

# Cultural Resource Endowment, Cultural Environment, and Cultural Market Activity A Moderated Mediation Model

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**Abstract.** Cultural soft power is essential to comprehensive national strength. and cultural resource endowment is a necessary support for a thriving cultural market. The county-level government, as the vital link of the political structure of China, is the basic unit of national governance and the carrier of providing public services to the public. As a unique grassroots sample, the county level has unique analytical value. The traditional cultural resource endowment in Northwest China is rich, but there is a big gap between the development reality of its cultural industry and the stock of cultural resources endowment, which constitutes a remarkable tension. The rise of social media provides a new way for the government to solve this contradiction. Cultural resource endowment will promote the activity of the local cultural market through government media behavior. Specifically, local government social media channels and influence will form a process of public sector branding of cultural resource endowment, ultimately affecting the cultural market activity. This effect will be affected by the cultural environment. Regions with a higher cultural environment are more likely to accept the branded values transmitted in social media, generating more cultural demands, having a two-way interaction with the market, and promoting market activity.

**Keywords:** Cultural Resource Endowment · Government Social Media · Public Cultural Service System · Cultural Market

## 1 Introduction

The construction of cultural soft power is an essential part of national construction. China is rich in traditional cultural resources, especially in the underdeveloped western regions. The form of cultural industry is also dominated by traditional culture. The "Proposal" of the Fifth Plenary Session of the 19th Central Committee of China put forward: "Inherit and carry forward the excellent traditional Chinese culture. "The 14th Five-Year Plan in China was proposed to "promote the creative transformation and innovative development of Chinese excellent traditional culture. "Creative and innovative development requires constructing a sound public cultural service system and a modern cultural industry system. However, how to solve the friction between traditional culture and modernity

has become the core contradiction in the construction of the public cultural system. For this reason, the 14th Five-Year Plan proposed planning directions such as promoting the in-depth integration of media, "implementing cultural brand strategy", and "integrating culture and tourism" to promote the modernization of the public cultural service system. However, from the perspective of industrialization and marketization, compared with developed regions, the western region is limited by the social and economic structure, and the development of cultural industries is relatively lagging. On the one hand, the integration level of tourism and cultural industries in the western region is relatively low [1]. On the other hand, because the production efficiency of the industry is low, its environmental impact in the western region is significantly greater than that in the eastern and central regions [2]. A bad external environment also causes low input-output efficiency.

The endowment of cultural resources, such as cultural heritage, is an essential means to promote the industrial economy and can effectively promote the development of the tourism economy. However, there are still many regions or cities in China, and the excellent endowment of cultural resources has not been well transformed into the advantages of cultural industry development, especially in the central and western regions. For example, in the utilization of cultural relics, there are problems such as "the degree of resource development is not high, there are not many means of utilization, insufficient social participation, excessive utilization, and improper utilization" [3].

From the overall research of the academic circle, the Fourth Plenary Session of the 19th Central Committee in China proposed to improve the national basic public service system. From the overall literature, public cultural services is an essential public services category. Compared with other sub-fields, the research is still a bit less. Secondly, relative to other subjects, there are many studies on the macro-level such as the cultural industry and the construction of the public cultural supply system, while there are relatively few studies on the activity of the cultural market and there are relatively few studies on the micro-subjects in the cultural market. Third, in the context of the Internet, there is still relatively little research on how the government acts among the micro-subjects in the cultural market based on cultural resource endowment (CRE). Finally, in the field of cultural services supply, more emphasis is placed on theoretical analysis and less empirical research.

With the rapid development of new media, many "Internet celebrity cities" have appeared in China, such as Chongqing, Xi'an, Chengdu, etc. The city's image has been reshaped in the discourse space of new media, thus forming a new urban cultural connotation. In a certain sense, this is a means to develop cultural resources' endowment deeply. The practice has also proved that these regions have used this method recently to promote local economic and cultural development. Therefore, this has formed a new entry point for cultural resource endowment and industrial development to a certain extent. Therefore, this paper explores how to make use of the balance between the rich cultural resource endowment and the relatively backward economic and social pattern in the western region to construct the supply mechanism of public cultural services in the western region. This provides an effective way to decipher the social and economic status quo and supply of cultural services in western China.

## 2 Literature Review and Theoretical Framework

# 2.1 Cultural Services Supply Subject and the Process of Marketization

The New Public Service argues that some of the responsibilities the government has undertaken in the past should be fulfilled through competition between the private and nonprofit sectors. The government shifts from control to participation and agenda arrangement [4]. One of the primary roles of the government is to serve to maximize public interests [5]. The collaborative governance theory believes that governance subjects are pluralistic, and the subsystems are coordinated [6]. Overall, the mainstream theories emphasize that the supply process of public services requires the participation of multiple subjects, and at the same time, it is necessary to change the role of the government, thereby improving efficiency and promoting the achievement of public interests.

The supply system of public cultural services mainly includes four central bodies: the government, enterprises, non-governmental organizations, and communities [7]. Compared with the modern western public cultural services supply system, the western public cultural supply is a model of "co-governance" to fully mobilize all subjects to participate, while China generally lacks subjects outside parts to participate in the process of public services supply. In the supply of rural public cultural public services, it is generally believed that it is necessary to introduce social and market forces to form an ideal cooperative supply model [8].

The process of transforming cultural resources into cultural services or products largely depends on the endowment of local cultural resources. Cultural resource endowment refers to the various production factors of culture possessed by a region. However, in many cases, cultural resource endowment does not mean that it has become a cultural service or product, and it is only a variety of cultural-related production factors. These production factors need to be processed by labor to form cultural services and cultural products with "value." This value includes "commodity value" and "social value". Social individuals should be the primary producers in this production process, which is especially reflected in intangible cultural heritage. As a part of the endowment of cultural resources, intangible cultural heritage partly relies on the existence of cultural inheritors. Therefore, from this perspective, social individuals are the primary producers of cultural resources and the leading creators of the value of cultural products.

After cultural resources are transformed into cultural services and cultural products, not all cultural resources can form public cultural services. From the perspective of the creation process of cultural products and cultural services, cultural products and services may also be privately formed cultural resource endowments, such as artistic creation. This kind of public goods requires a process of publicization. In this case, it depends on the government's behavior. For example, the certification of intangible cultural heritage is a government behavior, that is, the process of the government's branding. Therefore, government behavior is an essential process of publicizing cultural resources, and this process of publicizing makes the value of cultural products public. Culture in the public service system supply differs from other public services. Some scholars believe that there are spiritual, political, competitive, and reproductive differences between public culture and other public goods [9]. From this perspective, the reproducibility of public cultural services makes cultural products a process of continuous reproduction. Government

participation also involves a process of publicization. This process largely depends on the government's reproduction of the cultural meaning of cultural products and services, in other words, adding public information to the cultural meaning of the reproduction of cultural products. As a result, public cultural products or services with new cultural significance will be formed.

From the perspective of the supply side, the report of the 19th National Congress of the Communist Party of China proposed that by 2035, "the equalization of basic public services will be realized." The Fourth Plenary Session of the 19th CPC Central Committee once again emphasized the need to improve the national basic public service system. The equalization of essential public cultural services is also one of the critical components of the overall equalization of essential public services. The supply path of this kind of public cultural services is dominated by government monopoly. On the one hand, this monopoly brings inefficiency, resulting in the lack of effectiveness of the supply of public cultural services; on the other hand, with the complexity of individuals' preferences for cultural values, the supply of public cultural services will not be able to meet the cultural preferences of individuals in society. This imbalance between demand and supply may, to a certain extent, give birth to a market-oriented mechanism and form an active cultural market to supplement the lack of public cultural services supply and meet the diversification of cultural services or product demand brought about by cultural diversity. From the perspective of the marketization of the supply of public cultural services, the most crucial subject of the cultural industry is the enterprise. Empirical studies have shown that the extraordinary situation of the cultural industry in the provinces and cities in the western region is that the scale efficiency is too low, which leads to a low level of comprehensive technical efficiency, which is related to the economic level and the cultural needs of residents [10]. It is difficult for local cultural enterprises to develop and grow. Therefore, cultural enterprises have become an essential subject in cultural resource marketization. On this basis, the activity of the cultural market can also be regarded as a part of the public cultural supply system, which significantly affects the final supply form of public cultural services.

Some studies discussed the relationship between cultural diversity and the equalization of public services, and empirical results have shown that cultural diversity harms the equalization of public cultural services [11]. The main reason is that the diversity of cultural needs formed by cultural diversity will affect the lack of adequate supply in the process of equalization of public services [12]. Cultural differences mean differences in demand for public goods and services, which affect the supply and acceptance of cultural products and services [13]. This difference in cultural preference comes from the value preference itself. From the perspective of value preference, individual value preference is different, and value preference has a certain level. This means that in the context of cultural diversity, on the one hand, individuals have different preferences for cultural values; they may have different needs for culture in the same social environment; on the other hand, individuals' preferences for cultural values have different hierarchical, that is, in the case of different social environments, the cultural needs are different. For example, in areas with an intense cultural atmosphere, the value preferences for culture are more complex or diverse, while in areas with a relatively general cultural environment, the value preferences may simpler. Therefore, different cultural environments may

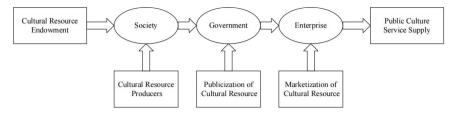


Fig. 1. Market-oriented supply of public cultural services

have an impact on cultural needs. As mentioned above, the regional value preference for culture will affect the cultural demand to a certain extent and may affect public culture's marketization process.

To sum up, society is the primary producer of cultural resources, transforming the endowment of cultural resources into cultural products and services. The government publicizes these cultural products and services to form public cultural products and services. The participation of supply-side enterprises enables cultural resources to be supplied through marketization. In the production process, the three parties added their preferences to form a consensus on public cultural interests to a certain extent and finally formed the supply of market-oriented public cultural services (Fig. 1).

## 2.2 Cultural Resource Endowment and Cultural Market Activity

An essential part of the supply of public cultural services comes from traditional culture, and an important source of traditional culture is the endowment of regional cultural resources. Differences in cultural resource endowments may lead to differences in cultural supply sources and ultimately affect the process of industrialization. The empirical results of previous research have shown that cultural industry is closely related to cultural resource endowment [14]. The commodity attribute of culture itself makes the commercialization of culture a process and result of pursuing the realization of labor value [15]. Traditional culture promotes the development of regional cultural industries through infiltration, demonstration, and integration benefits [16] but is limited by the structure of its endowments [17]. In the marketization of cultural resource endowment, economic benefits can be obtained mainly through the development and utilization of cultural resource endowment, such as applying for World Heritage status, cultural creation, etc., and increasing the output value of cultural-related industries [18]. This benefit comes from direct demand and external effects [19]. Some scholars have also proposed that the integrated development of cultural and tourism resources can promote the inheritance of traditional culture on the one hand and attract tourists on the other [20]. However, on the whole, the relationship between cultural resource endowment and cultural industry, which academic circles pay more attention to, lacks a discussion on micro-subjects.

Based on the above discussion, this paper first applies the quantity of intangible cultural heritage to measure cultural resource endowment. Secondly, use the number of local cultural industry enterprises to measure the activity of the regional cultural market. The more active the cultural market is, the more social subjects participate in the supply process of public culture, which can better represent the market-oriented

supply of public culture. Therefore, this paper regards the degree of cultural market activity as a process of marketization of cultural resource endowment. The more the number of market enterprises is, the more active they are, and the more they represent a higher degree of marketization. Therefore, this paper assumes that:

H1: The endowment of cultural resources is positively correlated with the activity of the regional cultural market. The cultural resource endowment in the region is high, and the cultural market is more active.

# 2.3 The Mediating Role of the Cultural Environment

Institutionalism believes that culture is an informal system that acts as a value norm for individuals. The cultural heterogeneity theory believes that there are cultural differences in different regions [21]. Therefore, regional differences will form cultural differences, affecting the separation of individual values and the values of regional groups. Due to the differences in the historical development and accumulation of traditional cultures in different regions, the inconsistency in the stock of cultural capital in different regions may affect the differences in individual cultural capital. This cultural capital refers to the existence of a form of cultural capital defined by Bourdieu: "A set of cultivated tendencies internalized by an individual through socialization constitute a framework for appreciation and understanding." [22] This tendency affects the recognition of the value of "culture" by individuals and even groups to a certain degree. From the perspective of groups, the degree of recognition of the value formation of "culture" will form certain social norms and, in turn, affect individual behaviors and choices. This article first regards the "cultural environment" as a region's acceptance of "culture" itself, that is, the intensity of a cultural atmosphere. In other words, it regards "culture" as a part of regional culture.

Previous empirical studies have shown that the social and cultural environment is closely related to the development of cultural industries [23]. Some scholars have conducted empirical research on cultural distance and the international trade of cultural products, and the results showed that cultural distance has a negative impact on the output of cultural products [24], but some scholars hold the opposite. The point of view is that the differences between cultures will complement each other, thereby promoting the export of cultural products. From an inter-country perspective, cultural differences among countries may lead to different cultural preferences, affecting the acceptance of cultural products and services.

If the cultures of countries or regions contain extremely rich value connotations and relatively significant heterogeneity and may produce different results or causal explanations, then whether the preference for treating a single value—"cultural" demand will affect the degree of demand and acceptance of cultural products, and then have an impact on the cultural market?

From a practical point of view, there are significant differences in cultural environments between regions because what determines the needs of the cultural industry is the artistic taste and appreciation level of cultural consumers, and this artistic taste and appreciation level are cumulative and irreversible [25]. Therefore, such differences in regions form different value preferences for culture, and such value preferences will constrain individual behaviors, thereby affecting the acceptance of cultural products by individuals

and even groups. On this basis, the influence on the development of the cultural industry is formed, and finally, the different reflections on the supply of public "cultural" services (or products) are formed. In areas with a high cultural environment, people have a higher demand for culture and are more likely to accept the information of value transmitted by cultural propaganda. People also prefer to consume cultural industries, which may lead to the marketization of cultural products and promote the prosperity of the cultural market. On the contrary, in areas with a low cultural environment, people's acceptance of cultural propaganda is low, and people may have a relatively weak willingness to consume cultural industries, which will affect the activity of the cultural market to a certain extent.

The regional cultural environment is an environmental factor, but there is no consensus on measuring the cultural environment. This paper mainly uses the library ownership of ten thousand people as a measure of cultural environment. Therefore, this paper assumes that:

H2: Cultural resource endowment is positively correlated with the regional cultural environment. The higher the cultural resource endowment in the region, the better the region's cultural environment.

H3: The regional cultural environment is positively correlated with the activity of the regional cultural market. The better the cultural environment in the region, the more active the cultural market.

H4: Cultural environment mediating between cultural resource endowment and cultural industry development.

# 2.4 The Moderating Effect of Government's Social Media Usage Behavior

Intangible Cultural Heritage refers to: "various traditional cultural expressions that have been passed down from generation to generation by people of all ethnic groups and are regarded as part of their cultural heritage, as well as objects and places related to traditional cultural expressions." The local government's application for certification of intangible cultural heritage is a process of developing and utilizing the endowment of cultural resources, which makes the endowment of cultural resources have a specific brand effect. Public Branding is a new public sector strategy where local governments use "branding" to attract target groups (companies, tourists) to the city [26]. Compared with private organizations, public organizations naturally enjoy reputational brand equity because of their public nature. An agency's name, image, and icon contribute to a public brand that conveys information about the agency's capabilities in a particular area of public policy. This public sector branding affects citizens' trust in policy [27] and positively affects support for management [28], but may weaken over time [29].

With the rise of social media such as WeChat, Weibo, and Tik Tok, the private sector had used social media for marketing, forming "viral communication". Since 2010, the establishment of official government social media accounts such as government affairs short videos and government affairs Weibo has risen. The popularity of short videos on social platforms in Xi'an, Chengdu, and other places has promoted the export of local cultural products to a certain extent. The establishment of government social media can narrow the distance between officials and the people, enhance the communication

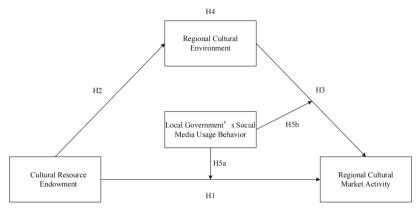


Fig. 2. Model Setting

between the government and the people, increase citizens' trust, establish a better public image [30], and export local cultural brands.

The construction of China's digital government started in the 1990s. In digital government construction, digital infrastructure construction required much financial investment, and provinces with high GDP were relatively dominant [31]. With the rise of social media, this dominance tended to be broken. The empirical results have shown that the local government short video accounts have little correlation with the original economic pattern and the traditional e-government performance level, and each of which can quickly obtain better performance, which primarily reflects the color of populism, whose number growth and dissemination mainly depend on population size, network penetration rate, and video content [32], that is, the video content itself. The rise of official social media enables the output of public brands to break away from the existing social and economic patterns to a certain extent. This communication method has specific value for marketizing cultural resource endowment in underdeveloped areas.

The government's social media accounts will form a medium, further strengthening the brand effect already formed by the endowment of cultural resources. Experimental results have shown that people with public self-awareness may accept products with national brand labels to enhance their public image [33]. Therefore, this enhanced public brand may attract the participation of the main body of the enterprise, thus forming the organic participation of the enterprise.

The use of government social media, including the number of channels for publicity and the number of fans, will affect the degree to which the brand is strengthened. Therefore, this paper assumes that:

H5a: The use of government social media positively moderates the positive relationship between cultural resource endowment and regional cultural market activity.

H5b: The use of government social media positively moderates the mediating effect of the regional cultural environment.

To sum up, this paper constructs a moderated mediation model using the local government's social media usage behavior as the mediating variable and the cultural environment as the moderating variable (Fig. 2).

# 3 Research Design

# 3.1 Research Sample Selection

How local governments promote the prosperity of public culture based on the relationship between regional cultural resource endowment and thriving cultural markets is a realistic expression of multi-subject participation in cultural production. Constrained by the reality of obtaining statistical data in the cultural industry, most existing research focused on provincial and municipal governments. The county (city) level government, as the critical link in the political structure of our country, is the basic unit of national governance. It is not only the support for ensuring and developing the economy, improving and promoting people's livelihood but also the carrier of public services. As a unique grass-roots sample, the county (city) level has a different analytical value. Especially in the northwest region of China, this region has a long history, thriving culture, and frequent exchanges of various ethnic groups since ancient times. Therefore, its cultural resource endowment is abundant, but there is a big gap between the actual development of its cultural industry and the stock of cultural resource endowment objectively. It constitutes the tension between the endowment of cultural resources and the development of the cultural market. Moreover, with the improvement of the government information disclosure system and the increase of third-party data collected and generated by various network channels, data collection at the county (city) level becomes possible. Therefore, this paper selects all 288 counties (cities) in the five northwestern provinces of China (Shaanxi Province, Gansu Province, Qinghai Province, Ningxia Hui Autonomous Region, and Xinjiang Uygur Autonomous Region) as the benchmark sample. The relevant data of 179 county-level cities in the five northwestern provinces were obtained, and the sample size accounted for 62.15% of the total number of county-level cities in the five northwestern provinces.

#### 3.2 Research Variable Measurement

#### **Cultural Resource Endowment**

Resource endowment refers to the relative abundance of resources in a region. According to the resource endowment theory proposed by Eli Filip Heckscher and Bertil Ohin, differences in resource endowments in different regions will significantly affect regional economic development and the level of inter-regional trade. Culture as a resource, in a narrow sense, refers to the spiritual and cultural content that can generate direct and indirect economic benefits. Intangible cultural heritage, as a recognized symbol of cultural achievement after historical scouring, can be used as an essential indicator to measure the endowment of regional cultural resources. Governments at all levels, from the central to local governments, have often organized the assessment of intangible cultural heritage. Among them, the evaluation results of provincial cultural departments are comprehensive enough to cover all counties (cities) within their jurisdiction without excessive evaluation, so they are the most suitable data sources for this study. This article collects the lists of various projects selected in each batch of intangible cultural heritage lists in various counties (cities) by searching the government affairs disclosure columns

of the people's governments in various regions and the intangible cultural heritage list column of the Chinese National Culture Resource Bank. Due to the step-by-step nature of intangible cultural heritage certification, this paper makes comprehensive statistics on various projects selected in each batch of counties (cities) to obtain the number of provincial-level intangible cultural heritage owned by counties (cities) as of December 2020.

# **Regional Cultural Market Activity**

The active degree of the regional cultural market is an important indicator to measure the degree of cultural marketization, and the prosperity of the regional cultural market is the premise of the marketization of public culture. As one of the central bodies of market operations, enterprises are closely related to the market, and their relationship presents various characteristics such as substitution, complementarity, and mutual embedding. To measure the activity of the regional cultural market, the activity of enterprises in related industries has to be considered. Therefore, this paper chooses the number of regional cultural enterprises as an indicator to measure the activity of the regional cultural market. According to the current national industry classification standards, this article uses the advanced search module in the country's largest commercial query platform "Tianyancha" to specify the scope of regional and industry queries, query and collect the number of cultural enterprises established, and continued to exist in each county (city) before 2020 (inclusive). Due to the different development foundations of different regions, especially the difference in population size, to make the number of cultural enterprises comparable, this paper calculates the number of cultural enterprises with 10,000 people in the region as the final indicator to measure the prosperity of the regional cultural market. The specific calculation method is as follows:

 $Regional \ Cultural \ Market \ Activity = \frac{County(city) \ Number of cultural}{Surviving before 2020(inclusive)} \\ \frac{county(city) \ population in 2020}{County(city) \ population in 2020}$ 

#### Local Government's Social Media Usage Behavior

The State Council's "Key Points of Government Information Disclosure in 2014" clearly stated that it is necessary to strengthen the construction of government affairs on Weibo, WeChat, and other information disclosure platforms, so that mainstream voices and authoritative and accurate government affairs information can be widely disseminated in the network field and the public information dissemination system. Government social media has become a new way for local people to connect with the masses. Currently, mainstream social media mainly include Weibo, WeChat official account, Tik Tok, Kuaishou, etc. Many local governments have also opened official accounts on such platforms as an essential channel to convey government information to the public and guide public opinion and have also set up a media integration center responsible for various social media operations. The first and most important way to measure the use of government social media is to measure the influence of government social media. Therefore, this article collects the number of fans on Weibo, WeChat public account, Tik Tok,

Kuaishou, and other social platforms (if any) in each county (city) as of December 2020. The number of fans on Weibo, Tik Tok, and Kuaishou is directly from the number of followers on its page collected from the display, and the number of followers of the WeChat public account was estimated by the new media traffic monitoring function provided by watermelon data due to its non-disclosure. After getting the number of fans of the official accounts of each county (city) and each platform:

Add them together to obtain the total new media traffic of the county (city).

Determine the platform's influence through the ratio of the new media traffic to the region's population.

Estimate the regional and local government's social media usage.

The specific calculation method is as follows:

Local Government's Social Media Usage Behavior  $= \frac{\sum \text{Number of followers of each platform in the county(city)}}{\text{County(city) population in 2020}}$ 

## **Regional Cultural Environment**

The cultural environment is a complex composed of people's cultural creation and achievements, and it is the background and conditions for cultural groups to engage in cultural creation, dissemination, and other cultural activities. The better the cultural environment, the more people admire various cultural achievements and actively participate in various cultural activities. As the most popular cultural activity, reading is the concentrated expression of the regional cultural environment, and the number of libraries is a crucial way to measure the local "national reading." Therefore, this paper searches for libraries in each county (city) by using AutoNavi Map, which has the most significant monthly active users in China's map navigation industry, and counts the existing open and accessible libraries in this area during working hours by controlling the retrieval time. As a public cultural services supply facility, the cultural environment constructed by the library is related to the number of audiences of public cultural services in the region. The more libraries per capita, the better the cultural environment in the region. Therefore, this paper calculates the number of libraries per 10,000 people in the region as an indicator for evaluating the region's cultural environment. The specific calculation method is as follows:

The Regional Cultural Environment =  $\frac{\text{Number of Existing Libraries in County(City)}}{\text{County(City) population in 2020}}$ 

#### Control Variable

There are differences in economic development foundation, economic growth rate, and government financial capacity in different regions. According to existing research, these differences will significantly affect the development of regional cultural industries, which in turn will affect the activity of the cultural market in the region. Therefore, this paper selects the regional per capita GDP, the growth rate of regional GDP, and the local government's fiscal self-sufficiency rate as the control variables for the study.

#### 3.3 Analysis Methods

In this study, when verifying the moderated mediation effect model, the stepwise method proposed by Wen Zhonglin et al. was used for sequential testing. However, due to the discussion and discovery of the defects of the stepwise method in the academic circle in recent years, based on the stepwise method, this paper also adopts the percentile Bootstrap method for bias correction proposed by Edward and Lambert to verify the relationship, that is, select the upper and lower moderating variables. A standard deviation (SD) value, if the difference in the mediating effect of the moderating variable is still significant under different values, it means that the moderating variable moderates the mediation effect.

# 4 Data Analysis

## 4.1 The Mediating Role of the Cultural Environment

To solve the problem that the research variables may be affected by multicollinearity in the regression process, this study uses the stepwise method proposed by Baron and Kenny (1986) to test the mediating effect of the cultural environment by subtracting the observed value of the variable from its sample mean.

Table 1 reports the steps and results of the step-by-step method to test the mediating effect of the cultural environment. Model 1 focuses on the regression of three control variables: GDP growth rate (GDP GR), regional per capita GDP (GDP RPC), and the proportion of tax revenue in public fiscal revenue (PTRPFR). The regression results show that the level of regional economic development is positively correlated with the activity of the regional cultural market (ARCM). The higher the regional economic development level, the more active the regional cultural market is. Model 2 focuses on the regression of the independent variable cultural resource endowment and the dependent variable regional cultural market activity. The regression results show that cultural resource endowment is positively correlated with the regional cultural market activity  $(\beta = 0.149, p < 0.1)$ , which indicates that the higher endowment of cultural resources, the more active the regional cultural market, and hypothesis 1(H1) is verified. Model 3 focuses on the regression of the dependent variable cultural resource endowment and the mediating variable cultural environment (CE). The results show that cultural resource endowment is positively correlated with the cultural environment ( $\beta = 0.179$ , p < 0.05), and the richer the cultural resource endowment, the higher the cultural environment. Hypothesis 2 (H2) is verified. Model 4 pays attention to the regression of the mediating variable cultural environment and the dependent variable regional cultural market activity. From the regression results, it can be concluded that the cultural environment and the regional cultural market activity are significantly positively correlated; a high cultural environment will enhance the regional cultural market activity ( $\beta = 0.257$ , p < 0.01). Hypothesis 3(H3) was validated. The regression focus variable of Model 5 adds the independent variable cultural resource endowment based on Model 4. The results show that after the effect of the mediating variable cultural environment, the cultural resource endowment and the activity of the regional cultural market have a significant positive correlation ( $\beta = 0.202$ , p < 0.01), which indicates that cultural environment

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	ARCM	ARCM	CE	ARCM	ARCM
	β	β	β	β	β
GDP GR	-0.255***	-0.261***	-0.187**	-0.205**	-0.205**
	(0.571)	(0.566)	(0.564)	(0.564)	(0.553)
GDP RPC	0.156*	0.169**	0.274***	0.081	0.088
	(0.343)	(0.341)	(0.340)	(0.346)	(0.339)
PTRPFR	-0.153*	-0.146**	0.034	-0.164**	-0.156**
	(1.543)	(1.531)	(1.525)	(1.498)	(1.470)
CRE		0.149*	-0.179**		0.202**
		(0.081)	(0.080)		(0.079)
CE				0.257***	0.296***
				(0.082)	(0.082)
R <sup>2</sup>	0.091	0.113	0.121	0.151	0.190
Adj-R2	0.072	0.087	0.095	0.127	0.161
F	4.652	4.403	4.739	6.151	6.438

**Table 1.** Stepwise mediation regression analysis results

n = 197; \*\*\* p < .01, \*\* p < .05, \* p < .1

variables do not fully mediate cultural resource endowment and regional cultural market activity. Hypothesis 4 (H4) is verified.

## 4.2 A Test of the Mediating Role of the Cultural Environment

Since there is a significant correlation between the independent variable cultural resource endowment and the mediating variable cultural environment, the mediating variable cultural environment and the dependent variable regional cultural market activity, there is no need to conduct a Sobel test for the mediating effect. Therefore, this study used the Boostrap method further to test the mediating effect of the cultural environment. A Bootstrap (set to 5000) analysis was performed with a 95% confidence interval (CI). According to the test standard of the Boostrap method, the product term of the regression coefficients from the independent variable to the mediating variable and from the mediating variable to the dependent variable is significantly non-zero, and it can be concluded that the mediating effect of the mediating variable is established. It can be seen from Table 2 that the indirect effect (IE) of cultural resource endowment affecting the activity of the regional cultural market through the cultural environment is 0.202, the standard error (SE) is 0.079, and the confidence interval is [0.005, 0.099]. The direct effect (DE) of cultural resource endowment on the regional cultural market activity is -0.053, the standard error is 0.027, and the confidence interval is [0.152, 0.231]. The above two confidence intervals do not include zero points, thus confirming that the mediating effect

Way	Effect category	Effect value	SE	95%CI	
				Lower limit	Upper limit
$CRE \rightarrow CE$		0.179	0.080	0.021	0.338
	_				
$\text{CE} \rightarrow \text{ARCM}$		0.296	0.082	0.134	0.458
	_				
CRE → ARCM	Direct Effect	0.202	0.079	0.046	0.357
	Indirect Effect	0.053	0.027	0.011	0.119
DE/IE	3.81%				
IE/Total effect	20.78%				

Table 2. Boostrap test for mediating effect

of cultural environment on cultural resource endowment and regional cultural market activity is more significant.

### 4.3 Moderated Mediating Effect

After adding the moderating variable, local government's social media usage behavior (LGSMUB), the data is first centralized. Then, we use the stepwise method proposed by Wen Zhonglin to test the moderated mediating effect. The results are shown in Table 3.

Model 6 shows that after controlling for the local government's social media usage behavior, the cultural resource endowment is still positively correlated with the activity of the regional cultural market ( $\beta = 0.143$ , p < 0.1), which indicates that after considering the moderating variable, this shows that the cultural resource endowment will positively affect the activity of the regional cultural market. Hypothesis 1(H1) is verified again. It can be seen from Model 7 that after controlling the local government's social media usage behavior, there is still a positive correlation between cultural resource endowment and cultural environment ( $\beta = -0.174$ , p < 0.05), and high cultural resource endowment helps to improve the cultural environment. Model 8 shows that after controlling for the local government's social media usage behavior as the moderating variable, the mediating variable cultural environment is significantly positively correlated with the dependent variable regional cultural market activity ( $\beta = 0.303$ , p < 0.01), and the mediating effect is verified. The independent variable and the correlation coefficient of the dependent variable were significant ( $\beta = 0.196$ , p < 0.05), and the cultural environment incompletely mediated the cultural resource endowment and the activity of the regional cultural market. Hypothesis 4(H4) was verified again. Model 9 adds the interaction term of the moderating variable the local government's social media usage behavior and the mediating variable cultural environment based on Model 8. The interaction term is significant ( $\beta = -0.133$ , p < 0.1), which verifies the regulation of local government's social media behavior effect, the coefficient of the interaction term's coefficient is smaller due to the main effect's control. The influence of the moderating effect is minor, and hypothesis 5a(H5a) is verified. After controlling the moderating variable local government's

Variable	Model 6	Model 7	Model 8	Model 9	Model 10
	ARCM	CE	ARCM	ARCM	ARCM
	β	β	β	β	β
GDP GR	-0.273***	-0.176**	-0.220***	-0.239***	-0.242***
	(0.574)	(0.572)	(0.557)	(0.559)	(0.569)
GDP RPC	0.167*	0.277***	0.083	0.089	0.082
	(0.341)	(0.340)	(0.339)	(0.337)	(0.343)
PTRPFR	-0.144*	0.033	-0.154**	-0.160**	-0.168**
	(1.532)	(1.527)	(1.467)	(1.459)	(1.483)
CRE	0.143*	-0.174**	0.196**	0.190	
	(0.081)	(0.081)	(0.079)	(0.078)	
CE			0.303***	0.310	0.275
			(0.082)	(0.082)	(0.082)
LGSMUB	-0.078	0.068	-0.099	-0.132*	-0.146*
	(0.082)	(0.081)	(0.078)	(0.080)	(0.082)
CE × SMBLG				-0.133*	-0.143*
				(0.091)	(0.093)
$\mathbb{R}^2$	0.119	0.125	0.200	0.216	0.182
Adj-R <sup>2</sup>	0.087	0.093	0.164	0.175	0.146
F	3.702	3.921	5.652	5.313	5.039

**Table 3.** Regression analysis results of stepwise moderated mediation effect

n = 197; \*\*\* p < .01, \*\* p < .05, \* p < .1

social media usage behavior, Model 10 observes the mediating variable cultural environment, the interaction term of the moderating variable local government's social media usage behavior and the mediating variable cultural environment, and the dependent variable regional cultural market activity. The results show that the interaction term of the moderating variable local government's social media usage behavior and the mediating variable cultural environment was significant ( $\beta = -0.143$ , p < 0.1), verifying the moderated mediating effect, and hypothesis 5b(H5b) was verified.

## 4.4 Tests for Moderated Mediating Effects

This study used the PROCESS program Bootstrap (set to 5000) to analyze the moderated mediating effect. Hayes proposed a moderated mediation effect judgment index; when the confidence interval of the judgment index does not contain zero, it proves that the moderated mediation effect is significant. The results are shown in Table 4, and the moderated mediation effect has been verified. At the same time, by combining the cultural environment at different levels and the activity of the regional cultural market, we can observe the specific moderated mediation effect. When the local government's

LGSMUB	Effect value	Boot SE	Bootstrap 95	Bootstrap 95%CI	
			LLCI	ULCI	
MEAN-SD	0.139	0.103	-0.069	0.342	
MEAN	0.210	0.080	0.051	0.092	
MEAN + SD	0.281	0.127	0.030	0.091	

**Table 4.** The mediating effect value of the mediating variable cultural environment at different levels of the moderating variable local government's social media usage behavior

social media usage behavior is high (MEAN + SD), the conditional indirect effect of the cultural environment on the activity of the regional cultural market is significant (indirect effect value = 0.281, SE = 0.127, and the confidence interval at the 95% confidence level are LLCI = 0.030, ULCI = 0.091), when the local government's social media behavior is moderate, the local government's social media behavior is also positively correlated with the activity of the regional cultural market (indirect effect value = 0.210, SE = 0.080, at the 95% confidence level Confidence interval for LLCI = 0.051, ULCI = 0.092), but the correlation is reduced. When the local government's social media usage behavior is low (MEAN-SD), local government's social media behavior and regional cultural market activity are no longer significant, indicating that for low local government's social media behavior, the cultural environment affects the regional cultural market activity. This conditional indirect effect is significant. The conditional indirect effect of the cultural environment on the activity of the regional cultural market is not significant.

#### 5 Conclusions

This study mainly draws the following four conclusions. First, the endowments of cultural resources in different regions are different, but generally speaking, the richer the endowments of cultural resources, the better the corresponding cultural environment. Second, the regional cultural environment has a positive role in promoting the development of the regional cultural market, and the regional cultural market with a better cultural environment is also more active. Third, the regional cultural environment is a mediating variable between cultural resource endowment and cultural market activity. The endowment of cultural resources can promote the prosperity of the regional cultural market by improving the local cultural environment. Fourth, local government's social media user behavior can affect the relationship between cultural resource endowment and regional cultural market activity. Specifically, the greater the influence of local government's social media, the stronger the positive impact on this relationship. At the same time, local governments' usage of social media can also positively affect the relationship between the regional cultural environment and the activity of the regional cultural market.

This study analyzes the relationship between cultural resource endowment, cultural environment, and government behavior from the county cultural industry development perspective. At the same time, due to the weak foundation of empirical research in

the cultural field and the lack of a unified variable measurement method, the paper also has certain limitations in variable measurement. From the research results, cultural resources have sufficient development value. In future development, counties (cities) should actively explore and reserve excellent public cultural resources, establish characteristic cultural brands, cultivate a good social and cultural environment, and contribute to cultural development. Industrial development has laid a solid foundation. In the information age, the government should make good use of new communication platforms and tools to better play a leading role in the field of publicity. As a higher-level public demand, public culture cannot be the only provider of public cultural services. The prosperity of public culture is inseparable from the cooperation between the government and other social subjects. The development of new media in government affairs can contribute to the promotion of cooperative production in the supply of public culture. County-level regions can effectively develop cultural resource endowments, connect cultural resource endowments with economic development, promote regional economic development, and provide citizens with public cultural services in a targeted manner, which is conducive to further promoting public cultural services. In the future, we can further explore the realization path and mechanism of government's social media behavior to promote public cultural services.

#### References

- Weng, G. & Li, L. (2016). The Coupling Coordination Degree and Spatial Correlation Analysis on Integrational Development of Tourism Industry and Cultural Industry in China. *Economic Geography* (01),178-185. doi:https://doi.org/10.15957/j.cnki.jjdl.2016.01.025.
- Jiang, P. & Wang, Y. (2011). Research on China's Cultural Industries Input-Output Efficiency under the Whole Scope Angle. *The Journal of Quantitative & Technical Economics* (12),69-81. doi: https://doi.org/10.13653/j.cnki.jqte.2011.12.005.
- China Cultural Heritage Bureau. Some suggestions on promoting the rational use of cultural relics. Retrieved July 1, 2022, from http://www.gov.cn/xinwen/2016-10/19/content\_5121126. htm
- 4. Denhardt, B.,R., Denhardt, V., J. & Liu, J.(2002) .The New Public Service: Serving, not Steering. *Chinese Public Administration* (10),38-44.
- Hou, Y. (2005). New Public Service Theory and the Building of Service-Oriented Government. *Journal of Chinese Academy of Governance* (04),31-34. doi: https://doi.org/10.14063/j.cnki.1008-9314.2005.04.008.
- Li, H.(2014). Exploring the theory of collaborative governance. *Theory Monthly* (01),138-142. doi: https://doi.org/10.14180/j.cnki.1004-0544.2014.01.021.
- Li, S.(2007). Analysis of the main components of public cultural service system construction and its functions. *Social Sciences Review* (02),37-39. doi: https://doi.org/10.16745/j.cnki. cn62-1110/c.2007.02.016.
- 8. Zhang, L.(2012).Government Leading, Social Participation and Market Allocation: the Ideal Model of Rural Public Cultural Service System. *Theory and Modernization* (04),25-30.
- Wu, L.(2012). Bringing Governance to Public Cultural Services. Exploration and Free Views (06),51-54.
- Wang, J. & Zhang, R. (2009). Research on Efficiency of Cultural Industry in 31 Provinces of China Based on Three-Stage DEA Model. *China Soft Science* (09),75-82.

- Li, S. & Zhang, Y. (2020). Impact of Cultural Diversity, Economic Growth on Equalization of Public Cultural Services— Empirical tests based on spatial econometric models. *Research on Library Science* (01),33-41. doi:https://doi.org/10.15941/j.cnki.issn1001-0424.2020.01.005.
- 12. Song, Y., Qu, J. & Lu, C.(2019). Cultural Differences and the Supply of Regional Public Cultural Service: From the Perspective of Fiscal Decentralization. *Journal of Finance and Economics* (10), 35-45. doi: https://doi.org/10.16538/j.cnki.jfe.2019.10.003.
- 13. Zhang, Q.(2017). Process design for expressing demand for rural public cultural services. *Journal of Beijing Administration Institute* (03),41-47. doi: https://doi.org/10.16365/j.cnki. 11-4054/d.2017.03.006.
- Lin, C. & Lu, Q.(2020).Influence of Cultural Resource Endowment on Cultural Industry Development--From the Research Perspective of Resource Heterogeneity. *Journal of Shanxi University of Finance and Economics* (08),86-101. doi:https://doi.org/10.13781/j.cnki.1007-9556.2020.08.007.
- Zhang, Z. &Zhang, L. (2002). On Cultural Industry and its Operation Law. Social Sciences in China (02),98–106+207.
- Jiang, Y. & Gao , C.(2015). Industrial Agglomeration, Historical and Cultural Resource Endowment and Cultural Industry Development - An Empirical Analysis Based on Chinese Cultural Industry Data. *Modernization of Management* (04),16-18.
- Gao, H. (2010). Research on the Industrialization of Cultural Resources. National Academy of Administration Press.
- 18. Gu, J. (2009). Economics of Cultural Heritage. Nanjing University Press.
- 19. Lu, H. & Zhu, T.(2013). Exploring the Contribution Mechanism of World Cultural Heritage to Regional Economic Growth. *Modern Economic Research* (11),37–40+55.
- Zhang, H. & Wang, Z.(2010). Research on Industrial Convergence Development of Tourism Industry and Cultural Industry. Resource Development & Market (04),322-326.
- 21. Hofstede, G. (1984). Culture's consequences: International differences in work-related values (Vol. 5). sage.
- Swartz D. (2012). Culture and Power: The Sociology of Pierre Bourdieu. Shanghai: Shanghai Translation Publishing House.
- Wang, L. & Zhang, B.(2013). The Empirical Analysis of Influence Factors about the Development of Cultural Industry. *Journal of Changing University* (Social Science Edition) (06), 50-55.
- 24. Tian, H. & Yan, S.(2015). The Effect of Cultural Distance on China's Cultural Products Export Trade—An Empirical Study Based on Three Margin. *Economic Survey*(06),71–77. doi: https://doi.org/10.15931/j.cnki.1006-1096.2015.06.013.
- 25. Zhao, Y., Yu, Y. & Ma, W.(2006). Chinese Cultural Industry Competitiveness: An Assessment and Analysis. *Journal of Renmin University of China* (04),72-82.
- Stevens, V., Klijn, E. H., & Warsen, R. (2021). Branding as a public governance strategy: AQ methodological analysis of how companies react to place branding strategies. *Public Administration Review*, 81(4), 752-762.
- 27. Karens, R., Eshuis, J., Klijn, E. H., & Voets, J. (2016). The impact of public branding: An experimental study on the effects of branding policy on citizen trust. *Public Administration Review*, 76(3), 486-494.
- 28. Teodoro, M. P., & An, S. H. (2018). Citizen-based brand equity: A model and experimental evaluation. *Journal of Public Administration Research and Theory*, 28(3), 321-338.
- 29. Eshuis, J., van de Geest, T., Klijn, E. H., Voets, J., Florek, M., & George, B. (2021). The Effect of the EU-brand on Citizens' Trust in Policies: Replicating an Experiment. *Public Administration Review*, 81(4), 776-786.
- 30. Wu, Y. & Hu, G. (2013). Advances in Social Media Research for Government Affairs. *E-Government* (05), 42-50. doi:https://doi.org/10.16582/j.cnki.dzzw.2013.05.005.

- 31. 2020 Construction Report of China Digital Government. Retrieved July 4, 2022, from http://image.ccidnet.com/ccidgroup/2020zhongguoshuzizhengfujianshenbaipishu0723.pdf
- 32. Wang, C. & Ma, L.(2019). How to explode the influence of short videos of government affairs: content analysis based on the government affairs Shake Yin number. *E-Government* (07),31-40. doi:https://doi.org/10.16582/j.cnki.dzzw.2019.07.004.
- 33. Bushman, B. J. (1993). What's in a name? The moderating role of public self-consciousness on the relation between brand label and brand preference. *Journal of Applied Psychology*, 78(5), 857.

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