

Value cocreation of innovation ecosystem based on customer needs

Hongyan Huang

No. 2, Xiyuangong Road, High-tech Zone, Fuzhou, Fujian, China

469448610@qq.com

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Abstract. The innovation eco-system is the embodiment of the transformation of the business model, and the value co-creation is realized through the communication and cooperation of the participating entities. Customer is an important part of the eco-system, and this paper studies the mechanism of the innovation eco-system based on customer needs, and uses Haier as an example to analyze the specific ways in which customers participate in the innovation eco-system.

1. Introduction

In recent years, value co-creation has become a hot topic in the theoretical and practical circles. In current economic environment, competition among enterprises is intensifying, and it is difficult for independent enterprises to gain competitive advantage. In addition to improve the core technology of enterprises, enterprises also need to transform and innovate in business models in order to win in the fierce competition. Therefore, the innovation eco-system came into being [3]. The innovation eco-system, that is, the formation of new cohesiveness in the scattered organizational structure. Centered on core companies, the upstream and downstream entities of the industry chain participate together, and fully realize the value co-creation.

With the development of "Internet +" technology, large companies such as Alibaba and Tencent have joined the innovation eco-system. By fully integrating resources, the innovation eco-system reshapes the role each company plays in the industrial chain, which breaks through the organizational boundaries, and realizes the value co-creation of enterprises within the system. Overall, the innovation ecosystem presents the following characteristics:

(1) Participating entities cooperate with each other to achieve value co-creation. As an innovative way of organizing, value co-creation creates a subversion of the traditional concept that "enterprise is the value creator" and continuously advances from the perspectives of customer experience, service-oriented logic, service science and so on, which reveals the dynamic process of cooperative innovation and value added through economic transactions and resource integration under institutional arrangements[1]. In the innovation eco-system, participants break through the vision of production or manufacturing. It emphasizes more on the interaction between technology and knowledge, which dynamically integrates from customer engagement experience in product design to technical resources, human resources, value proposition, information sharing and so on [2].

(2) The participating entities remain independent of each other. Diversified participants break the boundaries of functional division, and each entity participates in value co-creation in the industrial chain, but each entity is an independent individual. Although participating entities remain independent from each other, they also cooperate with each other in common areas or matters [5].

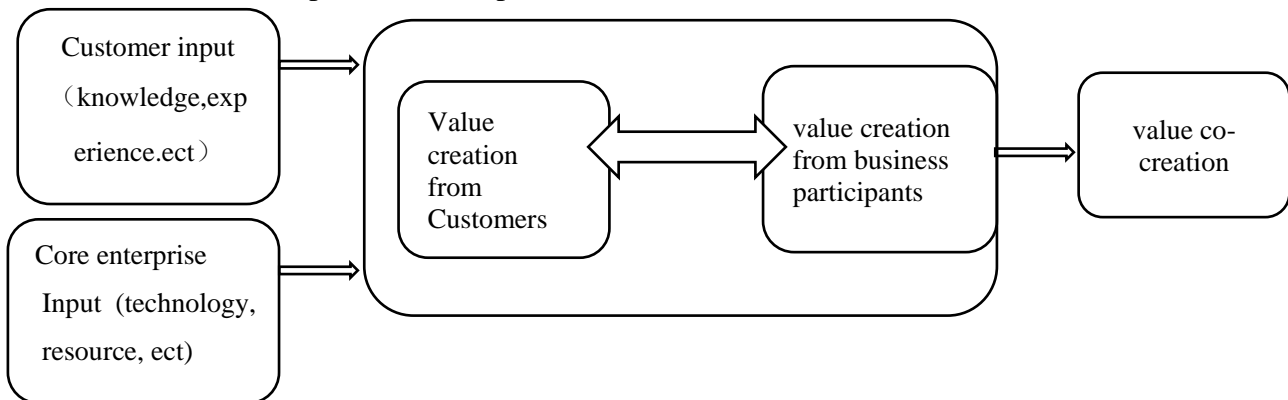
(3) Participating entities share risks and benefits. Enterprises within the innovation eco-system work together to create value, so, they try hard to the same direction and share benefits and risks. For example, cooperative companies such as suppliers obtain innovative income through market segments, customers can obtain greater value input [4] .

The diversity of participating groups and the relationship governance between different subjects have led to a richer research on innovative ecosystems. At present, there are many articles on value research from the micro, meso and macro perspectives, mainly focusing on: the main body of value co-creation in the innovation eco-systems [6], value co-creation of virtual brand community [7], innovation eco-system of manufacturing industry [8], innovation eco-system under the differentiation

of customer identity and suggestions on how to govern customer relationships [9]. Anyway, in the innovation eco-system, customer is an important participatory group and the existing literature rarely studies the specific path of customers involved in the innovation eco-system. So, the following is a discussion on the mechanism and specific method of innovation ecosystem and value co-creation based on customer needs.

2. The Mechanism of Value Co-creation in the Innovation Ecosystem Based on Customer needs

Participants in the innovation eco-system have broken through organizational constraints and constantly communicate with the outside world to cope with external challenges. The diversification of the participating entities increases the cost of coordination between enterprises, which makes the research of the innovation eco-system more plentiful. Among these groups in the innovation eco-system, the most basic group is the customer, and the customer-based innovation ecosystem emphasizes the role of the customer in the entire value chain, extending from the downstream of the industrial chain to the upstream. The specific mechanism of the action is as follows:



The innovation eco-system based on customer needs emphasizes the needs of customers and fully exploits the role of customers in industry chain through the core enterprise or the platform. From the specific path above, we can divide the path into two stages.

In the initial stage, the customer inputs relevant knowledge, life experience, daily needs by the platform or some other technologies. In the process of participation, the customer can obtain greater value output and better product or service. At the same time, the platform or the core enterprise invests relevant technologies, resources, funds to ensure that users participate in value creation successfully, and to provide users and resource with a better interactive communication platform by integrating corresponding resources.

In the continuous stage, customers continue to actively participate in the interaction. These two types of entities continue to communicate through the platform or other channels, and enhance the value of products or services in the process of interaction to achieve value co-creation. Generally speaking, more business participants participate at this stage, such as recourse providers. This continuous engagement increases customer stickiness and enhances the customer's service or product experience. Compared to the traditional business model, the innovation of the eco-system based on customer needs is to increase the participation of customers in the value co-creation of the industry chain.

In the above two stages, customers participate in actively, but there is a certain difference between the two stages. The initial stage emphasizes more on the customers' first experience, which can attract more customers to participate in the event. However, the continuous stage emphasizes more on the customers' stickiness, which can promote value co-creation to a greater extent. In the following article, we use a case analysis in order to clearly express the mechanism.

3. Case analysis of value co-creation in the innovation ecosystem based on customer needs

The innovation eco-system based on customer needs revolves around customer needs and increases customers' engagement in the industry chain by two stages. However, how customers participate in the eco-system specifically is the key to the transformation of business model. In the following, Haier will be used as an example to discuss the implementation of value co-creation in the innovation eco-system.

Haier always adheres to the cultural concept of "customer is the first". Under the background of enterprise transformation and the development of "Internet +" technology, Haier has fully utilized the role of customers in the industrial chain and built a quite successful innovation eco-system based on customer needs. By constructing the YiLian Smart Life Ecosphere, Haier has ultimately realized the value co-creation of the company and the customers through this innovation eco-system. Specifically, this paper generalizes the eco-system as follows:

(1) Relying on the COSMOplat platform to provide customers with customized solutions. This platform includes three modes: module customization, customer-participating customization and exclusive customization. Module customization is a mode that customers match the established modules according to their preferences; Customer-participating customization emphasizes on the customer's own needs and creative ideas, which means customers also participate in the design of the product; the customized customization is more personalized, and the customer's individual needs are added. In all these three modes, customers are involved in value co-creation, and the degree of participation is gradually increased. Thus, the user's experience can be better, and products or services are more in line with customers' needs. This is the initial stage of the innovation ecosystem. Through the COSMOplat platform, customers input experience and demand from different aspects. Haier invests in relevant technologies and achieves a win-win situation through collaboration between the two participating entities.

(2) Relying on IoT technology to strengthen contact with customers. Through human-machine interconnection and machine interconnection, a huge network is formed, and all the customers are gathered on the platform to conduct exchanges and discussions. Haier has built a smart family eco-system. In this process, customers can communicate with the company, and the company can grasp customers' information in real time and make adjustments to the company's products or strategies. This is the continuous stage of the value co-creation in the innovation eco-system, which can increase customers' engagement through continuous communication.

(3) Relying on the Multilateral Living Platform of Yilian Internet to strengthen communication between customers and resource providers. On the multi-living platform of Yilian Internet, Haier has integrates the related resources such as clothing enterprises, fitting mirror manufacturers and clothing technology providers, and established the Haier Yilian Ecological Alliance. The alliance brings the ecological resources of various industries together, which can provide customers with full-process services, and can also reduce Haier's related costs. This is also the continuous stage of the value co-creation in the innovation eco-system. Enterprises in the eco-system participate the value co-creation together and share both risks and benefits.

The innovation eco-system enables related companies to change from competition to a win-win cooperation. If the role of the customer in the eco-system can be fully utilized, the customer experience can be improved and the value of the customer can be increased. As for the company, customer's stickiness can be improved and the value of the company and other resources providers can be increased. Thus, each participating entity can gain benefit from this innovation eco-system, which is called value co-creation. But topics such as how to measure the value co-creation of the eco-system and how to coordinate possible conflicts between the participating parties are still worth studying.

4. Summary

The mechanism of value co-creation in the innovation eco-system based on customer needs can be divided into two stages, including the initial stage and the continuous stage. Customers play an

important part in the industry chain and gain some benefit. Through the participation of the customers, both the core enterprise and resources providers can benefit a lot. All the participants cooperate with each other and realize the value co-creation.

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