

Analysis of Value Co-Creation in Catering Enterprises

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Abstract: In recent years, the notion of value co-creation has emerged as a seminal theoretical and practical framework, originating from the evolution of the service-dominant logic (SDL). The concept of value co-creation has been applied to a limited number of industries, including retail, catering, tourism and healthcare. In these sectors, the application of value co-creation has facilitated a more profound comprehension of the mechanisms underpinning this phenomenon. Catering enterprises represent a significant segment within the service industry, characterized by direct interaction with consumers and a high degree of flexibility. This unique advantage is a significant factor in the study of value co-creation. To further understand the characteristics of value co-creation in catering enterprises, this paper employs the analysis of variance method to conduct an in-depth investigation of value co-creation in different types of catering. The research findings indicate that the impact of each dimension of value co-creation varies depending on the time, nature and scale of establishment of the catering enterprise. The findings of this study provide a foundation for the provision of targeted business advice to enterprise management, with the aim of enhancing the management level of the enterprise.

Keywords: Co-production, Value in use, Personalization, Interactivity, Business model.

1. Introduction

The concept of value co-creation has gained prominence in a range of academic fields, including business management, marketing and the social sciences. The concept has been applied in a variety of industries, including retail, food service, tourism and healthcare, where it has facilitated an understanding of the mechanisms of value co-creation. This confers upon it a distinctive advantage and special significance in the field of value co-creation research. In recent years, the global food and beverage industry has continued to demonstrate growth in revenue. In comparison to other industries, the delivery of services in the food service industry is characterized by a high degree of visibility, with customer behavior and feedback directly observable and quantifiable. An increasing number of food and beverage service providers are integrating value co-creation theory into their business processes. A considerable number of companies have already attempted to co-create value with their customers with a view to enhancing the customer experience. The concept of value creation is transformed as a result of co-creation activities, which also serve to motivate customers to engage in such activities. In this context, it is necessary to explore the specific factors of value co-creation as they differ in different food and beverage service providers. This will enable a focus on the types of factors that need to be considered for value co-creation to become an innovative approach for companies to cope with the complex environment of globalization and digitalization and achieve sustainable development.

2. Literature Review

2.1. Research on The Dimensions of Value Co-Creation

The theoretical foundation for value co-creation is the service-dominant logic (S-D logic), which was initially proposed by scholars Vargo and Lusch in 2008. The service-

dominant logic (S-D logic) theory places a emphasis on the importance of value co-creation between businesses and consumers. In a systematic review of 149 academic articles on value co-creation, Ranjan and Read (2016) identified two main conceptual dimensions of value co-creation: co-creation and value use.

Firstly, from the perspective of co-production. The concept of co-production encompasses direct or indirect collaboration between businesses and customers (Chatmi, A., Elasri, K., & Ponsignon, F., 2023). These endeavors are informed by three fundamental principles: knowledge, interaction and fairness, with the objective of creating value. Firstly, from the perspective of the knowledge element, the sharing of knowledge represents a fundamental operational resource. Secondly, from the perspective of the interactive element, interaction represents the primary interface between the two parties engaged in collaboration. The essence of co-production lies in the interaction between customers, encompassing mutual communication, physical and mental activities, and access to shared expertise. Thirdly, from the perspective of the equity element, equity in the form of reciprocity, openness and non-command relationships constitutes a fundamental aspect of collaborative production (Arvidsson, 2011). It is imperative that companies possess the requisite technical capabilities to facilitate consumer integration into the value chain creation process and enable them to access corporate data. This will facilitate consumer participation in the production of corporate products and services by leveraging operational resources.

Secondly, from the perspective of the value in use dimension. The concept of value in use is contingent upon the user's specific usage environment and process, which may encompass a range of factors including time, space, or uncertain conditions; unique experiences and perceptions; and the influence of relationships. It is posited by scholars that value in use occupies a central position in the complex value creation process, comprising three constituent elements: experience, relationship, and personalization. Firstly, from the perspective of the experience element, experience can be

defined as empathetic, emotional and memorable interactions with intrinsic value, which can be attributed to the products and services provided by the company (Ballantyne & Varey, 2014). Secondly, from the perspective of the relationship element, the formation of relationships and collaborations enables customers to author solutions, thereby creating value. Thirdly, from the perspective of the personalization element, personalization can be defined as the uniqueness of the actual or perceived usage process, and its value can be regarded as incidental personal characteristics.

In light of the aforementioned analysis, the authors concur with the following proposition: value co-creation can be defined as the creation of a product or service through the integration of interactions and resources between companies, consumers, employees and other stakeholders during the research, development, design, production, consumption and after-sales stages. Accordingly, this study categorizes value co-creation into two dimensions, with a emphasis on the concepts of "co-production" and "value in use." The concept of co-production is subdivided into three categories: knowledge, interaction and fairness. Similarly, the concept of value in use is also divided into three categories: experience, relationship and personalization.

2.2. Research on The Application of Co-Creation of Value in Catering Enterprises

The catering industry is currently undergoing a period of recovery from the effects of the epidemic. Moreover, the recent trend towards an enhanced standard of living for the population has led to an increased demand for the services of enterprises in the hospitality sector. Contemporary restaurants are not merely catering establishments; they are also leisure facilities where patrons visit not only to satisfy their hunger but also to relax, to experience positive emotions generated by the hospitable atmosphere, and to receive a satisfactory quality of service from the consumer. This requires a certain degree of managerial expertise and competence on the part of the catering business operator. The capacity of catering business operators to persevere in complex environments and to navigate challenging circumstances in the pursuit of business growth is a crucial competency (Barrios, A., Camacho, S., & Estrada-Mejia, C., 2023). Service companies may establish an appropriate co-creation strategy for their services, thereby enabling customers to become participants in the personalization of their services (Angelini, F., Castellani, M., & Pattitoni, P., 2023). The theoretical tool of value co-creation represents an effective means of enhancing the managerial competencies of restaurant operators. The

period following the pandemic is distinguished by a stable economic environment, an accelerated pace of life, demographic shifts and a notable increase in the frequency with which residents consume food prepared outside the home or order takeaways. It is anticipated that these trends will give rise to enduring alterations in dietary patterns. Consequently, the catering industry exhibited a consistent pattern of growth and stability. Moreover, the operating costs of the catering industry continue to rise, predominantly due to increased labor costs, raw material expenses and housing rental costs. As the catering industry is a traditional one, many companies do not priorities the exploration of profit models, which consequently limits their capacity to generate profits. This is due to an inability to adapt to changing market trends and consumer preferences, which has resulted in a lack of innovation and differentiation in their products and services. Consequently, these firms may encounter difficulties in distinguishing themselves in a highly competitive market and may be unable to generate an adequate return on investment. The concept of value co-creation in the food and beverage industry has been defined by scholars from two principal perspectives: that of the corporation and that of the consumer.

3. Analysis of Value Co-Creation Structures in Catering Enterprises of Different Characteristics

3.1. Data Collection

The formal questionnaire survey for this study was conducted between March and May 2023. A total of 1,200 questionnaires were distributed, and 932 were subsequently returned. To ensure the accuracy and reliability of the data, the researchers evaluated the 932 collected questionnaires and eliminated invalid questionnaires. Invalid questionnaires include those in which the same answer is selected for 10 consecutive questions, more than 10 questions are left unanswered, and there is a clear pattern in the selected answers. In the end, 918 valid questionnaires were retained, for a response rate of 85.87%.

3.2. Mean Value Analysis of Value Co-Creation Dimensions

In order to gain insight into the nuances of value co-creation, this dissertation employs the analysis of means method to ascertain the mean value of each index under the two dimensions of "co-production" and "use-value," respectively. Subsequently, an analysis and comparison are presented.

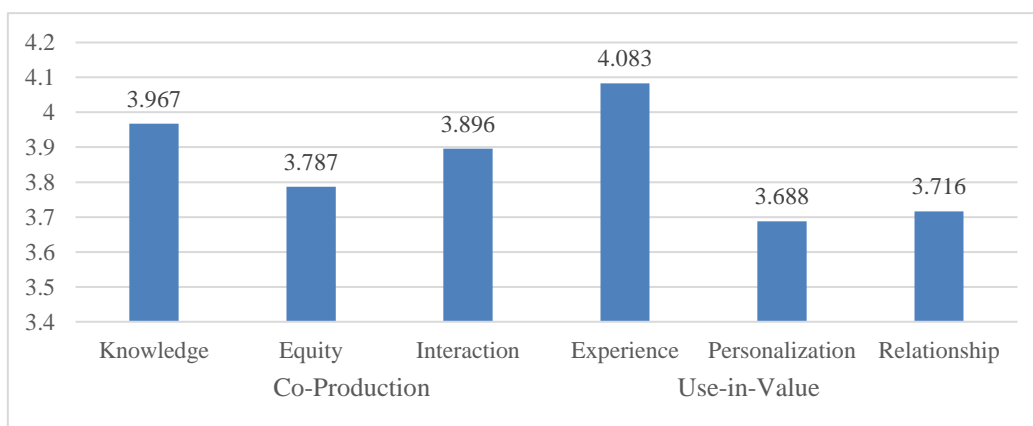


Figure 1. Comparison of the mean values of value co-creation dimensions

As illustrated in Figure 1, the mean value of knowledge is the highest ($M = 3.967$), followed by interaction ($M = 3.896$), and the mean value of equity is the lowest ($M = 3.787$). In the value-in-use dimension, the mean value of experience is the highest ($M = 4.083$), followed by relationship ($M = 3.716$), and the mean value of personalization is the lowest ($M = 3.688$). Overall, the mean values for knowledge, interaction, equity, experience, relationship and personalization are all above 3, indicating that catering service enterprises have begun to recognize the importance of these elements.

In co-production, the item 'knowledge' received the highest score. As a basic operating resource for achieving co-creation of value, knowledge is the basis for implementing collaborative production. This indicates the extent to which companies are willing to share knowledge, ideas and creativity with consumers. The research results show that companies have recognized the importance of knowledge sharing. This conclusion is consistent with Vargo's (2016) view that 'knowledge can bring more value creation opportunities for companies' and that 'knowledge is a fundamental source of competitive advantage and companies must value it'. The second most important factor is 'interaction' as a platform for value creation with customers. To facilitate co-creation, co-creation companies must show initiative and enthusiasm in their interactions with customers. They must also influence co-creation by facilitating the transfer and integration of resources through high-quality interactions. The view that 'value co-creation is an interactive process' is also evident in food service companies. Of all the average indicators, 'fairness' has the lowest average level, indicating that in the process of value co-creation, food service companies show a lack of equality in the sharing of resources and the distribution of discourse among customers. According to the customer-centric perspective, companies have an obligation to inform consumers about potential risks associated with the services and products they provide. This obligation requires managers to take responsibility for

informing consumers about potential risks associated with the products they need to use. A fair environment promotes communication and ensures interaction and exchange for value co-creation. It ensures that the company and the consumer cooperate on an equal footing, that the company is willing to share control in support of consumer empowerment, and that the consumer is willing to contribute to co-creative activities.

In the context of the value in use dimension, the item 'experience' received the highest score. Consumer experience is one of the most fundamental aspects of the foodservice industry. Consumers are dynamic social actors who create, interpret and embody value through their actions. Experience is of great significance to consumers. Those working in the foodservice industry have a responsibility to recognize the constructive role played by consumers as collaborators in creating value and experience. This recognition should be based on a comprehensive understanding of the value creation process. The value in use can be defined as the enjoyment and perceived value that consumers derive from their unique consumption patterns and processes. In the average measurement, the lowest score was for 'personalization'. From a personalization perspective, today's consumers need more professional, consistent and timely advice and recommendations. However, foodservice companies are not doing well in providing customized catering consulting services.

3.3. Analysis of Structural Differences in Value Co-Creation in Different Characteristics of Catering Service Enterprises

Using SPSS data processing software, a comparative analysis of the operating conditions of various types of food service enterprises was conducted using analysis of variance. The results are shown in Table 1.

Table 1. Comparison of value co-creation differences among different characteristics of catering service enterprises

	Co-production			Value-in-use		
	Knowledge	Equity	Interaction	Experience	Personalization	Relationships
	F (p)	F (p)	F (p)	F (p)	F (p)	F (p)
Time of establishment	7.743**	7.595**	5.649**	6.594**	6.554**	5.407**
	0.000	0.000	0.001	0.000	0.000	0.001
Nature of business	3.607*	2.151	1.894	1.525	1.166	1.031
	0.014	0.094	0.131	0.208	0.323	0.379
Size of enterprise assets	3.881**	3.328*	3.109*	1.697	2.288	1.244
	0.004	0.011	0.016	0.151	0.060	0.292
Business model	2.247	4.161*	3.091	2.067	4.235*	2.285
	0.135	0.042	0.080	0.152	0.040	0.132
Enterprise Service Form	6.241**	5.528**	5.369**	1.948	0.429	1.424
	0.002	0.004	0.005	0.144	0.651	0.242

Note: Obtained from analysis and collation by the authors. F represents the ratio of mean square between groups and mean square within groups; * indicates $p < 0.05$ and significant at the 0.05 level, and ** indicates $p < 0.01$ and significant at the 0.01 level.

Firstly, an analysis of the knowledge, fairness and interaction dimensions among catering service enterprises with different founding times revealed significant differences in collaborative production. The only significant difference between enterprises of different natures was in the knowledge

dimension. There were significant differences in the knowledge, fairness and interaction dimensions among catering service enterprises with different asset sizes. There were significant differences in the knowledge and fairness dimensions among different business types. There were significant differences in fairness among catering service enterprises with different business models. The form of service provided is an important factor leading to differences in knowledge, fairness and interaction. Specifically, a comparison of the means shows that: (1) enterprises that have

been established for a relatively short period of time are more inclined to achieve co-creation of value through knowledge, fairness and interactivity. This may be because long-established catering service enterprises have accumulated knowledge systems and skills that match their own development through long-term practice. Therefore, they are highly sensitive to market dynamics and are less dependent on or have difficulty accessing readily available or effective knowledge resources through consumers. It can therefore be said that the equal dissemination of information will enable enterprises to obtain relevant knowledge in a more efficient and effective manner. (2) From the perspective of the nature of the enterprise, private enterprises are more inclined to create value by utilizing the knowledge resources provided by consumers. Compared with state-owned enterprises and joint ventures, private enterprises are more susceptible to market risks and opportunities. Therefore, co-producing and co-creating value with consumers is a key strategy for private enterprises to improve their competitiveness. (3) From the perspective of the size of enterprise assets, small catering enterprises generally attach great importance to learning. They believe that learning is a key means of adapting to market changes, improving processes and maintaining competitiveness, given the need for continuous innovation and improvement to accelerate growth. Small catering enterprises pay more attention to the interconnection between customers, suppliers and partners, because small enterprises often need to work closely with suppliers and partners to promote the seamless integration of their operations. (4) From the perspective of business models, online catering service enterprises are better able to provide a more equitable value co-creation model than offline catering service enterprises. This assertion is because value co-creation is a new type of business innovation model characterized by collaborative value creation between enterprises and consumers. Existing technological platforms, digital technologies and the advantages of the internet give online businesses the opportunity to adopt more proactive strategic objectives and tactical behaviors when dealing with the relationship between businesses and consumers. In addition, they can influence the co-creation of value through interactions with multi-channel, multi-option, multi-transaction and multi-price experiences. (5) From the perspective of the form of business services, high-end service restaurants generally place great importance on the acquisition and utilization of knowledge and expertise. This includes having highly skilled chefs and staff who are proficient in culinary techniques, ingredients and the art of gastronomy. These establishments may invest heavily in staff training, and providing a high level of culinary knowledge and service is key to the premium dining experience. In high-end restaurants, this may be related to treating employees, suppliers and customers fairly. Many high-end restaurants prioritize fair labor practices, emphasize fair and transparent pricing of menu items, and enhance customer interactions with the aim of providing customers with delicious food, attentive service and a comfortable atmosphere.

Secondly, the analysis of the utility dimension shows that there are no significant statistical differences between different catering service enterprises, regardless of their property type, asset size or service form ($p > 0.05$). Catering service enterprises established at different times show significant differences in the experience, personalization and relationship dimensions. In contrast, catering service enterprises with different business models show significant

differences in personalization. Specifically, an analysis of the mean values shows that (1) companies with a long history in the restaurant industry tend to place more emphasis on customer experience. They understand the nuances of customer experience in different services, which is an asset for providing seamless and memorable restaurant services. With accumulated experience, long-established restaurant companies are usually better at customizing services according to the unique needs and preferences of customers. They have a deeper understanding of the processes involved in customizing menus, decorations and services to create a bespoke experience tailored to the specific needs of each event. Providing personalized service is an important competitive advantage for these businesses, enhancing the customer experience. The long-term development of catering businesses often involves building strong relationships with customers, suppliers and other industry professionals. Cultivating and maintaining these relationships is crucial to ensuring the continued growth and success of the business. Having developed a trusting and strong relationship with their customers over time, catering businesses are more likely to gain repeat business and satisfied customers who will recommend them to others. (2) From a business model perspective, offline catering companies, especially those that have been providing personalized services for a long time, often have a good reputation for customization. These companies usually provide face-to-face consultation, personalized menu planning and customized services to meet the specific needs of each event. The opportunity to interact face-to-face with customers can lead to a high degree of personalization and a deeper understanding of customer needs.

4. Summary

The average ranking of the dimensions of the co-creation of value concept for catering service enterprises is as follows: experience > knowledge > interaction > fairness > relationship > personalization. This finding indicates that catering service enterprises prioritize the promotion of co-creation of value through the sharing of customers' skills, knowledge and experience. Nevertheless, personalization and relationship building remain areas for enhancement in the process of co-creation of value. Furthermore, it is evident that structural differences in the dimensions of co-creation of value exist among diverse categories of catering service enterprises. The time since establishment of the company, the magnitude of assets, the operational model, the nature of business and the form of service it provides all have an impact on the value co-creation of catering companies. Firms with a recent establishment tend to prioritize knowledge, interaction and fairness as mechanisms for value co-creation, exemplified by the recruitment of highly skilled technicians and the provision of personalized package options, such as catering companies tailoring their menus to customer preferences. Private companies have been found to prioritize the utilization of consumers' knowledge resources in the creation of value, a practice that is less prevalent in state-owned enterprises. Large companies, on the other hand, have been observed to engage customers in the design of store layouts, fostering a sense of engagement and ownership.

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