The research content, characteristics and future trend of Chinese cultural brand——from the perspective of literature analysis

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Abstract. To create cultural brand is the internal need of enhancing the development of national cultural industry. We collected total of 1526 articles relevant to cultural brand from the China National Knowledge Infrastructure (CNKI) to analyse the data with bibliometrics, social network analysis. We divided the cultural brand research into three stages basing on the changes in the number of papers published each year which has been increasing recently and compared each stage according to their characteristics. The results indicate that the overall cultural brand research, characterized by diversification, shows more decentralization in the content. There are more researches focusing on Chinese traditional culture and innovation development of cultural industry due to the urgent need of the development of Chinese cultural brand. In addition, some traditional fields, such as cultural industry and regional culture, always attract more attention in all stages, while the topics that reflect the development of the time can also be popular in certain stage.

1. Introduction
During the 12th Collective Learning of the Political Bureau of the CPC Central Committee, General Secretary Xi Jinping emphasized the improvement of soft power of national culture and the development of cultural undertakings. These are related to the goal of building a culturally strong socialist country and the realization of the Chinese dream to achieve a great revival of China. Cultural brand is an important measurement of cultural soft power. It plays a decisive role in the competitiveness and attractiveness of the country and region. In recent years, China's cultural industry has been moving purposefully towards brand-based construction. The development of cultural brand has rapidly transited from the initial period to the growth period. And the cultural brand construction has shown better prospects and influence.

With the increasingly fierce competition in the economic market and the rapid development of knowledge management, China has paid more attention to the promotion of national cultural soft power and the development of cultural brands with rich cultural deposits and influence. The cultural industry can only have strong economic strength and market appeal through brand construction. Therefore, by creating cultural brand with market value and independent innovation by brand-based construction, the cultural industry can acquire the attention and recognition in the global cultural field. Simultaneously, cultural brand plays a vital role in popularizing regional culture due to its distinct
regional and territory characteristics. For example, Shanghai has built urban cultural brand to stimulate the innovative vitality of Shanghai's urban culture represented by Shanghai’s film and Peking Opera culture. However, China's cultural industry still needs further improvement in international influence, brand awareness and innovation ability. Through the development of the "the Silk Road Economic Belt and the 21st-Century Maritime Silk Road (Belt and Road Initiative)" cooperation strategy, China is aiming to create a cultural brand with global influence.

At present, the research of cultural brand is in the trend of diversification. However, the most of studies lack of systematic analysis and summary of the development trend of cultural brand. Therefore, basing on current theoretical research, we analyzed keywords and network structure from the collected sample literature, and drew knowledge maps of cultural brand research with bibliometrics and social network analysis in order to further explore the dynamic evolution process and future trend of cultural brand research content. In this paper, the research of cultural brand was divided into three stages and the corresponding development trend as well as research direction were analyzed according to the data of each stage and the overall characteristics.

2. Literature Review
With the in-depth study of brand, scholars pay more and more attention to the application of brand research in the field of culture. "Brand" was first proposed by David Ogilvy in "Image and Brand" in 1955 and "Culture" was first put forward by Edward B. Tylor in "Primitive Culture" in 1871, where the cultural brand was formed. Alden et al. studied the relationship between culture and brand and presented a new brand positioning strategy called "global consumer culture positioning" (GCCP). This strategy is to define the brand as a symbol of a given global culture and to influence brand value in an increasingly globalized market. Gammoh et al. suggested that the GCCP is a consumption strategy with the most consumer receptivity and appeal, proving that the effect of brand positioning on culture is one of the most important issues. According to Holt, cultural brand is a set of axioms and strategic principles that guide the building of brands into cultural icon. It can be seen that foreign research on cultural brand started earlier and focused more on the cultural value of the brand. On the other hand, many domestic scholars have put forward the concept of cultural brand in succession. Bai stresses that cultural brand is characterized by the names and symbols of cultural products. It is a special cultural symbol with high cultural connotation. According to Xie, cultural brand is to establish a distinct brand positioning by endowing brand with profound as well as rich cultural connotation and to create brand beliefs by the way of cultural communication, which ultimately lead to a strong brand loyalty. In conclusion, the researches of cultural brand from foreign countries mainly focus on brand products so that foreign scholars’ studies more on the cultural influence of brand products. The domestic scholars’ researches are guided by distinct traditional culture. On this basis, they create brand with unique cultural significance.

With the popularization and development of cultural brand, scholars have made more in-depth research on cultural brand. Some attempts have been made by constructing conceptual theory model to discuss the influence of culture on brand based on different factors. For example, building a theoretical model based on six concepts to analyse the cultural and geographical factors in cross-regional brand remodeling. Another one is to study the mechanism of the influence of different cultures on Chinese and foreign brands based on the two-dimensional structure. Besides, some scholars established the model system to promote the construction of regional cultural brand. Okano et al. set up urban strategic management system based on cross-cultural cooperation of urban cultural brands. Gao et al. constructed asymmetric game model to solve the risk of enterprises’ participation in regional cultural brand co-construction. Other researchers created local cultural brand conceptual model by SWOT analysis and CFA. Furthermore, some cultural brand theories were put forward from innovative development of cultural industry.

Through summarizing the results from cultural brand researches, the currently research of cultural brand, which is still in its infancy, lacks the comprehensive analysis of cultural brand concerning the content characteristics, evolution process and development trend. However, with the rapid
development of cultural brand, there are a large number of high-level theoretical research results in this field. Through bibliometrics and social network analysis methods, we analyzed the core literature in the past 18 years to fully grasp the development process, research content and future trends of cultural brand. This study visually shows the research hot spots and development prospects of cultural brand and provides theoretical support for further research.

3. Data Collection
The data was collected from CNKI database. We put cultural brand as theme, title, abstract and keyword respectively. The four search conditions were set to be "or" relationship and precise mode. This was conducted on March 1, 2019. The journal categories were selected as SCI, EI, core and CSSCI. A total of 1751 papers were retrieved. After artificial judgment and data preprocessing, papers that contained incomplete content features and unrelated research contents were deleted. Finally, 1660 papers were validated. The annual amount of published papers is shown in Figure 1.

![Figure 1. Annual amount of published papers](image)

The trend curve of annual papers published in Fig. 1 shows that the amount of annual papers published rises to the peak first in the 2012 and then declines. The trend line is \( y = -0.1186x^3 + 2.9657x^2 - 8.4954x + 12.179 \) with the \( R^2 \) value of 0.8817 which is approaching to 1. This shows that the regression equation has good fitting degree and high reliability. Referring to Dehdarirad et al.\(^0\), we divided the research of cultural brand into three stages: 2000-2008, 2009-2012 and 2013-2018, according to the change of annual publications. In the early stage (2000-2008) of cultural brand research, due to the lack of theoretical knowledge and social awareness of the cultural field, less scientific and technological literature was published. In the process of cultural brand research, due to the strong support for the cultural industry during the 12th Five-Year Plan period, it was a key year to realize the multiplication of the number of Chinese cultural industries in 2012. Scholars' research on the cultural industry has gradually developed and the amount of relevant literature has gradually reached its peak. There was an obvious trend of literature expansion in 2016 and 2018 because of the great importance attached by the 18th National Congress to the cultural industry.

Keywords can summarize the research features of the literature content to obtain more precise research hot spots in the field of cultural brand.\(^0\) In this paper, we analyzed keywords and screened out non-standard vocabulary by BICOMB2 software. Table 1 shows the top 10 of high-frequency keywords in three stages. There are 994 keywords in stage one, 157 of which have frequency greater than or equal to 2 and make 40.30% of the total. There are 1707 keywords in stage two, 296 of which have frequency greater than or equal to 2 and make 44.69% of the total. There are 1876 keywords in stage three, 308 of which are with frequency greater than or equal to 2 and account for 42.40% of the total.
Table 1. Keywords frequency in three stages

| Order number | Stage one       | Stage two       | Stage three      |
|--------------|-----------------|-----------------|-----------------|
|   | Keyword         | amount          | Keyword         | amount          | Keyword         | amount          |
| 1 | Brand           | 49              | Brand           | 63              | Cultural brand  | 72              |
| 2 | Cultural brand  | 34              | Cultural Industry| 60              | Cultural industry| 58              |
| 3 | Brand culture   | 19              | Cultural brand  | 59              | Brand           | 43              |
| 4 | Culture         | 12              | Brand culture   | 18              | Innovation      | 20              |
| 5 | Enterprise      | 9               | Culture         | 14              | Campus culture  | 16              |
| 6 | Business management | 9            | Cultural resources| 12              | Cultural construction| 16              |
| 7 | Cultural industry| 9               | Innovation      | 12              | Brand construction| 15              |
| 8 | Guangxi         | 7               | Strategy        | 11              | Countermeasure  | 14              |
| 9 | National culture| 7               | Guangxi         | 11              | Route           | 13              |
| 10| Innovation      | 7               | Cultural construction| 10              | Cultural creative industry| 13              |

Cumulative percentage

| 10.5841 | 11.5549 | 8.4926 |

4. Method

This paper used social network analysis method. The keyword co-occurrence matrix and relationship network between keywords were generated by BICOMB2 and Pajek software to calculate the centrality, network average density, clustering coefficient and network node average degree of nodes in keyword relationship network and to analyses the research contents and characteristics in the field of cultural brand⁶⁹.

As shown in formula (1), node centrality $C_c(v)$ represents the distance from each node to the centre, where $N$ is the number of nodes and $D_{ij}$ is the distance from node $V_i$ to $v_j$.

$$C_c(v_i) = (N - 1)/\sum_{j=1,j\neq i}^{N} d_{ij}$$  \hspace{1cm} (1)

As shown in formula (2), network density $d(v)$ denotes the degree of relationship between nodes. $M$ refers to the number of connections in the network.

$$d(v) = 2M/N(N - 1)$$ \hspace{1cm} (2)

As shown in formula (3), the agglomeration degree coefficient $CC_i$ reflects the degree of agglomeration of network nodes, $|E(G_i(v))|$ is a node with one adjacent node connected to $v$, and $\deg(v)$ is the degree of node $v$.

$$CC_i = \frac{2 |E(G_i(v))|}{\deg(v) \times (\deg(v) - 1)}$$ \hspace{1cm} (3)

As shown in formula (4), $\bar{d}$ is the average degree of network nodes, and $U$ is the set of all nodes.

$$\bar{d} = \frac{1}{N} \sum_{v \in U} \deg(v)$$ \hspace{1cm} (4)
5. Research Content of Cultural Brand

5.1. Analysis of Research Contents Based on Centrality
In order to study the centrality-based content analysis of high-frequency keywords in each stage shown in Table 2, the centrality of the first 10 high-frequency keywords in three stages was calculated respectively according to formula (1). The high-frequency keywords "cultural brand" and "cultural industry" maintain high centrality in all three stages, which indicates that these keywords play an important role in the field of cultural brand research and are closely connected with other high-frequency keywords. The centrality of keywords "brand", "brand culture" and "culture" become less and less, which indicates that scholars begin to pay more attention to the overall study of cultural brand basing on the study of brand, culture and brand culture. And the centrality of keyword "innovation" stable, indicating that "innovation" is the key point of cultural brand research.

Table 2. Centrality of keywords in three stages

| Order number | Stage one       | Stage two       | Stage three      |
|-------------|-----------------|-----------------|------------------|
|             | Keyword         | Centrality/  | Keyword         | Centrality/  | Keyword         | Centrality/  |
| 1           | Brand           | 0.73           | Brand           | 0.63           | Cultural brand  | 0.60           |
|             | Cultural        |                | Cultural        |                | Cultural industry|                |
| 2           | culture         | 0.53           | Brand industry  | 0.65           | Cultural brand  |                |
| 3           | culture         | 0.56           | Cultural        | 0.62           | Brand           | 0.52           |
| 4           | Culture         | 0.52           | Brand culture   | 0.5            | Innovation      | 0.50           |
| 5           | Enterprise      | 0.51           | Culture         | 0.45           | Campus culture  | 0.44           |
| 6           | Business        | 0.51           | Cultural        | 0.48           | Construction    | 0.47           |
|             | management      |                | resources       |                | Brand           |                |
| 7           | cultural        | 0.48           | Innovation      | 0.52           | Construction    | 0.40           |
| 8           | Guangxi         | 0.36           | Strategy        | 0.51           | Countermeasure  | 0.44           |
| 9           | National        | 0.48           | Guangxi         | 0.45           | Route           | 0.40           |
|             | culture         |                | Cultural        |                | Creative industry| 0.44           |
|             | construction    |                |                 |                |                 |                |

5.2. Comparison of Network Characteristics Based on Relational Links
In order to ensure the consistency of study, we chose keywords whose word frequency no less than 5, calculated centrality by Pajek software and divided centrality according to Wang et al. The core node is the ● black node whose Cc(v_n) is no less than 0.60. The centralized node is the ● gray node whose Cc(v_n) is between 0.50 and 0.60. The edge node is the ○ white node whose Cc(v_n) is less than 0.50. And visualized keyword-centred networks in different stages are shown in Fig. 2, Fig. 3 and Fig. 4, respectively.

Stage one: year 2000–2008
There are 26 nodes whose keyword frequency is more than or equal to 5, of which one core node is "brand", six nodes are in the middle layer, and 19 edge nodes account for 73% of the total. It can be seen that most of the nodes at this stage are marginal and the degree of concentration is not high.

Through the analysis of network nodes, it is found that brand, cultural brand, brand culture, culture and other related nodes in the field maintain a high degree, indicating that they are in a relatively important position. The marginal nodes, such as city brand and development centre, are in an isolated position. This shows that the frequency of these two keywords is high while the connection degree with other high-frequency keywords is low and they have not become more influential keywords. The cultural industry, national culture, cultural marketing, strategy, brand construction and other marginal...
nodes are relatively low in centrality. However, they are very high in degree and are closely linked with other key words so they are also the research points with high concern in stage one. From further analysis of the relationship between networks nodes, we can find that the relationship between keywords of enterprise management and enterprise is the closest. Brand and regional culture, creative industry and cultural brand, as well as cultural industry and culture form a number of small-scale relationships.

Stage two: year 2009–2012

There are 55 nodes whose keywords frequency are greater than or equal to 5 in this stage, which is twice as high as that of the stage one. There are three core nodes: cultural industry, brand and cultural brand. And the centrality is 0.65, 0.63 and 0.62, respectively. There are eight intermediate nodes in this stage, including cultural creativity, innovation, industrialization, strategy, cultural soft power, resources, national culture and campus culture, which account for 14.5% of the total. There are 44 edge nodes accounting for 80% of the total. The number of edge nodes increases significantly compared with the stage one.

Based on the network connection analysis of nodes, it is found that the keywords of cultural industry, cultural creativity and cultural brand have a high degree, which indicates that these research points are more closely connected with other keywords at this stage. The city brand and development nodes, which are in isolation in the stage one, gradually increase their centrality in stage two. This shows that these two keywords are more concerned than the previous stage. At the same time, some new research points draw attention gradually, such as urban culture, regional culture, independent brand, etc. And compared with the first stage, the number of keywords related to region in the second stage increases significantly, such as Shandong, Guangdong, Guilin, Qinghai, Guangxi, Yunnan and other big cities. Further analysis of the network node relationship shows that the keywords of cultural industry and cultural brand are the most closely related. Cultural brand is gradually developing towards cultural industry and a small network, with strong connectivity, centred on cultural industry, brand, cultural brand, cultural soft power and other nodes is formed.
Stage three: year 2013~2018

There are 79 nodes with keywords frequency greater than or equal to 5, including one core node and 75 edge nodes, which indicates that the research on cultural brand tends to be diversified.

The isolated point with zero centrality, which is the node of cultural products, appears again at this stage. Generally speaking, cultural brand, cultural industry, brand, brand construction and other nodes as the main areas of cultural brand still have a high research enthusiasm. At the same time, some new research points, such as new media, big data, regional economy and cultural dissemination, have been concerned by scholars. Moreover, campus culture, tourism culture, national culture and other nodes related to cultural industry appear in three stages and are all high-frequency keywords, which shows that cultural industry is the main emphasis of cultural brand research. In the third stage, there are new nodes related to cultural industry, such as sports industry, cultural creative industry and so on. This shows that cultural industry is not only the main emphasis but also the hot spot in the research of cultural brand. Through further analysis of the network relationship of nodes, it is found that the relationship between cultural brand and cultural industry is still the closest and gradually form a small network centred on cultural brand, cultural industry, cultural soft power, brand and other nodes.

5.3. Research trend analysis based on network characteristics

According to formula (2) ~ (4), the overall development trend of cultural brand research is further analyzed and studied. The results are shown in table 3.
Generally speaking, network density and network agglomeration coefficient decrease in turn from stage one to stage three, reflecting that the degree of connection and closeness between adjacent keywords decrease in turn. And the average degree of network decreases from stage two to stage three, indicating that the trend of cultural brand research points with the change of stage begin to diversify gradually.

| Network characteristic index     | Stage one | Stage two | Stage three |
|----------------------------------|-----------|-----------|-------------|
| Network density                  | 0.216     | 0.1339    | 0.1140      |
| Network agglomeration coefficient| 0.3016    | 0.2698    | 0.2347      |
| Network Average                  | 11.2307   | 14.7273   | 13.4576     |

Through the comparative analysis of the centrality, network relationship links and network characteristics of the three stages, the following main conclusions are drawn:

1. The centrality of the three stages is in a state of fluctuation. From stage one to stage two, the edge layer nodes are obviously increased. From stage two to stage three, the number of core layer nodes and middle layer nodes decreases. On the contrary, the number of edge layer nodes keeps increasing, which indicates that the research focus is more and more diversified.

2. In the three stages, the network tightness between keywords decreases continuously, which also indicates that the research focus is more and more diversified.

3. The research fields related to regional culture and cultural industry always maintain a high degree of concern.

4. The research focus of each stage is clear, and the research content related to cultural industry in each stage constantly appears and increases, which indicates that it is not only the research focus but also the hot topic in the three stages. And there are new research hot spots at all stages, such as animation industry, cultural communication, globalization, new media, red culture and so on.

6. Characteristic of Cultural Brand

By sorting out the literature and comparing the contents of the three stages, this paper concludes three characteristics of cultural brand which are different from other brands.

The first characteristic is the regionalism. A unique local cultural product represents the living habits and historical symbols of the local people. This is the reason why consumers are willing to buy cultural products. It is of great research significance to make full use of local cultural products to create brand characteristics. More and more cities begin to pay attention to the use of urban cultural characteristics to maintain the strength of traditional brands and regard this strength as the driving force of urban construction. For example, famous historical cities, such as Kashgar, Dali and Guangzhou, have created cultural brand to promote the brand development of traditional culture.

The second characteristic is the nationality. Regional cultural brand fully reflects the nationality, so as to promote the common development of excellent traditional culture and national culture in all regions. The national foundation exists in the process of establishing any cultural form, and the connotation of cultural brand must have its nationality. Brand research also has a positive impact on the construction of national cultural industry. For example, "Pu'er Tea" and "Lijiang's eternal love" have become achievements of Yunnan's cultural industry in generation of cultural brand. However, there are many misunderstandings and shortcomings in the dissemination of national cultural brand. Rebuilding the path of national cultural brand has become the key point.

The last characteristic is the industrialization. Establishing cultural brand to promote the development of cultural industry has become to the main direction of cultural industry at home and abroad. Cultural brand embodies the cultural characteristics of products as well as services and shows the advantages of cultural industry, which can attract more market consumption, and plays a leading
role in the steady promotion of cultural industry. In May 2002, the Executive first proposed the concept of cultural creative industries that emphasizes the development of culture on the basis of innovative technology and mass market and fully integrates creativity into the creation of cultural industry brand. Cultural industry not only needs to develop and utilize unique cultural resources, but also requires the integration of both innovation and autonomy to be at the top of the field and create excellent cultural brand.

7. Conclusion and prospect
After development during three stages, cultural brand research has gradually formed a theoretical research direction with regional culture and cultural industry as the core. More and more urban cultures have been developed, and more and more cultural enterprises have been innovated and reconstructed according to the concept of cultural brand. The content of research has become more and more diverse, and the research hot spots have gradually spread. In this paper, the research of cultural brand is divided into three stages according to the annual volume of articles and empirical research is conducted through social network method. The results show that cultural brand will continue to maintain a high research enthusiasm in the future. The development trend of cultural brand is that traditional content has always maintained a high degree of concern, such as regional culture, national culture, etc. Moreover, research with the characteristics in a period can also become hot issues at different stages, such as globalization, cultural dissemination, new media, etc.

With the rapid development of the Internet, cultural brand research will also focus on technologies like mobile Internet and big data, such as Internet +, network communication, AI, machine learning and so on. In addition, big data analysis and processing technology provide a basis for large-scale data collection, analysis and mining for cultural brand research, which will further promote the development of cultural brand research.

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