



# A Study on the Impact of Digital Empowerment, Value Co-Creation and Hotel Service Innovation Capability

Simeng Liu <sup>1,\*</sup>, Ruyu Zhu <sup>1</sup>, Huiqi Lu <sup>2</sup>

<sup>1</sup>Changsha Normal University, Changsha, Hunan, 410199, China

<sup>2</sup>Changsha University of Science and Technology, Changsha, Hunan, 410114, China

\*lsmcici@csnu.edu.cn

**Abstract.** Under the wave of the Internet era, big data and cloud computing technology show a rapid development trend, and this wave of technological innovation has prompted digital technology to continuously penetrate deeply into various fields and industries, providing them with powerful empowerment support. This paper focuses on Shenzhen L Hotel as a research case, and on the basis of literature review, systematically combs through the core content of empowerment theory, value co-creation theory and service innovation theory. On this basis, this paper constructs a theoretical model framework of digital empowerment, value co-creation and hotel service innovation capability, aiming to comprehensively explore the hotel service innovation and development path in the digital era, while making corresponding theoretical assumptions. Through SPSS26.0 data analysis, the following key conclusions are drawn: digital empowerment has a significant positive effect on the enhancement of hotel service innovation capability; the level of hotel value co-creation is positively affected by digital empowerment; the enhancement of hotel service innovation capability benefits from the positive role of value co-creation; and value co-creation plays a partly mediating role in the relationship between digital empowerment and hotel service innovation capability.

**Keywords:** digital empowerment; value co-creation; service innovation capability

## 1 Introduction

General Secretary Xi Jinping pointed out that “digital technology is comprehensively integrating into all fields and the whole process of human economic, political, cultural, social and ecological civilization construction with new concepts, new business forms and new modes, bringing a wide and profound impact on human production and life.” As a key link in the tourism industry chain, the hotel industry has a pivotal position in the country's social and economic development. In order to maintain a leading position in this competitive market, advanced information technology such as digitalization has become an indispensable development element for the hotel industry. Taking Shenzhen L Hotel as an example, this paper adopts a questionnaire survey method to study the

© The Author(s) 2024

A. K. Draman Mud et al. (eds.), *Proceedings of the 2024 5th International Conference on Big Data and Social Sciences (ICBDSS 2024)*, Advances in Computer Science Research 116,

[https://doi.org/10.2991/978-94-6463-562-1\\_27](https://doi.org/10.2991/978-94-6463-562-1_27)

role of digital empowerment on the hotel's service innovation capability from the perspective of value co-creation, enhance the cognition of the hotel's digital transformation, promote the co-creation of value of the main body and all parties in the hotel, and provide suggestions for the high-quality sustainable development of the hotel industry.

## **2 Theory and Hypotheses**

### **2.1 Research on the Impact of Digital Empowerment on Value Co-Creation**

Against the backdrop of a booming digital economy, research on how digital empowerment affects value co-creation has gradually deepened. Guo Lin emphasizes that the rapid progress of mobile Internet has completely broken the boundaries of time and space. This has led to the gradual evolution of the traditional marketing approach into a new type of value co-creation model<sup>[1]</sup>. Zhang Hui et al. pointed out that digital technology has also reshaped the spatial and temporal boundaries of consumer participation in consumption to a certain extent. Through the wide application of interactive mobile devices, consumers are able to access information more conveniently and actively participate in innovative production activities<sup>[2]</sup>. Hu Haibo and Lu Haitao point out that digital empowerment is a key force driving the continuous evolution of business ecosystems<sup>[3]</sup>. This evolution further contributes to the transformation of the connotation of co-creation value, and also provides new ideas for enterprises to realize sustainable development in the new economic environment. Accordingly, this study proposes hypothesis:

H1: Digital empowerment has a positive effect on the enhancement of value co-creation capability

### **2.2 Research on the Impact of Digital Empowerment on Service Innovation Capabilities**

The enhancement of service innovation capability by digital empowerment is particularly significant in the field of service innovation performance as well as service innovation. Yang Yong's study reveals the important role of digital empowerment in China's tourism industry, and he points out that digital empowerment promotes the formation of a diversified supply system, which in turn improves the quality and efficiency of the development of the tourism industry<sup>[4]</sup>. Yuan Shuyu et al. suggested that digital empowerment greatly facilitated the improvement of its resource integration capability and promoted the optimization and upgrading of tourism business processes<sup>[5]</sup>. These findings not only reveal the importance of digital empowerment for the development of the hotel industry, but also provide new ideas for the innovation and development of the hotel industry in the context of the new era. Accordingly, this study proposes hypothesis:

H2: Digital empowerment has a positive effect on the improvement of hotel service innovation capability

## 2.3 Research on the Impact of Value Co-Creation on Service Innovation Capability

Value co-creation promotes in-depth interaction and cooperation among all involved parties through effective integration of various resources, so as to jointly create and enhance value. Gao Ting and Zhan Jun studied from the hotel side and the customer side, and the hotel is committed to building a multidimensional communication bridge to jointly promote the optimization and upgrading of services<sup>[6]</sup>. Yu proposed that the key for organizations to stand out in competition is to have scarce, unique and hard-to-imitate resources<sup>[7]</sup>. Bettencourt & Brown pointed out that, in the fierce competition in the service market, the capability to innovate services is of importance is increasingly emphasized<sup>[8]</sup>. As an organizational form with high openness, hotels have a significant impact on the enhancement of hotel service innovation capability by effectively connecting the supply and demand sides and auxiliary subjects, deeply exploring and integrating the advantageous resources of all parties, and at the same time, constructing a multi-party dialogue mechanism in order to strengthen inter-subjective exchanges and cooperation. Accordingly, this study proposes the following hypothesis:

H3: Value co-creation has a positive effect on the enhancement of hotel service innovation capability.

## 3 Research Design

### 3.1 Modeling

Based on an in-depth discussion of the theories of digital enablement (abbreviated DE), value co-creation (abbreviated VC), and service innovation capability (abbreviated SA) and their dimensions, this paper firstly establishes three core sub-dimensions of digital enablement: connectivity (abbreviated CA), intelligence (abbreviated IA), and analytics (abbreviated AA), and sets them as independent variables in the theoretical model. Subsequently, this paper chooses resource integration (abbreviated RC) and interactive cooperation (abbreviated IC) as two key sub-dimensions of value co-creation and sets them as mediating variables in the theoretical model. Finally, the paper takes service innovation capability as the dependent variable in the model. As a result, the following model and theoretical assumptions are derived, as shown in Figure 1:

H1: Digital empowerment has a positive effect on the improvement of hotel service innovation capability

H1a: Linking capability has a positive effect on the enhancement of hotel service innovation capability

H1b: Intelligence capability has a positive effect on the improvement of hotel service innovation capability.

H1c: Analytic capability has a positive effect on the enhancement of hotel service innovation capability

H2: Digital empowerment has a positive effect on the enhancement of value co-creation capability

- H2a1: Connectivity has a positive effect on resource integration.
- H2a2: Connectivity has a positive effect on interaction and cooperation.
- H2b1: Intelligent capability has a positive effect on resource integration.
- H2b2: Intelligence has a positive effect on interaction and cooperation.
- H2c1: Analytical capability has a positive effect on resource integration.
- H2c2: analytic capability has a positive effect on interaction and cooperation.
- H3: Value co-creation has a positive effect on the improvement of hotel service innovation capability
- H3a: Resource integration has a positive effect on the improvement of hotel service innovation capability
- H3b: Interactive cooperation has a positive effect on the enhancement of hotel service innovation capability
- H4: Value co-creation mediates the relationship between digital empowerment and hotel service innovation capability.
- H4a: Resource integration mediates the relationship between digital empowerment and hotel service innovation capability.
- H4b: Interactive cooperation mediates the relationship between digital empowerment and hotel service innovation capability.

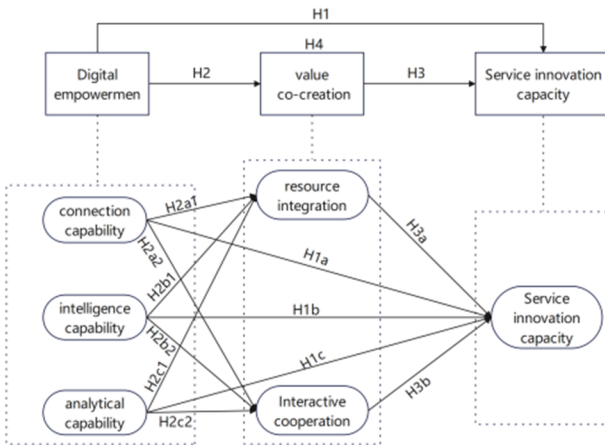


Fig. 1. Diagram of the hypothetical model of the influence path of the graph of each variable

### 3.2 Survey Procedure and Data Collection

In this paper, the questionnaire research was implemented by applying a 7-point Likert scale in conjunction with practical research. The content of the questionnaire consists of two main parts, the first part is the basic information of the respondents, which contains six questions. The second part is the main part of the questionnaire. It consists of 6 questions on the measurement of variables or dimensions. Among them, digital enablement scale mainly refers to the studies of Lenka (2017)<sup>[9]</sup> and others, Wenhui Zhou (2018)<sup>[10]</sup>, and David Zhao (2019)<sup>[11]</sup>, with a total of twelve measurement questions. Value co-creation scale mainly refers to the studies of Gummesson & Mele

(2010)<sup>[12]</sup>, and Deng Yu (2019)<sup>[13]</sup> and others, with a total of eight measurement questions. Service innovation capability scale mainly refers to the studies of Matear, S, Gray & Garrett's (2004)<sup>[14]</sup> and Yan Ning's (2011)<sup>[15]</sup> studies, totaling four question items, as detailed in the following Table 1:

**Table 1.** Sources of questions for this thesis.

| Dimension               | ItemTitle             | Title   | Reference Source                                      |
|-------------------------|-----------------------|---|---|
|                         | connectivity1         | Hotel booking platforms can efficiently match and connect with customers  |   |
|                         | connectivity2         | Hotel digitalization facilitates efficient communication between hotels and customers                                     |   |
|                         | connectivity3         | Hotels have continuous, real-time access to a wide range of data and information both inside and outside the organization |   |
|                         | connectivity4         | Hotels are able to provide port access to other supply chain participants   |   |
| digital enablement      | intelligence1         | Hotels are able to sense or respond to the environment and commands in real time through intelligent facilities           |   |
|                         | intelligence2         | Hotels are able to allocate digital resources dynamically and rationally across departments                               | Lenka(2017)etal <sup>[9]</sup> , Wenhui               |
|                         | intelligence3         | The hotel is able to use information technology to optimize internal management, communication and decision-making        | Zhou(2018) <sup>[10]</sup> , David                    |
|                         | intelligence4         | The hotel is equipped with intelligent identification and sensing devices to provide services to customers.               | Zhao(2019) <sup>[11]</sup>                            |
|                         | analytics1            | Hotels use digital technology to categorize customers and meet their individual needs                                     |   |
|                         | analytics2            | Hotels are able to use digital technology to accurately predict customer preferences and needs                            |   |
|                         | analytics3            | Hotels are able to analyze valuable customers through digital technology  |   |
|                         | analytics4            | Hotels are able to identify potential customers through digital technology  |   |
| value co-creation       | resource integration1 | Digital applications enable hotels to avoid “information silos” across departments in the service delivery process.       |   |
|                         | resource integration2 | Digital applications effectively integrate tangible and intangible resources in the service process                       |   |
|                         | resource integration3 | Digital applications enable hotels to efficiently deploy internal and external resources                                  | Gumesson&Mel  |
|                         | resource integration4 | The hotel is able to update customer data and data from various devices in a timely manner.                               | (2010) <sup>[12]</sup> ,Deng Yu(2019) <sup>[13]</sup> |
| interactive cooperation | cooperation1          | Customers spend a lot of time sharing information such as needs and opinions to the hotel during the service process      |   |
|                         | cooperation2          | Customers' efforts to express their needs to the hotel during the service   |   |
|                         | interactive           | Customers always provide hotels with suggestions to improve   |   |

|                       |                          |  |
|-----------------------|--------------------------|--|
| innovation capability | cooperation3             | the effectiveness of their services  |
|                       | interactive cooperation4 | Customers have a high level of involvement in the hotel service process  |
|                       | innovation capability1   | The hotel encourages new ideas, new business development, and the introduction of new products and services  |
|                       | innovation capability2   | The hotel is able to provide the right environment to promoteMatear,S,Gray employee innovation &Garrett(2004) <sup>[14]</sup>                        |
|                       | innovation capability3   | All departments and employees can work closely together in, Yan the development and implementation of innovative services Ning(2011) <sup>[15]</sup> |
|                       | innovation capability4   | Hotels are happy to reward employees who contribute to service innovation  |

This questionnaire was distributed online from March 2024 to April 2024 to the employees of Shenzhen L Hotel. A total of 350 questionnaires were recovered and 301 questionnaires were valid, with a validity rate of 86%. After excluding the invalid questionnaires, the questionnaire data were analyzed and examined by using SPSS26.0 software.

## 4 Empirical Research

### 4.1 Descriptive Statistical Analysis

Descriptive statistical analysis was carried out using SPSS 26.0 software and Table 2 can be obtained by analyzing the data obtained from the questionnaire with descriptive statistics.

**Table 2.** Descriptive statistics of respondents' basic information.

| Attribute   | Category                  | numbers | Percentage | Attribute          | Category               | numbers | Percentage |
|-------------|---------------------------|---------|------------|--------------------|------------------------|---------|------------|
| Gender      | Male                      | 135     | 44.9       | Job level          | Leader                 | 51      | 16.9       |
|             | Female                    | 166     | 55.1       |                    | Supervisor             | 13      | 4.3        |
| Age         | 18-25 years old           | 59      | 19.6       |                    | Director               | 14      | 4.7        |
|             | 26-35years old            | 136     | 45.2       |                    | More than ten years    | 85      | 28.2       |
|             | 36-45years old            | 71      | 23.6       | Length of practice | 5-10 years (inclusive) | 118     | 39.2       |
|             | 46 years and over         | 35      | 11.6       | 1 year and below   | 14                     | 4.7     |            |
| Educational | Undergraduate             | 145     | 48.2       | Income level       | 1-5 years (inclusive)  | 84      | 27.9       |
|             | High school and below     | 39      | 13.0       |                    | Above 10000RMB         | 34      | 11.3       |
|             | Master's degree and above | 28      | 9.3        |                    | 3000-5000RMB           | 62      | 20.6       |

|           |                                |     |      |               |     |      |
|-----------|--------------------------------|-----|------|---------------|-----|------|
| Job level | Specialized Department manager | 89  | 29.6 | Below 3000RMB | 16  | 5.3  |
|           | Vice President and above       | 5   | 1.7  | 5000-8000RMB  | 118 | 39.2 |
|           | grassroots workers             | 2   | 0.7  | 8000-10000RMB | 71  | 23.6 |
|           |                                | 216 | 71.8 |               |     |      |
|           |                                |     |      |               |     |      |

**4.2 Relicapability Analysis**

Reliability and validity analyses were conducted using SPSS26.0 software on six dimensions of connectivity, intelligence, analytical ability, resource integration, interactive cooperation, and service innovation ability, in which connectivity, intelligence, and analytical ability were mainly referred to the studies of Lenka (2017)<sup>[9]</sup> and others, Wenhui Zhou (2018)<sup>[10]</sup>, and David Zhao (2019)<sup>[11]</sup>, resource integration and interactive cooperation were mainly referred to the studies of Gummesson & Mele (2010)<sup>[12]</sup>, and Deng Yu (2019)<sup>[13]</sup> and others, and the measurement of hotel service innovation ability mainly refers to the studies of Matear, S, Gray & Garrett's (2004)<sup>[14]</sup> and Yan Ning's (2011)<sup>[15]</sup>. According to the Table 3, it can be seen that the survey questions covered by each item effectively and accurately reflect the evaluation objectives of the topic it corresponds to, and each topic can effectively explain each item, so the measurement scale of this questionnaire has high reliability and validity.

**Table 3.** Relicapability and validity analysis.

| Relicapability Analysis         |                      |  |                               | Validity Analysis |                        |   |              | Exploratory Factor Analysis |
|---------------------------------|----------------------|--|-------------------------------|-------------------|------------------------|---|--------------|-----------------------------|
| Dimension                       | Title                | Cronbach's alpha after deletion of terms | Standardized Cronbach's alpha | KMO               | Approximate chi-square | Bartlett's test of sphericity Degree of freedom | Significance | factor loading              |
| connectivity                    | connectivity1        | 0.851                                    | 0.888                         | 0.843             | 652.078                | 6   | 0.000        | 0.805                       |
|                                 | connectivity2        | 0.856                                    |                               |                   |                        |   |              | 0.8                         |
|                                 | connectivity3        | 0.855                                    |                               |                   |                        |   |              | 0.793                       |
|                                 | connectivity4        | 0.852                                    |                               |                   |                        |   |              | 0.814                       |
| digital intelligence enablement | intelligence1        | 0.839                                    | 0.870                         | 0.826             | 571.574                | 6   | 0.000        | 0.775                       |
|                                 | intelligence2        | 0.835                                    |                               |                   |                        |   |              | 0.796                       |
|                                 | intelligence3        | 0.831                                    |                               |                   |                        |   |              | 0.805                       |
|                                 | intelligence4        | 0.833                                    |                               |                   |                        |   |              | 0.778                       |
| analytics                       | analytics1           | 0.836                                    | 0.871                         | 0.834             | 571.254                | 6   | 0.000        | 0.759                       |
|                                 | analytics2           | 0.836                                    |                               |                   |                        |   |              | 0.763                       |
|                                 | analytics3           | 0.839                                    |                               |                   |                        |   |              | 0.802                       |
|                                 | analytics4           | 0.830                                    |                               |                   |                        |   |              | 0.798                       |
| value co-creation               | resource integration | 0.836                                    | 0.875                         | 0.836             | 586.162                | 6   | 0.000        | 0.811                       |

|  |                          |       |       |       |         |   |       |       |
|--|--------------------------|-------|-------|-------|---------|---|-------|-------|
|  | resource integration2    | 0.847 |       |       |         |   |       | 0.779 |
|  | resource integration3    | 0.838 |       |       |         |   |       | 0.784 |
|  | resource integration4    | 0.835 |       |       |         |   |       | 0.831 |
|  | interactive cooperation1 | 0.852 |       |       |         |   |       | 0.824 |
|  | interactive cooperation2 | 0.852 |       |       |         |   |       | 0.807 |
|  | cooperation interactive  | 0.856 | 0.884 | 0.840 | 633.819 | 6 | 0.000 | 0.811 |
|  | cooperation3             | 0.845 |       |       |         |   |       | 0.797 |
|  | cooperation4             | 0.821 |       |       |         |   |       | 0.809 |
|  | innovation capability1   | 0.829 |       |       |         |   |       | 0.769 |
|  | innovation capability2   | 0.834 | 0.865 | 0.824 | 548.900 | 6 | 0.000 | 0.789 |
|  | innovation capability3   | 0.827 |       |       |         |   |       | 0.758 |
|  | innovation capability4   |       |       |       |         |   |       |       |

**4.3 Correlation Analysis**

In this study, Pearson correlation coefficients were analyzed for the study variables using SPSS 26.0 software and the level of significance was assessed by two-tailed test. The results of the analysis are shown in Table 4:

**Table 4.** Correlation analysis of the study variables.

|    | CA     | IA     | AA     | RC     | IC     | SA |
|----|--------|--------|--------|--------|--------|----|
| CA | 1      |        |        |        |        |    |
| IA | .402** | 1      |        |        |        |    |
| AA | .395** | .477** | 1      |        |        |    |
| RC | .406** | .359** | .429** | 1      |        |    |
| IC | .434** | .396** | .356** | .340** | 1      |    |
| SA | .421** | .407** | .452** | .387** | .399** | 1  |

Note: “\*\*\*” indicates a significant correlation at the 0.01 level (two-tailed)

As can be seen from the table, there is a significant positive correlation (at the 0.01 level) between connectivity, intelligence, analysis, resource integration, interaction and cooperation, and service innovation capabilities.



#### 4.4 Regression Analysis

The correlation results derived from the analysis above show that there is a significant correlation between the variables. On this basis, this section uses SPSS26.0 software to further regression analysis of the data so as to test the causal relationship between the variables and to test the hypotheses proposed in this paper. The results of the analysis are shown in Table 5:

**Table 5.** Regression analysis for each study variable.

|  | Independent Variable | Dependent Variable | Adjusted R <sup>2</sup> | B     | Standard error | $\beta$ | t     | Sig   |
|--|----------------------|--------------------|-------------------------|-------|----------------|---------|-------|-------|
| Regression analysis of digital enablement on service innovation capacity | CA                   | SA                 | 0.174                   | 0.4   | 0.05           | 0.421   | 8.015 | 0.000 |
|  | IA                   | SA                 | 0.163                   | 0.399 | 0.052          | 0.407   | 7.706 | 0.000 |
|  | AA                   | SA                 | 0.202                   | 0.457 | 0.052          | 0.452   | 8.774 | 0.000 |
| Regression analysis of value co-creation on Service innovation capacity  | RC                   | SA                 | 0.147                   | 0.383 | 0.053          | 0.387   | 7.251 | 0.000 |
|  | IC                   | SA                 | 0.156                   | 0.386 | 0.051          | 0.399   | 7.514 | 0.000 |
|  | CA                   | RC                 | 0.162                   | 0.39  | 0.051          | 0.406   | 7.679 | 0.000 |
| Regression analysis of digital enablement on value co-creation           | IA                   | RC                 | 0.126                   | 0.355 | 0.053          | 0.359   | 6.645 | 0.000 |
|  | AA                   | RC                 | 0.182                   | 0.438 | 0.053          | 0.429   | 8.224 | 0.000 |
|  | CA                   | IC                 | 0.185                   | 0.427 | 0.051          | 0.434   | 8.320 | 0.000 |
|  | IA                   | IC                 | 0.154                   | 0.401 | 0.054          | 0.396   | 7.455 | 0.000 |
|  | AA                   | IC                 | 0.124                   | 0.372 | 0.056          | 0.356   | 6.590 | 0.000 |

As can be seen from the table, after controlling the relevant variables, all three dimensions of digital empowerment positively affect the hotel service innovation capability ( $R^2=0.174$ ,  $R^2=0.163$ ,  $R^2=0.202$ ,  $\text{Sig}=0.000$ ) therefore the research hypotheses H1, H1a, H1b, and H1c are valid; the resource integration and interaction and cooperation of value co-creating positively affect the service innovation capability ( $R^2=0.147$ ,  $R^2=0.147$ ,  $R^2=0.156$ ,  $\text{Sig}=0.000$ ) therefore hypotheses H3, H3a, H3b hold; digitally-enabled connectivity, intelligence, and analytics positively affect the resource integration of value co-creation as well as interactive cooperation, therefore hypotheses H2, H2a1, H2a2, H2b1, H2b2, H2c1, H2c2 hold.

#### 4.5 Analysis of Mediating Effect of Value Co-Creation

In order to deeply explore the mediating role of value co-creation in the enhancement of digital empowerment on hotel service innovation capability, this section utilizes the Process tool in SPSS26.0 software to test the mediating effect for the two key dimensions of value co-creation - resource integration and interactive cooperation. The results of the analysis are shown in Table 6:

**Table 6.** Results of the analysis of intermediary effects.

| Pathway relationship                                     |          | Total effect |             | Direct effect |             | Indirect effect |             |
|--|----------|--------------|-------------|---------------|-------------|-----------------|-------------|
|  |          | Lower limit  | Upper limit | Lower limit   | Upper limit | Lower limit     | Upper limit |
| Analysis of the mediating effect of resource integration | CA-RC-SA | 0.3019       | 0.4985      | 0.1963        | 0.4043      | 0.0511          | 0.1567      |
|  | IA-RC-SA | 0.2972       | 0.5011      | 0.1970        | 0.4069      | 0.0489          | 0.1558      |
|  | AA-RC-SA | 0.3547       | 0.5598      | 0.2444        | 0.4653      | 0.0527          | 0.1601      |
| Interactive cooperation mediation effect analysis        | CA-IC-SA | 0.3019       | 0.4985      | 0.1850        | 0.3957      | 0.0604          | 0.1669      |
|  | IA-IC-SA | 0.2972       | 0.5011      | 0.1832        | 0.3965      | 0.0631          | 0.1615      |
|  | AA-IC-SA | 0.3547       | 0.5598      | 0.2540        | 0.4648      | 0.0545          | 0.1466      |

From the above table, in the three path relationships CA-RC-SA, IA-RC-SA, AA-RC-SA, none of the total, indirect and direct effects of resource integration contain 0 under the interval, and H4a is assumed to pass. Similarly, in the three path relationships CA-IC-SA, IA-IC-SA, AA-IC-SA, none of the total, indirect, and direct effects of interaction and cooperation contain 0 under the interval, and H4b is assumed to pass.

**4.6 Summary of Research Hypothesis Results**

So far, this paper has conducted a systematic theoretical hypothesis and analysis of the relationship between the three sub-dimensions of digital empowerment, the two sub-dimensions of value co-creation, and the hotel's service innovation capability, and the overall hypothesis testing of the actual situation is presented in Table 7.

**Table 7.** Specifics of theoretical hypothesis testing.

| research hypothesis   | Test results |
|---|--------------|
| H1: Digital enablement has a positive effect on hotel Service innovation capacity enhancement             | valid        |
| H1a: Linking capacity has a positive effect on hotel Service innovation capacity enhancement              | valid        |
| H1b: Intelligent capabilities have a positive effect on hotel Service innovation capacity enhancement     | valid        |
| H1c: Analytical skills have a positive effect on the improvement of service innovation capacity in hotels | valid        |
| H2: Digital empowerment has a positive effect on the capability to co-create value                        | valid        |
| H2a1: Connectivity has a positive effect on resource integration  | valid        |
| H2a2: Connectivity has a positive effect on Interactive cooperation                                       | valid        |
| H2b1: Intelligent capabilities have a positive effect on resource integration                             | valid        |
| H2b2: Intelligent capabilities have a positive effect on Interactive cooperation                          | valid        |
| H2c1: Analytical capability has a positive effect on resource integration                                 | valid        |
| H2c2: Analytical capability has a positive effect on interactive cooperation                              | valid        |
| H3: Value co-creation has a positive effect on hotel Service innovation capacity                          | valid        |

---

|   |       |
|---|-------|
| enhancement   |       |
| H3a: resource integration has a positive effect on the enhancement of service innovation capacity in hotels               | valid |
| H3b: Interactive cooperation has a positive effect on the enhancement of service innovation capacity in hotels            | valid |
| H4: Value co-creation mediates between digital enablement and hotel Service innovation capacity                           | valid |
| H4a: resource integration mediates between digital enablement and service innovation capacity of hotel platforms          | valid |
| H4b: Interactive cooperation mediates between digital empowerment and the service innovation capacity of hotel platforms. | valid |

---

## 5 Discussion

### 5.1 Research Conclusion

Based on the theory of empowerment, value co-creation theory and service innovation capability theory, this paper discusses in depth the specific impact of digital empowerment on hotel service innovation capability. Taking Shenzhen L Hotel as the research object, the data were obtained through questionnaires and analyzed empirically by using SPSS26.0 data analysis software, and the analysis results show that: digital empowerment has a significant positive effect on the enhancement of hotel service innovation capability; the level of value co-creation in hotels is positively affected by digital empowerment; the enhancement of hotel service innovation capability is benefited by the positive role of value co-creation; in the digital empowerment relationship with hotel service innovation capability, value co-creation plays a partially mediating role. Based on the results of the above empirical analysis, countermeasures for the enhancement of hotel service innovation capability are proposed in three aspects: strengthening the construction and application of digital technology; strengthening the integration of key hotel resources; and improving the interactive cooperation mechanism with customers.

### 5.2 Practical Implications

In view of the analysis in the previous chapters and the current reality of the hotel industry, this paper provides the following targeted recommendations for the sustainable development of the hotel: first, strengthen the construction and application of digital technology to accurately grasp customer needs and provide personalized services, which further enhances customer stickiness. Second, strengthen the integration of key hotel resources, through cooperation with other enterprises or organizations, to achieve resource sharing, complementary advantages, and jointly promote the development of the hotel industry. Third, improve the mechanism of interaction and cooperation with customers, through the establishment of a membership system with cus-

tomers and the introduction of preferential activities, hotels are able to attract more loyal customers and realize a win-win situation with customers.

## References

1. Guo Lin. Marketing strategy in the internet era based on the perspective of value co-creation[J]. *Research on Business Economy*,2017(09):54-56.
  2. Zhang Hui, Yi Jinbiao, Xu Jianxin. Research on the spatial spillover effect of digital economy on regional innovation efficiency--Based on the perspective of factor marketization allocation[J]. *Securities Market Herald*,2022(07):13-22.
  3. HU Haibo, LU Haitao. Research on value co-creation in the evolution of enterprise business ecosystem - a digital empowerment perspective[J]. *Economic Management*,2018,40(08):55-71.
  4. Yang Y. Has the Internet promoted the dynamic optimization of tourism industry? [J]. *Economic Management*,2019,41(05):156-170.
  5. Yuan Shuyu, Chen Yang. Upgrading and optimization of new tourism industry structure under "Internet+"[J]. *Business and Economic Research*,2017(10):186-188.
  6. Gao Ting, Zhan Jun. Research on business model innovation of video websites under the perspective of value co-creation--Taking LeTV and Youku as an example[J]. *Management Modernization*,2017,37(04):36-38.
  7. Yu W, Chavez R, Jacobs A M, et al. Data-driven supply chain capabilities and performance: a resource-based view[J].*Transportation Research Part E*. 2018,114:371-385.
  8. Bettencourt A L, Brown W S. From goods to great: service innovation in a product-dominant firm[J].*Business Horizons*,2013,56(3):277-283.
  9. Lenka S, Parida V, Wincent J. Digitalization Capabilities as Enablers of Value Co-Creation in Servitizing Firms[J].*Psychology & Marketing*,2017,34(1):92-100.
  10. ZHOU Wenhui, DENG Wei, CHEN Lingzi. Research on data empowerment for value co-creation process of platform enterprises based on dropshipping[J]. *Journal of Management*,2018,15(08):1110-1119.
  11. ZHAO Dawei, JING Aiping. Research on dynamic value co-creation process of online travel service under the perspective of data empowerment[J]. *Business Research*,2019(04):22-30.
  12. Gummesson E, Mele C. Marketing as Value Co-creation Through Network Interaction and Resource Integration[J].*Journal of Business Market Management*,2010,4(4):181-198.
  13. Deng Yu. A Study of the Impact of Resource Integration on Breakthrough Innovation - The Moderating Role of Alliance Partner Competition[J]. *Management Review*,2019,31(11):71-79.
  14. Tony G J B G S M. Market orientation, brand investment, new service development, market position and performance for service organizations[J].*International Journal of Service Industry Management*,2004,15(3):284-301.
  15. Yan Ning. A study of the relationship between team culture, knowledge sharing and service innovation--a case study of high-star hotels in Fujian Province[J]. *Journal of Beijing Second Foreign Language Institute*,2011,33(03):56-64+55.
- Guo Lin. Marketing strategy in the internet era based on the perspective of value co-creation[J]. *Research on Business Economics*,2017(09):54-56.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

