ECOLOGICAL EVOLUTION AND STRATEGIC INNOVATION: A STUDY OF SHANGHAI'S MICRO-DRAMA INDUSTRY IN THE ALGORITHMIC ERA*

Yiming Wang[1] and Prakaikavin Srijinda[2]

[1-2]**College of Communication Arts,**

Suan Sunandha Rajabhat University, Thailand

Corresponding Author's Email: Prakaikavin.sr@ssru.ac.th

Received 15 June 2026; Revised 19 June 2026; Accepted 21 June 2026

Abstract

This research article aims to: 1) evaluate the impact of industrial ecosystem elements (policy, technology, competition) on Shanghai's micro-drama industry performance; 2) explore the mechanisms of symbolic narrative strategies in constructing cultural identity; and 3) propose a strategic framework for ecological restructuring. This study conducted a mixed-methods research study collecting data from 451 (428 survey respondents and 23 interviewees) people; analyze the data using regression analysis, Structural Equation Modeling (SEM), and thematic analysis.

The research results found that:

1) Policy support (β=0.38) and technological maturity (β=0.29) exert significant positive influences on industrial performance, while market competition (β=−0.20) has a significant negative impact.

2) Symbolic narrative strategies play a crucial mediating role between

Citation:

* Yiming Wang and Prakaikavin Srijinda. (2026). Ecological Evolution And Strategic Innovation: A Study Of Shanghai's Micro-Drama Industry In The Algorithmic Era. Modern Academic Development and Promotion Journal, 4(5), 467-485.; DOI: https://doi.org/10.

https://so12.tci-thaijo.org/index.php/MADPIADP/

policy resources and cultural influence, though a risk of "semiotic alienation" exists among non-local audiences.

3) Cross-boundary integration (e.g., micro-drama + tourism/branding) and a "boutique" quality-first model are essential for sustainable innovation and overcoming the "involution" of the algorithmic era.

Keywords: Haipai Culture, Micro-Drama, Algorithmic Era, Strategic Innovation, Media Ecology

Introduction

Entering the third decade of the 21st century, the global digital media ecosystem has experienced a profound paradigm shift driven by rapid technological breakthroughs. These advancements—specifically in 5G connectivity, mobile ubiquity, and Artificial Intelligence Generated Content (AIGC)—have fundamentally reconfigured the production, distribution, and consumption of narrative media. A pivotal manifestation of this evolution is the emergence of micro-dramas: a specialized genre of short-form video content designed for mobile-first engagement, typically spanning from several seconds to ten minutes. By integrating traditional storytelling with the high-velocity consumption habits of the algorithmic era, micro-dramas offer immediate gratification and immersive experiences tailored for fragmented viewing schedules.

In China, this format has achieved industrial dominance via platforms like Douyin and Kuaishou, which leverage sophisticated recommendation engines to compress narrative arcs into hyper-engaging segments. This rapid ascent reflects an evolving media ecology where audiences prioritize content that is both accessible and algorithmically resonant. Shanghai, as a primary hub of "Haipai Culture," is uniquely positioned to spearhead this sector. The city’s historical depth and cosmopolitan urbanity provide a fertile landscape for

blending heritage with digital innovation. However, Shanghai's micro-drama industry faces a dual challenge: navigating exorbitant production costs while adhering to platform logics that prioritize viral pacing over artistic depth. Consequently, creators must balance the preservation of local cultural identity with the broad, competitive appeal required for success in a saturated digital market.

Furthermore, the industry is currently undergoing a critical ecological transition from a volume-driven expansion to a value-oriented consolidation. In this algorithmic era, the competitive landscape has shifted; survival no longer depends solely on rapid output but on the strategic integration of cultural depth with technological precision. As regulatory frameworks tighten and audience expectations mature, the need for a "quality-first" evolution becomes paramount. This shift necessitates a structural re-evaluation of how Shanghai can leverage its unique Haipai identity and AIGC capabilities to pioneer sustainable innovation models, ensuring that the micro-drama ecosystem thrives beyond short-term traffic gains toward long-term cultural and economic vitality.

Objectives

1. To evaluate the impact of industrial ecosystem elements, such as policy support, technological advancements, and market competition, on the performance of Shanghai's micro-drama industry.

2. To explore the mechanisms and effects of symbolic narrative strategies in constructing cultural identity in Shanghai's micro-dramas, both locally and across regions.

3. To propose a framework for ecological restructuring and strategic innovation, focusing on how Shanghai's micro-drama industry can achieve long-term sustainability and innovation.

Literature Review

1. Digital Media Ecology Theory: Exploring how technological environments shape human behavior and content visibility.

2. Semiotics and Narrative Strategy: Focusing on the construction of meaning through "Haipai" cultural symbols and the Encoding/Decoding model.

3. Cultural Identity Theory: Examining the negotiation between local heritage and global digital trends (Hybridity and Third Space).

Methodology

This study adopts a mixed-methods approach. The quantitative phase involved a survey of 428 industry practitioners. The qualitative phase consisted of 23 semi-structured in-depth interviews with industry experts, including producers and platform managers.

Quantitative Research: This approach was used to assess the overall impact of industrial ecosystem elements, such as policy support, technological innovation, market competition, and capital investment, on the performance of Shanghai's micro-drama industry. A survey questionnaire was administered to a large sample of industry practitioners to quantify their perspectives on these factors. Statistical techniques, including regression analysis, were applied to identify correlations and causal relationships between the variables.

Qualitative Research: To provide a deeper, more contextualized understanding of the micro-drama industry, semi-structured in-depth interviews were conducted with industry experts, such as producers, directors, platform managers, and content creators. The interviews focused on gaining insights into how symbolic narratives are constructed, how Shanghai's Haipai culture is represented, and how industry professionals adapt their strategies in response to technological advancements and market pressures.

This mixed-methods design allows for a more robust exploration of the research questions, integrating the broad statistical findings from the survey with the more nuanced, context-rich data from interviews.

The population for this study consists of individuals who are directly involved in Shanghai's micro-drama industry. These individuals represent a range of roles within the industry, including content creators, producers, directors, platform operations personnel, and consumers of micro-drama content. The research sample was selected to provide a diverse and representative view of the industry's ecosystem.

1. Practitioners (Industry Participants):

The primary sample consists of professionals who work in the production, distribution, and management of micro-dramas. This group includes:

Screenwriters: Those responsible for writing scripts for micro-dramas.

Directors and Producers: Individuals overseeing the production process.

Platform Managers: Employees working with platforms like Douyin (TikTok) and Kuaishou who manage content distribution.

Investors and Marketers: Individuals involved in the financial and marketing aspects of micro-drama production.

2. Audience:

In addition to industry practitioners, the study also targets audiences who consume micro-drama content. These audiences are from different regions—both within Shanghai and other parts of China—offering a cross-regional perspective on how Shanghai micro-dramas are received and interpreted by different cultural groups. The aim is to explore how cultural identity is constructed through micro-dramas and how audiences interpret these cultural symbols.

3. Sample Size:

Quantitative Sample (n=428): Validated through a power analysis (G*Power) to ensure sufficient statistical strength for regression modeling.

Qualitative Sample (n=23): Semi-structured interviews were conducted with key stakeholders, including directors and platform managers, until data saturation was reached.

The research instruments developed for this study include both quantitative surveys and qualitative interview guides. These instruments were designed to gather data on the key variables identified in the research questions, such as policy support, technological innovation, market competition, and cultural identity.

1. Survey Questionnaire

The survey was developed to measure practitioners' perceptions of the factors affecting industrial performance. The questionnaire consists of several sections:

Policy Support: Items to assess how government policies and funding initiatives (e.g., Shanghai's 50-million-yuan fund) impact micro-drama production.

Technological Innovation: Items to explore the adoption of new technologies such as Artificial Intelligence Generated Content (AIGC), virtual production tools, and their effects on production efficiency and content quality.

Market Competition: Items to measure the level of competition between Shanghai and other micro-drama hubs (e.g., Xi'an, Hengdian) and its impact on cost control and creative decision-making.

Cultural Identity: Items that address how practitioners incorporate Shanghai's Haipai culture into their micro-drama content and the perceived importance of maintaining cultural authenticity.

The survey uses a Likert scale (1 to 5) for most questions, where respondents rate their agreement with various statements about the industry's ecosystem.

2. In-depth Interviews

The interview guide was semi-structured, allowing for flexibility in the discussion while ensuring that key topics were addressed. The interviews aimed to explore the following themes:

Symbolic Narrative Strategies: How do micro-drama creators incorporate Haipai cultural symbols into their narratives? How do these symbols resonate with both local and non-local audiences?

Technological Adaptation: How do practitioners balance the use of new technologies, such as AI and virtual production, with the need to maintain high-quality, culturally authentic content?

Market Adaptation: How do industry professionals adapt their production strategies to compete in a market that is driven by algorithmic recommendation systems? What strategies do they use to maximize viewership while staying true to cultural narratives?

The interviews were audio-recorded, transcribed, and analyzed thematically.

Results

Descriptive analysis shows an "elite" workforce (90% with bachelor's degrees or higher). Regression results confirm that Policy Support is the strongest driver (β=0.38), while Market Competition is the main barrier (β=−0.20). Technological maturity significantly aids efficiency but requires "algorithmic awareness" to succeed.

1. Descriptive Analysis of Respondents and Industry Profile

Before examining the core hypotheses, a comprehensive descriptive statistical analysis was performed to delineate the demographic characteristics of the respondents and the structural underpinnings of Shanghai's micro-drama industry. The 428 valid questionnaires collected reflect a workforce that exhibits distinct "elite" characteristics, which significantly differentiates Shanghai from other production hubs in China.

Data indicates that more than 90% of industry practitioners hold a bachelor's degree or higher, with an impressive 46% possessing a master's or doctoral qualification. This educational profile suggests that Shanghai's micro-drama sector is not merely a labor-intensive manufacturing field but a knowledge-intensive industry driven by high-level intellectual capital. In terms of age distribution, the vast majority of respondents fall within the 25 to 40-year-old bracket. This demographic trend indicates that the industry is dominated by a young, digitally native, and professionally trained workforce that is uniquely equipped to navigate the complexities of the algorithmic era. This robust talent structure provides a critical human capital foundation for Shanghai to pursue a "quality-first" development trajectory rather than a volume-driven, low-cost model.

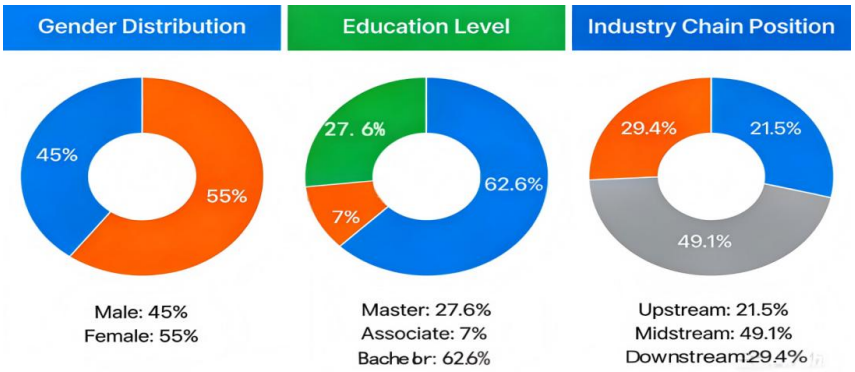


Figure 1 Demographic Characteristics of Respondents

From an occupational perspective, the sample includes a diverse array of roles, such as screenwriters, directors, producers, platform operation personnel, MCN managers, and brand marketing specialists. This multi-dimensional composition reflects the cross-functional and interdisciplinary nature of the micro-drama industry, which necessitates the seamless integration of cultural production, technological operation (AIGC), and commercial logic. Compared with traditional production bases such as Hengdian or Xi'an, which focus heavily on the physical manufacturing of audiovisual content, Shanghai demonstrates a stronger orientation toward "creative concentration" and "strategic integration." The city serves as an intellectual hub where narrative strategy and cross-industrial fusion are prioritized over mere throughput.

2. Ecological Status of Shanghai's Micro-Drama Industry

Descriptive statistics reveal that Shanghai's micro-drama ecosystem presents a distinctive and paradoxical pattern, characterized by the coexistence of significant institutional advantages and severe structural constraints. This ecological status is analyzed through three primary dimensions:

First, Policy Support received a high mean score (M = 4.12), indicating strong recognition of Shanghai's institutional framework. Practitioners specifically value regulatory clarity, financial subsidies, and specialized industry funds, which provide a "stabilizing mechanism" amidst algorithmic volatility. Qualitative data confirm that these interventions are essential for long-term project planning and mitigating the risks inherent in the digital media market.

Second, Technological Maturity, particularly regarding AIGC integration, also scores highly. Practitioners acknowledge that AI-driven tools—ranging from scriptwriting to intelligent post-production—have revolutionized efficiency and helped offset Shanghai's high operational costs. The city's competitive edge lies in its "tech-creative" workforce, capable of seamlessly synthesizing algorithmic logic with traditional Haipai storytelling.

However, Market Competition pressure scores the highest (M = 4.38), highlighting a state of intense "involution." Escalating labor costs and the hyper-competitive nature of traffic acquisition on major platforms have significantly compressed profit margins. This reveals the core contradiction of Shanghai's ecosystem: while the city enjoys superior policy and technological conditions, it faces immense pressure in cost control and traffic-driven rivalry. This paradoxical structure—"high policy support + high technological maturity + high competitive pressure"—forms the fundamental background for the study's subsequent strategic analysis.

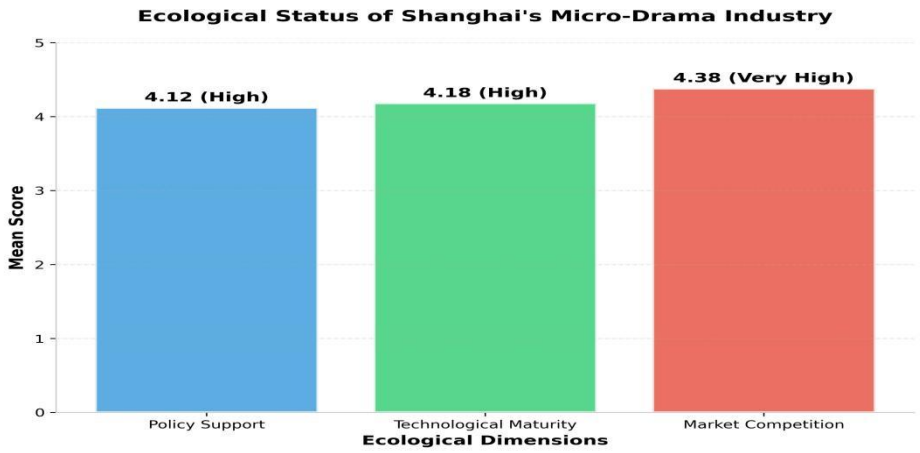


Figure 2 Mean Scores of Ecological Factors

3. Hypothesis Testing and Quantitative Results

To rigorously evaluate the relationships between industrial ecological factors and sector performance, this study employed Multiple Regression and Structural Equation Modeling (SEM). These analytical techniques allow for a nuanced understanding of how external drivers—policy, technology, and competition—interact with Shanghai's micro-drama ecosystem in the algorithmic era.

Policy Support and Industrial Performance. The quantitative results indicate that Policy Support exerts a significant positive influence on the performance of Shanghai's micro-drama industry (β=0.38,$p<0.001$). This finding reinforces the premise that government intervention is a critical catalytic force in the evolution of emerging cultural sectors. In Shanghai, this support is manifested through financial subsidies and a robust regulatory framework that protects intellectual property and encourages high-quality output.

However, qualitative interview data suggest that the efficacy of policy is conditional rather than automatic. Several industry experts emphasized that policy resources only generate tangible cultural and economic value when they are successfully transformed into high-quality content through sophisticated narrative strategies. This implies that while policy support provides a necessary "resource buffer," it functions primarily as an enabling condition. Its ultimate success depends on the ability of practitioners to navigate the tension between regulatory compliance and the creative experimentation required for digital innovation.

Technological Maturity and Economic Performance. Technological maturity, specifically the integration of AIGC tools, demonstrates a significant positive correlation with economic performance indicators, such as production efficiency and cost reduction. The data(β=0.29, $p<0.001$) show that teams utilizing AI for scriptwriting and virtual production are able to compress development cycles significantly. However, a more granular analysis reveals a moderating effect of algorithmic adaptability.

This phenomenon reflects what this study identifies as the "technology–algorithm paradox": technological advancement alone does not guarantee market success unless it aligns with platform logic. Practitioners who possess strong "algorithmic awareness"—an understanding of completion rate optimization, pacing control, and precise tag strategies—are far more likely to

convert technological efficiency into actual financial returns. Conversely, teams that rely solely on AIGC for volume without adjusting to the recommendation engines of platforms like Douyin often fail to gain sufficient exposure. This highlights the necessity of a holistic strategy that balances AI-driven efficiency with a deep understanding of algorithmic distribution.

Market Competition and Sustainable Development. In contrast to policy and technology, Market Competition shows a significant negative impact on industry performance (β<-0.20,p<0.001). This result confirms that excessive, homogeneous competition—often referred to as "involution"—undermines the sustainable development of the ecosystem. In an environment dominated by traffic-gambling and low-price strategies, profit margins are rapidly eroded, forcing some creators to sacrifice narrative quality for clickbait.

For the Shanghai market, these results carry profound strategic implications. Competing purely on production speed or sensationalism places Shanghai at a distinct disadvantage compared to lower-cost production hubs. Therefore, the negative effect of market competition reinforces the necessity of a "differentiation strategy." To survive in the algorithmic era, Shanghai's micro-drama industry must pivot away from volume-driven rivalry and toward strategic innovation, focusing on high-value Haipai cultural narratives and cross-industrial fusion to create unique market positioning that is resilient to price-based competition.

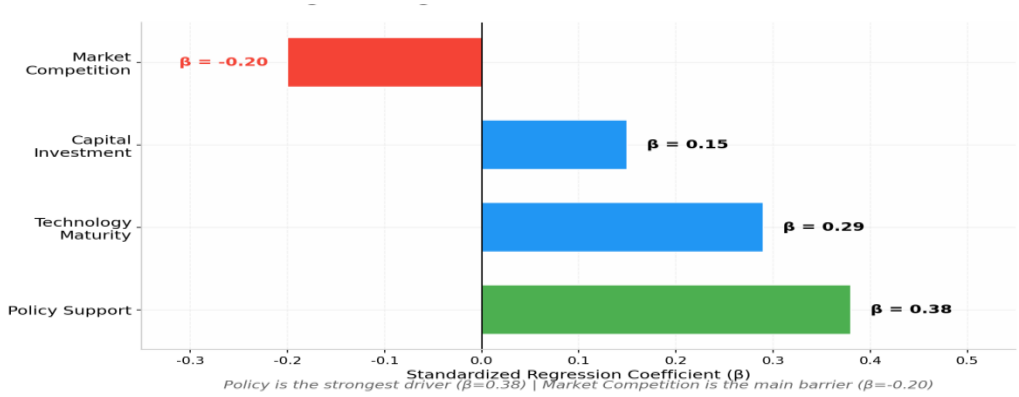


Figure 3 Multiple Regression Results

Discussion

The findings identify a "technology–algorithm paradox" where advancement alone doesn't guarantee success. Symbolic narratives are essential to transform policy into "soft power," yet creators must balance "surface symbols" with "deep symbols" to avoid cultural stereotyping

1. Symbolic Narrative Strategies and Cultural Identity Construction

Quantitative results show that the overall mean value of Symbolic Narrative Strategy (SNS) is relatively high (M = 4.02), indicating that Shanghai micro-drama creators possess strong symbolic consciousness. Commonly used symbols include urban landmarks, workplace culture, dialect fragments, fashion aesthetics, and narratives of modern urban life.

Mediation analysis further confirms that symbolic narrative strategies play a significant mediating role between policy support and cultural influence. This means that policy resources do not directly translate into cultural soft power; instead, they must be encoded into symbolic narratives to be recognized and internalized by audiences.

Qualitative interviews deepen this finding. Many creators explicitly distinguish between “surface symbols” (visual landmarks, accents, costumes)

and “deep symbols” (values, lifestyle, modern identity). Interviewees emphasize that excessive reliance on surface symbols risks stereotyping Shanghai, while deep symbolic encoding allows audiences to emotionally identify with the city’s spirit.

2. Semiotic Alienation and Cross-Regional Communication

Despite the high level of symbolic awareness, the study identifies persistent problems of semiotic alienation, particularly in cross-regional dissemination.

Non-local audiences may misinterpret Haipai symbols as elitist, materialistic, or overly commercialized. This misreading weakens cultural identification and may even generate resistance. As a result, creators increasingly adopt hybrid narrative strategies, combining Shanghai-specific elements with universally resonant themes such as family ethics, personal growth, and emotional redemption.

This strategy aligns with Bhabha’s concept of cultural hybridity, where local identity is not diluted but reconfigured through negotiation with external audiences.

3. Cross-Boundary Integration and Business Model Innovation

One of the most significant findings of this study is the role of cross-boundary integration in improving innovation performance.

Shanghai micro-drama companies increasingly shift from a single “C-end payment model” to diversified models such as:

Micro-drama + brand customization

Micro-drama + cultural tourism

Micro-drama + urban IP marketing

Brand customization, in particular, demonstrates strong potential. By integrating storytelling with brand narratives, micro-dramas are transformed from content products into marketing services, reducing dependence on unstable traffic income.

However, cultural tourism integration remains underdeveloped. Interview data suggest that the main obstacle lies in the lack of effective online–offline conversion mechanisms, indicating future opportunities for AR/VR and immersive technologies.

4. Integrated Discussion: Toward an Ecological Reconstruction Logic

Synthesizing the quantitative and qualitative findings, this study identifies a three-layer mechanism shaping Shanghai's micro-drama industry:

Environmental Layer: Policy support and technology provide structural opportunities, while market competition imposes constraints.

Behavioral Layer: Symbolic narrative strategies and algorithmic adaptation function as mediating mechanisms.

Outcome Layer: Cross-boundary integration determines long-term innovation performance and sustainability.

This layered logic explains why Shanghai cannot rely on a single factor (policy, technology, or culture) but must pursue systemic ecological reconstruction.

Recommendations

1. Optimize Policy Flexibility: Transition toward adaptive frameworks that prioritize cultural depth over mere financial subsidies.

Policymakers should transition toward more adaptive frameworks that incentivize high-quality content without stifling artistic freedom. Rather than purely financial subsidies, support should be directed toward projects that demonstrate both cultural depth and commercial viability. Regulatory adjustments are needed to accommodate the rapid iteration cycles of digital content, allowing creators more room for experimental narrative strategies.

2. Foster Synergies: Establish "Creative Tech Hubs" to balance AIGC efficiency with human-centric storytelling.

The industry should prioritize the balanced integration of AIGC tools with human-centric storytelling. Establishing "Creative Tech Hubs" could facilitate collaboration between AI experts and cultural practitioners, ensuring that technological innovation enhances the authenticity of Haipai narratives. Educational initiatives should focus on training creators to utilize algorithmic logic as a tool for cultural amplification rather than a constraint.

3. Pivot to Boutique Models: Commit to a quality-first approach to transcend "involution."

To combat the pressures of "involution," the Shanghai micro-drama industry must commit to a quality-first approach. This involves prioritizing narrative depth and emotional engagement over short-term clickbait tactics. By focusing on high-value, culturally rich content, creators can build loyal audiences and establish a brand identity that thrives on long-term value rather than fleeting traffic spikes.

4. Deepen Cross-industrial Fusion: Collaborate with tourism and fashion sectors for revenue diversification.

Micro-drama firms should actively explore collaborations with the tourism, fashion, and entertainment sectors. Integrating digital storytelling with offline experiences—such as Shanghai-themed tourism packages or branded "retail-tainment"—can create a more robust and multifaceted revenue model. These synergies allow the industry to leverage Shanghai’s urban IP across multiple commercial dimensions.

Implement Audience Engagement and Contextualization Strategies:

To address semiotic alienation, creators should invest in "audience education" by providing context for local cultural symbols. This can be achieved through interactive content or supplementary materials that explain the significance of Haipai heritage. Such efforts ensure that diverse audiences can meaningfully engage with and decode Shanghai’s unique cultural narratives.

Promote International Cultural Exchange:

Shanghai's micro-drama industry should position itself as a cultural ambassador on the global stage. By fostering international collaborations and cross-cultural exchanges, the sector can enhance its global presence. Working with international creators to adapt Haipai stories for global platforms will not only expand market reach but also build cultural bridges in the digital age.

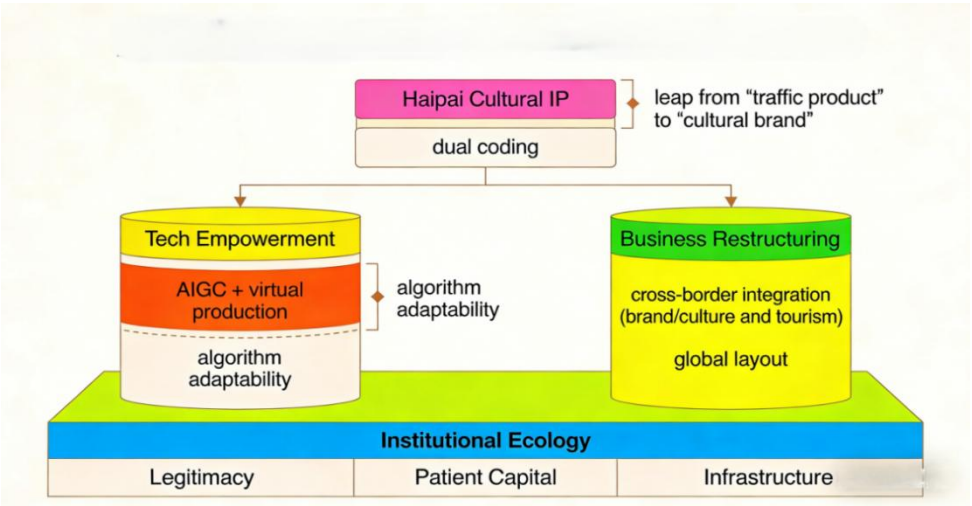


Figure 4 Proposed Strategic Innovation Model

References

Anantachart, S. (2023). Digital Ecosystems and Short-form Video Consumption in Thailand: Balancing Platform Algorithms and Local Cultural Context. *Journal of Communication Arts*, 41(2), 112-130.

Chen, Y. (2022). From platform-based to hybrid narrative strategies: Micro-dramas in Shanghai. *Journal of Digital Communication*, 27(1), 123-139.

Chen, L., & Zhang, H. (2024). AIGC Application and Cultural Authenticity in Chinese Micro-Drama Production. *Journal of Digital Media & Policy*, 15(2), 189-206.

Fidler, R. (1997). Mediamorphosis: Understanding New Media. Pine Forge Press.

Goldhaber, M. H. (1997). The attention economy and the Net. *First Monday*, 2(4). https://firstmonday.org/ojs/index.php/fm/article/view/519/440

Hall, S. (1990). *Cultural Identity and Diaspora*. In J. Rutherford (Ed.), Identity: Community, Culture, Difference (pp. 222–237). Lawrence & Wishart.

Huang, S. (2023). Copyright Protection and Industrial Regulation in China's Micro-Drama Industry: A Shanghai Perspective. *Journal of Law, Technology & Policy*, 23(1), 98-115.

Jenkins, H. (2006). *Convergence Culture: Where Old and New Media Collide*. New York University Press.

Li, H., & Xu, S. (2022). The new media ecosystem and cultural identity construction: A study of Shanghai micro-dramas. *Journal of International Media Studies*, 8(2), 105-121.

Li, W., & Zhao, Q. (2023). Media Ecology and Sustainable Development of Short-Form Video Industries: Evidence from Shanghai Micro-Dramas. *Journal of Media Ecology*, 26(3), 210-225.

Li, W., & Zhou, Y. (2021). The role of artificial intelligence in China's entertainment industry: A case study of micro-drama production. *Journal of Digital Media & Policy*, 12(1), 65-79.

Liu, Y., & Wang, S. (2024). Algorithmic Governance and Content Innovation in Shanghai's Micro-Drama Ecosystem. *Chinese Journal of Communication*, 17(1), 45-62.

Rosa, H. (2013). *Social Acceleration: A New Theory of Modernity*. Columbia University Press.

Sun, X. (2020). The economic implications of government subsidies for digital media. *Journal of Cultural Economics*, 42(3), 357-373.

Wang, H. (2021). Cultural identity in the era of micro-dramas: Haipai culture's adaptation to digital platforms. *Asian Cultural Studies*, 23(2), 95-112.

Wei, Z., & Li, J. (2021). Cross-boundary integration in China's media industry: A case study of micro-drama and tourism synergy. *China Media Report*, 12(1), 79-91.

Wu, X. (2024). Semiotic Alienation and Cross-Regional Reception of Haipai Cultural Symbols in Micro-Dramas. *Cultural Studies*, 38(4), 512-530.

Xu, J., & Wang, Y. (2022). The rise of micro-dramas in China: Digital transformation and cultural content. *Journal of Media Culture*, 38(3), 45-59.

Zhang, L. (2022). Government policy and creative industries in China: The case of Shanghai's cultural sector. *Creative Industries Journal*, 15(2), 122-137.

Zhang, Y., & Sun, L. (2024). Policy Incentives and Industrial Upgrading: The Development Path of Shanghai's Micro-Drama Industry. *Journal of Chinese Media Studies*, 10(2), 78-95.

Zhao, Q. (2020). The fusion of cultural symbols and digital media: Semiotic analysis of Chinese micro-dramas. *Cultural Studies Journal*, 17(1), 34-50.

Zhou, M., & Li, J. (2024). Cross-Boundary Integration and Business Model Innovation of Urban Micro-Dramas: A Shanghai Case Study. *International Journal of Cultural Policy*, 30(3), 321-338.