding and improving value co-creation ability within the context of social media platform.

2. Related Literature

Value co-creation is a key issue in the business research and it emphasizes the value-creation processes by combining collaborators together [8]. Based on the service-dominant logic, Vargo et al. (2008) also advocate that value co-creation should be a process of combining several service systems together, and claim that value is co-created by integrating the available resources owned by collaborators [5]. The aim of exchange is to bond resource and value together. In other word, value deeply relies on the collaborators particular contexts. This paper adopts the definition proposed by McColl-Kennedy et al. that customer value co-creation is “benefit realized from integration of resources through activities and interactions with collaborators in the customer’s service network. Activities are the customers’ cognitive and behavioral actions. Interactions are approaches that individuals engage with others to integrate resources based on their social context.” [9].

In the service-dominant logic, co-created value is value proposition for customers [5] and aims to keep customers in the companies. The co-creation processes are separated into customer processes, company processes and encounter processes [10]. Chandler and Vargo suggested that dynamic and relative resources which were the core of value creation should be dynamically determined in the actor’s context so that the gap between customer context and value co-creation could be bridged [11]. Resources in value co-creation are categorized into operant resources and operand resources, where operant resources are mainly identified as product, information, technology etc; and operand resource are considered as knowledge and skills [7]. In value-co-creation processes, companies can’t provide all of their resource solely. Third-party resources that belong to customers would contribute a lot to the value co-creation processes [7]. However, researches of value co-creation mainly focus on the simple one-to-one relationship between companies and customers from the traditional view. Social media platform which becomes one of the most important spaces to co-create value provide the opportunities to study the resource mapping model in the context of mass social relationship. In this paper, the research question is how to construct the conceptual framework of resource mapping in the context of value co-creation, in order to improve the service capability based on the social media where UGC are abounding.

3. RESOURCES IN THE SOCIAL MEDIA

As showed in the literature review part, resources mapping framework is the key issue for value co-creation process based on the service-dominant logic. The resource-based theory suggests that resources should be the source of competitive advantage [12]. Customer service capability of companies can be improved by resource sharing strategies [3]. Firstly, resources can represent collaborators’ service capabilities. Some constrains exist in the customer services. Value co-creation activities may rely on special resources, especially in the traditional context of customer service. For instance it is impossible to provide service to patients in hospitals if there are no experts and equipment. Secondly, resources connect the context and services between customers and companies [11]. In traditional context, goods bridge customers and companies; however the role of goods has been replaced by services in the new commercial environment based on the service-dominant logic [7], especially in e-business context. The outcome of value co-creation is effectively depending on the successful integration of resources of other to survive [5].
Resources are key issues of service processes. From the perspective of service science, resources are separated into operand resources (those that an act or operation is performed on) such as goods, and operant resources (those that act upon other resources), such as knowledge and skills where the latter plays a more important role than the former in the value co-creation processes. However, this simple category of resource cannot satisfy the demand of management practices and a more detail analysis of resources in the value co-creation processes is needed. In the social media platform, the external resources are the product-oriented content generated by customers online, such as comments, reviews. This paper has summarized the resources based on the Vargo’s category from the perspective of companies and customers as showed in Table 1.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Examples</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operand Resource</td>
<td>Products, Brand, Service Experts, IT Capability, IT Investment, Channels, Loyal Customers, Technology</td>
<td>UGC, Usage, Social Roles, Families and Friends, User Context</td>
</tr>
<tr>
<td>Operant Resource</td>
<td>Knowledge, Skill, Relationship, customer satisfaction</td>
<td>User Experience, Knowledge, Skill, social capital</td>
</tr>
</tbody>
</table>

3.1 From the perspective of companies

A lot of money is invested into internal information systems to improve the service capability, service experts, service equipment and service technologies; which are the mainly resources in the context of traditional service. The value co-creation is totally constrained by those resources based on the traditional context. From the perspective of companies, external resources for value co-creation processes are more important than the internal resources which have been discussed for a long time. Social media has totally changed the situation and information between companies and customer flow more smoothly. Resources are mainly in the type of information and can provide more details of customer’s habit and behavioral intentions.

Resources owned by companies will be summarized into the operand resources and operant resources. Firstly, the operand resources are the tangible resources and are defined as those resources on which an operation or act is performed to produce an effect. In our paper, all of the tangible resources are the operand resources, such as products, brand, channel, service experts, service equipment and service time. Some intangible resources are also treated as the operand resources, such as customer purchasing behavior pattern, products information, and value measuring information. Lastly, operant resources which are considered more important than operand resources are defined as those resources which act on the operand resources and other operant resource. Service knowledge, service skill, customer relationship and customer satisfaction are classified into operant resources here.

3.2 From the perspective of customers

In social media platform, customers can freely post their comments, opinions and attitude online. And social relationships between customers are alternative resources for analyzing customers’ social position. However, those applications are mainly related to the service for customers or companies separately. The new marketing condition requires more effective methods of UGC utilization for value co-creation.

As illustrated in Table 1, resources of customers are split as operand resources and operant resources. Firstly, the operand resources of customers are deeply related to their online behaviors, such as UGC, product usage experience, social roles and social relationship. UGC is widely used in sentiment analysis, user recommendation and other applications. Customer’s product usage experience can provide many implications for product design and development. Social relationships are the main resources for opinion leader identification. Secondly, the operant resources of customers are summarized as user experience, user knowledge, user skills and user social capital. Resources that are not easily perceived by customers and companies weight more than operand resources in the process of value co-creation.
4. A RESOURCE MAPPING FRAMEWORK BASED ON THE VALUE CO-CREATION THEORY

Resources connect value and resources together. Many studies have explored the resource allocation from the perspective of algorithms and decision model [15]. However, the importance of customers’ value demand and the resource mapping framework have been ignored due to the gap of resource and value.

4.1 Value and value co-creation

Based on the CRM framework suggested by Zablah et al. [16] from the perspective of knowledge management, the value can be categorized into beneficial value, social capital value and the knowledge value. Value in co-creation processes is produced by integrating the resources provided by different actors, [5] and is determined by the value-in-use in the interaction [17].

The beneficial value is fundamental in the service system [5]. In the social media platform, beneficial opportunities can effectively drive the customer to participate in the value co-creation process, such as coupons and discounts. As observed in micro-blog platforms, companies encourage customers to repost the messages over a small possibility of gaining a reward at no cost at all.

The social capital value is widely explored, just like the opinion leader identification. Burt [18] proposes the structure holes theory and suggests that the social position which should be one kind of social capital could bring new ideas, referrals and innovations to actors. Akaka and Chanlder [13] bring the social roles into the value co-creation as one kind of social capital and break the limitation of social relationships.

The knowledge value is gained through the “win-win” information exchange pattern. Many data mining methods provide the tools to utilize the UGC. Kleijnen et al. [19] explored the knowledge co-creation from the social networks and social community perspective. Knowledge is an abstract of information and includes more rules and experience. There are many data mining algorithms focusing on the efficient knowledge discovery technologies, such as machine learning and neural networks [20].

4.2 Resource Mapping Model

In section 3, this paper separates the resources in value co-creation processes into operand resources and operant resources, and the latter weight more than the former [7]. Many uncertainties emerging from those resources and some uncontrollable factors will deeply influence the service ability. It is therefore necessary to design a resource mapping model to improve the value co-creation ability [21]. The resources-based theory has suggested that the sharing of resources and knowledge could improve the customer service ability [3]. However, there are few studies focusing on the resource managing mechanism although the importance of resources has been emphasized iteratively.

Heinonen et al. [14] argue that the value co-creation world is consisted by the customer’s world and the service company’s world with clear boundary. However, the value co-creation processes can’t be explained clearly according to the equal position of customers and companies in value co-creation process [22]. Based on principles in value co-creation theory [5], a new framework from the perspective of resources has been proposed by joining the work of Payne et al. [10] (value co-creation processes) and that of Zablah et al. [16] (knowledge management) together. The conjoint framework is divided into three components and has been proposed in order to match the resources with the value demands just as illustrated in Figure 1. The operand resources are the value-in-exchange and the operant resources are the value-in-use learned from ref[5].
Companies drive value co-creation processes. Many studies have empirically tested the relationship among the IT investment, firm-specific resources and the customer service abilities \[^3\]. However, the development of social media brings new value co-creation opportunities. Thus, it is not enough to provide only the internal resources from the information management systems. Resources from the third party may contribute more to the value co-creation processes \[^7\], especially in the customer-centric social media platform. The company resource-mapping processes are defined as series of activities performed by companies based on the internal and external resources in order to achieve the co-created value. The value co-creation ability is strongly related to the integration of available resources and the depth of customer-company interaction \[^10\]. Firstly, the operand resources which include product, brand, service experts, IT capability and others guided by the definition of operand resources are mapped from the information in the MIS database, the UGC distributing in the social media platform and the operand resources of customers as illustrated in Figure 1. Secondly, according to the definition, the operant resources which include knowledge, skill, relationship and customer satisfaction is integrated from operand resources of its own and the operant resources of customers.

Customers are considered to be the producer of value in the value-creation processes \[^5\]. In the social media, customers create a huge amount of contents, including product reviews and micro-blog. Those approaches of utilizing UGC from different perspectives \[^23\] are all considered as the resource mapping methods, especially data mining, machine learning, neutral networks and sentiment analysis. The customer’s resource-mapping processes are defined as the series of activities performed by customers to achieve the co-created value, by organizing the UGC and following some rules. Customer’s ability to create value is determined by the amount of operant resources available to them \[^24\]. In our mapping model, UGC acts as the raw resources in the value co-creation processes. Firstly, the UGC can be used to extract the user perception, customer social roles, customer social capital and other information. That information along with the operand resources of companies form the operand resources as a whole. Secondly, the operant resources of customer are mapped from operand resources of customers and the operant resources of companies. For examples, the perception of products and the knowledge/skill from company can build the knowledge and skill in the operant resources. Social roles and

Figure 1 The resources mapping model in social media

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customer satisfaction can be mapped as user experience. The mapping mechanism between them is a multi-to-
multi relation based on a particular context.

The encounter process involves a series of interactions and resource exchange emerging between the
customer and the company [10]. In social media, companies and customers can be treated as equal and the
interaction between them is built and driven by the emerging content; they require the value co-creation to be
guiding the value generation processes. The encounter resource-mapping processes are defined as the interaction
activities performed by the customer and the company. They communicate and discuss with each other in the
social platform and the information can be easily collected and diffused according to their personal value
demands.

In summary, the value co-creation processes have been split into three sub-processes based on the value co-
creation theory. The resources mapping is emphasized in the presented framework because resources is the core
of this processes. The details of each sub-process have been neglected and can be explored in the field of the
business intelligence and marketing.

5. INSTANCE AND CONCLUSION

5.1 Instance

To prove the proposed framework availability, the value co-creation approaches in a famous micro-
blogging service provider named Weibo (weibo.com) as a typical social media application have been analyzed.
Many companies act as normal users in it. A famous company related to the high-velocity industry has been
chosen due to its successful marketing strategies widely acknowledged. The results are illustrated in Figure 2.

The raw resources come from the actions of customers and companies. And the communication between them
(such as comments and reposts) connects their respective resources together. In the operand resource level,
the resource mapping will bring the information skill and the activities together. For example, companies
encourages other individuals to repost its micro-blog in the approach of referring to his/her friends and by
providing the probability of gaining a large award. Some product using skills are often posted. Customers often respond to it in order to share their usage experience and to provide advices towards the products, and every other information that is likely valuable to the company. In the operand resource level, the operand resources have been mapped into operand resources which are shared with each other. Customer preferences have been identified, opinion leaders have been recognized and WOMs have been generated. Those resources are operant correspondingly to the pre-given definition. Product knowledge has been distributed to actual or potential customers, new friends have been recommended to them and new experience has been generated in the value co-creation processes. Ultimately, Customer satisfaction has increased. Based on the company’s posts in Weibo, resources are mapped into the value co-creation processes which are key issues to promote the products and brand.
5.2 Conclusion

Resources are the key issues of value co-creation processes\textsuperscript{[5]}. Properly and efficiently map the resources into value seekers, is strongly recommended especially in the customer-centric and information-enriched social media platform. This paper focus on resource mapping problem based on value co-creation theory in the social media platform. Firstly, the resources have been categorized into operand resources and operant resources in the social context. Secondly, the value of companies and customer has been recognized. Thirdly, a resource mapping model has been designed based on the resource management processes\textsuperscript{[16]} and value co-creation processes\textsuperscript{[10]}. Lastly, a case in a typical social media has been analyzed.

There are several theory contributions of this paper: \[ The resource management processes have been mixed with the value co-creation processes which is rare in traditional value co-creation literatures; \] \[ The value and value co-creation in social media have been analyzed from the resource perspective. A few management implications are given here: \] \[ In order to maximize the value from the social media, companies should pay more attention to the resource integration; \] \[ sharing information behavior in social media is very important for companies to turn operand resources into operant resources; \] \[ A good mechanism in value co-creation processes is needed to encourage customers to join it, and some external stimulates will be the good choices. \]

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