A Study on Sanxingdui Cultural Brand Marketing Strategies in the Context of Generative Artificial Intelligence

Qihan Lin*
Xiangsihu College of GuangXi Minzu University, Nanning 530225, China
*Corresponding email: 1507307922@qq.com

Abstract

With the rapid advancement of artificial intelligence (AI) technology, generative AI is reshaping production and marketing models within the cultural and creative industries. This study examines the Sanxingdui cultural brand, employing both quantitative analysis and case study methodologies to explore optimisation pathways for marketing strategies of cultural heritage IPs within the Artificial Intelligence Generated Content (AIGC) context. Based on 222 valid questionnaires, correlation and regression analyses reveal that users' AI operational skills, perceived falsity, and perceived creativity are key variables influencing purchase intent. Addressing current challenges such as users' digital skill gaps, content perceived as artificial, and application scenario limitations, this paper integrates Segmentation, Targeting, Positioning (STP) and 4P theories. It proposes identifying high-value niche markets through cluster analysis, followed by strategic optimisation in product customisation, differentiated pricing, O2O channel integration, and targeted promotions to achieve deep integration between technology and culture.

Keywords

Generative artificial intelligence, Sanxingdui, Cultural branding, Marketing strategy

Introduction

In recent years, the emergence of generative artificial intelligence (AI) technology has garnered widespread attention, with its rapid advancement forging increasingly close ties with the creative industries [1]. The application of AI algorithms in design enables the creation of unique, innovative works [2,3]. As a vital component of China's cultural tourism resources, Sanxingdui's distinctive bronze artefacts have become a popular subject for Artificial Intelligence Generated Content (AIGC) platforms. However, maximising the development of Sanxingdui Intellectual Property (IP) through AI while mitigating its potential negative impacts remains an urgent challenge.

Although considerable research exists on cultural brand marketing strategies, gaps remain in studying specific cultural brands under generative AI influences, particularly for classic cultural IPs like Sanxingdui. While most scholars have explored Sanxingdui's cultural brand IP from multiple angles, these studies predominantly focus on the design of its cultural and creative products and the imagery of its art effects. This paper offers valuable insights into the future development and exploitation of the Sanxingdui cultural brand IP by conducting an in-depth analysis of consumer attitudes towards generative AI and the corresponding marketing strategies for the Sanxingdui cultural brand IP within this context.

This study employs quantitative analysis and case studies to examine Sanxingdui's cultural brand marketing strategies under generative AI's influence. Grounded in cognitive dissonance theory, it identifies differences by comparing user perceptions of AI-generated versus traditional Sanxingdui cultural products. Simultaneously, variables such as perceived falsity and perceived creativity will be introduced to explore core factors influencing consumer perceptions of generative AI. Finally, drawing upon brand image theory and Segmentation, Targeting, Positioning (STP) theory, the core market positioning of the Sanxingdui cultural brand will be established, proposing countermeasures for more effective marketing planning and image positioning. Strategies include enhancing the application and integration of AIGC technology, promoting personalised creation and quality management of AIGC content, and

implementing consumer acceptance and experience management.

Research design and data analysis

Questionnaire design

To gauge consumer acceptance of generative AI and preferences for the Sanxingdui cultural brand, whilst precisely analysing marketing challenges and optimisation opportunities for the brand within the generative AI context, this questionnaire comprises three sections: Part one collects respondent demographics (e.g., gender, age, occupation, income, education). Part two assesses perceptions of Sanxingdui cultural products through questions such as: Which channels you find most compelling for purchasing Sanxingdui cultural products; your preferred categories of Sanxingdui cultural products; and innovative methods you would like to see for showcasing and promoting Sanxingdui culture in the future. The third section gauges respondents' attitudes towards generative AI. This primarily involves comparing attitudes towards traditional cultural products versus Sanxingdui AIGC products, assessing respondents' proficiency in operating AIGC platforms, and evaluating their perceptions of the artificiality and creativity of generated imagery.

Questionnaire distribution and collection

Regarding questionnaire distribution, this survey was conducted online via Wenshu Xing from 20th to 26th May 2024. The primary target audience comprised university students, their friends, and members of the general public. The research subjects exhibited considerable variation in age, occupation, and income level, ensuring good representativeness. Regarding the response rate, a total of 250 completed questionnaires were received. After statistical analysis and collation, invalid questionnaires that did not meet the criteria were excluded, yielding 222 valid survey responses. The basic information on the survey subjects is presented in Table 1.

Table 1. Basic information on survey participants.

Name	Option	Frequency	Percentage (%)	Cumulative percentage (%)
Gender	Female	110	49.5	49.5
	Male	112	50.5	100.0
Age	18-25 years old	76	34.2	34.2
	26-30 years old	32	14.4	48.6
	31-40 years old	29	13.1	61.7
	41-50 years old	36	16.2	77.9
	51-60 years old	30	13.5	91.4
	61 years old and above	19	8.6	100.0
Educational attainment	Junior secondary school and below	18	8.1	8.1
	Undergraduate degree	121	54.5	62.6
	College diploma	33	14.9	77.5

Name	Option	Frequency	Percentage (%)	Cumulative percentage (%)
	Senior secondary school / Vocational school	30	13.5	91.0
	Postgraduate and above	20	9.0	100.0
Total	/	222	100.0	100.0

Validity and reliability testing

We assessed the reliability of the questionnaire scales using Cronbach's α coefficients, presenting results across multiple dimensions. These encompassed respondents' proficiency with AIGC platforms, perceptions of artificiality, perceptions of creativity, and purchasing intent for Sanxingdui AI-generated cultural products. Calculations using SPSS 22.0 yielded Cronbach's α values consistently above 0.800, indicating robust reliability. Results are presented in Table 2.

Table 2. Reliability test results.

Constructs	Cronbach's α	Number of items
Overall questionnaire	0.972	12
AIGC platform operational proficiency	0.905	3
Perceived falseness	0.887	3
Perceived creativity	0.892	3
Intention to purchase cultural and creative products	0.896	3

We employed factor analysis to assess the content validity of the questionnaire as a whole. Using SPSS 22.0, we calculated a Kaiser-Meyer-Olkin (KMO) coefficient of 0.979 with a p-value of 0.000<0.050, indicating the questionnaire possesses sound construct validity. The results are presented in Table 3.

Table 3. Validity test table.

Kaiser-Meyer-Olkin measure of sampling adequacy		0.979
Bartlett's sphericity test	Approximate chi-square	2822.847
	df	66
	p-value	0.000

Challenges facing the Sanxingdui cultural brand in the context of generative AI

During its development, the Sanxingdui cultural brand IP has explored diverse cultural and creative products while integrating existing digital technologies. It has engaged with virtually every accessible digital medium and advanced technology, including Mixed Reality (MR), Augmented Reality (AR), Virtual Reality (VR), and generative AI, establishing itself as an industry benchmark for cultural branding. Nevertheless, several issues and shortcomings remain:

Users' lack of proficiency in existing digital technologies

The natural language interaction capabilities and multi-domain generalisation applications of generative AI facilitate user adoption and deliver inclusive empowerment. Nevertheless, digital inequality stemming from monopolisation, diffusion constraints, and limitations of digital technologies remains an objective reality [4].

This study analysed users' digital skill proficiency through questionnaire surveys, examining how such proficiency influences purchasing intentions for generative AI cultural and creative products. Data were first transformed using SPSS's calculate variable panel to derive mean values, converting scales into two variables: respondents' mastery of AIGC platforms and their attitudes towards AIGC cultural and creative products. Subsequently, normality tests were conducted, as shown in Table 4.

Based on the results in Table 4, the p-value for both variables are 0.000<0.050, leading to the rejection of the null hypothesis. This demonstrates that neither variable conforms to a normal distribution, rendering Pearson's

correlation analysis unsuitable. Consequently, Spearman's correlation analysis was employed to examine the relationship between the variables, with results presented in Table 5.

Table 4. Normality test results.

Variable	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	p-value	Statistic	df	p-value
Proficiency with AIGC platforms	0.299	222	0.000	0.774	222	0.000
Purchasing intent for AIGC products	0.300	222	0.000	0.774	222	0.000

Note: Lilliefors significance level adjustment.

Table 5. Correlation analysis.

Variable			Proficiency in AIGC platforms	Purchasing intent for AIGC products
Spearman's rho	Proficiency in AIGC platforms	Correlation coefficient	1.000	0.532**
		p-value (two-tailed)	/	0.000
		N	222	222
	Purchasing intent for AIGC products	Correlation coefficient	0.532**	1.000
		p-value (two-tailed)	0.000	/
		N	222	222

Note: ** indicates a significant correlation at the 0.01 two-tailed confidence level.

As shown in Table 5, the two-tailed p-value is 0.000<0.050, leading to the rejection of the null hypothesis. The correlation coefficient is 0.532**. This indicates a clear correlation between respondents' proficiency in AIGC platforms and their purchasing intent for AIGC products. It also indirectly demonstrates that users' mastery of AIGC platforms is closely linked to their willingness to purchase AIGC products, with users possessing higher digital literacy exhibiting greater acceptance of such products. However, in practice, users possessing high digital literacy remain relatively scarce, presenting a significant obstacle to AIGC product adoption.

The issues of falsity and creativity in AI-generated content

Deepfakes constitute a form of synthetic media employing AI to generate seemingly authentic videos or images. While currently utilised across diverse scenarios such as film production, deepfake technology has simultaneously raised concerns regarding its potential misuse for malicious purposes, including the dissemination of misinformation and manipulation of public discourse [5]. Since 2022, with the continuous advancement and maturation of generative AI models like ChatGPT and Wenxin Yiyan, AI technology has attracted intense scrutiny.

The application of generative AI technology in the production of Sanxingdui cultural and creative products, while significantly enhancing design efficiency and reducing costs, nevertheless presents numerous challenges. These include heightened risks of copyright infringement in artistic works and the generation of unrealistic content [6]. Furthermore, the inherent nature of image splicing within this technology can result in outputs lacking in originality. Against this backdrop, we employed a questionnaire survey to investigate respondents' perceptions of the perceived falseness and perceived creativity of AI-generated artworks, and how these perceptions influence end-users' willingness to purchase AI-generated cultural and creative products.

We first transformed the data, utilising the mean values from the calculate variable panel in SPSS to convert the

scales into two variables: respondents' perceived falsity and perceived creativity.

When selecting models, a binary logistic regression model is typically employed. However, given the high prevalence of generative AI usage in the questionnaire (74.32%), with only 25.68% of respondents having no exposure to AI-generated imagery, and considering the questionnaire's multiple-choice design, a multivariate logistic regression analysis proved more appropriate.

This analysis employed IBM SPSS Statistics software to examine various variables. Multiple logistic models were constructed based on relevant questionnaire options. Significant influencing factors were identified through multi-level assessments of various determinants. The likelihood ratio test results are presented in Table 6. Based on the results, the sig values for both variables are 0.000<0.050, leading to the rejection of the null hypothesis.

Table 6. Likelihood ratio analysis table.

Effect	Model fitting criteria	Likelihood ratio test		
	Log-likelihood of simplified model	Chi-square	df	p-value
Intercept	213.717[a]	0.000	0	/
Perceived falsity	421.906[b]	208.189	110	0.000
Perceiving creativity	400.804[b]	187.087	100	0.000

This demonstrates that both variables exhibit a significant correlation with the dependent variable, purchase intention for AIGC products. Concurrently, we conducted model fit tests, with the results presented in Table 7. Based on the model fitting results, we observe that at the 0.050 significance level, the null hypothesis is rejected, demonstrating the model possesses a high level of goodness-of-fit.

Table 7. Model fitting results.

Model	Model fitting criteria	Likelihood ratio test		
	Log-likelihood ratio	Chi-square	df	p-value
Intercept only	574.114	/	/	/
Final	213.717	360.397	220	0.000

According to the multiple regression results, we observe that respondents' perceptions of the artificiality and creativity of AI-generated images significantly influence their willingness to purchase AIGC products. In the current era of widespread AI adoption, the technology still exhibits considerable shortcomings. For instance, most AI-generated human figures display anomalies such as six fingers, and the pupils of newly generated characters often differ markedly from those of real individuals. In the design of cultural and creative products, AI-generated landscapes may also deviate from reality. Moreover, the majority of AI-generated images involve splicing existing photographs, which not only raises copyright infringement concerns but also contributes to the production of shoddy goods. The issues of falseness and creativity in AI-generated imagery represent critical challenges that must be addressed in the development of AI-enhanced Sanxingdui research.

Limitations in generative AI application scenarios

Sanxingdui has pioneered AI applications within museum collections. It has established a joint team with Tencent to launch the first AI pilot project for simulated artefact reconstruction, successfully recreating the "Bronze Beast Carrying a Kneeling Figure with a Vase on Its Back". Despite these achievements, its AI applications remain limited to technical scenarios rather than promotional marketing initiatives. Despite recent collaboration with Alibaba's Duiyou platform to develop the world's first Sanxingdui-style AI model, limited brand recognition and application depth hinder user adoption. Our survey reveals: 31.53% of respondents favour promoting Sanxingdui generative AI through art exhibitions, while 30.18% advocate cultural festivals for its dissemination. However, current applications remain confined to museum artefact restoration and app marketing, with limited presence in physical exhibitions or cultural events. Further refinement and promotion by

museums and relevant authorities are required.

Optimising Sanxingdui IP marketing strategies in the context of generative AI

Based on the aforementioned issues, this paper proposes the following optimisation strategies by integrating the STP strategy with the 4P theory.

Optimisation based on STP strategy

(1) Optimising market segmentation strategy

Historically, Sanxingdui's cultural brand IP employed market segmentation strategies based on urbanisation, gender, and age. Given that contemporary cultural and creative products now offer high-quality, reasonably priced items for consumers across all age groups, the Sanxingdui cultural brand should reconsider its target market segmentation. Simultaneously, as post-90s individuals increasingly dominate household decision-making, the brand must reassess its target demographic's gender and age distribution. To conduct specific market segmentation for primary consumers of Sanxingdui AIGC products, we employed K-means clustering within SPSS software. Setting the number of clusters to four yielded the final cluster centres and ANOVA tables as shown in Tables 8 and 9.

We can see that through cluster analysis, we have categorised respondents into four groups. The cluste 1 comprises male respondents aged 26-30 with a bachelor's degree and a monthly income of 3,001-4,500, exhibiting a high purchasing intent for AIGC products. The cluste 2 comprises female respondents aged 51-60 with a bachelor's degree and monthly incomes of 3,001-4,500, exhibiting strong purchasing intent for AIGC products. The cluste 3 consists of male respondents aged 31-40 with secondary/vocational qualifications, demonstrating strong purchasing intent for AIGC products. The cluste 4 comprises male respondents aged 18-25 with a bachelor's degree, exhibiting low purchasing intent for AIGC products. The ANOVA table results indicate that the sig values for age, educational attainment, average monthly income, and purchasing intent for AIGC products are all <0.05, rejecting the null hypothesis. Therefore, we can conclude that these four variables significantly influence the final classification outcome. Conversely, the sig value for the gender p-value is 0.744>0.050, accepting the null hypothesis, meaning it does not significantly impact the final classification result.

Table 8. Final cluster centres table.

Variable	Cluste 1	Cluste 2	Cluste 3	Cluste 4
Your gender	1	2	1	1
Your age group	3	6	4	2
Your educational background	4	4	2	4
Your average monthly income	3	3	3	1
Purchasing intent for AIGC products	4.39	4.38	4.35	1.74

Table 9. ANOVA table results.

Variable	Cluster		Error		F	p-value
	Mean square	df	Mean square	df		
Your gender	0.105	3	0.253	218	0.413	0.744
Your age group	175.780	3	0.602	218	291.785	0.000
Your educational background	56.774	3	0.422	218	134.492	0.000
Your monthly average income	66.109	3	0.621	218	106.450	0.000
Purchasing intent for AIGC products	95.684	3	0.128	218	748.885	0.000

The analysis reveals that individuals with higher purchasing intent for AIGC cultural and creative products predominantly comprise middle-aged males aged 26-40 and middle-aged/elderly individuals

possessing refined aesthetic sensibilities. Contrary to the previous set of results analysis, the male respondents aged 18-25 exhibits relatively low purchasing intent for AIGC cultural and creative products. This outcome stems primarily from the fact that while this younger demographic demonstrates high acceptance of digital technology, they are predominantly university students with comparatively low incomes, resulting in limited purchasing power for such products. Therefore, when segmenting the Sanxingdui cultural brand market, primary consideration should be given to consumers' age, educational attainment, and average monthly income. The customer base should be expanded to encompass both the purchasing intentions of younger individuals and the purchasing power of middle-aged and elderly consumers.

Following strategic optimization, the market segmentation of the Sanxingdui cultural brand has become more extensive and diverse. By expanding the tier of target cities, focusing on the young consumer market, and emphasizing family group segmentation, the approach has evolved from a single-dimensional to a multi-dimensional strategy. This shift will enhance the company's market targeting and competitive development [7].

(2) Optimising target market strategy selection

For the Sanxingdui cultural brand IP, target market selection and positioning are pivotal to its success. Current challenges reveal strategic market hurdles yet also present opportunities.

Regarding product positioning, the Sanxingdui cultural brand currently centres on traditional cultural and creative products, presenting challenges in resource allocation and responsiveness. However, this also creates an opportunity: integrating AI to develop semi-customised cultural and creative product services. This approach combines traditional hand-drawn designs with client personalisation, using machine learning algorithms to automatically match and optimise design solutions. This not only reduces the workload for product designers but also provides clients with faster, more economical services. Regarding the slow progress in product line expansion, generative AI can assist the company in making faster decisions and adjustments during the research, development, and promotion of new product lines. The algorithmic optimisation logic applied here is consistent with the deep learning technology used in video analysis of key motion positions, both of which rely on AI's feature extraction and adaptive optimisation capabilities to improve the efficiency and accuracy of product development and promotional content creation [8].

(3) Optimising market positioning strategies

Within the current commercial landscape, the Sanxingdui cultural brand IP faces both challenges and opportunities. Optimising its market positioning will be pivotal to achieving long-term success. Against the backdrop of AI technology, refining market positioning not only addresses existing challenges but also enables the cultural brand to capitalise on emerging market opportunities. Firstly, establishing a clear and distinct market positioning is paramount. The Sanxingdui cultural brand IP should strive to establish a leading position within the museum cultural and creative sector, focusing on delivering cultural products that integrate technology with Sanxingdui cultural heritage. This precise positioning will enable Sanxingdui to stand out within the cultural and museum creative domain while meeting target audiences' demands for uniqueness and personalised services. Through accurate market positioning, the Sanxingdui cultural brand can more effectively communicate its core values, making its key strengths readily recognisable to potential customers [9]. Secondly, differentiation and innovation must be reinforced. Incorporating distinctiveness and innovation into the market positioning is paramount. The Sanxingdui cultural brand IP will deliver unique services and products by integrating cutting-edge generative AI technology with innovative design concepts. Furthermore, developing signature design aesthetics or product features, such as creating Sanxingdui blind box cultural products through generative AI, will enhance market appeal and cultivate a loyal customer base.

Optimising Sanxingdui marketing mix strategies in the context of generative AI

(1) Product strategy optimisation

Addressing the limitations of generative AI applications for the Sanxingdui cultural brand IP previously outlined, this study proposes a series of optimisation measures for the product portfolio strategy. Firstly, the Sanxingdui cultural brand should strive to broaden its service scope. This includes applying generative AI to the pattern design of cultural and creative products and their

promotion, thereby adapting to the trend of diversified market and customer demands. Our questionnaire survey revealed that respondents prefer purchasing cultural and creative products through online shopping platforms and physical cultural and creative stores. Consequently, the Sanxingdui cultural brand should fully leverage generative AI for promotional integration within these two scenarios to enhance the visibility of Sanxingdui cultural products.

The Sanxingdui cultural brand should also refine AI-generated technologies to elevate product design quality. Addressing the aforementioned issues, consumers' perception of generated imagery as artificial due to immature AI technology, and the lack of creativity stemming from AI image collage characteristics , the brand must enhance relevant technologies. By advancing algorithmic capabilities, it can improve service experiences and personalisation levels, thereby further boosting service satisfaction and appeal.

(2) Optimising pricing strategy

Regarding the pricing of Sanxingdui cultural brand products, we first collected market prices for Sanxingdui cultural and creative products, as shown in Table 10. The prices of Sanxingdui cultural and creative products range between 35 and 443 yuan. According to our questionnaire findings, the most widely accepted price range for these products is between 51 and 100 yuan, accounting for 38.74% of responses. This indicates that the purchasing power of general consumers for Sanxingdui cultural and creative products is not particularly high. Therefore, the Sanxingdui cultural brand needs to develop cultural and creative products tailored to the purchasing power of different consumer groups in order to consolidate its market position [10].

Table 10. Specific pricing of Sanxingdui cultural creative products.

Type of cultural and creative product	Specific product details	Specific product price
Popularity blind boxes	Divine official blessing blind box, rock band blind box, mini standee blind box	95-392
Trendy accessories	Stud earrings, necklaces, badges, pendants, scarves, bracelets, charms	48-168
Office stationery	Bookmarks, pens, creative stationery	35-99
Homeware essentials	Cups, fridge magnets, face masks	35-168
Creative ornaments	Zongmu lucky bags, ornaments	44-443
Curated gifts	Cute mug, travel mug, rubik's cube	39-168

(3) Optimisation of sales channel strategy

Addressing the insufficient integration of Sanxingdui's online and offline channels, the study proposes an O2O e-commerce model solution. Detailed product information should be presented through AI-generated advertisements and AR/VR technologies, enabling consumers to gain a comprehensive understanding of the appearance and quality of Sanxingdui cultural products. Furthermore, an integrated online-offline experiential service model should be introduced. Consumers can book offline cultural and creative product experience activities via the Sanxingdui WeChat official account, streamlining the shopping experience. Concurrently, the Sanxingdui cultural brand must prioritise the operational efficiency and service quality of its physical stores. Regular staff training should enhance their digital literacy and proficiency in AI technologies, enabling them to better serve customers and elevate the shopping experience. Furthermore, the brand should introduce unique offline cultural and creative services, such as in-person archaeological experiences and immersive museum tours.

By adopting multi-channel customer acquisition, personalised marketing, and strengthened customer relationship management, the brand can more effectively enhance customer acquisition efficiency, expand market share, and bolster its competitive position within the cultural market.

(4) Optimising promotional strategies

The Sanxingdui cultural brand can leverage social media platforms like WeChat, Weibo, and Douyin for targeted promotions. In today's digital age, these Chinese social platforms boast extensive user engagement and popularity. Utilising these channels, the brand can

deliver tailored content based on user behaviour and interests, such as distributing promotional information via WeChat Official Accounts or showcasing products and offers through short videos on Douyin. The Sanxingdui cultural brand may also establish official communities or forums, inviting loyal users to share insights and suggestions regarding its cultural creative products. This approach builds a direct communication bridge with consumers, ensuring more precise delivery of promotional messages while gathering user feedback to further refine products and services [11]. Finally, collaborating with prominent social media influencers or key opinion leaders (KOLs) represents a highly effective strategy. These influential figures command substantial followings, partnering with them enables the Sanxingdui cultural brand to rapidly disseminate promotional content through their reach, thereby attracting greater numbers of potential customers.

The Sanxingdui cultural brand should fully utilise contemporary digital tools, integrating China's unique social media landscape with a multi-channel strategy to disseminate promotional messages. This approach will better engage and serve Chinese consumers.

Conclusion

This study explores the marketing optimization of the Sanxingdui cultural brand amid the proliferation of generative AI, addressing critical gaps in cultural heritage IP marketing under technological disruption. Through quantitative analysis of 222 valid questionnaires, this research identifies core determinants of consumer purchase intent and proposes targeted strategic solutions integrated with STP and 4P theories.

Key findings confirm that users' AIGC operational proficiency, perceived falsity of AI-generated content, and perceived creativity are pivotal to purchase intent, with digital skill gaps and content quality issues emerging as primary challenges. Cluster analysis further delineates high-potential consumers as middle-aged males (26-40 years old), middle-aged/elderly females (51-60 years old) with bachelor's degrees, and males aged 31-40 with secondary/vocational qualifications - all with monthly incomes of 3,001-4,500 yuan. Notably, age, education, and income significantly drive market segmentation, while gender exerts no statistical impact. Limited GenAI application in physical exhibitions and cultural events, despite consumer preferences for these channels, constitutes an additional critical constraint.

To address these issues, this study advocates for multi-dimensional optimization:

(1) Refining AI algorithms to reduce content falsity and enhance creativity.

(2) Adopting differentiated pricing aligned with the 51-100 yuan preferred price range; integrating O2O channels via AR/VR experiences and offline archaeological activities.

(3) Leveraging social media and KOL collaborations for targeted promotions.

This research enriches the literature on technology-cultural brand integration and provides actionable insights for cultural institutions. Limitations include cross-sectional data and urban-centric sampling. Future research could adopt longitudinal designs and expand samples to rural areas, while comparative studies with other cultural IPs may further validate the proposed framework, fostering sustainable development of cultural brand marketing in the generative AI era.

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Conflict of Interest

The author declares no conflict of interest.

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