

# A Review of Customer Involvement in Innovation

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**Abstract.** With the continuous improvement of customer status, more and more customers pay more attention to their sense of involvement in the entire consumption process and hope to obtain more value. Customer involvement in innovation has become a new hot spot. This article systematically sorts out and summarizes the concept of foreign customers involvement in innovation and related research results, summarizes and collates the research on the role of customers involvement in innovation, and the factors that influence customers involvement in innovation, and points out future research directions in order to promote China Follow-up research by scholars in this field.

**Keywords:** Customer involvement in innovation; Customer participation ;Co-creation of value.

## 1. Introduction

At present, many companies have gained customer satisfaction by increasing their participation in consumption. A number of new practices have emerged in recent years that are changing the role of customers in innovation. Traditionally, consumers, as buyers and users of goods and services, increasingly play a new role in actively participating in corporate innovation efforts or creating new products on their own. These practices are changing the paradigm of innovation and becoming the new frontier of competitive advantage. Traditionally, innovation was a company's internal activities. Now innovation has expanded beyond organizational boundaries to include customer activities that are not under the company's direct control. This shift in innovative practice offers businesses tremendous opportunities, but it also brings the challenge of managing relevant organizational and strategic changes.

Therefore, this article systematically sorts out and summarizes the concept and main research results of customer participation in innovation, and sorts out the research on the role of customer participation in innovation and the factors that influence customer participation in innovation. And related theories to help further advance research in this area.

## 2. Customer Participation in Value Co-creation

### 2.1 The Role of Customers in Innovation

Prahalad[1] (2004) research found that due to the changes in the market environment brought about by the development of the Internet, companies in the supply chain are no longer independent value creators, but instead create value through the interaction between customers and enterprises, and The process of value creation is rapidly changing from being enterprise-centric to being customer-centric. More and more customers are participating in the process of enterprise value creation. Vargo and Lusch[2] (2011) found that customers have a need for product information acquisition and perception, and customers can invest in intangible resources such as intelligence to conduct value co-creation activities with enterprises, which has a positive effect on meeting customer needs and increasing customer value .

In enterprise innovation and production, customers participate in the process of enterprise product design and research and development, and the way to achieve co-creation with enterprise value can enhance customer experience and meet customer needs, which has been recognized by many scholars. Hoyer et al.[3] (2010) analyzed the factors that affect co-creation and the results of co-creation by constructing a conceptual framework of the degree of customer participation in

co-creation during the development of new products. Enterprise innovation efficiency can also increase customer experience and enhance customer satisfaction, which is conducive to product marketing. Gustafsson et al.[4] (2012) analyzed the co-creation process between enterprises and customers based on the four dimensions of communication (frequency, direction, form, and content). They believed that in co-creation, enterprises are mainly to communicate with customers to understand and meet their future. Demand, the interaction between enterprises and customers has a positive impact on service innovation. Mahr et al.[5] (2014) believe that co-creation with customers is the main source of corporate competitive advantage. Enterprises interact and cooperate with close customers to obtain customer demand information and knowledge at a lower cost, which helps enterprise product innovation and Production can timely and accurately meet customer demand for products and enhance the competitive advantage of the enterprise. Agrawal[6] et al. (2015) showed that customers as co-creators should adopt appropriate co-creation forms (co-innovation) in combination with customer skills and abilities, and enable enterprises to more effectively and efficiently communicate with modern information and network technologies. Customers interact, which is conducive to the process of creating value for enterprises and customers together. Yu et al.[7] (2018) found that the rise of social commerce has brought new challenges to enterprises, and the way customers purchase products and services has been reshaped. Studies have shown that enterprises determine the actual needs of customers through interaction, and in the process of innovation Emphasize cooperation with customers to produce products that meet customer needs.

The above documents all emphasize the important role of customers, and believe that customer participation in innovation plays an important role in improving R & D efficiency and innovation performance, increasing customer experience, promoting product sales, and realizing value-added.

## **2.2 Factors Influencing Customer Participation in Innovation**

The factors that customers will encounter when participating in corporate innovation activities are divided into two dimensions, namely the customer level and the enterprise level.

At the customer level, customer characteristics and customer personal capabilities can influence customer participation in innovative behavior. Different user characteristics can influence customer participation in innovation behavior and degree of participation. Jespersen[8] (2010) pointed out that the user's ability, that is, the user's own knowledge, his own creativity, his own skills, learning ability, and the ability of the user to actively communicate with the enterprise will affect the user's participation in innovation. Users' unique hobbies will encourage them to participate in innovation activities in this field. User initiative will make them actively express their innovation needs to the enterprise, while users with low initiative are less enthusiastic about participating in enterprise innovation. Stock et al.[9] (2016) explored the relationship between the personality traits of the "big five" of consumer innovators and the successful completion of the three basic innovation process stages through research on German consumer innovation and non-innovation, and found that those who experience People who score higher on openness are more likely to have new product ideas, introversion and seriousness are significantly associated with successful prototyping, and those with a high sense of responsibility are more likely to successfully spread their innovations commercially, and vice versa, Responsibility reduces the likelihood of successful peer-to-peer communication.

While being affected by the customer's own ability to innovate, customers' participation in the innovation process of the enterprise will also be affected by the enterprise level. Jespersen[10] (2010) believes that customers as external resources for new product development have been recognized in theory and practice. Customers' participation in new product development depends on the openness of corporate decision makers. Conducive to customer participation process, if less open will hinder the implementation of open innovation. Balka et al.[11] (2014) Selective openness as a key variable to study how it affects customer value creation in innovative communities through external complementarity. Studies show that openness is important to community customers: the more open the product design, the more they are open to innovation. The more involved the project, the greater the effort invested. Martínez-Torres[12] (2015) takes customer activity in the open innovation community as the research object, first determines the main themes of customer interest,

and then compares these themes with management decisions, and finds that voting and comments can be used to predict customers Preferences, and customers tend to focus on and propose ideas related to the core activities of the business. Zhang et al.[13] (2017) research found that in the process of customer participation in innovation, material rewards have a profound impact on customers' enthusiasm for sharing knowledge.

Through the review of the above literature, it was found that the customer's own knowledge reserve, innovation ability, and personal characteristics can affect the degree of customer participation and the process of innovation, which has a positive impact on improving the innovation performance of enterprises; at the same time, the process of customer participation in innovation will also be affected by the enterprise The impact of relevant factors at different levels, such as the design of relevant systems and management measures. It can be indirectly seen that the cooperation between enterprises and customers and customer participation behaviors will affect customer participation in the innovation process.

### **3. Summary**

This section systematically sorts out research on customer participation in innovation and supply chain value creation through literature review. In the literature review of the role of customer participation in innovation, whether in terms of value co-creation or open innovation, the research results have emphasized the important role of customers. They believe that customer participation in innovation can improve R & D efficiency and innovation performance, increase customer experience, Promoting product sales and realizing value added play an important role; in terms of influencing factors for customer participation in innovation, sort out relevant influencing factors from the user and enterprise levels, user personal characteristics and personal capabilities, and corporate system design and management measures can affect customer participation in the innovation process. These literatures study the role of customer participation in innovation, the degree of participation, and related influencing factors, and do not address the impact of customer participation in innovation on the value of the supply chain.

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