

# UNLOCKING INNOVATION POTENTIAL: THE ROLE OF VALUE CO-CREATION AND ABSORPTION CAPACITY

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**Abstract.** *In today's rapidly changing world, there is a growing demand for organizations to innovate and establish initiative-driven resources. The current*

*study is a cross-sectional study grounded in epistemological positivism, involving a sample of 200 participants drawn from the service industry, specifically hotels and restaurants in Quetta City. Sampling techniques included both stratified and cluster sampling. Data were analyzed using SPSS version 27 and Hayes Process Macro Model, which encompassed correlation, multiple regression, and reliability testing. Results showed a positive and significant correlation among all variables. Moreover, the analysis demonstrated that absorption capacity significantly moderates the relationship between value co-creation and innovation capabilities, confirming the hypotheses and proposed model. These findings emphasize the importance of fostering innovation capabilities, promoting value co-creation, and developing absorption capacity practices within organizations, thus highlighting avenues for future research.*

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## 1. Introduction

In the digital innovation ecosystem, the notion of value co-creation serves as a guiding framework, facilitating procedural adjustments and offering direction to innovation driven stakeholders to enhance their innovation capabilities and establish innovative resources. In this dynamic landscape, business enterprises must focus on prioritizing value co-creation (Ji; Zou & Liu, 2023), recognizing its role in fostering innovation. Increasingly, organizations are embracing interactive value delivery models, thereby nurturing innovation ecosystems (Han et al., 2012). This paradigm shift towards non-linear, interactive value co-creation processes underscores the influence of theories such as the value galaxy and value network within innovative ecosystems.

Value co-creation is termed as one of the organization strategies that improves competitive performance, that includes both management and marketing methods (Ciasullo & Carrubbo 2011). Aluri, Price and McIntyre (2019) concluded that the functioning of purposed value co-creation encourages the integration of knowledge and future innovation among customers and organization. One of the main determinants for achieving successful innovation is the knowledge absorption from customers (Kazadi *et al.*, 2016). The concept of absorptive capacity primarily pertains to an organization's ability to assimilate explicit technological information (Tseng *et al.*, 2011), and procedure of acquiring and transforming external information (Zahra & George, 2002). Previous research indicated organizational existing information is crucial to assess, assimilate, and apply to explicit knowledge, because existing knowledge of organization is totally based on the core antecedent of absorptive capacity (Hughes & Warcham, 2010). Cohen and Levinthal (1990) concluded that absorption capacity is an organizational capability to attain explicit information, assimilate, and to exploit for commercial ends. Absorption capacity is the organizational process in which organization seeks to absorb external information, and takes consideration of such knowledge for future course of action (Müller-Seitz, 2012). An enterprise performance can significantly increase by successfully integration of explicit and implicit information, and how well it is implemented to create new good and service to strengthen their innovation capability (Dev et al., 2010). The creative effort of individuals and their external linkages is produced through the firm's valuable resource that is known as innovation capability (Balan, Lindsay, & Allan, 2009). Innovation capability introduced as the capability to create new products or services and to adapt upgraded procedures. Conversely, the implementation of innovation in a firm is complex, and firm simplify innovation by concentrating on its capability related to resources and abilities e.g., procedures, schedules, and competencies (Hertog & Jong, 2010). A company can only be distinguishing from their competitors by focusing on the creation of resources through innovation capability and these resources results in providing upgradation in the current product or services, and innovation capability also help to lead in prospect markets and customers.

The arrangement of value co-creation factors in enterprise determines innovation capability for expansion of new products (Leclercq et al., 2017). Moreover, the activities of absorption capacity that includes searching, integrating, and processing are the fundamental practices for achieving innovation (Yu, 2013) and the procedures for acquiring information that increase the innovative capabilities. When innovation capability increased it presents new information and technology, that leads to creation of new product or service design, and to deliver good or service in upgraded versions. If the firms have the ability to create, shape, configure their resources and operation a firm is recognized as an innovative capable firm. Innovation capability enable the transformation of firm assets to provide improved services or innovative goods or products and in a result a firm

can gain the competitive edge over competitors in a market place. Theoretically, this research contributes to the existing literature in two ways. Firstly, this research contributes to the entrepreneurship literature by investigating the correlation between value co-creation and innovation capability. Secondly, it delves into the moderating role of absorption capacity on the impact of value co-creation on innovation capability. Furthermore, organizations can bolster their comprehension of customer needs, stimulate innovation, and sustain competitiveness in the market by actively engaging customers in the value co-creation process and proficiently assimilating external knowledge.

## **Literature Review**

### **Value Co-Creation**

Co-creation is defined as the creation of value through collaboration between the organisation and external experts or stakeholders such as customers and suppliers (Galvagno & Dalli, 2014). When it comes to importance of competitive strategy, value co-creation has merged significantly that leads to value innovation (Melis, et al., 2022). In marketing, the theory of value co-creation has become widely popular since it was introduced in the literature (Vargo & Lusch, 2004). Value creation for customer is the found in core ideology of organizational marketing, and this is fundamental for organization to gain competitive strategy. In the 1960s researchers progressively explained the value co-creation tendency depend on the theory of customer production, and Ramriez, was the pioneer who gave the orientation of value co-creation (Normann, & Ramirez, 1993). Customer production theory focus on the encouragement of technology, R&D, and efficient resource allocation to achieve viable value co-creation.

An organizational value co-creation process is categorized into three dimensions. First, category is relational interaction, which encompasses on the multiple factors that combined to generate value through effective implementation of an interactive method, and to strengthen the relational authority of innovative agents to achieve value co-creation in an enterprise (Tóth, Peters & Pressey, 2018). Payne *et al.* (2021) argued about the second category i.e., environment support which suggested value co-creation provides an ecosystem of services in an innovative environment that is totally grounded on the collaboration of peoples. Lastly, third category is value guidance which divides value co-creation into social, economic, and hedonic values including inherent and extrinsic, self-directive, other focused values (Holbrook, 2006).

### **Relationship between value co-creation and innovation capability**

Organizations are mainly relying on the innovation activities to satisfy their customer demands. These organizations typically do efforts to create value for their customer, and that is included in their innovation process and strategy

(Taghizadeh et al., 2016). Their philosophy of value co-creation enables a customer to create new ideas in the procedures of product and service design. Additionally, the upgradation of the technologies facilitates a customer to interact with organizations easily. The idea of innovation can only be active through the effective interaction between customers and organization (Hamidi & Gharneh, 2017). Thus, the active interaction through sharing of new ideas and customer experiences influences the value co-creation on the organizational innovative capability. Few scholars have studied, and concluded with significant of value co-creation and innovation capability (Markovic & Bagherzadeh, 2018; Romero & Molina, 2011) the creation of innovation can be achieved through the incorporation of the applicable resources and the effective role of collective networks and dynamic collaboration. The information management exist in an opened innovative environment that encourage the business model go further than the community limitations (Chesbrough & Bogers, 2014) and speed up the rate of market acceptance, and create an innovation culture, upgrades the business situation in the industry and set a new goal in market (Chesbrough, 2003). Therefore, it is hypothesized that:

*H1: Value co-creation is positively and significantly related to innovation capability.*

### **Absorptive Capacity**

Cohen and Levinthal (1990) define Absorptive capacity as “a firm’s ability to recognize the value of new external knowledge, assimilate it, and apply it to commercial ends” (p.128). In 1990, the term absorptive capacity was introduced, and till 2023 it has been applied on the wide range of more research studies (Vega-Jurado et al., 2008). An organizational effectiveness that imitates new information, and their ability to assess, recognize, integrate, absorb and implement new information that is acquired from external resources is known as absorptive capacity (Tsai & Ghosal, 1998). Prior research on absorption capacity concluded, that there is a strong relationship between absorption capacity and innovativeness. Furthermore, absorptive capacity serves as a dynamic capability that creates, extends and modified an organizations knowledge resourced base (Lane & Lubatkin, 1998), and in an upper order the capability that to help establishment of competencies and capabilities.

### **Relationship between absorption capacity and innovation capability**

Numerous empirical studies have explored the influence of absorptive capacity and other knowledge management mechanisms on organizational innovativeness. Absorptive capacity collaborates with external influences to facilitate innovation (Audretsch et al., 2014), while knowledge circulation encompasses the inflow and outflow processes within a business enterprise, fostering internal innovation creation and commercialization (Chesbrough & Crowther, 2006; Nonaka & Takeuchi, 1995). Literature confirmed that absorptive capacity recognized as one

of the main elements that leads to the process of knowledge transfer (Soh & Roberts, 2005). Moreover, the absorptive capacity helps to facilitate the utilization of information that an organization gain from external means promotes innovation capability (Powell *et al.*, 1996). Organizations with higher absorptive capacity and to utilize for innovation can increase their innovation capabilities. The concept of the absorption capacity is quite risky to deal the shared information, that are not well retrieved but it addresses information as a property with strong limitations (Preikschas *et al.*, 2017). It is expected that supplementary knowledge can provide light to new understandings, but in a few cases, it may be uncompetitive with a company's existing products. Past studies on absorption capacity concluded that capacity to absorb is a major contributor that leads higher information benefits (Cenamor *et al.*, 2019). Therefore, it is hypothesized that:

*H2: Absorption capacity is positively and significantly related to innovation capabilities.*

### **Moderating relationship between absorption capacity, as the effect of value-co creation on innovation capability**

Value co-creation refereed as an open innovation process that increases the efforts for new product development whether acquiring knowledge from external innovators imposing outside or inside approaches or to work on their under-developed product designs and technologies to be assimilated into different innovative procedures (Bstieler *et al.*, 2018). Zahra and George (2002), argued that absorption capacity is one of the important factors in predicting organizational competitive advantage by reinventing organization knowledge based on the expertise that are essential to compete in changing market. the business enterprise with greater influence of absorption capacity, enterprise innovation process tends to regulate its organizational internal change, opportunities to excel in environment, solutions to problems and to activity innovation to achieve organizational needs. Theoretically, absorptive capacity is the capability to identify and assimilate information from the environment, then to process and exploit such information. Whereas value co-creation that addresses the process outcome and examine its effect on enterprise performance (Zhang *et al.*, 2016). Additionally, absorptive capacity is an instrument in attaining valuable co-creation consequences through their enhanced ability to gather and transform information. Furthermore, absorptive capacity can lead to valuable co-creation and it transform organizational resources to gain competitive advantage (Fink *et al.*, 2017). When the firms acquire knowledge from their absorption capacity are utilized towards achieving innovation. The higher value of absorption capacity, the higher result of organizational innovation (Yu, 2013). Organizational innovation can be achieved by mixing the current and new acquired knowledge. Firm with advanced absorption capacity to assimilate knowledge and the promotion of value co-

creative activities results organizational innovation capability. Mendoza-Silva (2021), concluded that association among internal organizational factor i.e., value co-creation and absorption capacity significantly increases an organizational innovation capability. Therefore, it is hypothesized that:

*H3: Absorption capacity significantly and positively moderates the relationship between value co-creation and innovation capability.*

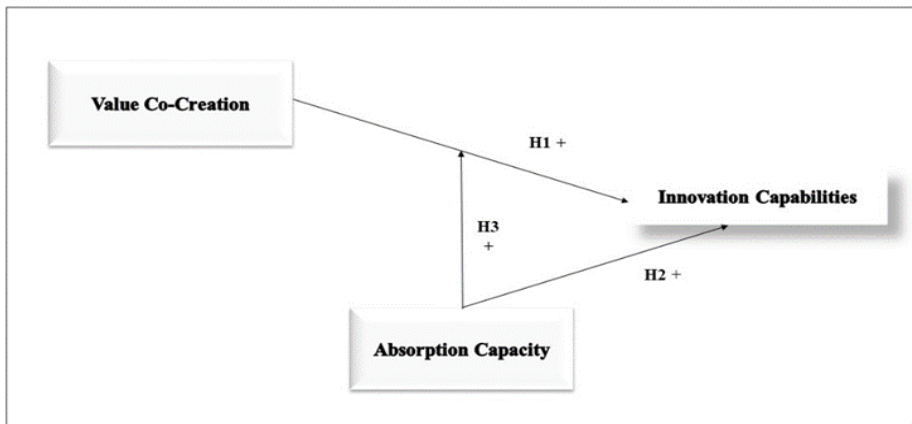


Figure 1 Conceptual Model of the Study

## Methodology

Various methods were employed to test the hypothesis proposed in the theoretical framework, aiming to investigate the relationship between value co-creation and absorption capacity on innovation capability.

## Research Design

The purpose of doing this research is to explain the phenomena addressing the cause and effect of value co-creation and absorption capacity on innovation capabilities. Time and cost are the potential constraints associated in conducting this study. This study is explanatory and cross sectional in nature, by following the deductive reasoning and epistemological-positivism research philosophy. Quantitative research techniques were applied to gather primary source of data from hotels and restaurants chains in Quetta, Balochistan through structured approach i.e., questionnaires.

## Sample and data collection

Current study proposed a probability sampling method with the combination of stratified sampling of service industry as population and then creating a cluster of hotels and restaurants chain as a sample. The data of service industry of Balochistan is quite scattered and less reliable, so compilation of sample was also approved out through convenience sampling method. The sample size of 250 were

generated on the criteria of trade and commerce department of Balochistan that recognized product or service industry in three categories; large, medium, and small industry. Therefore, for the assurance of the reliability and validity of this study questionnaires were circulated carrying demographics, modified scales of value co-creation, absorption capacity, and innovation capabilities with owners and top managers of hotels and restaurants in Quetta, Balochistan.

### **Instrument and Measures**

This study implies structured questionnaire as a survey instrument, which was adapted by reviewing the literature. The questionnaire of this study consists of four parts started from demographics, scale of value co-creation, absorption capacity, and innovation capabilities.

Following measures were used in this study

Table 1 *Reliability Analysis*

<b>Variable</b>	<b>Author</b>	<b>Scale Type</b>	<b>Items</b>	<b>Range</b>	<b>Cronbach Alpha</b>
Value Co-Creation	(Zhang & Chen, 2008).	7-point Likert Scale	03	1=completely disagree to 7=strongly agree	0.95
Absorption Capacity	(Cohen & Levinthal 1990).	-do-	14	-do-	.94
Innovation Capability	(Sheng & Hartmann 2019)	-do-	04	-do-	.91

Reliability analysis conducted through Cronbach's Alpha showed that the scales were equitably reliable. Value co-creation was measured with a three items scale ( $\alpha = 0.95$ ). The Cronbach's Alpha showed that the fourteen items scale for absorption capacity was also reliable ( $\alpha = 0.94$ ). Similarly, innovation capabilities were measured with four items scales with Cronbach's alpha value of 0.91 respectively.

## Results

Table 2 *Descriptive Statistics (Participant Demographics)*

		Frequency	Min	Max	Mean	Std. Deviation
How many years has your hotel/restaurant been in business?	Less than 5 years	94				
	5-10 years					
	10-15 years	65	1.00	4.00	1.76	0.82
	15 years or more	37				
What is the size of your hotel/restaurant?	15-19 employees	110				
	20-99 employees	87	1.00	3.00	1.47	0.53
	More than 100 employees	03				
What is the status of your hotel/restaurant?	Registered	176				
	Non registered	-	1.00	4.00	1.25	0.67
	In process of registration	24				
	Dine-in only	03				
Which facility you actively provide in your hotel/restaurant?	Dine-in and take away.	39				
	Dine-in, take away, and delivery	128	1.00	5.00	2.94	0.66
	Accommodation	28				
Do you support innovation activities in your hotel/restaurant?	Accommodation and Dine-in	02				
	Yes	198	1.00	2.00	1.02	0.14
	No	02				

Data were collected from hotels/restaurants situated in Quetta, City. Out of 250 questionnaires circulated in the hotel and restaurants, 200 questionnaires were resumed for a response rate of 80%. From those surveys, six different questions were asked in terms of designation, hotel/restaurant been in business, size of your hotel/ restaurants with regard to employs as recognized by the trade and commerce department of Balochistan, status of the hotel, facility actively provided in hotel/restaurant, and do you support innovation activities in your hotel/ restaurant? The results showed that CEO/Owners were 65 (32.5%), Directors 19 (9.5%), and the Managers were 116 (58%). 94 (47.4%) hotel/restaurants were less than 5 years in the business, 65 (32.5%) were been 5-10 years of business, 37 (18.5%) were been 10-15 years of business, and 04 (2%) hotels/restaurant were being in business more than 15 years. 110 (55%) hotel/restaurant have 15-20 employees, 87 (43.5%)



hotel/restaurant have 20-99 employees, and 03 (1.5%) hotel/restaurant have size of more than 100 employees. 176 (88%) hotels/restaurant were registered and 24 (12%) were in the process of registration. 3 (1.5%) hotel/restaurant provide only dine-in facility, 39 (19.5%) both facilities of dine-in and takeaway, 128 (68%) provide facilities of dine-in, take away and delivery services, 28 (14%) provide the service of accommodation only, and 2 (1%) provide both services of dine-in and accommodation. 196 (98%) support the activities of innovation and 4 (2%) not supporting the innovation in their hotel/ restaurant.

### Correlation and Descriptive Analyses

Table 3: *Correlation and Descriptive Analysis (N=200)*

Variables	(VCC)	(AC)	(IC)
Value Co-Creation (VCC)	1.00		
Absorption Capacity (AC)	0.73**	1.00	
Innovation Capabilities (IC)	0.17**	0.713**	1.00
Mean	12.32	63.68	13.84
Standard Deviation	3.602	16.65	5.76

Correlation is significant at the 0.01 level (1-tailed).

The results of the correlation analysis along with the means and standard deviations are summarized in table 3 as expected by the theoretical framework, the results of the correlation analysis showed significant positive correlation between the purposed variables of the study. There was significant correlation between value co-creation and absorption capacity for our sample data  $r = .726$ ,  $p < .01$ . Furthermore, value co-creation and innovation capabilities at  $r = .167$ ,  $p < .01$ . The correlation between absorption capacity and innovation capabilities was also found to be significantly positive  $r = 0.713$ ,  $p < .01$ .

### Multiple Regression Analyses

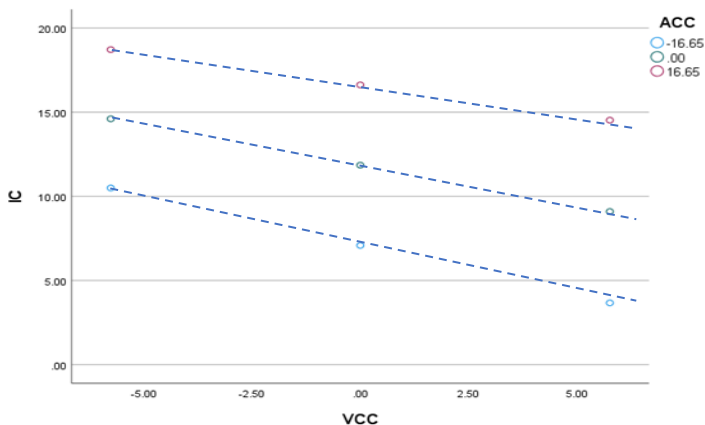
Table 4: *Regression Analysis*

Variables	<i>B</i>	<i>SE</i>	<i>t</i>	<i>P</i>	95%CI
Constant	11.85	0.14	86.3870	0.00	[11.58 12.12]
Value Co-Creation	-0.48	0.04	-15.8477	0.00	[-.6660, -.5186]
Absorption Capacity	0.29	0.03	-16.8978	0.00	[-.5338, -.4222]
Interaction (VCC*ACC)	0.01	0.03	-11.7403	0.00	[-.4248, -.3026]

Note.  $R^2 = .9001$  ( $N = 200$ ,  $p < .001$ ). CI = confidence interval for *B*.

Multiple linear regression was used to analyze the moderating influence of absorption capacity on the relationship between value co-creation and innovation capabilities through Hayes Process Macro (Model 1) was deployed to our theoretical framework. Remarkably, both value co-creation ( $\beta = -0.4780$ ,  $p =$

0.000) and absorption capacity ( $\beta = 0.29$ ,  $p = 0.00$ ) independently established significant impacts on innovation capabilities. Additionally, the interaction effect between value co-creation and absorption capacity was found to be significant ( $\beta = 0.01$ ,  $p = 0.00$ ), suggesting a significant proportion in our model. The model accounted for a significant determination of co-efficient in innovation capabilities ( $R^2 = 0.90$ ), emphasizing the strength of the relationships measured. Furthermore, conditional effects analysis revealed that at lower levels of absorption capacity (-16.65 SD), the outcome of value co-creation on innovation capabilities was notably evident ( $\beta = -0.59$ ,  $p = 0.00$ ), indicating a stronger negative impact. Conversely, at higher levels of absorption capacity (16.65 SD), the impact of value co-creation was moderated ( $\beta = -0.36$ ,  $p = 0.00$ ), indicating a less noticeable negative influence on innovation capabilities. The findings of multiple linear regression revealed that absorption capacity acts as a moderator in the relationship between value co-creation and innovation capabilities, emphasizing or shrinking the impact of value co-creation based on varying levels of absorption capacity within an organization.



## Discussion

This research was intended to examine the relationship between value co-creation, absorption capacity on innovation capabilities. Our study purposed three hypotheses that are positively and significantly related with indigenous (value co-creation), endogenous (innovation capabilities), and moderating variable (absorption capacity). First, the findings revealed that value co-creation has positive and significant impact on innovation capabilities. The idea of innovation can only be active through the effective interaction between customers and organization (Hamidi & Gharneh, 2017). Aluri et al. (2019) found that active value co-creation fosters the integration of knowledge between customers and organizations, thereby stimulating future innovation endeavors. The arrangement of value co-creation factors in enterprise determines innovation capability for expansion of new products (Leclercq et al., 2017). Thus, the creation of

innovation can be achieved through the incorporation of the applicable resources and the effective role of collective networks and dynamic collaboration of value co-creation and innovation capabilities.

Second, the results showed that absorption capacity has positive and significant impact on innovation capabilities. Our results corroborate with the past research findings, indicating that absorptive capacity facilitates the effective utilization of externally acquired information within an organization, thereby enhancing its innovation capability.

An enterprise performance can significantly be increased by successful integration of explicit and implicit information, and how well it is implemented to create new goods and services to strengthen their innovation capability (Dev *et al.*, 2010). Thus, innovation capability can be enhanced by successful integration and implementation of internal and external information through absorptive capacity. Lastly, absorption capacity moderated the relationship between value co-creation and innovation capabilities. The results of our study supported the findings of Mendoza-Silva (2021), that association among internal organizational factor i.e., value co-creation and absorption capacity significantly increases an organizational innovation capability. Firm with advanced absorption capacity to assimilate knowledge (Laumann *et al.*, 1978) and the promotion of value co-creative activities results organizational innovation capability. Thus, absorptive capacity can lead to valuable co-creation and it transforms organizational resources to gain competitive advantage of enhanced innovation capabilities.

## **Conclusion**

This research concludes that value co-creation of hotel and restaurants has a positive outcome on enhancing innovation capabilities. This study uncovered that a stronger focus on value co-creation within the hotel and restaurant industry leads to elevated levels of innovation capability. Furthermore, our findings indicate that absorptive capacity also plays a significant role in driving innovation capability within hotels and restaurants. Furthermore, the findings of our study concluded that absorption capacity acts as a moderator in the relationship between value co-creation and innovation capabilities, emphasizing or shrinking the impact of value co-creation based on varying levels of absorption capacity within hotel and restaurants.

## **Limitations and Future Directions**

The study has a few limitations. First is the social desirability bias in supporting the innovation activities in demographics. Second, the current study is specific to hotel and restaurants of Quetta, City. Different industries providing goods or services may be targeted in future for better validation of value co-creation, absorption capacity and innovation capabilities. Lastly, small sample size and

cross-sectional study were adopted to examine the relationship between value co-creation, absorption capacity and innovation. In future, researcher may examine the behaviors and other approaches that predict the tendencies of individuals, managers and leaders of value co-creation, absorption capacity and innovation capabilities, delving deeper into these constructs could provide valuable insights into their prospective relationships with other constructs.

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