

# The Impact Mechanism of Value Co-Creation on Enterprise Performance

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## ABSTRACT

In the contemporary business landscape, which is characterized by the integration of digital technologies with numerous industries, the concept of value co-creation is becoming an increasingly important and creative competitive strategy. Scholars have highlighted the absence of robust arguments and theoretical guidance for organizations seeking to implement value co-creation practices with consumers. This thesis employs the theory of value co-creation as a foundational framework and a mixed-methods approach, utilizing structural equation modelling (SEM), to investigate the mechanism through which value co-creation affects enterprise performance. The findings of the research demonstrate that business model innovation acts as a mediating factor between value co-creation and enterprise performance, while internal process management exerts a moderating influence between the two. It is recommended that the findings of this research be employed to develop efficacious strategies for the implementation of value co-creation in enterprise practice management, with the objective of enhancing enterprise performance.

## KEYWORDS

Business model innovation; Internal process management; Co-production; Value in use; Financial performance; Customer relations and employee feedback

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## 1. INTRODUCTION

In the context of globalization and digitalization, market demand is in a constant state of flux, and companies must enhance their flexibility and responsiveness through value co-creation. As a significant theoretical instrument within the domain of business marketing, the concept of value co-creation has been extensively employed in a multitude of consumer contexts. The concept of value co-creation emphasizes the interaction and cooperation between companies and stakeholders. The extant literature tends to concentrate on the process of value co-creation, such as customer participation and employee collaboration, but gives less consideration to its outcomes, such as particular enhancements in company performance. Furthermore, it examines the phenomenon of value co-creation between customers and companies within the context of online communities. It is therefore evident that further study of the existing literature is required in order to gain a full understanding of the impact of value co-creation. It is incumbent upon companies to engage in the process of scientifically and effectively matching customer resources in order to facilitate the transfer of value. The objective of this research project can now be defined. The objective of this study is to examine the mechanisms through which value co-creation affects enterprise performance, with a focus on the catering service industry. Based on this analysis, the study will propose value co-creation strategies for improving enterprise performance.

## **2. LITERATURE REFERENCES**

### **2.1. Relationship Between Value Co-Creation and Enterprise Performance**

Gronroos (2011) posits that in the context of business operations, the value creation of suppliers can exert an influence on the economic outcomes of the customer company. This implies that although the profitability of a company is contingent upon its operational procedures, the extent to which these activities generate value and reduce costs is contingent upon the extent to which the company's suppliers achieve value in the process of value co-creation. Moreover, customers can enhance organizational performance through value co-creation (Chatmi, A., Elasri, K., & Ponsignon, F., 2023). The findings indicate that the generation of utilitarian and hedonic value for customers and employees on social media can foster positive trust, which subsequently exerts a beneficial influence on business performance. It is evident from existing studies that value co-creation has an impact on business performance. However, further exploration is required to ascertain its precise role.

### **2.2. Relationship Between Value Co-Creation, Business Model Innovation and Enterprise Performance**

In recent years, the relationship between value co-creation and business model innovation has been the subject of considerable interest within the academic community. Wahab (2022) conducted a study on business model innovation methods through exploratory multi-case studies. The study posits that innovation is fundamentally about combining customer needs with value propositions and promoting value co-creation by integrating resources from all parties and designing fair value capture mechanisms. Business model innovation is a necessary precursor to value co-creation. The repetition of co-creation of value is likely to promote business model innovation and the emergence of new institutions, resources and technology applications. Consequently, the quality of services is enhanced and business benefits are expanded (Botti & Monda, 2020).

### **2.3. Relationship Between Value Co-Creation, Internal Process Management and Enterprise Performance**

In numerous instances, a number of companies have implemented effective procedures aimed at fostering the co-creation and utilisation of value in collaboration with their customers. Lopes (2021) put forth the proposition that, while the implementation of innovation strategies or ideas is conducive to improving organisational performance, entrepreneurial orientation, process management and the interaction between the two play a moderating role in the impact of strategies on performance. Zaborek and Mazur (2019) put forth the proposition that the establishment of a process management system is of great significance for enhancing enterprise value. Furthermore, it has a constructive impact on the relationship between technological innovation and enterprise value creation. Such a system enables companies to manage and mitigate the potential business risks associated with innovation activities, while also facilitating self-assessments and improvements in management performance (Chatterjee, S., Rana, N. P., & Dwivedi, Y. K., 2022).

## **3. THEORETICAL MODEL AND RESEARCH HYPOTHESIS**

### **3.1. Theoretical Model**

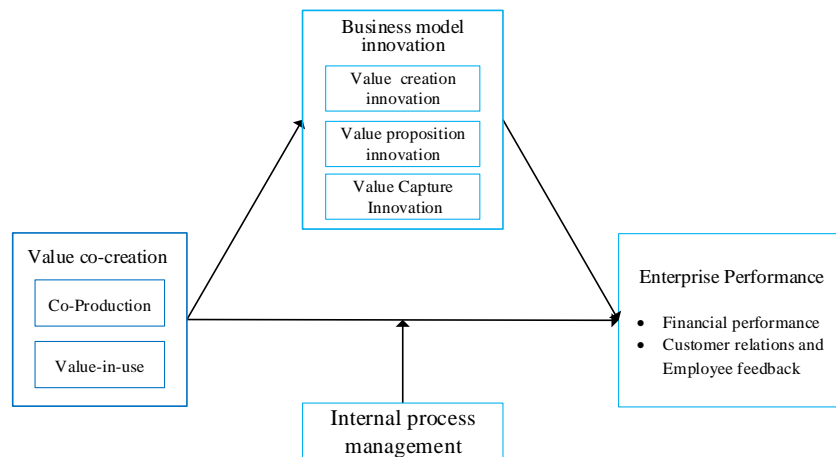
From the perspective of dynamic environmental management, this study introduces business model innovation as an intermediary variable and internal process management as a moderating variable to investigate the impact of these two variables on the performance of enterprises engaged in value co-creation. The dimensions of each variable are defined and divided in accordance with the findings of previous research (see Table 1).

**Table 1.** Definition and dimensions of the variables

Name	Type	Definition	Dimensions
Value co-creation	Independent variables	Value co-creation is the result of interactions between the participants in a business's economic activity and its customers.	Co-production, value-in-use
Business model innovation	Mediating variable	Innovation that relies on a company's own resources and capabilities, is customer demand-oriented, and is a systematic operational change process that improves enterprise performance.	Value creation, value proposition, value capture
Enterprise performance	Dependent variable	Enterprise performance is one of the important bases for evaluating and judging the operation effect of enterprises.	Financial performance, customer relations and employee feedback
Internal process management	Moderating variables	Internal process management refers to the internal reform of the business process of an enterprise, including the systematic method of design, execution, monitoring, evaluation and improvement, so as to improve the efficiency, effectiveness, quality and innovation ability of the process.	

Note: Author collated according to relevant literature.

In light of the aforementioned analysis and the integration of pertinent theoretical tenets, including value co-creation theory, innovation theory, and management process theory, as well as the examination of the interrelationships between variables as elucidated in the literature review, a theoretical model of value co-creation and business performance can be formulated (Figure 1).



**Figure 1.** Theoretical model of value co-creation, business model innovation, enterprise performance and internal process management

Note: The author draws the theoretical model according to the results of previous literatures and the theoretical basis of this dissertation.

The figure illustrates that value co-creation has a direct impact on business performance. Furthermore, business model innovation acts as a mediator between value co-creation and business performance, while internal process management plays a moderating role between value co-creation and business performance.

## **3.2. Research Hypothesis**

### **3.2.1. Research hypothesis on the direct effect of value co-creation on enterprise performance**

Co-production emphasizes equality and fairness between businesses and consumers. This helps to integrate and allocate resources, thereby creating favorable conditions for businesses to generate value growth and performance improvement. Personalized customization can enhance value because the process is unique, thereby expanding the boundaries of consumer value. The aim is to increase consumer satisfaction and loyalty during use, thereby further improving enterprise performance.

H1: Co-production has a significant positive impact on enterprise performance (Financial performance, Customer relationship and employee feedback).

H2: Value-in-use has a significant positive impact on enterprise performance (Financial performance, Customer relationship and employee feedback).

### **3.2.2. Research hypothesis on the intermediary role of business model innovation**

Chinese enterprises are studying the ‘integration of people and orders’ model. This novel approach to business operations is based on the strategic concept of value co-creation and is achieved through business model innovation. The goal is to transform every employee in the enterprise into an independent ‘market operator’, thus emphasizing the process empowerment of the ‘use value’ realized in every interaction and transaction between employees and customers. The order placement process represents the formation of a new relationship between the enterprise and its customers, and between employees and customers. In this process, the company builds a bridge for co-creation of value between employees and users based on a new understanding of self-positioning related to value creation, capability building and value capture. At this point, the utilization of value in use with the help of new business models helps to improve business performance.

H3: Business model innovation plays a mediating role between co-production and enterprise performance (Financial performance, Customer relationship and employee feedback).

H4: Business model innovation plays a mediating role between value-in-use and enterprise performance (Financial performance, Customer relationship and employee feedback).

### **3.2.3. Research hypothesis on the moderating effect of internal process management**

More and more companies are recognizing the importance of internal control. As a result, they are establishing internal control systems that reflect this recognition. However, despite this progress, there are still cases where areas of responsibility and authority are not clearly defined, implementation methods are not detailed enough, and there is a lack of follow-up inspection procedures. If the internal control system of a company is a jigsaw puzzle, then process management can be considered the thread that holds the pieces together to achieve maximum value.

H5: Internal process management has a positive moderating effect on the relationship between co-production and enterprise performance (Financial performance, Customer relationship and employee feedback).

H6: Internal process management has a positive moderating effect on the relationship between value-in-use and enterprise performance (Financial performance, Customer relationship and employee feedback).

## 4. DATA COLLECTION AND ANALYSIS

### 4.1. 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%.

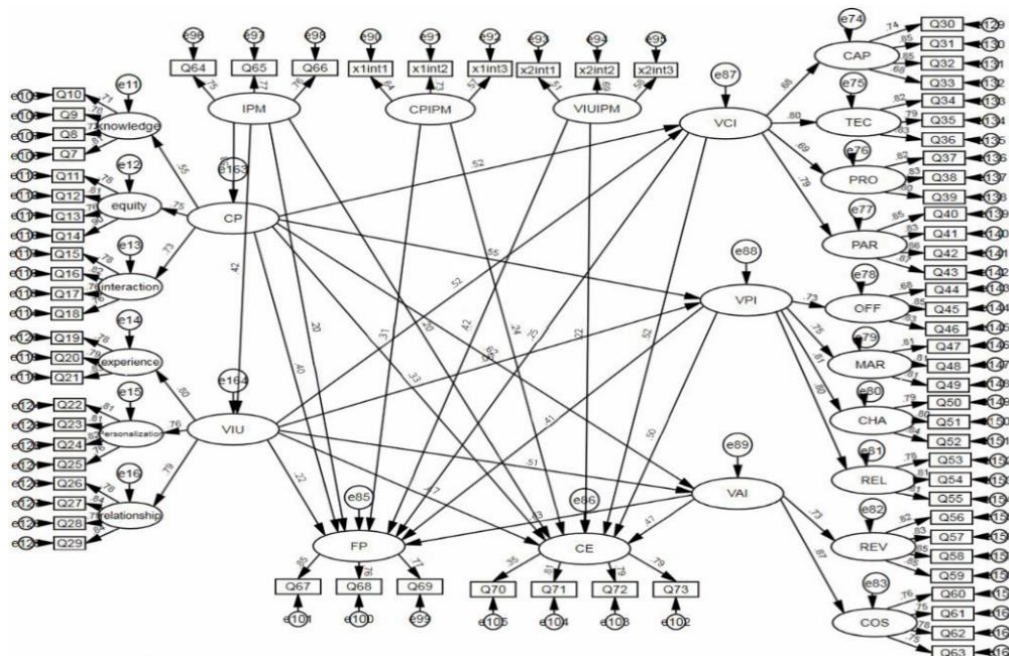
### 4.2. Data Analysis

#### 4.2.1. Reliability and validity analysis of each scale

The Cronbach's alpha coefficient for each variable is 0.953, which exceeds 0.9, indicating that the reliability of the research data for each variable scale has reached an exemplary standard. Cronbach's alpha coefficients were employed for the purpose of evaluating the reliability of the first-level dimensional scales. All the results exceeded 0.7, thereby indicating that each dimension of each scale exhibited a high degree of internal consistency. The average variance extracted (AVE) value for the dimensions of all variables was found to be greater than 0.5, indicating a satisfactory level of reliability. The data demonstrate that the value co-creation scale exhibits satisfactory convergent validity.

#### 4.2.2. Hypothesis testing analysis

A structural equation model was constructed using AMOS 26.0 software based on the theoretical model and the dimensional classification of each variable presented in this paper. The data was imported for calculation, and the results are presented in Figure 2.



**Figure 2.** Structural equation model path analysis diagram

Note: Based on survey data, the result is obtained by using the structural equation model. CP: Co-Production; VIU: Value-in-use; IPM: Internal process management; FP: Financial performance; CE: Customer relations and Employee feedback; VCI: Value creation innovation; VPI: Value proposition innovation; VAI: Value capture innovation; CAP: New capabilities; TEC: New

technology/equipment; PRO: New processes; PAR: New partnerships; OFF: New offerings; MAR: New customers and markets; CHA: New channels; REL: New customer relationships; REV: New revenue models; COS: New cost structures, CIPM: Interaction of Co-Production and Internal process management, VIUIPM: Interaction of Value-in-use and Internal process management.

The path coefficients in the structural equation model can be used to test the research hypotheses. The standardized path coefficients, standard errors, t-values and significance p-values in the model structure are used to determine whether the model and the hypothesis are supported. The significance level  $p < 0.05$  is used for path analysis, and the results of hypothesis testing are shown in Table 2-6.

**Table 2.** Value co-creation and enterprise performance hypothesis test results (H1, H2)

Hypothesis path	Path coefficient $\beta$	S.E.	p	Conclusion
H1: CP→FP	0.391	0.128	***	Support
CP→CE	0.332	0.139	***	Support
H2: VIU → FP	0.217	0.075	**	Support
VIU → CE	0.468	0.089	***	Support

From the above data analysis results, most of the coefficients of the hypothetical paths are significant, and that value co-creation has a positive impact on business performance. Hypothesis H1 and H2 are therefore valid.

**Table 3.** Mediation effect test of "Co-production -- Business model innovation -- Enterprise performance" model(H3)

Mediation model	Test Conclusions	a	b	a*b mediating effect	a*b (95% BootCI)	c 'direct effect
CP => VCI => FP	Support	0.299**	0.146*	0.044	0.005 ~ 0.083	0.236**
CP => VPI => FP	Support	0.354**	0.275**	0.097	0.035 ~ 0.152	0.236**
CP => VAI =>FP	Not supported	0.314**	0.089	0.028	-0.018 ~ 0.077	0.236**
CP => VCI => CE	Support	0.299**	0.231**	0.069	0.018 ~ 0.107	0.237**
CP => VPI =>CE	Not supported	0.354**	0.055	0.019	-0.026 ~ 0.066	0.237**
CP => VAI => CE	Support	0.314**	0.296**	0.093	0.032 ~ 0.134	0.237**

**Table 4.** Mediation effect test of "Value-in-use -- Business model innovation -- Enterprise performance" model(H4)

Mediation model	Test Conclusions	a	b	a*b mediating effect	a*b (95% BootCI)	c 'direct effect
VIU => VCI => FP	Support	0.170**	0.160**	0.027	0.004 ~ 0.062	0.176**
VIU=> VPI =>FP	Support	0.168**	0.314**	0.053	0.016 ~ 0.102	0.176**
VIU=> VAI => FP	Not supported	0.153**	0.114	0.017	-0.006 ~ 0.049	0.176**
VIU => VCI => CE	Support	0.170**	0.232**	0.039	0.010 ~ 0.075	0.268**
VIU => VPI => CE	Not supported	0.168**	0.079	0.013	-0.011 ~ 0.040	0.268**
VIU => VAI => CE	Support	0.153**	0.310**	0.048	0.013 ~ 0.089	0.268**

The results of the aforementioned data analysis indicate that the majority of the coefficients associated with the hypothetical paths are statistically significant, with the exception of the mediating effect of value capture innovation in co-production and financial performance, and the mediating effect of value proposition innovation in co-production and customer relationships and employee feedback. Considering the evidence, it can be concluded that hypothesis H3 is partially supported.

The results of the aforementioned data analysis indicate that the majority of the coefficients associated with the hypothetical paths are statistically significant, with the exception of the mediating effects of value capture innovation in the value-in-use and financial performance, and the mediating effect of value proposition innovation in the value-in-use and customer relationship and employee feedback. Considering the above, it can be concluded that hypotheses H4 is partially supported.

**Table 5.** Test of the moderating effect of internal process management on "co-production -- enterprise performance"(H5)

Variables	FP		CE	
	$\beta$	t	$\beta$	t
Constant	-	85.338	-	68.101
Co-production	0.358**	4.71	0.326**	4.56
Internal process management	0.207**	4.547	0.203**	3.915
Co-production $\times$ Internal process management	0.312**	3.41	0.243**	2.771
$R^2$	0.232		0.197	
F-measure	45.717		37.237	
$\Delta R^2$	0.097		0.074	
$\Delta$ F-measure	38.081		27.897	

The path analysis diagram of the structural equation model indicates that the path coefficient of the interaction terms between internal process management and co-production is positive, suggesting that internal process management exerts a positive regulatory influence on the relationships between "co-production — financial performance" and "co-production — customer relationship and employee feedback." Consequently, it can be posited that H5 is valid.

**Table 6.** Test of the moderating effect of internal process management on "value-in-use -- enterprise performance"(H6)

Variables	FP		CE	
	$\beta$	t	$\beta$	t
Constant	-	71.001	-	68.192
Value-in-use	0.215**	3.86	0.219**	4.834
Internal process management	0.201**	3.869	0.204**	4.947
Value-in-use $\times$ Internal process management	0.415*	2.587	0.221*	1.568
$R^2$	0.156		0.207	
F-measure	27.955		39.515	
$\Delta R^2$	0.064		0.084	
$\Delta$ F value	23.096		31.93	

The path analysis diagram of the structural equation model indicates that the path coefficient of the interaction term between internal process management and use-value is positive, suggesting that internal process management exerts a positive regulatory influence on the processes of " value in use -- financial performance" and " value in use -- customer relationship and employee feedback." Consequently, it can be posited that H6 is valid.

## 5. SUMMARY

The following paper puts forward a few strategies for the use of value co-creation in order to enhance business performance from the perspectives of enterprises, employees and consumers. Collaborating with stakeholders to enhance brand image and market competitiveness; sharing resources and risks with supply chain partners to reduce operating costs; enterprises and supply chain partners can share real-time data, including inventory levels, demand forecasts and logistics information, to optimize the efficiency of supply chain collaboration; employee participation in corporate decision-making and innovation processes to improve employee engagement and productivity; customer involvement in design and production to improve customer loyalty; enterprises can adopt a diverse range of innovative perspectives to leverage the knowledge and creativity of customers, partners or employees to develop more innovative products that meet market demand. In practical management, the implementation of these strategies has been shown to enhance the financial and non-financial performance of enterprises.

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