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The Display Characteristics of Exhibition Industry in Mainland China

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Abstract: This essay aims to discuss the display characteristics of exhibition industry in Mainland China to supply a new analysis view for researching on China's exhibition industry. This essay takes Chinese website pages about Chinese exhibitions in 2012 as the study text, uses the content analysis method of media study to analysis the quantity, industry, theme, character, scale, dates and especially the characteristics of the main exhibitions' time and location in five economic areas of Mainland China by SPSS statistical analysis. The result shows that the characteristics on both time and location of the exhibition industry are different in different seasons and areas. Besides, the five economic areas show different degrees of industry concentration and characteristics. These characteristics reflect their developing levels and space agglomeration.

Key words: exhibition industry; time and space characteristics; Mainland China
JEL codes: Z3

1. Introduction

With the development of globalization and the expanding of enterprises' market space, the exhibition industry boosts rapidly. From 2001 to 2005, the number of the exhibitions increased at a speed of 16%. In 2005-2007, the increase reached 28% (Yu Dan, Zhang Heqing, 2010, pp. 2143-2154). However, there are also problems concerning its development, for example, the lack of overall management by the government and the vacancy of exhibition centers. At present, there is vacancy in the research of agglomeration characteristics of exhibitions. This paper aims to discuss these agglomeration characteristics and provide guidance on developing the industry scientifically.

2. Time Distribution Characteristics of Exhibitions

2.1 The Time Distribution Shows a Doublet Shape

The Figure 1 indicates that in May and September, there are more exhibitions and less in January, February and July. That is because of the climate in China. The relatively low point in April and October derives from the opening of the China Export Commodities Fair because it is an important brand exhibition in China. Many exhibition organizers choose to avoid competition with it.

In the first quarter of the year there are least exhibitions. Besides the climate, it also owes to our traditional

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festival-the Spring Festival. The trade between companies reduces dramatically in this period.

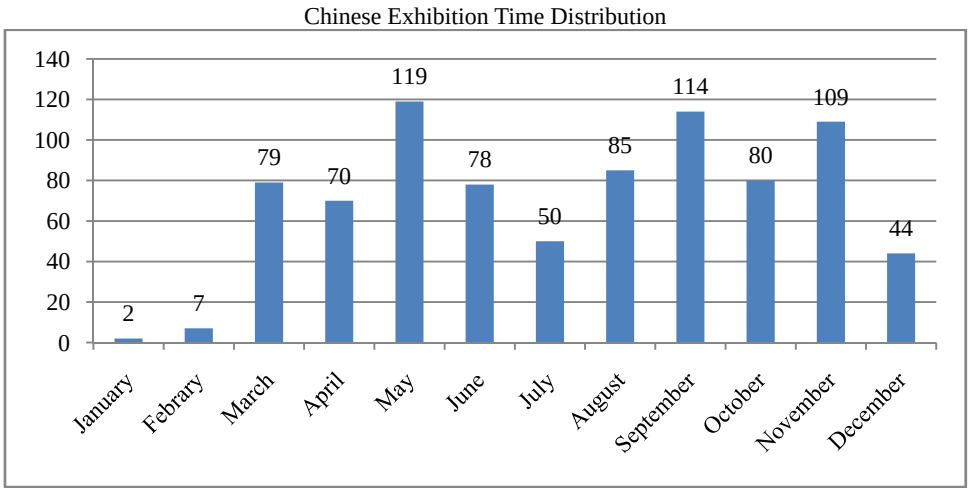
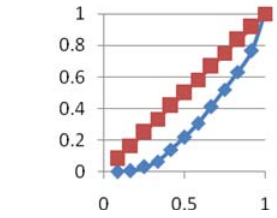


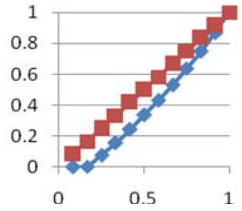
Figure 1 Distribution of the Exhibitions' Opening Dates in Our Country

2.2 Time Distribution Is More Unequal in Five Economic Zones than in the Country

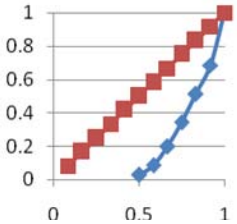
Lorenz Curve: Lorenz curve is put forward by Max Otto Lorenz to measure fair distribution level of social income. Here we use this curve as a tool to measure the degree of uniformity of the exhibitions' distribution in the 12 months in 2012 in five economic zones (Blue line: Beijing and Tianjin Economic Zone; Red line: Absolute Average curve).



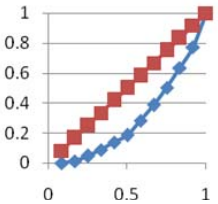
Beijing and Tianjin Economic Zone



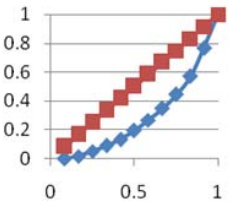
The Yangtze River Delta Economic Zone



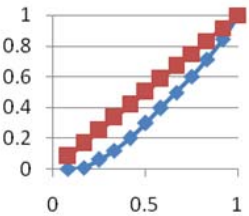
The Northeast Economic Zone



The Pearl River Delta Economic Zone



The Midwest economic Zone



Nationwide

Figure 2 Time Distribution Lorenz Curve of Five Economic Zones

With Lorenz curve, we can only get a rough qualitative inequality degree of exhibition distribution in the 12 months. To present it precisely, we can use Gini coefficient, which refers to the percentage of the area surrounded by the actual Lorenz curve and the curve of absolute equality. Gini coefficient is between 0 and 1, the bigger the coefficient is, the bigger the inequality degree is. The calculation formula is (Zhang Jianhua, 2007, pp. 55-58, 63)

$$G = 1 - \frac{1}{n}(2\sum_{i=1}^{n-1} W_i + 1)$$

2.3 Season Coefficient

Season Coefficient can be used to analysis the concentration degree of exhibitions' time distribution quantitatively. The calculation formula is (Dai Guangquan, Chenxin, 2010, pp. 2143-2154):

$$R = \sqrt{\sum_{i=1}^{12} (x_i - 8.33)^2 / 12}$$

Xi refers to the percentages of numbers of exhibitions in each month. The closer R is to 0, the more even the time distribution among months is; the bigger R is, the bigger the gap between slack seasons and peak period is.

Table 1 Gini Coefficient and Seasonal Coefficient of Exhibitions' Opening Dates' Distribution in Our Country

Economic Zones / Coefficient	Beijing and Tianjin Economic Zone	The Yangtze River Delta Economic Zone	The Pearl River Delta Economic Zone	The Northeast Economic Zone	The Midwest Economic Zone	Nationwide
Gini Coefficient	0.399	0.244	0.407	0.607	0.435	0.291
Season Coefficient	6.676	5.458	6.728	7.928	7.080	4.421

It can be seen from Table 1 that in the Northeast Economic Zone and the Midwest Economic Zone, time distribution are the most uneven. This coincides with some scholars' research findings: in provinces where exhibitions are fewer, the seasonal concentration degree is higher; in provinces that enjoy more exhibitions, the seasonal concentration is relatively low. Besides, the inequality degrees of time distribution in five economic zones are much higher than the nationwide. That is because that China is a large country and there is significant difference between the north and south area. For instance, July and August are the slack seasons for exhibitions in the south area, but that is not the case in the north area. November and December are the slack seasons for exhibitions in the north area, but that is not the case in the south area.

Therefore, from the view of the nationwide, its concentration degree of time distribution is smaller than the regional.

3. Theme Distribution Characteristics of Exhibitions

3.1 Close Relationship between the Themes of Exhibitions and the Economy

From a national perspective, Exhibitions of Machinery industry, Property of building materials and Food and beverage constitutes the largest proportion. This is consistent with the characteristics of economic operation and reflects the fact that exhibition is the barometer of economy. Infrastructure, such as real estate, is the major driving force of the economic growth.

China, the factory of the world, has strong request for the machinery industry. This explains why the numbers of the two kinds of exhibitions are larger. Food and beverage has obvious regional characteristics so the number of exhibitions is also larger. With China's economic transformation from investment to consumption, from export oriented to domestic demand oriented, the percentage of the tertiary industry will rise and so does the exhibition

type. In the future, cultural trade, entertainment exhibition types may increase.

Table 2 Percentages of Exhibitions' Themes in Our Country

IT/ Communication	Food and beverage	Electronic photoelectric	Property of building materials	Textile and apparel	Maternity and infant toys	Ads and media	Machinery industry	Home Furnishing	Energy conservation and environment protection	Labor security	Gifts and Workmanship
1.91%	9.32%	6.69%	11.35%	6.21%	1.79%	1.43%	12.07%	1.91%	4.18%	1.19%	2.51%
Franc hise chain	Energy and chemical industry	Agriculture	Bijouterie	Cars and transportation	Digital appliance	Office supplies	Tourism and entertainment	Medical Care	Government support	Others	Total
2.15%	3.94%	3.94%	2.15%	5.62%	2.27%	1.43%	3.23%	4.54%	2.63%	7.53%	100.00%

3.2 Difference in Exhibition Themes' Concentration in Five Economic Zones and the Nationwide

3.2.1 Herfindahl Index

Herfindahl Index is used to reflect the distribution of market forces and the degree of market monopoly. It refers to the quadratic sum of the percentages of enterprises' shares on the whole market. The calculation formula is (Zhang Fang, 2011, pp. 125-126):

$$HHI = \sum_{i=1}^{N} (X_i / X)^2 = \sum_{i=1}^{N} S_i^2$$

Table 3 HHI Coefficients of Exhibitions' Themes Distribution

Economic Zones	Beijing and Tianjin Economic Zone	The Yangtze River Delta Economic Zone	The Pearl River Delta Economic Zone	The Northeast Economic Zone	The Midwest economic Zone	Nationwide
HHI	0.004057	0.008547	0.003467	0.00028	0.002473	0.065261

It is obvious that HHI is the highest in the nationwide and concentration ratio nationwide is bigger than that of the economic zones, with economically developed areas larger than the less developed area. Among the five economic zones, the Yangtze River Delta Economic Zone's concentration ratio of exhibition types is the highest while that of the Northeast Economic Zone's is the lowest. This is because that economically developed countries have formed its advantage industries. So certain themes of exhibitions in this region are in the majority and HHI is consequently higher.

3.2.2 Numbers of Five Economic Zones and GDP

Table 4 Exhibition Number and GDP of the Five Economic Zones

Economic Zones	Beijing and Tianjin Economic Zone	The Yangtze River Delta Economic Zone	The Pearl River Delta Economic Zone	The Northeast Economic Zone	The Midwest economic Zone
Exhibition Number	150	258	145	35	112
GDP (0.1 billion yuan)	30686.2	72035.92	40949.84	50430.69	35825.95

The Yangtze River Delta Economic Zone has the most exhibitions and its GDP also ranks first; GDP of the Northeast Economic Zone ranks second, but it has the least exhibitions. That is because although its economic scale is large, its radiation force is limited. GDP of Beijing and Tianjin Economic Zone is smaller than the Midwest economic Zone, but it has more exhibitions. The reason is that Beijing market can radiate to nationwide so that it can attract more exhibitions.

4. Conclusion

This paper shows that exhibitions in Mainland China have some distribution characteristics. Industry

development plan should be made based on these characteristics, that is to say, to fully take industrial and economic advantages in different regions to develop the exhibition industry. These distribution characteristics provide guidance on it.

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