

Research on the Influence of Cultural and Creative Industries on Local Economic Development in Bengbu

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Abstract

With the development of the times, cultural and creative industries have become a new driving force for the development of the national economy with their characteristics of low pollution and high income. Bengbu is located in the Yangtze River Delta. In recent years, driven by the radiation of the surrounding areas, it has been developing cultural and creative industries. Therefore, studying the relationship between Bengbu's cultural and creative industries and regional economic development is of great significance to promoting the upgrading and transformation of regional industrial structure and promoting the sustainable development of regional economy. This paper expounds the current situation of cultural and creative industries and economic development in Bengbu City, and makes an empirical analysis of the relationship between cultural and creative industries and economic development in Bengbu City. It concludes that there is a close relationship between the economic development and cultural and creative industries in Bengbu City. Finally, based on the analysis of the research results, the corresponding countermeasures and suggestions are put forward.

Keywords

Cultural and Creative Industries; Grey Correlation Degree; Regional Economic Development.

1. The Origin and Connotation of Cultural and Creative Industries

The cultural and creative industry was originally proposed by the British people. And through the interpretation of "culture", it has developed into an emerging industries with creativity as the core, which is produced under the background of economic globalization. It emphasizes an industry in which the main culture or cultural factors rely on individuals or teams to develop and intellectual property through technology, creativity and industrialization. With the development of the industry and the deepening of the research, the cultural and creative industry has become a new economic growth point, which has attracted the attention of all parties. At present, the cultural and creative industries are moving towards science and technology and cross field. In terms of technology, the cultural and creative exhibition industry has gradually introduced new technologies. In terms of scope, cultural and creative industries have strong dependence and diverse expression methods. In a word, there are traces of cultural and creative products in many fields.

The characteristics of cultural and creative industries make it a new economic growth point. The future development of China's cultural industry is an important part of China's realization of cultural power in 2035. It will play a very important role in the realization of a cultural power and will have a long-term worldwide impact. Bengbu City is located in the Yangtze River. Driven by the radiation of the surrounding areas, it also realized the importance of developing cultural and creative industries earlier. It has begun to build and develop cultural industries continuously, and made remarkable achievements.

2. The Current Situation of Bengbu Cultural Creative Industry Development

2.1. The Basis of Cultural Creative Industry in Bengbu City

Bengbu City has a long history and cultural resources, known as Pearl City, and was defined as the cultural industry center in northern Anhui in 2015. Bengbu ' s cultural and creative industries are constantly developing based on Bengbu ' s culture and local unique folk customs. Bengbu City is the birthplace of Huaihe culture, which has bred many excellent cultures, such as flower drum lanterns, Sizhou opera, Fengyang flower drum opera and other opera cultures, as well as historical cultures such as ' Dayu ' s water control ' and ' Bawang Biji ' , and Shuangdun culture, one of the origins of Chinese characters.

Bengbu ' s cultural and creative industries are part of its tourism industry, including Longzi Lake Scenic Area, Lake Rise Moon, Bengbu Gate Water Park, Zhanggongshan Park, Jinpu pond, Nanshan Children ' s Park, Flower Drum Lantern Festival, etc. Bengbu ' s cultural and creative industries are also based on Bengbu ' s streets, such as ' Tuguo Street ' , ' Shengli East Road ' ; bengbu food, such as ' cookies folder ridge ' , ' Huainan beef soup ' ; bengbu buildings, such as ' department store ' , ' Xinhua bookstore ' ; bengbu landmarks, such as ' North-South boundary ' , ' Bengbu Railway Station ' , etc.

2.2. The Development Status of Cultural and Creative Industries in Bengbu City

Bengbu City has a strong foundation for the development of cultural and creative industries, so the cultural industry has been given a new engine of economic growth. Therefore, Bengbu continues to explore and innovate, relying on the characteristics of cultural resources and location characteristics, focusing on the development of creative design, cultural information transmission, cultural product equipment manufacturing, cultural tourism and other cultural industries, and actively promoting the deep integration of cultural industries with science and technology, tourism, industry, sports and other industries.

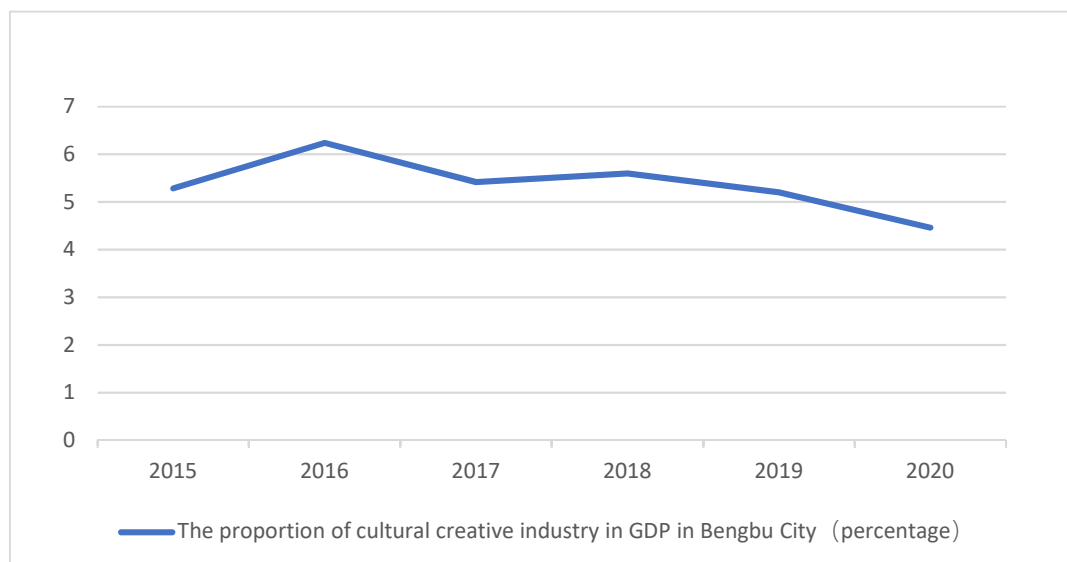


Figure 1. The proportion of cultural creative industry in GDP in Bengbu City (percentage)

In recent years, under the guidance of ' planning guidance, project driven, policy support, market cultivation ' , Bengbu cultural industry has gradually entered the development of ' fast lane ' and achieved good results. By 2020, the added value of Bengbu ' s cultural industry has been at the forefront of the province for seven consecutive years. Anhui Province announced

the evaluation results of the development of cultural industry in the province in 2020. The added value of Bengbu ' s cultural industry in 2020 reached CNY 10.48 billion, accounting for 5.2 % of GDP, and the total number of cultural enterprises exceeded 4, 500. In 2020, 38 provincial key cultural industry projects were included, with a total investment of 71.62 billion yuan, an annual planned investment of 4.79 billion yuan and an actual investment of 5.78 billion yuan. In 2021, the municipal party committee and the municipal government took ' promoting cultural tourism ' as one of the six main lines of work, promoted the high-quality development of culture and tourism, constructed the development pattern of cultural tourism integration of ' one core, one belt, three districts and three groups ', and strived to create provincial cultural industry and tourism industry integration development demonstration area and provincial night cultural tourism consumption gathering area.

But for now, Bengbu ' s cultural and creative industry is still in the first stage, that is, the proportion of cultural and creative industries is still low, the number of local cultural and creative industrial parks needs to be increased, in a more need to rely on local resources development stage. There is still a lot of space for the development of cultural and creative industries in Bengbu, which has the characteristics of diversified works, scientific and technological innovation, joint co-operation, and diversified creators. The diversity of works is reflected in Bengbu cultural and creative products in addition to traditional cultural design, but also joined a lot of landmarks, food, architecture, streets and other elements. The innovation of science and technology is reflected in the use of new raw materials for cultural and creative products in Bengbu, such as silicon-based new materials, biological-based new materials and so on. The integration of new materials and traditional culture is both ' cultivating the root and consolidating the root ' and connecting with the times. The first cultural and creative competition in Bengbu is jointly organized by Anhui Provincial Cultural Relics Bureau, Bengbu Municipal Propaganda Department, Bengbu Cultural and Tourism Bureau, Bengbu Cultural Development Group, Bengbu Museum, Bengbu Cultural Museum and Bengbu Library. The creator diversification is Bengbu ' s cultural and creative products are not only created by the traditional old artists, but also by college students, freelancers, working people and so on.

3. An Empirical Analysis of the Relationship between Cultural and Creative Industries and Economic Development in Bengbu

3.1. Growth Elasticity Coefficient of Cultural and Creative Industries in Bengbu

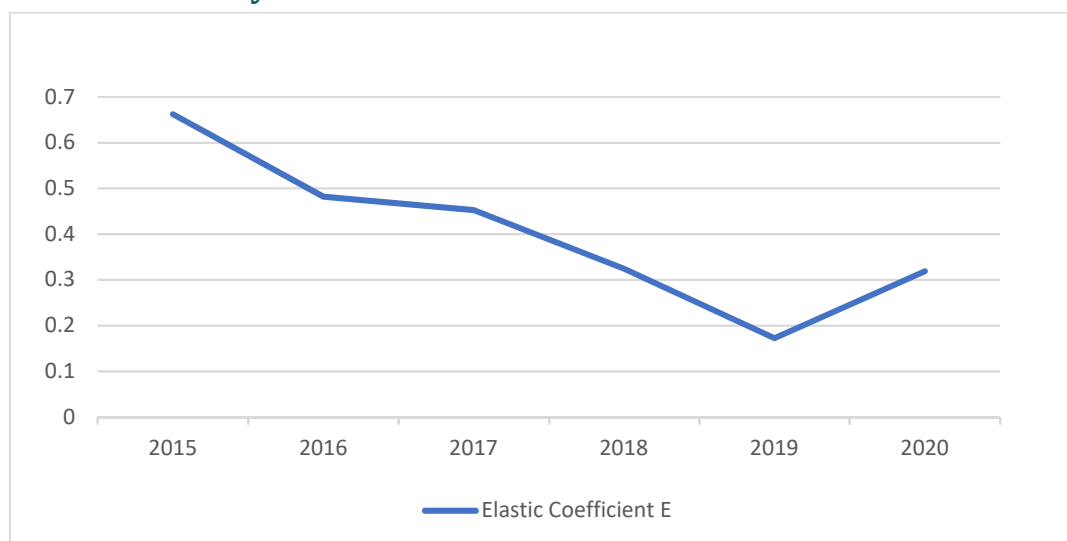


Figure 2. Growth elasticity coefficient of cultural and creative industries in Bengbu

The growth elasticity coefficient of cultural and creative industries indicates the impact of the growth rate of cultural and creative industries on the growth rate of the national economy. It is expressed by E , and the formula is $e = VG / VC$. Where, VG is the growth rate of GDP and VC is the growth rate of added value of cultural and creative industries. The growth elasticity coefficient of cultural and creative industries indicates how many units of national economic GDP will be increased by each unit of cultural and creative industries on average. The larger the coefficient, the more obvious the effect.

From Fig. 2, according to the change diagram of the growth elasticity coefficient e of cultural and creative industries calculated according to the relevant data of cultural and creative industries and GDP in Bengbu in recent years, it can be seen that E has been greater than 0.15, with great volatility. The elasticity coefficient in 2015 is the largest, and the elasticity coefficient fluctuates greatly from 2015 to 2020. The transition began in 2019, and the general trend is increasing. The elastic coefficient E is less than 1, which belongs to insufficient elasticity. The elastic growth coefficient of cultural and creative industries is less than 1, which indicates that the two change in the same direction, that is, the growth of cultural and creative industries will lead to the growth of GDP.

In recent years, with the economic development entering the new normal and the repeated impact of the epidemic in recent years, the growth rate of GDP is in a slow trend, so the E is small. It can be seen that the cultural and creative industries play an obvious role in driving the development of the national economy. Under the new economic normal, the cultural and creative industries will have a stronger development status and role in the future due to their high added value and small resource consumption.

3.2. Grey Relational Analysis

3.2.1. Overview of Grey Relational Analysis

Grey system theory refers to the study and prediction of unknown fields through known information, so as to understand the whole system. The grey relational analysis method is to use a certain method to clarify the main relationship between various factors in the system. The grey relational analysis has no strict requirements on the number of samples, and does not require that the sequence data must conform to the normal distribution, and will not produce a conclusion that is greatly different from the qualitative analysis. Therefore, the grey relational analysis method is selected to analyze the impact of cultural and creative industries on the optimization of industrial structure in Bengbu City.

3.2.2. Empirical Research

Table 1. Added value of cultural and creative industries and tertiary industries in Bengbu from 2015 to 2020

particular year	GDP(x_0)	GDP(x_1)	GDP(x_2)	GDP(x_3)
2015	70.63	188.55	641.94	422.56
2016	93.72	200.01	609.12	576.69
2017	91.61	205.33	681.3	664.03
2018	106.79	207.89	762.29	744.48
2019	104.80	234.32	845.87	976.98
2020	89.98	255.01	835.19	992.53

The added value of cultural and creative industries in Bengbu from 2015 to 2020 is selected as x_0 as the reference sequence, and the added value of the primary industry, the added value of the secondary industry and the added value of the tertiary industry are recorded as X_i , ($i = 1, 2, 3$) as the comparison sequence, and the resolution coefficient $\rho \in (0, \infty)$. The smaller ρ is, the greater the resolution. Generally ρ 's value range is $(0, 1)$. The specific value depends on the

situation. When $\rho \leq 0.5463$, the resolution is the best, usually $\rho = 0.5$. Table 1 shows the added value of cultural and creative industries and tertiary industries in Bengbu from 2015 to 2020. GDP (x_0) is the added value of cultural and creative industries, and GDP (x_1), GDP (x_2) and GDP (x_3) are the added value of primary, secondary and tertiary industries respectively.

First, the reference sequence and the comparison sequence are determined. And then the sequence is subjected to dimensionless processing. The correlation coefficient r_{0i} of the processed sequence at each time is calculated. The calculation formula is

$$R_{0i}(K) = \frac{\min_i \min_t |x_0(t) - x_i(t)| + \rho \max_i \max_t |x_0(t) - x_i(t)|}{|x_0(t) - x_i(t)| + \rho \max_i \max_t |x_0(t) - x_i(t)|} \quad (i = 1, 2, \dots, n).$$

Where $x_0(J) = \{x_0(k) \mid k = 1, 2, \dots, n\}$ is the reference sequence; $X_0(J) = \{X_i(k) \mid k = 1, 2, \dots, n\}$ is the comparison sequence; ρ is the resolution coefficient.

Then the reference sequence is established. Here, it is necessary to compare the three industries with the cultural and creative industries to calculate the degree of correlation. Therefore, the reference sequence is the added value of the cultural and creative industries.

Then, the dimensionless processing is adopted. Here, the average method is adopted, that is, the ratio of the annual statistical value of each series to the average value of the whole series. The following results can be obtained:

Table 2. Correlation coefficient results

Correlation coefficient results			
	R_{01}	R_{02}	R_{03}
2015	0.7295276451606107	0.720277598258962	0.6041747904415162
2016	0.8276393094519622	0.6164892417802873	0.549880778328191
2017	1	0.9192751658386955	0.8380717004762457
2018	0.6005798985507766	0.7590173351968078	0.7011056753823948
2019	0.9692469350072332	0.9984725834150753	0.5590329203335986
2020	0.5517212739841142	0.6106827340373978	0.3871956026148018

It can be seen from the above table that grey relational analysis is conducted for 3 evaluation items (GDP (x_1), GDP (x_2), GDP (x_3)) and 6 data, and GDP (x_0) is taken as the "reference value" to study the relationship between 3 evaluation items (GDP (x_1), GDP (x_2), GDP (x_3)) and GDP (x_0), and provide analysis reference based on the correlation degree. When using grey relational analysis, the resolution coefficient ρ Take 0.5, calculate the correlation value in combination with the correlation coefficient calculation formula, and then calculate the correlation degree value according to the correlation coefficient value for evaluation and judgment.

Next, the correlation degree and the correlation result are calculated according to the formula, ($i = 1, 2, \dots, n$). The correlation degree indicates the similar correlation degree between each evaluation item and the "reference value", which is calculated by the average value of the correlation coefficient. The correlation degree value is between 0 and 1. The larger the value, the stronger the correlation between the evaluation item and the "reference value", and the higher the correlation degree, which means the closer the relationship between the evaluation item and the "reference value", so the higher the evaluation. Combined with the relevance value, the ranking of all evaluation items is obtained.

Table 3. correlation results

correlation results		
Evaluation items	Relevance	Ranking
GDP(x1)	0.78	1
GDP(x2)	0.771	2
GDP(x3)	0.607	3

Combining the above correlation coefficient results to perform weighting processing, finally obtaining the correlation degree value, and using the correlation degree value to evaluate and rank the three evaluation objects; The correlation value is between 0 and 1. The larger the value, the stronger the correlation between it and the "reference value", that is, the higher the evaluation.

It can be seen from the above table that the cultural and creative industries in Bengbu have the highest degree of association with the primary industry, which is 0.78. In terms of the natural resources of Bengbu, Bengbu has a large area of arable land. In recent years, it has also been developing characteristic agriculture, and there are many local characteristic agricultural industries, forming many county-level agricultural product characteristic industrial clusters. From the perspective of industrial development in Bengbu, the proportion of the primary industry is also high, and the added value is also increasing. The primary industry in Bengbu has gradually developed from traditional agriculture to modern agriculture. Therefore, the development of cultural and creative industries in Bengbu can drive the development of the primary industry.

The correlation degree between the cultural and creative industries and the secondary industry is 0.771. The development of related industries can directly drive the development of other secondary industries through the input-output technology connection. The cultural and creative industries can also endow the secondary industry with more cultural attributes through their high added value characteristics, infiltrate relevant innovation and creativity into the product design, manufacturing and sales of the secondary industry, and achieve high-tech, high added value and high efficiency of products, It can drive the transformation and upgrading of the secondary industry.

The correlation between cultural and creative industries and the tertiary industry is relatively low, 0.607. From the perspective of industrial structure, Bengbu still has a large proportion of the secondary industry, and the tertiary industry still needs long-term development. However, Bengbu has made great efforts to develop the tertiary industry in recent years, and plans to build the high-tech industry and cultural tourism industry into a new economic growth point, with the promotion of culture and tourism as the focus of work, so that the added value of the tertiary industry is also increasing. Therefore, the cultural and creative industry has a certain degree of correlation with the tertiary industry, The development of cultural and creative industries can promote the development of other tertiary industries through the role of industrial integration, but the degree of correlation is low.

On the whole, cultural and creative industries have a certain impact on the development of the three industries, but the degree of impact is different. Among them, the cultural and creative industries are obviously related to the first and second industries, and are less related to the third industry. From the above calculation results and analysis, it can be concluded that the cultural and creative industries have a certain impact on the optimization of the industrial structure of Bengbu City. The cultural and creative industries are the tertiary industry and play an important role in accelerating the structural adjustment of the tertiary industry; After the

integration of cultural and creative industries with the primary and secondary industries, it can drive the transformation and upgrading of the primary and secondary industries, especially play the role of optimizing the urban industrial structure, promote the improvement of the internal structure of the three industries, and jointly promote the development of Bengbu's regional economy.

4. Research Conclusions and Suggestions

Based on the relevant data statistics of Bengbu from 2015 to 2020, the paper quantitatively analyzes the impact of Bengbu's cultural and creative industries on the industrial structure and local economic development, analyzes the growth trend of the elastic coefficient of cultural and creative industries, and the dominant position of cultural and creative industries in the rapid development of social economy. This paper discusses the influence of cultural and creative industries on the optimization of regional industrial structure and the concept of green development and sustainable development by using the method of grey correlation statistical analysis. The results show that the elasticity coefficient of Bengbu's cultural and creative industries fluctuates greatly, and the overall value is above 0.15. The contribution rate of cultural and creative industries to economic growth has gradually increased. Although the driving level of cultural and creative industries to economic growth fluctuates slightly, the overall development trend is upward. From the perspective of industrial layout, Bengbu's cultural and creative industries have a certain impact on the optimization of industrial structure, with a greater impact on the primary industry, followed by the secondary industry and a lesser impact on the tertiary industry.

From the above situation and model analysis, it can be seen that the rapid development of cultural and creative industries has obvious positive externalities, which has important practical significance for improving regional independent innovation ability and overall competitiveness. Therefore, we can promote the development of Bengbu cultural and creative industries from the following four aspects.

4.1. We Will Strengthen Policy Support and Institutional Management for the Development of Cultural and Creative Industries

Like other industries in Bengbu, the development of cultural and creative industries cannot be separated from the education and guidance of government agencies. Bengbu Municipal government can establish a cultural and creative development research group centered on the county and city, and all enterprises can jointly create a comprehensive service platform for cultural and creative industries. The cultural and creative research group is mainly responsible for managing the affairs related to the development of cultural and creative industries, such as the overall development planning of regional cultural and creative industries, industrial development planning, key project construction, etc., formulating actual overall objectives and giving full play to the positive role of government policies. The cultural and creative comprehensive service platform is responsible for providing perfect public services for cultural and creative investors in terms of information exchange, data supervision, online trading, etc., to ensure that the methods, steps and Countermeasures for sustainable development are further implemented.

Secondly, the government can increase the financial support, increase the preferential range of tax policies, and actively expand the financing methods. In the process of promoting the development of cultural and creative industries, Bengbu Municipal government should provide specific preferential policies, especially at the tax level. For example, special funds for cultural and creative industries are formulated to be used for the basic construction of relevant cultural industrial parks and the development of cultural and creative companies. In addition, the Bengbu Municipal government can also refer to the current support policies of the state for

high-tech enterprises, give government subsidies to the assessed cultural and creative companies, and encourage various social investment entities to actively carry out cultural independent innovation activities according to different taxes, import and export tax rebates and other methods. Or according to the characteristics of investment and financing of cultural and creative industries, actively improve the basic construction of the investment and financing guarantee system of cultural and creative industries from various channels such as government departments and financial institutions, so as to create a good financing development environment for cultural and creative enterprises.

Finally, the government can encourage and correctly guide the cultural and art consumption market. At present, mass trading has entered a new stage of personalization and diversification. Bengbu Municipal government should further improve the management system of mass culture industry. And integrate into everyone's daily life in the form of publicity planning, activity planning, theme activities, community performances, etc. according to the mainstream media, so as to realize the special needs of consumers at different levels for cultural and creative goods.

4.2. Create a Legal Environment to Ensure the Healthy Development of Cultural and Creative Industries

Unlike traditional industries, the process and results of many cultural creativity are closely related to intellectual property rights. Bengbu City should strengthen the law enforcement of cultural and creative industry property rights protection and strive to create a social culture for protecting intellectual property rights. Therefore, Bengbu City should improve the working mechanism of intellectual property rights and severely crack down on intellectual property infringement. In a good social atmosphere, Bengbu Municipal government should actively do a good job in Internet work, local cultural and creative enterprises should create excellent corporate culture, and strengthen the legal awareness of protecting cultural property.

4.3. Pay Attention to the Cultivation and Introduction of Talents in Cultural and Creative Industries

Talent is the core of enterprise and social development. First, Bengbu can strengthen the training and construction of independent innovation talents in Colleges and universities. Promote the good development momentum of cultural and creative industries in the creative industry chain, colleges and universities have certain leading advantages in cultivating talents. Bengbu colleges and universities shall set up technical majors related to cultural and creative industries, or set up cultural and artistic creative schools. Government agencies should strengthen cooperation with universities, enterprises and scientific research institutes, constantly expand the cultural and creative industry chain, create industrial bases, and cultivate high-quality and high-end cultural and artistic creative talents.

Second, we should create a good social environment and attract creative talents to settle down. The introduction of creative talents is an important driving force for the development planning of creative industries. Bengbu Municipal government should flexibly apply preferential policies, formulate preferential policies for correctly guiding talents, and give government subsidies and latest project subsidies to creative talents introduced by creative enterprises to attract all kinds of creative talents to settle in Bengbu. At the same time, we should strengthen the infrastructure construction of cultural and artistic creative talents, do a good job in the pilot work of creative talents, stimulate the development momentum of creative talents, and constantly enhance the initiative and creativity of relevant enterprises and talents.

Third, we need to improve the on-the-job training system for cultural and creative industry talents, strengthen short-term training and on-the-job training for cultural and creative industry talents, and deeply tap existing advantages such as local culture, art and creative talent resources. The cultivation of talents in cultural and creative industries must adhere to "walking

on two legs". Therefore, the relevant departments must closely combine training and learning with post practice activities to cultivate technical innovation talents that meet the market demand. At the same time, we will strengthen the exchange, learning and training of the working experience of talent shaping in cultural and creative industries with the more developed regions in the world.

4.4. Explore New Development Trends and Highlight the Characteristics of Bengbu Through Industrial Cultivation

The development of Bengbu's cultural and creative industries should grasp the development trend, adapt measures to the local conditions, strengthen the sorting, exploration and packaging of local history, ethnic and folk cultural resources, deeply explore the local culture and art, human resources management and other relevant factors, transform creative design into entity new projects, meet the needs of the masses with unique design independent innovation and cultural feelings, develop and design cultural tourism commodities with Bengbu characteristics, Create a number of cultural and creative industries with local characteristics and cultivate cultural brands with local characteristics. Relying on the advantages of old brands with market influence, we will open up the whole industrial chain of cultural and creative industries, form a number of large-scale comprehensive development and design cities with large business scale, good economic benefits and high popularity, and make full use of the leading role of backbone enterprises and the agglomeration effect of industrial parks to introduce new impetus for Bengbu's "transformation development and beautiful development trend".

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