

Cultural Digitization and IP Empowerment: Analysis of Commercialization Pathways and Economic Benefits of Yongchun Bamboo Weaving

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Abstract: Against the backdrop of advancing digital strategies and the rise of national trend consumption, traditional craftsmanship faces new opportunities for modern transformation. Yongchun bamboo weaving, as an important cultural heritage, has been constrained by practical challenges such as fragmented production scales, insufficient product innovation, and narrow market channels. Driven by the dual forces of cultural digitization and IP empowerment, this paper primarily explores how Yongchun bamboo weaving can achieve a leap in commercial value and analyzes the economic benefits it brings. This study mainly employs literature analysis and case study methods to dissect the current state and core bottlenecks of the Yongchun bamboo weaving industry, further elucidating how cultural digitization and IP design can collaboratively facilitate the creative transformation of cultural resources and drive the economic performance of bamboo weaving-related products. Based on this, the study devises a phased commercialization implementation pathway and conducts simulated analysis and evaluation of its potential direct and indirect economic benefits. The conclusions of this study not only provide a specific roadmap for the sustainable development of Yongchun bamboo weaving but also offer valuable insights for the commercial development of similar cultural projects and the innovation of craftsmanship economic models in the digital age.

Keywords: Digitization; IP empowerment; Yongchun bamboo weaving; Economic benefits

Online publication: April 16, 2026

1. Introduction

Under the intertwined waves of globalization and digitalization, the cultural industry has emerged as a pivotal engine driving high-quality economic development and enhancing a nation's soft power. Currently, leveraging digital technology for the creative transformation and innovative development of cultural heritage has been elevated to an unprecedented strategic level. We should follow this macro policy orientation, break down barriers between cultural undertakings and the cultural industry, and unleash the immense economic and social value

embedded in China's excellent traditional culture ^[1]. Meanwhile, the cultural confidence of emerging consumer groups is growing, demonstrating strong enthusiasm for "national trend" products that combine aesthetic value, emotional resonance, and cultural identity. This trend provides a vast market for the revival and commercialization of traditional craftsmanship.

The traditional bamboo weaving technique in Yongchun County, Fujian Province, China, embodies regional culture and exquisite craftsmanship. However, it faces multiple bottlenecks in industrial ecology, product forms, marketing strategies, and skill inheritance. This study takes the bamboo weaving technique in Yongchun County as an example to explore how cultural digitization and IP design can empower the commercialization path of traditional craftsmanship, transforming static cultural heritage into dynamic industrial assets and achieving a new leap forward, while also providing universal demonstrative significance for other traditional craftsmanship projects.

Currently, few studies deeply integrate cultural digitization, systematic IP empowerment, micro-level craftsmanship commercialization path design, and economic benefit evaluation, failing to clearly reveal the intrinsic synergistic mechanism among digital technology, IP logic, and business model. This study attempts to explore how digitization and IP empowerment drive the transformation and upgrading of traditional craftsmanship industries in the digital economy era, feasible commercialization paths and their design, and the expected comprehensive economic benefits they will bring.

2. Literature review and theoretical foundations

2.1. Cultural digitization

The concept and connotation of cultural digitization have undergone continuous deepening and expansion. Initially, cultural digitization was primarily understood as a technological means, with the core objective of collecting, archiving, and permanently preserving digital information of precious and perishable cultural heritage ^[2]. With the comprehensive penetration of digital technology, the connotation of cultural digitization began to expand into broader dimensions. Scholars started to focus on how to leverage the interactivity, immersion, and boundlessness of digital media to innovate the presentation and dissemination of cultural content. For example, using virtual reality and augmented reality technologies to construct immersive historical scenes, enabling audiences to transcend temporal and spatial boundaries and deeply interact with cultural heritage, significantly enhancing the attractiveness and effectiveness of cultural education and dissemination.

At the current stage, the core of cultural digitization lies in value reengineering and creation. Digitization is not merely a tool for preservation and dissemination but has become a core driving force for innovation in the cultural industry and business model transformation. Research indicates that digital transformation empowers the cultural industry through multiple paths, including optimizing production processes and accurately discerning market demands ^[3]. During this process, cultural resources are transformed into editable, reconfigurable, and tradable digital assets. For Yongchun bamboo weaving, its unique weaving techniques and intricate pattern systems can be converted into high-quality digital assets, laying a solid foundation for subsequent commercial development.

2.2. IP empowerment

The theory of IP empowerment provides a core logical framework and methodology for realizing the commercial

value of cultural resources. A successful cultural IP represents a highly unified entity of content, personality, and symbols, having inherent popularity, possessing a loyal fan community, and having the potential to continuously create commercial value.

The process of IP empowerment is essentially a systematic value amplification process, typically deconstructed into several key links. The first is contentization or storytelling, which involves deeply excavating the historical context, humanistic spirit, legendary stories, and craftsman sentiments embedded in cultural resources and transforming them into narrative content that can evoke emotional resonance among the public. The second is personification, which endows the IP with distinct, anthropomorphic personality traits, facilitating emotional connections with users in the social media era. The third is symbolization, which involves extracting simple, unique, and easily recognizable visual identifiers or mascot images from complex cultural elements and constructing a complete visual identification system, which is crucial for establishing brand recognition in the market. The final step is productization and industrialization, which involves injecting the value of the IP into diversified products, services, and experiences, forming a multi-layered product matrix, and achieving a leap from single product sales to multi-dimensional value realization^[4]. By creating an IP, consumers are no longer purchasing just a bamboo basket or ornament but the story, cultural spirit, and lifestyle behind it. The transition from selling products to selling culture and then to selling experiences is the inevitable path for traditional craftsmanship to break through price ceilings and enter the mid-to-high-end consumer market.

2.3. Commercialization of traditional craftsmanship

Early research primarily focused on the product level, aiming to enhance the market competitiveness of handicrafts through improved design and quality. It emphasized the integration of traditional craftsmanship with modern design trends to develop innovative products that retain traditional charm while meeting contemporary aesthetic demands and new market needs. As research deepened, scholars realized that the commercialization of craftsmanship goes beyond product innovation and involves a systematic project encompassing channels, marketing, branding, and experience. The handmade warmth and craftsmanship spirit embedded in handicrafts make them naturally suited for integration with experiential consumption.

In recent years, with the rise of the platform economy, research on the commercialization of craftsmanship has begun to focus on business model innovation and industrial ecosystem construction. Platform strategies empower numerous dispersed craftsmanship practitioners, enhancing the synergistic effects and overall competitiveness of the entire regional industry.

2.4. Literature review

Research on cultural digitization reveals how technology can inject new vitality into traditional craftsmanship, while the theory of IP empowerment provides the core logic for marketizing cultural value. Studies on the commercialization of craftsmanship point out multiple paths for industrial upgrading. However, these studies have largely developed in parallel, lacking organic integration. Existing research often treats digitization, IP-ization, and commercialization as parallel options or tools, failing to deeply analyze the logical chain and synergistic mechanism among them.

This constitutes the core entry point of this study. This research attempts to place cultural digitization, IP empowerment, and commercialization path design under a unified analytical framework, where digitization serves as the infrastructure, IP-ization acts as the value engine, and commercialization is the ultimate outlet. Taking

Yongchun bamboo weaving as an example, this study aims to provide an integrated solution with both theoretical depth and practical guidance for the modern transformation of traditional craftsmanship.

3. Research design

3.1. Research framework

This study first conducts field research on the Yongchun bamboo weaving industry, analyzing the bottlenecks and pain points it faces in production, design, marketing, branding, and other aspects. Moreover, based on existing literature, a dual-drive theoretical model is constructed, grounded in cultural digitization and empowered by IP development. This model elucidates the internal mechanism by which the two synergistically reshape the value of traditional craftsmanship, serving as the theoretical core of the research. Under the guidance of this theoretical model and combined with insights from case studies, a set of commercialization implementation paths tailored to Yongchun bamboo weaving is designed. Finally, a comprehensive analysis and evaluation of the potential economic and social benefits of the designed paths are conducted, representing the value proposition of this study.

3.2. Data sources

The primary qualitative data for this study is derived from in-depth interviews. By visiting provincial-level inheritors of Yongchun bamboo weaving, a comprehensive understanding of the industry's ecosystem is obtained, including its current production and management status, skill inheritance and innovation, market perception and channels, as well as views and practices regarding digital transformation and the understanding and application of the IP concept.

Additionally, this study collects information on the history and current status of Yongchun bamboo weaving through channels such as government websites and local chronicles. Meanwhile, to draw on successful experiences, a variety of exemplary cases in IP creation and traditional craftsmanship commercialization both domestically and internationally are selected. Systematic information on IP strategies, product development, and marketing models is gathered to provide references for the path design of Yongchun bamboo weaving.

3.3. Analytical methods

This study conducts textual analysis and concept refinement on the interview content to summarize the current development status of the Yongchun bamboo weaving industry. Furthermore, a comparative case analysis method is employed to construct a unified analytical dimension framework, encompassing IP positioning, product strategies, channel strategies, and communication strategies. This framework enables a systematic comparison and summarization of different cases, summarizing the commonalities and exemplary model characteristics of successful cases. Simultaneously, the similarities and differences in resource endowments and development stages between these cases and Yongchun bamboo weaving are analyzed to ensure the applicability of the borrowed experiences.

4. Industrial status and commercialization bottlenecks of Yongchun bamboo weaving

Through field research on the Yongchun bamboo weaving industry and observations of existing products and markets, the factors constraining the development of Yongchun bamboo weaving are identified.

4.1. Current industrial ecosystem

The industrial ecosystem of Yongchun bamboo weaving exhibits typical characteristics of traditional craftsmanship. In terms of organizational form, the industry is fragmented, with family-based workshops dominating, leading to difficulties in unifying production standards and effectively integrating resources. Regarding the product system, the product line is relatively rigid, consisting mainly of traditional daily utensils with practical functions and decorative handicrafts. In terms of sales channels, there is a strong reliance on traditional paths. The vast majority of bamboo-woven products are still sold through offline physical stores, with most practitioners lacking online operational capabilities and having monotonous marketing discourse. Regarding brand building, Yongchun bamboo weaving has low recognition in the national market, with inconsistent product quality and diverse design styles, failing to form stable and high-end brand associations.

4.2. Diagnosis of core bottlenecks

4.2.1. The innovation bottleneck

The product design of Yongchun bamboo weaving is relatively outdated, with a lack of internal innovation capabilities and mechanisms within the industry. Craftsmen possess superb skills but have limited market perspectives, making it difficult for them to take the initiative in innovation. External designers, lacking understanding of bamboo weaving techniques, find it challenging to implement their design plans. Most practitioners lack innovation motivation, leading to severe product homogenization and compressed profit margins.

4.2.2. The market bottleneck

Currently, the customer base of Yongchun bamboo weaving is narrow, relying heavily on tourism channels and lacking brand loyalty. It has failed to establish effective channels and discourse systems to reach young mainstream consumer groups. Yongchun bamboo weaving has not derived personalized consumer products and lacks a voice in emerging consumption scenarios.

4.2.3. The benefit bottleneck

Due to low product added value, a narrow market, and weak brand premium capabilities, the overall profit level of the industry is generally low. Low benefits may lead to talent drain, which further weakens the industry's innovation capabilities and development potential, resulting in low-level industry development.

5. Theoretical construction of cultural digitization and IP empowerment

This study proposes a dual-drive theoretical model combining cultural digitization and IP design empowerment, viewing the two as an interdependent and mutually promoting organic whole with inherent logical connections. Cultural digitization aims to construct the digital new infrastructure necessary for industrial transformation and upgrading, providing basic materials and technological platforms for value creation ^[5]. IP empowerment, on this basis, serves as the core new engine for value growth, transforming cultural resources into commercially competitive assets. The synergy between the two can drive Yongchun bamboo weaving to achieve a value leap from traditional craftsmanship to a modern cultural industry.

The essence of the dual-drive model lies in the close linkage and virtuous cycle between the two wheels. Without digital deconstruction of techniques and the construction of a pattern library, the extraction of IP symbols

and product design would be without a source. Without digital communication channels, the stories of IPs would struggle to reach a wide audience. Through the synergy of the two, the value chain of Yongchun bamboo weaving is reshaped. It is no longer a traditional industry merely producing functional handicrafts but evolves into a modern cultural industry capable of continuously creating story-rich cultural commodities, immersive emotional experiences, and strongly recognizable brand symbols.

This process is essentially a closed loop of value co-creation: digitization creates new possibilities, IP-ization amplifies cultural value, and the success of commercialization, in turn, feeds back into the industry, providing financial support for higher-level digital construction and IP operations, driving the entire industrial ecosystem to ascend in a spiral manner.

6. Commercialization path design and economic benefit analysis

6.1. Commercialization path design

Based on the aforementioned theoretical analysis and incorporating insights from interviews on the current state of the Yongchun bamboo weaving industry, this study has designed a phased implementation path for commercialization. The entire commercialization process is divided into three stages as follows:

- (1) Digital initiation and IP design incubation period, expected to last 1–2 years;
- (2) IP design deepening and market expansion period, expected to last 2–3 years;
- (3) Ecosystem construction and platformization period.

The core objective of the first stage is to digitally archive the core techniques and representative works of Yongchun bamboo weaving, focusing on 1–2 specific stories for in-depth exploration and creative interpretation to design cultural and creative products. The core objective of the second stage is to enrich the IP system, expand product lines and market reach, emphasizing diversified product development, actively seeking collaborations, and transforming simple product consumption into cultural experience spaces. The core objective of the third stage is to construct a bamboo weaving industry ecosystem and establish an industry collaboration service platform. Through these three stages of progressive development, Yongchun bamboo weaving will gradually transform from a dispersed, traditional handicraft industry into an organized, branded, and ecologically oriented modern cultural industry.

6.2. Economic benefit analysis

From the perspective of direct economic benefits, they are primarily reflected in revenue growth and cost optimization. On the one hand, product upgrades create room for product premiums, while the expansion of marketing methods and sales channels leads to increased sales volume, thereby boosting industry revenue. On the other hand, digital technologies shorten product development cycles, reduce design costs, and the development of a platform model also lowers sales costs, resulting in cost optimization.

From the perspective of indirect economic benefits, the revitalization of the bamboo weaving industry will drive the development of the local bamboo industry and also stimulate the coordinated development of a series of related industries such as packaging design, printing, warehousing and logistics, and cultural tourism. Meanwhile, industrial transformation and upgrading will create job opportunities, attract talent backflow, and inject vitality into the industry.

7. Conclusion

Through in-depth analysis, theoretical construction, path design, and benefit analysis of the Yongchun bamboo weaving industry, this study demonstrates that cultural digitization and IP empowerment serve as the core driving forces for breaking through development bottlenecks and achieving value leapfrogging. This study summarizes the bottlenecks faced by Yongchun bamboo weaving in terms of innovation, market, and benefits, constructs a theoretical framework jointly driven by cultural digitization and IP design, designs a three-stage commercialization development path, and demonstrates the economic benefits that can be generated through this path. Looking ahead, Yongchun bamboo weaving will transform from static artifacts into captivating stories, design languages, and vibrant cultural spaces. This commercialization path represents not only the revitalization of an industry but also the rebirth of ancient civilization in modern society.

Funding

Education Research Project for Young and Middle-aged Teachers in Fujian Province (Project No.: JAT231285)

Disclosure statement

The author declares no conflict of interest.

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