

A Review and Prospect of Value Co-creation in Business-to-Business Relationship

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Abstract

From the introduction to the development of the concept of value creation, most scholars have placed their research objectives in the B2C (business-to-customer) area. Value Co-creation is also of great interest to research in the B2B (business-to-business) field, especially at this stage when the measure of a firm's ability to survive in a changing market is based on inter-firm innovation cooperation. The complexity of technological innovation, markets and scarcity of resources make the study of inter-firm value Co-creation in a collaborative innovation environment even more necessary. Value Co-creation in B2B context refers to the process in which suppliers and user enterprises integrate resources, strengthen cooperation ability and improve comprehensive strength of enterprises through certain Co-creation behaviors. In B2B context, whether the Co-creation of value can be realized depends not only on the user enterprises, but also on the uncertainty and complexity of the needs and environment of all enterprises as stakeholders. Based on the literature review, this paper proposes a conceptual definition of value Co-creation in B2B context, taking current innovation as the main background and combining theories such as value Co-creation and relational learning of B2B cooperation; summarizes the main driving factors of value Co-creation in B2B context from two aspects of B2B relationship and knowledge; analyzes the main results of value Co-creation in B2B context from three aspects of enterprise innovation performance, interactive behavior and value Co-destruction; on this basis, constructs a preliminary theoretical analysis framework of value Co-creation in B2B context and the main directions of future research are discussed.

Keywords

Innovation; B2B Value Co-creation; Relationship; Knowledge.

1. Introduction

In a rapidly changing technology and market environment, all the industry is now as much as possible to integrate the Internet technology and value creation process, the enterprise with the help of industry alliance, innovation network, different forms to carry out the cooperative innovation activities, such as digital technology allows manufacturers to fully utilization of digitalization and interconnection, intelligent and decentralized value chain. Technological innovation makes enterprises' resources, capabilities, relationships and value creation present different changes. Innovation and user demand promote enterprises and their stakeholders to jointly create value in the innovation environment, and enterprises maintain long-term competitive advantages in the market through this key approach. In cooperative innovation among enterprises, enterprises constantly integrate resources, use them to develop new products and technologies to improve the participation of stakeholders, increase the perceived value of each stakeholder, realize value appreciation or improve economic benefits. In order to enhance the interactive innovation of B2B system participants, enterprises study the value Co-creation process from different aspects.

Value is a concept widely studied in management and marketing literature, and the term value Co-creation was originally proposed by Prahalad and Ramaswamy[1], who suggested that customers co-create value for themselves with the help of company resources. Depending on the type of value and the method of value creation is divided into service led logic and commodity led logic. Goods-led logic (GDL) is based on exchange value: value creation is seen as the production process of suppliers and their ability to produce exchange products in market transactions. Service dominant logic (SDL) is based on the idea of value as use value, where the customer is intrinsic in value creation when value emerges in the use process in the customer's domain, rather than in the supplier's manufacturing process[2]. Its emphasis is on replacing the term exchange and its focus on product exchange with the term Resources Integration (RI) to highlight the ongoing interaction between the parties. Product exchange is only a limited view of resource integration whose ultimate aim is the ability of stakeholders to use their resources in the process of value Co-creation.

In different situations, the change of the subject of value creation brings about different ways of value creation. There are many researches on value Co-creation in the field of B2C, mainly focusing on the relationship between B2C enterprises and customers, and paying more attention to relationship marketing and customer participation, such as customer perceived value, customer integration, business model and open innovation[3]. In the context of innovation, the business model that enterprises and users jointly create value is changing, and the characteristics of digitalization become the driving factor in the evolution of industrial value transfer. It is a research hotspot in B2B field to make seamless connection between enterprises and users by using digital empowerment and user demand to realize value Co-creation[4]. Compared with B2C environment, value Co-creation between enterprises in B2B field is more complex, with longer relationship chain and value chain, high operation cost and greater risk in the process of Co-creation. Planning, communication and other interactions between enterprises tend to have more channels and are unstructured. Enterprises can obtain the results of the final products they participate in. For enterprises, value Co-creation is not only at the level of individual customers.

There is little discussion about Co-creation in the B2B context[5], where value Co-creation among firms brings economic as well as social benefits that are greater than the benefits brought by the combination of their own resources through deepening the benefit linkage mechanism. Inter-firm cooperation often refers to the process of combining different resources, and firms often need to acquire their unique resources through technological innovation, while exchanging knowledge with other firms so that they can maximize value. Therefore, it is necessary to study inter-firm value Co-creation in an innovation environment.

2. Theoretical Foundation

2.1. S-D Logic

The literature on value Co-creation in B2B contexts is richer in terms of theoretical foundations, and many studies are based on S-D logic, but their theoretical foundations are more fragmented. Vargo and Lusch further emphasize the concept of value Co-creation by arguing that value is determined by each participant in the collaborative process involved in value creation, and S-D logic is of great interest to international scholars for its focus of the value creation S-D logic has received considerable attention from international scholars for its focus on the basis of value creation on services rather than on exchange products. In contrast to commodity-dominated marketing logics that emphasize tangible resources (materials) and value embedding and exchange transactions, S-D logic focuses on the integration of manipulative resources (e.g., knowledge and skills) with resources (materials), use values, and relationships. S-D logic also suggests that economic players do not create value independently;

other players such as individuals (family, friends, and peers) or the public (government and society) are also resource integrators, and these resource integrators develop partnerships or other relationships with each other, so that value is always created in an environment through interactions between more than one participant. In the B2B context, S-D logic was used to define the market as a network system in which all participants are resource integrators. There are many scholars who analyze production relationships based on S-D logic from a B2B customer-supplier perspective. Yasir Rashid [6] and others emphasize four characteristics of value Co-creation among actors in a business-to-business environment, using the service-dominant (S-D) logic of marketing as a theoretical perspective to examine the process of value Co-creation. S-D logic emphasizes the value Co-creation network in which The S-D logic emphasizes the participation of actors in the value Co-creation network and the use of their knowledge, skills and social resources to co-create value through interaction, which is the basis for studying value Co-creation.

2.2. Resource-based View

The Resource-based view holds that an enterprise has different tangible and intangible resources that can be transformed into unique capabilities. Resources are immobile and difficult to replicate across enterprises; These unique resources and capabilities are the source of lasting competitive advantage of enterprises. The Resource-based view emphasizes "heterogeneous resources and complementary capabilities". According to the Resource-based view, organizational resources need to go through a series of effective management to form a corresponding capability system, and ultimately bring competitive advantages to the organization and create value for customers. The Resource-based theory points out the direction for the long-term development of enterprises, that is, cultivating and acquiring special resources that can bring competitive advantages to enterprises. Value Co-creation is a process of resource interaction between enterprises. No matter the enterprises are rich in resources or lack of resources, they can break the resource constraint to cope with environmental uncertainty. The enterprise is regarded as a collection of heterogeneous resources and capabilities, and its value can be maximized through proper use of resources and capabilities, and its competitive advantages can be explained and predicted. Multiple participants jointly create the resources provided by value through resource integration, open their modular resources and promote the formation of higher-order resources, which reflects the importance of promoting more effective resource allocation in the creation, transformation and updating of resources in the process of value Co-creation [7].

2.3. Knowledge-based Theory

The knowledge - based view emphasizes the integration and creation of knowledge. In the era of knowledge economy, knowledge has become the core strategic resource for enterprises to obtain and maintain competitive advantages and promote technological innovation, and the research on collaborative knowledge creation has become the frontier subject in the field of knowledge management. According to the Knowledge-based theory, as a social entity, the survival, development and success of the entire organization depend on how the organization stores and utilizes its internal knowledge, competition and talent [8]. Basic theory knowledge to distinguish the explicit knowledge, it can spread to some form of public knowledge) and tacit knowledge (embedded in the individual experience knowledge, scholars research on explicit knowledge maturing, tacit knowledge because of its uniqueness and not easy to get, is the valuable resources for enterprises, between the two different types of knowledge, there are a lot of research, As knowledge is regarded as a resource to promote the development and cooperation between enterprises, the knowledge reserve of enterprises determines the difference in efficiency of different enterprises, so some enterprises will form a comparative advantage, and the difference in knowledge reserve may lead to more diversified and

innovative enterprises. Therefore, the management of knowledge is crucial to the cooperation between enterprises.

3. Analysis

Currently, the literature related to value Co-creation is mainly concentrated in several research fields of marketing, psychology, and sociology. Among them, the literature involving economics, management, and social sciences focuses more on the impact of B2B value Co-creation on partner relationships, economy, and society; the literature of technology focuses on the practical innovations brought by new technologies to B2B marketing and service fields; the literature of sales and service logic focuses on customer satisfaction and loyalty. This chapter reviews and analyzes the current line management research on B2B value Co-creation on the basis of literature review and analysis.

3.1. Hot Keyword Analyse

The Chinese database is CNKI, and the English database is Web of Science. When "B2B value Co-creation" was used as the theme word, there were 8 domestic articles and 139 foreign articles were searched, and 45 articles related to the purpose of this study were selected. Therefore, this paper uses CiteSpace 5.0. Therefore, this paper uses CiteSpace 5.7. R5 software to analyze domestic and foreign B2B value Co-creation research using bibliometric methods, spanning the period 2010-2021, and visualizes the analysis through the knowledge graph structure of keyword clustering analysis (see Figure 1). Each node in the figure represents a different keyword, the size of the node represents the keyword word frequency, and the edge represents the connection between each keyword. To a certain extent, keyword word frequency can represent the research topics and hot research contents of a certain field.



Figure 1. 2010-2021 CNKI Chinese Database B2B Value Co-creation Keyword Co-creation Knowledge Mapping



Figure 2. 2010-2021 WOS Core Collection B2B Value Co-creation keywords Co-occurrence knowledge Mapping

3.2. Research Topic Analysis

As shown in the figure, comparing domestic and foreign B2B value Co-creation keyword co-occurrence knowledge mapping, most of the current research in Chinese database is limited to the exploration of relationship capital, relationship value, trust between B2B platforms, innovation ecosystem, business ecological mentality, technology, resource integration, etc. The systematic research on each aspect of the relevant model is still very lacking. The English keywords are more dense than the Chinese keyword mapping network, and the research themes in foreign literature are more concentrated, in which Knowledge, Management, Innovation, Business relationship corporate relationship, Customer value customer value and other nodes are clustered obviously. It can be seen that with the change of time and the development of science and technology, value Co-creation has been explored more extensively and deeply in the B2B field.

Based on the in-depth analysis of these literatures, this paper takes enterprise innovation as the background and analyzes these researches from two perspectives : (a) inter-firm relations, namely related literatures of relationship capital, relationship value, trust and management; (b) knowledge, inter-firm resource integration, learning, ability, etc.; This will lead to a better understanding of corporate partnerships, resource integration and value Co-creation, and will also help future scholars expand on this information. The research structure of this paper is as follows: the introduction part briefly composes the value definition of value Co-creation, existing research and the importance of research in B2B context; the second part systematically integrates the theoretical basis of B2B value Co-creation based on the review of inter-firm cooperation; the third part obtains the research hotspots in the field of B2B value Co-creation in recent years through literature analysis; the fourth part systematically composes the main drivers of value Co-creation in B2B The fourth part systematically composes the main driving factors of value Co-creation in B2B context; the fifth part systematically elaborates the main results of value Co-creation in B2B context; the sixth part constructs a theoretical analysis framework of value Co-creation in B2B context and provides an outlook on possible future research directions.

4. Driving Factors

Based on summarizing and sorting out the related literature, this paper classifies the literature on interactive relationships, knowledge behaviors, and technological innovation among

enterprises according to S-D logic, Resource-based view, Knowledge-based theory, and all keywords revealed by knowledge mapping, and categorizes the main factors driving inter-enterprise cooperation for value Co-creation activities into two aspects: relationship factor and knowledge factor. Due to the renewal and flow of new technologies, new knowledge and relationships are brought to enterprises, and this new knowledge and relationships will in turn promote technological innovation and form a pattern. Nowadays, most of the studies by scholars exploring technological innovation gather on the technological innovation capability of core enterprises, knowledge transfer capability, network organization structure form.

4.1. Relationship

The interactive relationship between enterprises refers to the interactive and infectious behaviors that enterprises and other enterprises create value together. Understanding participants, participant resources and the relationship between participants is crucial for the study of value Co-creation [9]. Ellram et al. [10] showed the importance of relational (physical, human and social) investment in interdependent B2B relationships. Only by capturing the main relational value in the process of value creation can Co-creation be achieved. By integrating the resources of different companies in industrial relationships, partners can achieve goals that cannot be achieved by themselves, thus achieving value Co-creation through mutually beneficial relationships [11-12].

4.2. Knowledge

The Knowledge-based view views knowledge as an important strategic resource of an enterprise, a core capability for product innovation, and the knowledge possessed by an enterprise is the key to determine its competitive advantage. Research on knowledge is mainly analyzed from two aspects: behavioral aspect refers to the willingness of knowledge interaction/participation behavior between enterprises and their partners or even stakeholders; knowledge capability mainly refers to the ability of enterprises to absorb resources, use them and enhance their own advantages. The more the client firm systematically shares resources and information with other firms, the more likely the service system will work better and generate value in Co-creation [13], the transfer of knowledge from one carrier to another is the act of knowledge transfer, in which the process consists of two main aspects: i) transmission, i.e., the sending or display to potential recipients; second, absorption, that is, the absorption and utilization of knowledge by individuals or groups. Across the value chain, cost affects the willingness and efficiency of inter-firm knowledge sharing, which can easily lead to diseconomies of scale; when they have the willingness to interact and engage in behaviors, they generate knowledge behaviors and have opportunities for value creation [14].

5. Results

5.1. Enhancing Corporate Innovation Performance

Skarmeas et al. [15] use relationship resources as a mediating variable to decipher the relationship between value Co-creation and firm innovation performance, and they argue that value Co-creation builds good relationships, which leads to improved innovation performance. Constraining relationships through contracts and improving relationship governance can effectively address opportunistic behaviour in value Co-creation [16], so that the better the innovation performance of the firm will be. Gregory defines innovation performance as the performance outcomes in innovation activities enabled by technological innovation, and divides the innovation process of technological innovation networks into, from the perspective of knowledge flow three stages: knowledge development, knowledge transfer, and knowledge application, and uses different outcomes to represent the innovation output of each stage as a criterion for considering innovation performance.

5.2. Increasing Interactive Behavior between Companies

The interaction effects between different business relationships can be further investigated to understand how business relationships influence each other [9]. The analysis of interaction effects further explores how actors in different relationships interact with each other and how the resources of the actors are integrated to create value together. Most of the research on interaction or interactivity has focused on the business-customer level and has been explained from four perspectives: the interacting subject, the process view, the structural characteristics of the interaction and the perception view. In the context of the B2B industry, Rusthollkarhu et al. [17] focus on the binary B2B buyer-seller relationship perspective and analyses the importance of interaction in the (co)creation process from an ecological perspective. The impact of interaction behavior on new product performance and classifies three dimensions of interaction behavior: two-way communication, inter-firm customer engagement and joint problem solving.

5.3. Occurring Value Destruction Behaviors

Although value Co-creation is attracting a great deal of academic attention and many studies have highlighted the benefits of value Co-creation, researchers often fail to consider the potential negative effects of value Co-creation, especially in the context of business networks where some factors are instead prone to the antithesis of value Co-creation, namely value destruction. Others explored the B2B service networks on the dark side of value Co-creation, identifying role conflict and ambiguity, opportunism and power games on the dark side of value Co-creation. During value Co-creation interactions, tensions caused by role conflict, lack of clarity of managerial expectations that may result from shared responsibility, role ambiguity and misunderstandings between firms, all have negative effects. The existence of role conflict, role ambiguity, opportunistic behaviour and power games suggests that in the process of inter-firm value Co-creation, value can also be co-opted by the participants in the creation of value.

6. Theoretical Analysis Framework and Research Outlook

6.1. Theoretical Analysis Framework of Customer-corporate Social Value Co-creation

Most of the existing studies on value Co-creation are placed in the context of innovation, from the perspectives of supplier power, supplier brand and platform as well as customer engagement, customer value, and firm-customer synergistic evolution, and most of them still follow the customer-firm value Co-creation in the B2C domain as the independent variables, with less attention to the results of their effects. The exploration of the antecedent variables of B2B value Co-creation mainly focuses on the relationship, knowledge Both aspects have been refined and developed to a certain extent, and complementary key technical knowledge resources and as fair as possible relationship status are strongly attractive to enterprises, which help to establish partnerships and achieve synergistic value creation. Therefore, based on a systematic review of the existing related literature, this position proposes the concept of value Co-creation in B2B context, and builds a theoretical analysis framework for value Co-creation research in B2B context, mainly drawing on resource dependence theory and Knowledge-based theory, as well as the participation behavior model proposed by many scholars in the field of value Co-creation.

6.2. Future Research Prospects

Value Co-creation has been a topic of in-depth discussion and research among scholars, and domestic research hotspots are gathered in the B2C field. However, because of the differences between B2B and B2C internal and external environments, most of the value Co-creation among

enterprises is based on case studies, and the enterprises studied have their industry specificity, so the research on value Co-creation in B2B is weak, and the research results are not rich and systematic enough, and need to be further improved and expanded. Therefore, based on the integration framework established in this study, this paper proposes an outlook for the future from the shortcomings of existing research for reference and inspiration of subsequent studies.

6.2.1. Innovation Ecosystem

With the development of technological innovation and the concept of strategic management among enterprises, value Co-creation under B2B no longer studies supplier enterprises and customer enterprises, but puts them in an ecosystem, analyzes the whole ecosystem, divides the cycle and studies the environment. From the perspective of technology dependence, some scholars put forward an integrated model of dynamic process, namely innovation ecosystem, in which ecosystem cycle and value process are the two most important aspects. More and more scholars put value research into ecosystem. Integrating customers, partners, and stakeholders into a common value creation process has long outweighed the value of individual companies.

6.2.2. Crisis Management

Unexpected events will have a negative impact on the enterprise, and the lack of measures to deal with emergencies will cause some harm to the enterprise and the partnership. In the case of the latest sudden crisis (COVID-19), scholars analyzed the impact on companies from multiple perspectives. Manage from the perspective of connections rooted in science, technology and the environment, and foster interdependent and mutually beneficial relationships between enterprises through social connections. A crisis can be seen as an opportunity to turn the tide by rethinking and updating relationship norms and perceived inter-organizational justice. Firms focus on their ability to perform assigned tasks with internal and external partners. If relationship imbalances are caused by crisis situations, it can generate certain negative emotions.

6.2.3. Value Co-destruction (VCD)

The concepts of Co-creation and Co-destruction should be conceptually seen as representing a space of value change rather than dichotomy or mutual exclusion. Mutual destruction of value mainly refers to the degradation of the welfare of at least one party for both the company and the customer. VCD is explored by combining social interaction and resource integration practices with value concepts that reveal its diversity. Partners need to evaluate collaboration, knowledge sharing, learning, and to build trust, market expansion and technology sharing, consider the transaction cost economy driven the selfish behavior of partners, all ecosystems participants shown in seeking development ability, the knowledge advantage, technology leading position, reduce the uncertainty and cope with the challenge of the new business model, which can lead to value were destroyed, Empirical research on the factors influencing value Co-destruction is lagging behind.

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