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Retraction

Retracted: The Impact of Convention and Exhibition Industry on Regional Economic Development Based on Grey Relational Model

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Manipulated or compromised peer review

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] X. Yang, "The Impact of Convention and Exhibition Industry on Regional Economic Development Based on Grey Relational Model," *Journal of Mathematics*, vol. 2022, Article ID 9752636, 8 pages, 2022.

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Research Article

The Impact of Convention and Exhibition Industry on Regional Economic Development Based on Grey Relational Model

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Since the exhibition is an exhibition industry, it has got so much importance by many countries. In China, the development of the said industry is wonderful. Therefore, we use the grey relational model to study the impact of convention. Moreover, the exhibition industry on regional economic development is proposed, and the concept and characteristics of exhibition industry, exhibition economy, and the research results of exhibition industry at home and abroad are expounded in detail. Then, according to the influence mechanism of exhibition industry on regional economy, the grey relational model is used to analyze the economic development of Changsha from 2012 to 2016. The analysis disclosed that the exhibition industry remained the main driving force of Changsha's economic development in these five years, which effectively promoted the economic development and the benign growth of various industries in Changsha.

1. Introduction

With the rapid development of global trade and the acceleration of global economic integration, the exhibition industry is one of the important manifestations of the tertiary industry, and it has attracted more and more attention from all over the world [1]. In economy, the exhibition industry has been out of commodity trading patterns, evolved into the comprehensive information gathering of information, technology, goods and talents, and the comprehensive business activity that promotes trade, investment, services, forums, and cultural exchanges [2]. After hundreds of years of development, the operation mode of convention and exhibition industry has become very mature. In today's world, Europe and the United States are in a leading position, and Europe becomes a well-deserved exhibition inleader with technological, transportation, communications, and other technical advantages [3]. With the long period of continuous reform and opening up in China, the economy has long been in a state of rapid development, the exhibition industry as a comprehensive business activity has begun to gradually active, and its scale has continued to grow at an annual rate of more than 20% and showed a very good development. According to the related research and statistics, our country has formed the exhibition economic zone in the Yangtze River Delta, Pearl River Delta, Bohai Rim, Northeast China, and the Midwest, and the exhibition industry has been becoming one of the main driving forces of China's economic growth [4]. It is precisely because the Ministry of Commerce will begin to cultivate the exhibition industry to make it become China's strategic pilot industry of the tertiary industry from the government level.

According to relevant data statistics, in the global GDP total, the convention and exhibition industry directly produces GDP already accounted for 1%, and if GDP of the surroundings of the convention and exhibition area is also included, it accounts for 8% of the total, and the direct economic gain is as high as 20% [5]. The exhibition industry brings direct economic benefits and leads to the flow of talent, goods, information, and funds, so the relevant scholars call exhibition industry as "the bread of the city" [6]. As an important part of the commercial activities of the tertiary industry, the exhibition industry has the effect of

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strong economic agglomeration and diffusion, which can effectively promote the economic and trade growth in the region, and bring great promotion to regional manufacturing, production factors, and resource allocation optimization [7]. The exhibition venue can also promote the development of related service industries, promote the communication between regional culture and external world, and bring direct or indirect huge economic benefits. Due to the important role of exhibition industry, it is precise, and the world gives excessive importance to its development. It is made an important form of international trade [8]. The influence of exhibition industry on the regional economy has also become an important subject of the research of relevant scholars. Therefore, this article would study the influence of exhibition industry on regional economic development through the grey relational model and take C city as an example. In this article, the concept, characteristics, and other related research associated with industry and economy of exhibition and convention are discussed in Section 2. Then in Section 3, the influence mechanism of exhibition industry on regional economy and grey relational model were presented. In Section 4, the impact of convention and exhibition industry on Changsha's economic growth was proposed, and finally, the concluding remarks are given in Section 5.

2. The Concept, Characteristics, and Related Research of Industry and Economy of Convention and Exhibition

2.1. The Concept and Characteristics of Industry and Economy of Convention and Exhibition. The exhibition industry, as a kind of commercial activity under the economic globalization, has been widely regarded and studied by all countries. According to the definition of convention and exhibition industry of China's Statistics Bureau, the exhibition industry is a large-scale industrial chain, which includes commodity display, promotion and circulation, economic and trade talks, business and civil exchanges, and international exchanges [9]. In the whole exhibition industry, the core content is exhibition and conference, its carrier is the related industries, and the complete infrastructure and related services of region are utilized to operate [10]. Therefore, from the industrial point of view, the exhibition industry belongs to the tertiary industry. According to the current operational situation, the exhibition industry involves various economic and trade cultural exchanges, such as attracting investment, cultural and technical exchanges, international exchanges, and commodity exhibitions [11]. Such a large number of contents also give the exhibition industry more extensive features. As the exhibition industry and a variety of industries have a greater relevance, it shows the characteristics of comprehensiveness and relevance. The ability of the exhibition industry to integrate buyers, sellers, products, information, and technology in a certain area in a short period of time also makes it to have a clustering effect, coupled with its large number of industries to exchange information and promote

development in a short time, logistics, people, and information flow around the globe; therefore, it has interactive and open characteristics. These characteristics and advantages of the exhibition industry make it possible to promote the economic development of a country or a country under the circumstances of economic globalization, and also form a unique economic effect [12].

The economic development takes the exhibition industry as the core, and the relevant experts and scholars call such an economic development as the exhibition economy [13]. Through the exhibition activities (Figure 1), the exhibition economy promotes the development of regional industries and brings huge social and economic benefits for the region. To sum up, the economic effect of the exhibition economy, which takes the exhibition as the core, has four major effects. The first is the direct economic effects of the exhibition activities, which include exhibition organizers, participants, related services, media costs, and corporate salaries; the second is the economic benefits derived, such as hotels, catering, transportation, and tourism; the third is the economic and trade transactions produced by the exhibition itself, such as commodity trading, regional investment, and investment and economic and trade talks; and the fourth is the economic and social effects brought by the exhibition to the region. As the exhibition activities cannot be separated from the support of the related industries and infrastructure, the convention and exhibition activities will greatly enhance the economy, influence, reputation, infrastructure construction, related services, and tourism in the host country. It is precisely because the convention and exhibition industry can bring about such enormous economic effects on the economic development of cities and regions, each country, and region or city attaches great importance to the development of the exhibition industry in the region.

2.2. Related Research on Exhibition Industry and Exhibition Economy. In the economic globalization today, the huge economic effect of the exhibition industry has become increasingly important. Countries and regions around the world attach great importance to the development of their own exhibition industry, so the relevant research is also closely following the pace of the times [14]. In the related research of exhibition industry, developed countries in Europe and America have mature experience with their own advantages, the related research is also leading the research in China, the research content is more mature and in-depth research, and the exhibition industry has a greater reference in China [15]. In the early 80s of the last century, in Hanlon A's book "Trades Shows in the Marketing Mix," the development, significance, cost, and related economic benefits of exhibition were described in great detail, and this book regarded the exhibition as an efficient marketing tool and had made a very important contribution and inspiration to the related research of the exhibition industry [16]. Christinc Christman conducted a systematic study of the preparation and operation of the exhibition, and discussed the market objectives of the different stages, so his theory was currently in the leading position in the exhibition industry. After



FIGURE 1: Various forms of exhibition activities.

entering the new century, JcAnnaAbbott and Agne SDe Franco, who cowrote the "exhibition management," the book made a full range of dissection and analysis of the exhibition industry and gave detailed advice and guidance. In addition to the theoretical research on the convention and exhibition industry, foreign scholars have also conducted extensive research on the choice of the venue and the urban economic development of the convention and exhibition industry, and achieved more results.

Compared with foreign counterparts in the field of exhibition industry, domestic research in this area is relatively backward. In addition to backwardness, the domestic research methods are also quite different from those in other countries. At present, the domestic research on exhibition industry is mainly divided into two directions: qualitative and quantitative research [17]. Qualitative research mainly focuses on the economic benefits, industry promotion, and regional impact of the exhibition industry from a macropoint of view [18]. In this aspect, the research of the scholar Yu Xiangping and Wang Dongmei had a good representation, and these two people carried on a more thorough research separately from the perspective of industry leading effect, the conference, and exhibition for the city development. While the quantitative analysis is based on the direction of the industrydriven coefficient, research on this aspect is relatively more, and the results are relatively rich, and scholars Hu Ping, Li Zirong, Wang Haiyu, and Tian Jinxin are the excellent figures on these researches. Ye Kai, Tian Jinxin, and Shi Min used Granger cointegration analysis and causality to study the exhibition industry and pointed out that the exhibition industry could promote the optimization of urban industrial structure. Apart from the research on the exhibition industry itself, the domestic

exhibition industry is also studied. These studies were mainly concentrated on the impact of tourism, such as Yu Yonghai, Kong Qingfu, and other scholars put forward research and suggestions on the cooperation between exhibition industry and tourism industry [19]. The scholar Wang Yajing put forward the problems and revelation between the exhibition industry and the hotel industry through the research on the exhibition industry in Jinan. Today, the exhibition industry plays a more and more important role in China's regional economic development (Figure 2), and the related research is also more and more thorough, and in the near future, the gap between convention and exhibition industry of China and foreign counterparts will shrink, which provides an advanced and solid theoretical basis for the development of convention and exhibition industry in China [20].

3. The Influence Mechanism of Exhibition Industry on Regional Economy and Grey Relational Model

3.1. The Influence Mechanism of Exhibition Industry on Regional Economy. Convention and exhibition activities are the interaction and the business platform and the intermediary between enterprises, and between the enterprise and the public; therefore, the exhibition activities will inevitably make business, product, technology and information, and other elements gathered in a specific period of time; and in the promotion and exchange of new technologies and new products, information, knowledge, and ideas are spread, and economic, trade, and investment promotion among regions are promoted. The agglomeration effect of the integrated economy is called the agglomeration effect of geographical space, which means that the exhibition





FIGURE 2: Exhibition industry has been paid more and more attention by domestic scholars.

industry has a agglomeration effect on urban development, so it can form a strong agglomeration effect. Because the industries of the participants during the exhibition activities are different from each other, the influencing factors of the agglomeration effect of the exhibition industry are also different, and each factor also has a mutual influence; Therefore, the exhibition industry is a very complex system, as shown in Table 1.

In the exhibition industry cluster effect, hardware and software facilities and exhibition environment have favorable effects on the exhibition industry, logistics, transportation, exhibition services, and basic industries play a positive role in the exhibition industry. While the adjustment of regional industrial structure and the attraction of other regions have adverse effects on the convention and exhibition industry, and form negative feedback, construction of infrastructure, finance, and media advertising in the city have become the influence factors of the exhibition.

Besides the strong agglomeration effect, the convention and exhibition industry also has obvious multiplier effect; the specific manifestation is that the exhibition industry itself will develop a large number of related industries in the process of development of itself. In the multiplier effect, the multiplier in a conference and exhibition industry generally refers to multiples, which represents the ratio between income changes and the inputs that cause change. The multiplier effect is that public spending and investment are effective incentives for demand, and the increase in public spending and investment will lead to a multiple growth in the region's economy. Cairns made it clear that macroeconomic investment, income, and unemployment were closely linked between in his economic thinking, and the increase in investment would inevitably increase income and the scope of employment; otherwise, income decreased and employment scope shrunk. Under certain conditions, the addition of a certain amount of investment in a region will inevitably lead to a multiple increase in the national income in the region. If a sector increases its investment and raises its own income, it will lead to an increase in departmental income and further lead to an increase in investment in these sectors and a new increase in revenue. The increment of national income was assumed to be ΔY , the investment multiplier was K, and the increment of government investment was ΔI . Then, the following formula can represent the multiplier formula of investment:

$$\Delta Y = \Delta I \cdot K. \tag{1}$$

In the multiplier effect, the marginal propensity to consume determined the investment multiplier, the consumption increment was assumed to be a, and then, the following formula could be obtained:

$$\Delta Y = \Delta C + \Delta I. \tag{2}$$

Formula (2) was substituted into formula (1), and then, the following formula could be is obtained:

$$K = \frac{\Delta Y}{\Delta Y - \Delta C} = \frac{1}{1 - (\Delta C / \Delta Y)}.$$
 (3)

The above formula represented the marginal propensity to consume $\Delta C/\Delta Y$, and then by formula (3), the following formula could be derived:

$$\Delta Y = \frac{\Delta I}{1 - (\Delta C / \Delta Y)}.$$
 (4)

Through formula (4), we can know that the increase in national income is ΔY , which has not only a great relationship with the implementation of incremental government investment ΔI , but also a great relationship with the marginal propensity to consume $\Delta C/\Delta Y$, and when the amount of government investment ΔI is fixed, the greater the marginal propensity to consume $\Delta C/\Delta Y$ is, and the greater the increase in national income ΔY will be. When the marginal propensity to consume is fixed, the greater the amount of government investment ΔI is, the greater the national income ΔY will be. Therefore, we can see that the increment of national income is proportional to the amount of government investment and marginal propensity to consume; marginal propensity to consume also determines the investment multiplier. According to Keynes's argument, the marginal propensity to consume is between [0, 1].

The amount of government investment in a region was assumed $\Delta I = 100$, and the marginal propensity to consume was assumed $\Delta C/\Delta Y = b$; among them, B1 = 2/3 and B2 = 1/2. The values of B1 and B2 were substituted into formula (4); thus the national income of the region was increased to $\Delta Y_1 = 300$. Those means the total national income in the region was 3 times of the amount of government investment. We can see $Y\varepsilon$ and Y_2 trend in Figure 3. From this inference, we can draw that the total amount of national

Table 1: Exhibition industry agglomeration factor statistics.

Exhibition area Exhibition facilities Concentration degree Modernization degree Enterprise quantity Exhibition service provider Brand quantity Advertising media Financial insurance Accommodation catering **Exhibition talents** Exhibition industry cluster The exhibition environment Natural condition Popularity Geographical position City foreign trade level Urban infrastructure Logistics transportation Basic industry Industrial structure adjustment Regional attraction

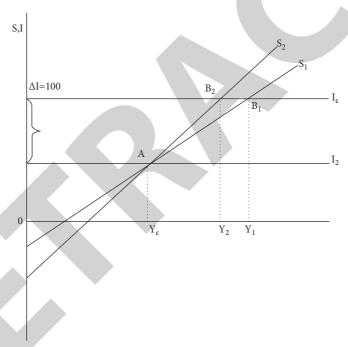


FIGURE 3: The equilibrium between the savings function curve and the investment curve.

income ΔY brought by an equal amount of government investment ΔI is not the same, and the main reason is that the slope of the savings function is different; that is, the multiplier effect is different, which leads to the result.

3.2. Grey Relational Model. Through the agglomeration effect and the multiplier effect, the convention and exhibition industry promotes the interactive development of the related industries and affects the development of regional economy. Therefore, we can analyze the impact of the convention and exhibition industry on the regional economy through the grey relational model. The grey relational analysis model mainly described the relationships among the objects, the strength, the size, and the order of the factors through the

grey relational grade. Through the grey correlation degree, the influence degree of the object or the contribution degree of the factor to the object of study was expounded. The basic idea is that in the process of development of the object of study, the changes of the two factors are basically the same, which means that the correlation between the two is larger, or the correlation is less related. The main basis of the judgment is the geometry of the curve. If the two approaches, it indicates that the degree of association is higher; otherwise, it is smaller. In this article, the grey relational model was used to study the impact of convention and exhibition industry on regional economic development, and Changsha was chosen as the research object. Changsha, as an important component of the triangle area of Changsha Zhuzhou Xiangtan, its exhibition industry develops early,

the scale of convention and exhibition industry is relatively large, and its level of development is relatively mature, In 2014, it won the "the gold five stars" in the national exhibition—the "excellent exhibition city award." Therefore, the development level of convention and exhibition industry in Changsha is highly representative of the economic impact of Changsha region. The grey relational model was used to study the impact of the convention and exhibition industry on the economic development of Changsha. The specific steps are as follows:

First of all, through the network and other platforms, the exhibition industry, industrial production, and other related raw data of convention and exhibition industry in the Changsha region were statistically counted to establish the grey relational set and determine the dependent variables and independent variables. A sequence consisting of variables was set as a reference sequence, and a sequence of independent variables was a comparison sequence, which was set to $\{X_i\}$. Table 2 is the related raw data of Changsha from 2012 to 2016.

Secondly, the raw data of the statistics were processed by a nondimensional method. There are many methods for dimensionless processing, such as averaging and initialization. In this article, the mean processing method was chosen, and the results are shown in Table 3. The method is mainly that all the original data in that series is divided by the average of each sequence. The formula is given as follows:

$$Xi = \frac{xi(k)}{(1/n)\sum_{i}^{n}xi(k)}.$$
 (5)

Moreover, the sequence difference, the maximum difference, and the minimum difference were obtained. The sequence difference formula was $\Delta O_i(k) = |x_0(k) - x_i(k)|$, the two largest difference formula of two grades was $\max_i \max_k \Delta O_i(k)$, and the minimum difference formula of two grades was $\min_i \min_k \Delta O_i(k)$.

The third step is to find the correlation coefficients, the correlation coefficient reflects the correlation degree between the reference sequence and the comparison sequence at a certain time, and the value is generally between 0 and 1. The correlation coefficient is greater, the correlation degree will be greater, conversely, the correlation degree will be smaller, and its formula for calculation is

$$\gamma(x_0(k); x_i(k)) = \frac{\min_i \min_k \Delta O_i(k) + \xi \max_i \max_k \Delta O_i(k)}{\Delta O_i(k) + \xi \max_i \max_k \Delta O_i(k)}.$$
(6)

The fourth step is to calculate the correlation degree and the rank of correlation degree. Among them, the correlation degree reflects the relation between the comparative sequence and the reference sequence, and the formula of the correlation degree is as follows:

$$\gamma(x_0, x_i) = \frac{1}{n} \sum_{k=1}^{n} \gamma(x_0(k), x_i(k)).$$
 (7)

The final is to analyze the results. According to the above steps, after calculating the correlation degree, the relation between the reference sequence and the comparative sequence was analyzed by the correlation degree. Relevance was used to sort, and sorting could reflect the impact of convention and exhibition industry on urban economic development, which meant the impact of the convention and exhibition industry on the elements of urban economic development is greater, and then the ranking would be more upfront and vice versa.

4. The Impact of Convention and Exhibition Industry on Changsha's Economic Growth

By using the grey relational grade model, this article calculated the total value of convention and exhibition industry and GDP, and correlation coefficient and correlation degree of three industries of Changsha in 5 years from 2012 to 2016 in Hunan, Changsha. Detailed results are shown in Table 4.

From the calculation results of Table 4, the influence of convention and exhibition industry on the economic development of Changsha was analyzed. The exhibition industry has a very strong correlation. According to the GDP of Changsha, the correlation degree of exhibition industry and GDP is 0.6871 and ranks first. The calculation results show that during 2012 to 2016, a total of 5 years, convention and exhibition industry and economic development in Changsha is very strong, and the convention and exhibition industry becomes the main driving force of economic development in the region of Changsha. The rapid development of convention and exhibition industry is closely related to the regional economic development of Changsha. The convention and exhibition industry has promoted the economic development and promoted the transformation and upgrading of the industrial structure in Changsha, and the changes of the exhibition area and regional economic growth in Changsha also confirm this result, as can be seen in Figure 4, which is a scatter diagram of the relationship between the convention and exhibition industry and GDP in Changsha. The convention and exhibition industry of Changsha has become a leader in economic development in the past 5 years; this is inseparable from the strong support of the Hunan provincial government. In 2013, the Hunan provincial government promulgated The plan for the development of convention and exhibition industry in Hunan province (2013–2020). The planning provides the direction and policy basis for the development of convention and exhibition industry in Hunan province. Data from 2012 to 2016 show the effectiveness of this policy support is very

Apart from the correlation between GDP and exhibition industry in Changsha, the output value of tertiary industry and exhibition industry is the most relevant in Changsha, and the correlation degree is 0.6809. This result is consistent with the tertiary industry, so the overall trend of the tertiary industry is consistent with the development trend of the exhibition industry. In addition to strong policy support, the rapid development of convention and exhibition industry and the tertiary industry is benefited from that Changsha's own cultural tourism resources are very rich. Changsha is the cradle of Chu culture, and its history can be traced back

TABLE 2: Changsha	exhibition	and outpi	ut statistics	in	2012~2016
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	2012	2013	2014	2015	2016
Exhibition area (ten thousand m ²)	135.00	190.7	180.18	197	203.33
Gross product (billion Yuan)	6399.91	7153.13	7824.81	8510.13	9323.7
Primary industry (billion Yuan)	272.31	291.15	318.04	341.78	370.95
The secondary industry (billion Yuan)	3592.52	3946.97	4245.68	4478.20	4513.23
The service sector; the tertiary industry (billion Yuan)	2535.08	2915.01	3261.09	3690.15	4439.52

TABLE 3: The result of dimensionless processing of raw data.

	2012	2013	2014	2015	2016
Exhibition area (ten thousand m ²)	0.7432	1.0499	0.9920	1.0956	1.1194
Gross product (billion Yuan)	0.8161	0.9121	0.9978	1.0852	1.1889
Primary industry (billion Yuan)	0.8540	0.9131	0.9975	1.0719	1.1634
The secondary industry (billion Yuan)	0.8646	0.9499	1.0217	1.0777	1.0861
The service sector; the tertiary industry (billion Yuan)	0.7527	0.8655	0.9682	1.0956	1.3181

Table 4: The correlation coefficient, correlation degree, and ranking of convention and exhibition industry in Changsha.

	2012	2013	2014	2015	2016	Correlation degree	Sort
Gross product	0.5771	0.4191	0.9450	0.9055	0.5886	0.6871	1
Primary industry	0.4728	0.4209	0.9477	0.8081	0.6932	0.6685	3
The secondary industry	0.4503	0.4985	0.7695	0.8479	0.7494	0.6631	4
The service sector; the tertiary industry	0.9135	0.3502	0.8074	1.0000	0.3334	0.6809	2

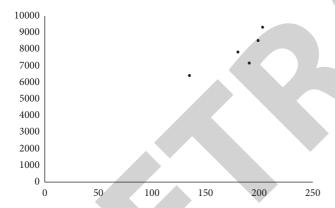


FIGURE 4: Changsha convention and exhibition industry and the relationship between the total outputs of the scattered map.

to the spring and autumn periods and the Warring States period, and in ancient times, Changsha is known as "the hometown of Jia Yi and Qu Yuan" and "famous city of Chu and Han"; the entertainment and catering of the contemporary Hunan have become very developed, and a batch of entertainment industries which have influenced the whole country and even the whole world have appeared, such as the "Hunan army on TV" in Hunan TV. Unique historical, geographical, and cultural background also provides very favorable factors for the development of convention and exhibition industry and indirectly promotes the economic growth of the tertiary industry in Changsha.

The correlation of the convention and exhibition industry, the primary industry, and the secondary industry is analyzed in Table 4. The relevancy between Changsha convention and exhibition industry and the primary industry is 0.6685, and the difference of correlation degree of exhibition industry in Changsha between the primary

industry and the secondary industry is very small. This result is very similar to the development of Changsha itself, and Changsha is located in the lower reaches of Xiangjiang, and not only an important grain production base, but also an important base of equipment manufacturing industry in our country. Therefore, the industry and agriculture in Changsha are much developed. Table 2 shows the statistics of the output value of the primary industry and the secondary industry in Changsha from 2012 to 2016, and the results show that the growth of the two is in line with the development of the convention and exhibition industry.

5. Conclusions

The economy of China has rapidly developed with the deepening of international exchanges between China and the rest of the world. The government is giving increasing attention to the exhibition industry. Therefore, the grey relational model used to study the impact of the exhibition industry on regional economic development was put forward. Changsha region was taken as an example, a statistical analysis of the exhibition industry and GDP in Changsha in a total of 5 years from 2012 to 2016 was made, and then, the grey relational analysis method was used to analyze. The analysis shows that the exhibition industry has the most significant correlation with the GDP of Changsha and is the main driving force for economic development in Changsha; the relation between the exhibition industry and the tertiary industry is inferior to that of GDP; this coincides with the result of the exhibition industry belonging to the tertiary industry. Through the analysis of the Changsha region, it can be seen that the exhibition industry has a great influence on the regional economic development, which can bring huge

economic effects to the regional economic development and promote regional economic development.

Data Availability

The data used to support the findings of this study are included within the article.

Conflicts of Interest

The author declares that there are no conflicts of interest regarding the publication of this article.

References

- [1] A. Ortakci, "Idea of protection folk culture in the activities of comminity center museum and exhibition (history) branch," *The Journal of International Social Research*, vol. 7, no. 30, pp. 181–189, 2014.
- [2] N. Smagina, "Russian sector of the global MICE industry in the international business cooperation," in *Proceedings of the IX International Scientific and Practical Conference*, Saint Petersburg, Russia, October 2016.
- [3] K. E. Yong-Hui and G. Y. Zhang, "The rational role of government intervention in MICE industry based on AS theory," *Journal of Minxi Vocational & Technical College*, vol. 33, 2016.
- [4] J. C. Martín, C. Román, and C. Gonzaga, "Quality of service and segmentation in the MICE industry: an approximation based on fuzzy logic," *Journal of Convention & Event Tourism*, vol. 18, no. 1, pp. 1–25, 2016.
- [5] T. C. Li and L. Liu, "An empirical study of the economic impact of the MICE industry in China using interregional input-output models (IRIO)," *Tourism Tribune*, vol. 29, no. 6, pp. 34–45, 2014.
- [6] L. Wu, "The comparison of employee value proposition between MICE industry and MICE higher education in China—based on TEFI value set," *International Journal of Innovation and Technology Management*, vol. 5, no. 5, pp. 358–361, 2016.
- [7] H.-W. V. Tang, "Constructing a competence model for international professionals in the MICE industry: an analytic hierarchy process approach," *Journal of Hospitality, Leisure, Sports and Tourism Education*, vol. 15, no. 1, pp. 34–49, 2014.
- [8] J. W. Liu and J. L. Meng, "Research on methods to improve core competitiveness of MICE industry of Hebei province under the background of Beijing-Tianjin-Hebei collaborative development," *Journal of Hebei University of Engineering*, vol. 21, 2016.
- [9] L. Cai and Q. I. Hongxia, "Research on the development of MICE industry under the background of "The Thirteenth Five-Year Plan": based on the perspective of boundary," *Journal of China University of Petroleum*, vol. 23, 2015.
- [10] L. I. Tiecheng and L. Liu, "Study on the regional imbalance characteristics of MICE industry in China from the perspective of value added and labor productivity," *Tourism Forum*, vol. 21, 2016.
- [11] Y. Li and B. Department, "An analysis of nanning MICE industry competitiveness from the perspective of porter's "Diamond Model"," *Journal of Liuzhou Teachers College*, vol. 32, 2014.
- [12] J.-J. Li, S. F. Wang, and S. T. University, "SWOT analysis of Sichuan MICE industry and corresponding strategies against

- the background of economic growth transformation," *Journal of Sichuan Tourism University*, vol. 28, 2014.
- [13] B.-S. Li, Q. Zhu, and Z. Wang, "Study on southwest MICE industry competitiveness in the view of competitiveness of the local government-taking Chengdu MICE industry as an example," *Journal of Guangxi Economic Management Cadre College*, vol. 29, 2014.
- [14] K. I. Sandy Sou and G. Mccartney, "An assessment of the human resources challenges of Macao's meeting, incentive, convention, and exhibition (MICE) industry," *Journal of Human Resources in Hospitality & Tourism*, vol. 14, no. 3, pp. 244–266, 2015.
- [15] S. I. Ling and N. Yu, "Research on development countermeasures of MICE tourism development from perspective of industry convergence," Resource Development & Market, vol. 41, 2016.
- [16] H. W. V. Tang, K. Chang, M. S. Yin, and R. S. Sheu, "Critical factors for implementing a programme for international MICE professionals: a hybrid MCDM model combining DEMATEL and ANP," Current Issues in Tourism, vol. 20, no. 14, pp. 1–24, 2015.
- [17] Y. Gao and S. W. Zeng, "The analysis of agglomerating factors and prospects of MICE industry in Fuzhou," *Journal of Yueyang Vocational & Technical College*, vol. 26, 2015.
- [18] Y. Zheng, Y. Mao, and S. O. Tourism, "On promoting MICE industry in the context of west coast economic zone," *Journal of Fuqing Branch of Fujian Normal University*, vol. 44, no. 6, pp. 6–13, 2014.
- [19] W. U. Peiqin and H. Abulizi, "Research overview of MICE industry affecting silk road economic belt," *Global City Geography*, vol. 53, 2014.
- [20] G. Cheng and L. Zhang, "Achievements and deficiencies: an analysis on the status-quo of Chengdu's MICE industry," *Urban Insight*, vol. 2014, 2014.