

# Value Co-Creation of Cultural Tourism Enterprises' Service Ecosystem in Digital Transformation: -- Case Study of Digital Shaanxi Tourism Group

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**Abstract:** This study focuses on how cultural tourism enterprises promote value co-creation in service ecosystems with the help of digital technology, taking digital Shaanxi tourism as the research object for case analysis, and exploring the evolution mechanism of value co-creation in tourism service ecosystem under the context of digital transformation by using the grounded method. It is found that digital technology plays an important facilitating role throughout the value co-creation process, coordinates the layout of multiple subjects in the system, and promotes resource sharing, which can improve the frequency and precision of demand communication and achieve cost reduction and efficiency. The market is a key factor influencing the value co-creation of the service ecosystem of cultural tourism enterprises, and plays a role of precision, coordination and adaptability from the bottom up, driving the integration of customer value, platform value and system value. This paper provides new theoretical insight into the evolutionary mechanism of value co-creation of cultural tourism enterprises' service ecosystem in digital transformation and provides an important practical reference for cultural tourism enterprises to improve their viability and strengthen their resilience.

**Keywords:** Digital transformation, Cultural tourism enterprise service ecosystem, Value co-creation, Shaanxi Tourism Group.

## 1 INTRODUCTION

With the gradual spread of a new generation of information technologies represented by SMACIT (the convergence of social and mobile media, analytics, cloud and IOT), inter-organizational data sharing, scenario-based instant applications, and large-scale data applications have become possible. The technology application of cultural tourism enterprises has thus evolved from mere information transfer to value transfer and value creation. However, the digital transformation of cultural tourism enterprises generally faces challenges such as weak technology transformation ability, the insufficient resonance between digital technology and demand, deficient innovation in publicity and communication, and lack of compound talents with high digital literacy.

In recent years, the research field of value co-creation is no longer limited to binary and network relationship perspectives and the multi-interest subject's diversified interactions in the

service ecosystem perspective have become the focus of scholars and business practices <sup>[18]</sup>, and researchers have begun to pay attention to the systematic value creation orientation among multi-participants, proposing that value co-creation embedded in micro, meso and macro structure levels is a resource integration process <sup>[9]</sup>. Existing studies on value co-creation in service ecosystems have mainly conducted useful discussions in terms of interaction structures and facilitation conditions <sup>[22]</sup>, but the impact of social environment and tourism demand transformation on tourism value co-creation is underappreciated.

The development from simple value interactions to complex and diversified service ecosystems in the tourism field is the inevitable path, and future competition in the cultural tourism market will further evolve into a competition between ecosystems. However, most of the existing studies are reviews based on theoretical deduction, while empirical studies based on enterprise practice are still lagging. Given this, this paper adopts the case study approach and selects Shaanxi Tourism Group as a case study object to explore how the ever-emerging and evolving digital intelligence technology can promote the value co-creation and evolution of the cultural tourism enterprise service ecosystem at various levels and stages, to realize the activation and enhancement of its viability. To answer the above questions, this paper constructs a theoretical analysis framework of "Value proposition, Value network reconstruction and Co-creation value realization", deconstructs the evolution mechanism of value co-creation in the service ecosystem of cultural tourism enterprises in the digital context, and compensates for the existing literature to a certain extent.

## **2 LITERATURE REVIEW**

### **2.1 Digital transformation of cultural tourism enterprises**

In the early stage, the digital transformation application of cultural tourism enterprises mainly relied on the Internet to provide tourism information and book tourism products and services online. However, in the new era, cultural tourism enterprises are more concerned about the agility of responding to market demands and the intellectual support of enterprises adapting to market development, promoting the digital trend of production <sup>[12]</sup>, experience <sup>[1]</sup> and service mode <sup>[23]</sup>. The quality and efficiency of services provided by cultural tourism enterprises will be improved and new vitality of the cultural tourism industry will be stimulated through new forms and models such as product intelligence <sup>[10]</sup>, marketing precision <sup>[19]</sup>, personalized demand <sup>[17]</sup> and online enterprise services <sup>[4]</sup>.

At the same time, the COVID-19 pandemic has also forced cultural tourism companies to accelerate their online and digital transformation and upgrade to adapt to market changes. However, in general, the current research on the digital transformation of cultural tourism enterprises is mostly limited to performance improvement and business expansion, and the research on the business model and organizational structure reform needs to be in-depth, and there is a lack of empirical research rooted in cultural tourism enterprises.

### **2.2 Value co-creation studies in service ecosystems**

The value co-creation in service ecosystems includes the dynamic evolution of micro, meso and macro levels <sup>[3]</sup>, focusing mostly on the multi-level interactive structure <sup>[21]</sup>, regime and

market roles in value co-creation, where diverse participants agents are connected through direct or indirect relationships, and the same value proposition becomes the basis for participants to establish new connections <sup>[11]</sup> and carry out value creation to achieve the desired outputs <sup>[14]</sup>. In the context of digitalization, digital technology is an important driving force for value co-creation, as it reshapes the value co-creation of innovative subjects in the service ecosystem, increasingly participating in interactive value creation as non-human participants, and converging previously dispersed demands and experiences across spatial boundaries to digital platforms <sup>[13]</sup>. However, few existing studies have discussed the changes in the value co-creation formation mechanism of the service ecosystem based on enterprise perspective in the digital context, and the multi-agent composition and interaction among the agents need to be further explained.

### **2.3 Value co-creation in tourism**

The concept of service-oriented logic provides a new direction for tourism development, with the realization of the important impact of co-creation and even co-destruction brought by information technology, studies have explored social media interactions <sup>[16]</sup>, co-creation behaviors <sup>[15]</sup>, and tourism strategies developed with the participation of web users <sup>[7]</sup>. For cultural tourism enterprises, promoting value co-creation requires building a co-creation platform, improving its ease of use, aesthetic experience, and trust and thus influencing tourists' fit behavior <sup>[22]</sup>; identifying value-added links for customer participation at each stage of the value chain and designing co-creation approaches and contents <sup>[8]</sup>, but the value co-creation process in the field of tourism is a black box that needs to be continuously explored, and there is currently insufficient attention to the position and role of the cultural tourism enterprise in the value co-creation process, the impact of shifts in the social environment and tourism demand characteristics on tourism value co-creation has not been fully paid attention to.

## **3 RESEARCH DESIGN**

### **3.1 Research methods and case selection**

This paper adopts the case study method <sup>[20]</sup>, selects cases through the theoretical sampling method <sup>[6]</sup>, and takes into account the availability and typicality of case data. And the grounded theory and coding analysis methods <sup>[2]</sup> are used to conduct an in-depth analysis of the research process. The cooperation among related enterprises in the Digital Shaanxi Tourism network has typical dynamic evolution characteristics, which meet the research conditions of the service ecosystem.

Shaanxi Tourism Group is one of China's earliest cultural tourism groups to practice digital transformation, with a complete industrial chain, prominent comprehensive effect, and extensive influence. In 2020, Shaanxi Tourism Group built the industry's first "Digital Cultural Tourism Lab", which became the incubation base for digital projects. In early 2022, Shaanxi Yuanjing Digital Innovation Technology Co., LTD. (hereinafter referred to as "Yuanjing Digital Innovation") was established to further explore the application scenarios and build the industrial ecology. In December 2022, Shaanxi Tourism Group was awarded "Top 20 Chinese Tourism Groups" for three consecutive years. At present, almost all mainstream technology

and media support enterprises have cooperation with Shaanxi Tourism.

**Table 1:** Case study business information

Main business area	Enterprise or institution
Digital cultural tourism creative content application services	Digital Cultural Tourism Lab / Shaanxi Yuanjing Digital Innovation Technology Co., Ltd
Tourism complexes/scenic spots	Huaqing Palace (C1), Bailuyuan Studios (C2), Holy Valley · Golden Yan 'an (C3), Silk Road Paradise (C4), Four Seas Chinatown (C5), Golden Tourism City · Window of Sports (C6)
Tourism Services	Juntu Tourism Network (C7), The Tang Dynasty, Xi 'an(C8), Taihua Ropeway (C9), Shaanxi Tourism Group Overseas Trade Co., Ltd (C10), Shaanxi Yunshang Boutique Hotel Management Co., Ltd. (C11)
Technical support	Alibaba (C12), Tencent (C13), Huawei (C14), BlackBow (C15)
Media support	Bytedance (C16)
Channel Support	Ctrip (C17), Meituan (C18)
Market Positioning Support	Hilton (Hotel) (C19), Moma (Marriage) (C20)
Content Creation Support	Broadway Entertainment (C21), Taiko Studios (C22)

### 3.2 Data sources and data collection

This paper combines primary and secondary data and uses triangulation to ensure that the research data are interactively supplemented and verified by multiple information sources. The sources and quantities of data are shown in Table 2.

**Table 2:** Case data sources

Data type (code)	Main sources	Duration /Article
Interview transcripts (D1)	Shaanxi Tourism Group Management (M1-10), Project Manager (P1-8)	18 hours
Field observation records (D2)	Enterprise/Scenic area site	22
Website News Reports (S1)	Official websites of Shaanxi Tourism Group & Other enterprises, mainstream media	1166
Research Reports (S2)	Shaanxi Travel Group Digital Transformation White Paper, 2017-2021 Social Responsibility Report	5
Conference Materials (S3)	2020 Shaanxi Tourism Group Digital Creativity Conference, "Heart Follow Shaanxi Tourism to Win the Future" Investment promotion Conference, etc.	3
Core Journal Literatures (S4)	CNKI	5

### 3.3 Data coding and analysis

#### 3.3.1 Open coding

This study obtained 425 items of secondary data. Through open coding, 51 initial concept labels (N1-N51) were obtained, including 42 high-frequency concepts (HN1-HN42). Combining similarity concepts yields 28 subcategories. Table 3 shows examples of open coding at different levels in this study.

**Table 3:** Examples of opening coding

Examples of items	Conceptual construction
Huaqing Palace combines AR, visual intelligence algorithms, and other technologies, creating the scenery mentioned in the poem, allowing visitors to have a "dream back to the Tang Dynasty" participation experience.	HN1 Storytelling
Yongcun Hotel started to analyze the needs of different regions and types of guests from online booking, and actively implemented and continuously tracked them.	HN3 Living service
The "Shaanxi Travel high GO" live broadcast room focuses on Shaanxi Tourism's special resources and local special products, providing visitors with more intuitive and preferential access to product information and enabling consumers to participate in activities.	HN5 Live interact
Huaqing Palace has explored a "micro-innovation to patent" value cashing model to transform quality achievements into brand assets and converts the innovation technology accumulated in the process of tourism quality management into brand assets.	HN25 Copyright manage
The successful holding of the 14th Games has brought a strong brand radiation effect to the Shaanxi International Sports Window, and the surrounding business district and sports clusters have accumulated a great atmosphere and resources. Since the birth of Hi Metaverse, it has insisted on technology empowerment and is committed to excavating the spiritual connotation of cultural resources, making the platform an important carrier for the general public to enhance cultural self-confidence.	HN27 Leveraging empower HN40 Develop traditional culture

#### 3.3.2 Spindle coding

By analyzing the organic correlation of the meanings of 28 sub-categories, this paper further gets the corresponding main categories (Table 4).

**Table 4:** Examples of spindle coding

Main category	Level	Associated sub-category
A Value proposition	1 micro	A1a In-depth experience; A1b Interactive marketing; A1c Fine service; A1d Intelligent management
	2 meso	A2a Partner matching; A2b Industry identification; A2c Enterprise vision
	3 macro	A3a Opportunity recognition; A3b Mission commitment; A3c Demand of the Times
		B1a Demand communication; B1b Demand matching; B1c Resource optimization
B Value network reconstruction	1 micro	B2a Resource reproduction; B2b Resource integration;
	2 meso	

C Co-creation value realization	3 macro	B2c Data centralization B3a Strategic cooperation; B3b Capability element Integration; B3c Overall layout
	1 micro	A3a Data understanding; A3b Data resources; A3c Demand creation
	2 meso	B3a Operation standardization; B3b Brand appreciation; B3c Data visualization
	3 macro	C3a Social benefit enhancement; C3b Cultural benefit enhancement; C3c cultural tourism consumption upgrade

### 3.3.3 Selective coding

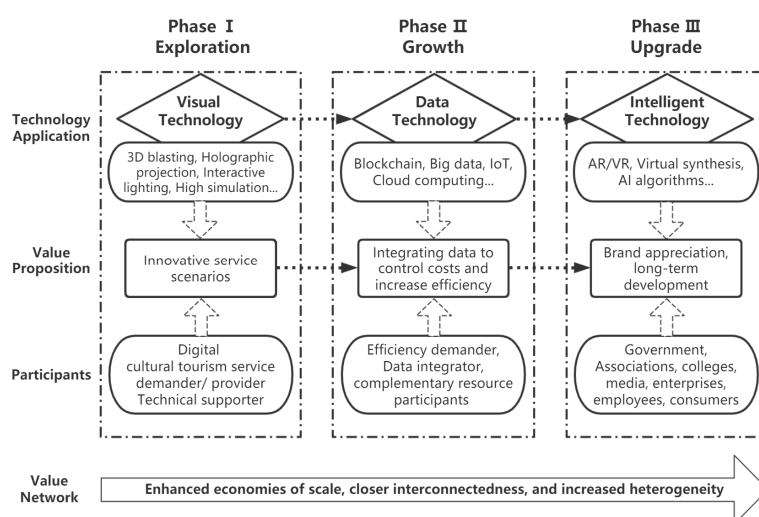
By continuing to examine the 9 main categories and 27 associated sub-categories, repeatedly comparing the original data records, the core category of "value co-creation of cultural tourism enterprises' service ecosystem in digital transformation" was extracted, and through matching, interaction and fusion, the precision, coordination and adaptability of cultural tourism enterprises were improved, the value of the customer, platform and system is realized, and the next round of value co-creation activities was paved and supported.

**Table 5:** Selective coding

Level	Canonical relation	Key phenomenon
Micro	Proposition ↓ Precision	Novel and intelligent sensory experience brings more efficient and intimate fine service.
	Reconstruction↓ Matching Realization ↓ Customer value	Use digital technology to precisely communicate and match enterprises, employees and consumers. Use data resources to meet customers' customized and diversified digital consumption needs.
	Proposition ↓ Coordination	Establish a co-creation platform to further promote industry chain resources and business synergy.
	Reconstruction↓ Interaction Realization ↓ Platform value	Revitalize idle resources, integrate online and offline traffic, and realize data interoperability. Create a standardized system to promote cooperation and symbiosis, and support intelligent decision-making.
Meso	Proposition ↓ Adaptation	Leverage the situation by identifying opportunities and proactively responding to the development of the needs of the times.
	Reconstruction↓ Fusion Realization ↓ System value	Integrate the elements of system capacity, make overall plans, and fusion intelligent business. Through supply-side structural reform, demand-side management maximizes benefits.

## 4 CASE ANALYSIS

This paper adopts the case study method, focuses on the constantly upgrading technologies to empower the service ecosystem of cultural tourism enterprises, and divides the service ecosystem with Shaanxi Tourism Group as the core into three phases, which can be successful because it transforms the original operation mode, continuously innovates to create value propositions, emphasizes the depth of experience and service refinement, and coordinates the participation and interaction of multiple subjects, especially heterogeneous subjects, drives the synergy, sharing and reconstruction of resource elements in the service ecosystem of cultural tourism enterprises, and achieve the win-win and all-win of multiple subjects. This section will deeply analyze the construction process of the model and elaborate on the evolution of value co-creation of Shaanxi Tourism Group's service ecosystem under digital transformation.



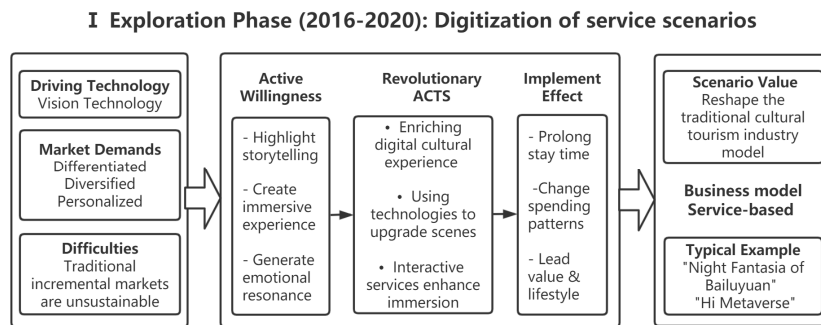
**Figure 1.** Value co-creation evolution process of cultural tourism enterprise service ecosystem in digital transformation

### 4.1 Phase I: Exploration

To meet the in-depth experience needs of indigenous people in the digital era, the value proposition of "innovative service scenarios" is proposed, focusing on immersive experience business and cultivating market-recognized products and services. In the context of a recurrent epidemic, Shaanxi Tourism also actively carries out self-rescue by trying to develop "small but beautiful" projects, and the scope of application has gradually spread from the initial performances to exhibitions, secret rooms, live broadcasts, blocks, amusement parks, and other scenes.

Since 2016, from "Northern Expedition Memorial" and "Red Detachment of Women" to "Night Fantasia of Bailuyuan" and "Hi Metaverse", Shaanxi Tourism Group has seized market opportunities, deeply perceived the real needs of tourists, continuously used emerging technologies to fully mobilize tourists' senses, satisfied or even created tourists' experience

needs, effectively extended tourists' stay time by changing their consumption patterns, and obtained the recognition of young tourists in terms of values and lifestyle through in-depth interaction, thus created new value for participants within the system. In the context of a recurrent epidemic, Shaanxi Tourism also actively carries out self-rescue by trying to develop "small but beautiful" projects, and the scope of application has gradually spread from the initial performances to exhibitions, secret rooms, live broadcasts, blocks, amusement parks, and other scenes.



**Figure 2.** The first phase of the Value co-creation evolution process

However, due to the imperfect cognition of digital cultural tourism on the demand side, the limited application scenarios of digital technology, the immature management and operation practices of the supply side, and the monitoring of effects have not yet formed a widely recognized evaluation, Shaanxi Tourism Group's overall organizational efficiency and management mode also need to be rapidly upgraded in the digital era, and the core participants promote the cultural tourism service ecosystem to the second stage in the exploration aimed at solving the above issues.

#### 4.2 Phase II

In the context of the epidemic, the demand of cultural tourism enterprises to reduce operation and maintenance costs has become increasingly urgent, and barriers between business units have become the biggest obstacle to the utilization of data resources. Therefore, Shaanxi Tourism Group puts forward the value proposition of "integrating data, controlling costs, and increasing efficiency", mines and applies data, breaks business silos, and promotes the integration of online and offline processes, making the system data interworking while focusing on improving data security strategies to ensure data security. With the accumulation of data assets, Shaanxi Tourism Group has a broader range of data fusion, forming a data interface to connect with external partners, and establishing a data fusion and sharing mechanism.



## II Growth Stage (2020-2021) : Digitalization of platform management

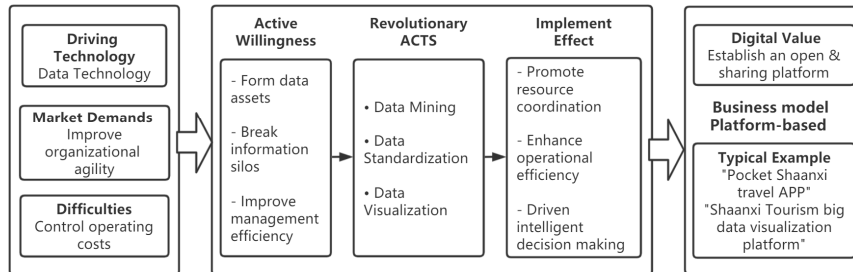


Figure 3. The second phase of the Value co-creation evolution process

Since 2020, Shaanxi Tourism developed a big data visualization platform, launched Pocket Shaanxi Travel APPs and applets, realized office automation, online business, data standardization, and intelligent management, improved organizational efficiency and internal collaboration capability, strengthened project supervision, to respond the needs of the market, customers and employees timely. However, long-term development requires sustainable competitive advantages through innovative business models and brand appreciation, which places higher demands on marketing accuracy, market agility, and adaptability to the times. How to gain insight into the key trends of the cultural tourism industry, deliver information more efficiently and accurately and implement optimal strategies? It has become the driving force for Shaanxi Tourism Group to promote the next iteration of the service ecosystem.

### 4.3 Phase III

Shaanxi Tourism Group's media center provides one-stop analysis and operation, insight into market demand, intelligent scheduling, fine delivery, and real-time interaction with online consumers, puts forward the value proposition of "brand appreciation and long-term development", and strengthens resilience capacity building to maximize benefits. In the third phase of the value network reconstruction process, the accumulation of data assets in the earlier stage has formed a digital product matrix, generating scale effects, and building a 1+N ecosystem.

## III Upgrade Phase (2021 to present): Digitalization of marketing ecology

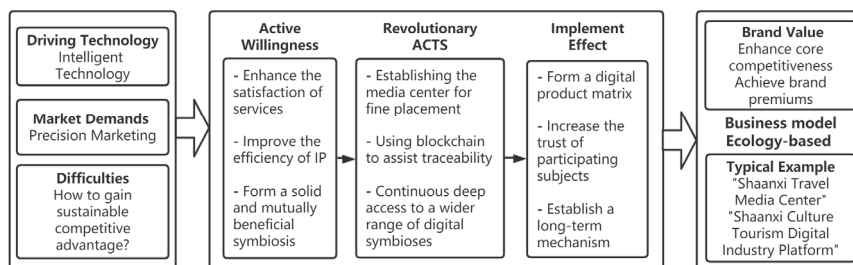


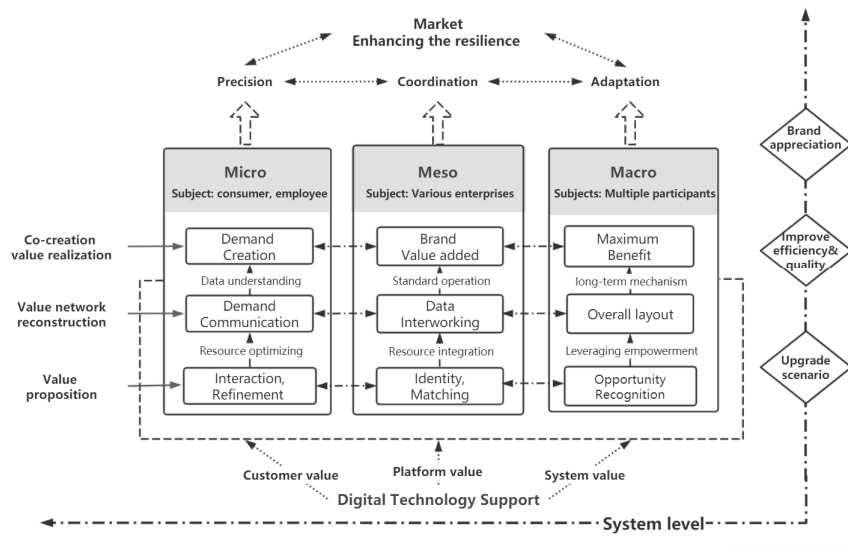
Figure 4. The third phase of the Value co-creation evolution process

In 2021, Shaanxi Tourism Group together with Ant Technology Group established the first national cultural tourism digital industry platform, launched the "Cloud Shaanxi Travel" super APP, and opened the "Shaanxi Travel High GO" live studio, which attracted widespread attention. In addition, Huaqing Palace Scenic Area of Shaanxi Tourism won the "2021 National Copyright Demonstration Unit" also represents that the group's awareness of intellectual property has been further strengthened, which will help to improve the trust of all participants in the system, stimulate the enthusiasm for value co-creation, establish a long-term mechanism, and form a stable mutually beneficial and symbiotic relationship. However, there are also some hidden questions, such as: Does intelligent technology violate the privacy rights of tourists? Are cultural tourism enterprises able to support changes and strengthen system implementation capabilities in the long term? Based on theoretical logic and existing practice, it is believed that blockchain technology and the cultivation of high-quality digital cultural tourism talents will become the enabling power for the next stage. The blockchain-based integration platform can effectively enhance the trust, security and transparency of the cultural tourism industry. Meanwhile, it is also necessary to establish a talent guarantee mechanism and perfect the digital cultural tourism talent training system to help achieve high-quality and sustainable development of the cultural tourism industry.

## 5 CONCLUSION AND PROSPECT

### 5.1 Conclusions

Based on the case analysis of Shaanxi Tourism Group, this study extracts the evolutionary mechanism of value co-creation of the cultural tourism enterprise service ecosystem in digital transformation (Figure 2). Based on this model, the following main conclusions are drawn.



**Figure 5.** Evolutionary mechanism of value co-creation of cultural tourism enterprise service ecosystem in digital transformation

Digital technology, as a facilitator, supports the value co-creation of the whole process at all levels of the cultural tourism enterprise service ecosystem. At the macro level, digital technology connects multiple subjects including government agencies, industry associations, universities and colleges, media and the public, etc., and each participant maximizes the benefits through the overall layout. At the meso level, digital technology plays a role in connectivity, transcends the traditional boundary between platforms and enterprises, integrates assets, management, industrial chain and other capability elements, and promotes the integration and symbiosis of online and offline. At the micro level, digital technology transforms data into resources, improving the breadth and precision of demand matching among cultural and tourism enterprises, employees and consumers. In the digital environment, digital technology connects scattered subjects, demands, resources and data, coordinates the participation and interaction of multiple subjects, especially heterogeneous subjects within the system, promotes cost reduction and efficiency increase, and drives the coordination, sharing and reconstruction of resource elements within the service ecosystem of cultural tourism enterprises.

In the context of digital transformation, the market is an important promoting factor for value co-creation in the service ecosystem of cultural tourism enterprises. At the micro level, based on customer-oriented demand communication and matching, cultural tourism enterprises create new consumer demand and usher in new market opportunities. At the meso level, cultural tourism enterprises do a good job in partner selection and resource coordination, establish an integrated platform based on the principle of the open system, and realize the enhancement of platform value while transforming the cultural tourism business model. At the macro level, cultural tourism enterprises identify important opportunities to comply with the market development trend and drive the digital upgrading of the cultural tourism consumption market. The market breaks through the micro, meso and macro level boundaries to play a precise, coordinated and adaptive role respectively, gradually realizing the integration of customer value, platform value and system value, agilely responding to market demand, and ultimately strengthening the resilience of cultural tourism enterprises.

## **5.2 Practical Inspiration**

At present, the impact of COVID-19 on China's society and economy is still ongoing. Exploring the constitutive dimension and evolutionary mechanism of multi-level value co-creation in the service ecosystem of cultural tourism enterprises is helpful to clarify the vague understanding of value creation in the complex system structure, dissect the changes of key elements such as subjects, relationships and resources in the system, and provide a practical reference for decision-makers to promote digital transformation.

(1) Strengthen the top-level design, improve the agile response-ability to the market, and deeply grasp the development trend of "diversification, interaction, precision, quality" of the cultural tourism market. (2) Attach importance to the coordinating role of the cultural tourism enterprise service ecosystem platform, stimulate all kinds of innovation subjects to actively integrate into the ecosystem, and allocate innovation resources reasonably and efficiently. (3) Attach importance to the transmission role of digital technology. Through the intelligent interconnection of data, the adaptive digital enabling mechanism is introduced to assist scientific decision-making, and digital technology will strengthen the multi-sensory enjoyment of cultural travel experience, and enhance the interest and attraction of cultural travel products

and services.

### 5.3 Research limitations and outlook

This paper focuses on the evolutionary mechanism of value co-creation in Shaanxi Tourism Group up to 2022, and future research can lengthen the time dimension to discuss the dynamic evolutionary mechanism of value co-creation in the service ecosystem from a longer-term perspective. Furthermore, the practice of change based on emerging digital intelligence technologies is generally in the exploration stage, in the future, it is still necessary to track new innovative case practices, and multi-case analysis can be carried out based on the development practices of other advanced cultural tourism groups, and the mechanism of deep integration of cultural tourism industry and digital economy can be explored from the aspects of organizational structure reform and external utility verification.

## REFERENCES

- [1] Bec, A., Moyle, B., Timms, K., Schaffer, V., Skavronskaya, L., & Little, C. (2019). Management of immersive heritage tourism experiences: A conceptual model. *Tourism Management*, 72, 117-120..
- [2] Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, 13(1), 3-21.
- [3] Chandler, J. D., & Vargo, S. L. (2011). Contextualization and value-in-context: How context frames exchange. *Marketing theory*, 11(1), 35-49.
- [4] Chiang, C. T. (2020). Developing an eMarketing model for tourism and hospitality: a keyword analysis. *International Journal of Contemporary Hospitality Management*.
- [5] Dickinson, J. E., Hibbert, J. F., & Filimonau, V. (2016). Mobile technology and the tourist experience:(Dis) connection at the campsite. *Tourism management*, 57, 193-201.
- [6] Glaser, B. G., & Strauss, A. L. (2017). *The discovery of grounded theory: Strategies for qualitative research*. Routledge.
- [7] González, I. O., Camarero, C., & Cabezudo, R. S. J. (2021). SOS to my followers! The role of marketing communications in reinforcing online travel community value during times of crisis. *Tourism Management Perspectives*, 39, 100843.
- [8] González-Mansilla, Ó., Berenguer-Contrí, G., & Serra-Cantalops, A. (2019). The impact of value co-creation on hotel brand equity and customer satisfaction. *Tourism Management*, 75, 51-65.
- [9] Leal, F., Malheiro, B., Veloso, B., & Burguillo, J. C. (2020). Responsible processing of crowdsourced tourism data. *Journal of Sustainable Tourism*, 29(5), 774-794.
- [10] Lim, C., Mostafa, N., & Park, J. (2017). Digital omotenashi: Toward a smart tourism design systems. *Sustainability*, 9(12), 2175.
- [11] Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28(6), 1129-1157.
- [12] Mathew, V., & Soliman, M. (2021). Does digital content marketing affect tourism consumer behavior? An extension of technology acceptance model. *Journal of Consumer Behaviour*, 20(1), 61-75.
- [13] Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital Innovation Management: Reinventing innovation management research in a digital world. *MIS quarterly*, 41(1).
- [14] Ramaswamy, V., & Ozcan, K. (2018). Offerings as digitalized interactive platforms: A

conceptual framework and implications. *Journal of Marketing*, 82(4), 19-31.

[15] Shen, H., Wu, L., Yi, S., & Xue, L. (2020). The effect of online interaction and trust on consumers' value co-creation behavior in the online travel community. *Journal of Travel & Tourism Marketing*, 37(4), 418-428.

[16] Sigala, M. (2015). Gamification for crowdsourcing marketing practices: Applications and benefits in tourism. *Advances in crowdsourcing*, 129-145.

[17] Van, H. T., & Hieu, V. M. (2020). Travel branding in tourism 4.0: case study Vietnam travel. *Journal of Asian and African Studies*, 55(6), 896-909.

[18] Vargo, S. L., Wieland, H., & Akaka, M. A. (2015). Innovation through institutionalization: A service ecosystems perspective. *Industrial Marketing Management*, 44, 63-72.

[19] Vázquez Loaiza, J. P., Pérez-Torres, A., & Díaz Contreras, K. M. (2019). Semantic icons: A sentiment analysis as a contribution to sustainable tourism. *Sustainability*, 11(17), 4655.

[20] Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). sage.

[21] Yoo, Y., Boland Jr, R. J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for innovation in the digitized world. *Organization science*, 23(5), 1398-1408.

[22] Zhang, H., Gordon, S., Buhalis, D., & Ding, X. (2018). Experience value cocreation on destination online platforms. *Journal of Travel Research*, 57(8), 1093-1107.

[23] Zheng, W., Liao, Z., & Lin, Z. (2020). Navigating through the complex transport system: A heuristic approach for city tourism recommendation. *Tourism Management*, 8, 104162.