

Clustering Analysis on Inbound Tourism Market in Jiangxi

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Abstract: In accordance with the data related to inbound tourism in Jiangxi from 2006 to 2015, analyze the general development situation and composition of inbound tourism in Jiangxi by aid of the Excel software, and conduct clustering analysis on the market of tourist source related to inbound tourism in Jiangxi by aid of SPSS23.0 software. The result shows that the development momentum of inbound tourism in Jiangxi is strong to effectively promote the development of the tourism in Jiangxi. According to the clustering analysis, divide the main markets of tourist source related to inbound tourism in Jiangxi into three types, wherein, Korea, America and Japan are contained in type I, England, Germany and Singapore are contained in type II and other countries are contained in type III; besides, classify the tourist destination market in Jiangxi into three types, wherein, Jiujiang and Jingdezhen are contained in type I, Nanchang, Ji'an, Shangrao and Ganzhou are contained in type II, and Pingxiang, Fuzhou, Yichun, Yingtan and Xinyu are contained in type III, therefore, it is needed to strengthen the development and publicity of the tourism resources.

1 INTRODUCTION

Inbound tourism is involved in the three largest tourism markets in China, the development of which is the important symbol of the tourist economy strength of one country or region (Wei Fuwei, 2010). In order to comprehensively know the development situation of inbound tourism in Jiangxi, the paper chooses 14 main tourist source countries of inbound tourism in Jiangxi and 11 destination cities as the research objects, analyzes the general development situation and composition of inbound tourism in Jiangxi in accordance with the related data of Jiangxi Statistical Yearbook (2007-2016) and by aid of the Excel software, besides, it conducts clustering analysis on the tourism source market related to inbound tourism and the destination market in Jiangxi by aid of the SPSS23.0 software thus to provide basis for the development of inbound tourism in Jiangxi.

2 GENERAL DEVELOPMENT SITUATION OF INBOUND TOURISM MARKET IN JIANGXI

Jiangxi locates in the Southeast China and the south bank of the middle and lower reaches of the Yangtze River. Jiangxi has picturesque scenery as well as numerous tourist attractions and rich cultural heritages, wherein, the Mount Lushan and Jinggang Mountain are famous around the world, therefore, large number of foreign tourists visit Jiangxi to have sightseeing and vacations every year.

In accordance with the statistical data related to inbound tourism market in Jiangxi, draw the tendency chart related to the number of inbound tourists and the foreign exchange earnings from tourism in Jiangxi from 2006 to 2015 by aid of the Excel software (figure 1), and it can be seen from figure 1 that the overall development trend of the number of inbound tourists and the foreign exchange earnings from tourism in Jiangxi from 2006 to 2015 presents a situation of steady growth. Wherein, the number of inbound tourists increased from 49,700 in 2006 to 1,553,000 in 2015 with the proportion of

212.5%, which declined in 2015. However, it was noteworthy that foreign exchange earnings from international tourism always presented an increasing trend, which increased from 0.14 billion in 2006 to

0.567 billion in 2015 with the proportion of 305%. The above data show the development momentum of inbound tourism in Jiangxi is strong to effectively promote the development of the tourism in Jiangxi.

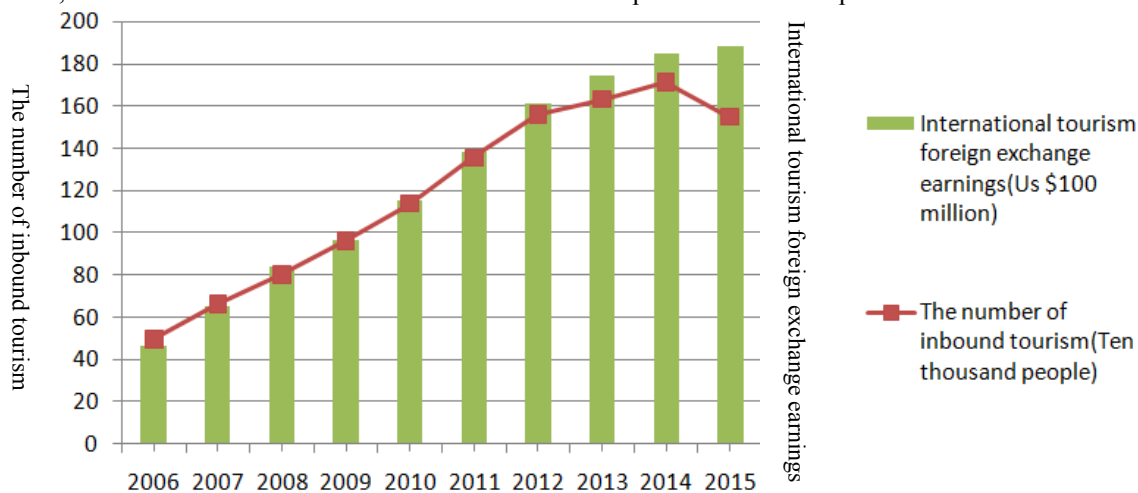


Figure 1: The tendency chart related to the number of inbound tourists and the foreign exchange earnings from tourism in Jiangxi from 2006 to 2015.

3 ANALYSIS ON THE TOURIST SOURCE STRUCTURE OF INBOUND TOURISM IN JIANGXI

It can be seen from figure 1 that America had been the first largest tourist source country for Jiangxi in its inbound tourism before 2015, which began to appear with negative growth from 2014 and decreased from 43,853 in 2006 to 43,509 in 2015 with the proportion of 0.7%. Furthermore, Korea

surpassed America to become the first largest tourist source country for Jiangxi in its inbound tourism in 2015, which increased from 19,491 in 2006 to 49,150 in 2015 with the proportion of 152.2% and presented a trend of steady growth. As the third largest tourist source country for Jiangxi in its inbound tourism, Japan was similar to America, which decreased by 15.6% over the ten years. Besides, 12 of the 14 countries realized the growth in the number of the inbound tourists, wherein, Thailand increased most with the proportion of 794.6%.

Table 1: The number of inbound tourists from the main tourist source countries in Jiangxi from 2006 to 2015. Unit: person-time

| Year source countries | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Indonesia | 2951 | 5196 | 8041 | 11933 | 12251 | 13224 | 14631 | 15585 | 11641 | 11954 |
| Japan | 29751 | 34128 | 30029 | 34096 | 34956 | 32347 | 28646 | 23716 | 17971 | 25124 |
| Malaysia | 5399 | 7286 | 9135 | 13865 | 12113 | 14503 | 16094 | 16766 | 12481 | 15124 |
| Philippines | 2523 | 4471 | 8359 | 10206 | 8320 | 10442 | 11614 | 12787 | 9906 | 7156 |
| Singapore | 11884 | 14838 | 16568 | 18748 | 20249 | 21432 | 24448 | 25612 | 20228 | 22060 |
| Korea | 19491 | 24794 | 30056 | 37849 | 36240 | 38936 | 46105 | 43872 | 40078 | 49150 |
| Thailand | 2497 | 4448 | 8317 | 10509 | 4271 | 5781 | 6621 | 7168 | 8424 | 22337 |
| England | 10507 | 12257 | 17193 | 21159 | 21613 | 24094 | 28207 | 30324 | 23531 | 23449 |
| Germany | 12386 | 11833 | 17219 | 20729 | 21689 | 23879 | 26939 | 28492 | 20426 | 18913 |
| France | 6468 | 7729 | 14027 | 16825 | 15299 | 18769 | 21711 | 23702 | 21343 | 21765 |

| | | | | | | | | | | |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Russia | 3548 | 4572 | 7562 | 13443 | 16502 | 16860 | 20321 | 22544 | 17726 | 17110 |
| Canada | 4031 | 5031 | 8206 | 11631 | 10886 | 12234 | 13958 | 14276 | 19560 | 20105 |
| America | 43853 | 43117 | 42393 | 43696 | 52339 | 55799 | 64417 | 67676 | 44831 | 43509 |
| Australia | 4670 | 7044 | 7661 | 11810 | 11888 | 13330 | 15279 | 15729 | 15321 | 15616 |

4 CLUSTERING ANALYSIS ON INBOUND TOURISM MARKET IN JIANGXI

4.1 Clustering analysis on the tourist source market related to inbound tourism in Jiangxi

Clustering analysis is a kind of method used for data classification based on the data (Zhang Wentong, 2013). In accordance with inbound tourism data in Jiangxi, set X_1 =Indonesia, X_2 =Japan, X_3 =Malaysia, X_4 =Philippines, X_5 =Singapore, X_6 =Korea, X_7 =Thailand, X_8 =England, X_9 =Germany, X_{10} =France, X_{11} =Russia, X_{12} =Canada, X_{13} =America, X_{14} =Australia (Chen Peng, 2012), conduct clustering analysis by aid of the SPSS23.0 software to get the clustering analysis pedigree chart for the main tourist source markets related to inbound tourism in Jiangxi (figure 2).

It can be seen from figure 2 that the tourist source markets related to inbound tourism in Jiangxi from 2006 to 2015 can be divided into three types, wherein, Korea, America and Japan were contained in type I, England, Germany and Singapore were contained in type II and other countries were contained in type III. It can be seen from the clustering analysis that Korea, America and Japan were the first-class targeted markets for inbound tourism in Jiangxi, therefore, it is needed to adopt measures to strengthen the most important markets. Besides, England, Germany and Singapore were the second-class targeted markets for inbound tourism in Jiangxi, which are the most potential tourist source markets and are needed for positive development. Furthermore, France, Russia and Thailand were the third-class markets for inbound tourism in Jiangxi, which should be largely developed and positively expanded.

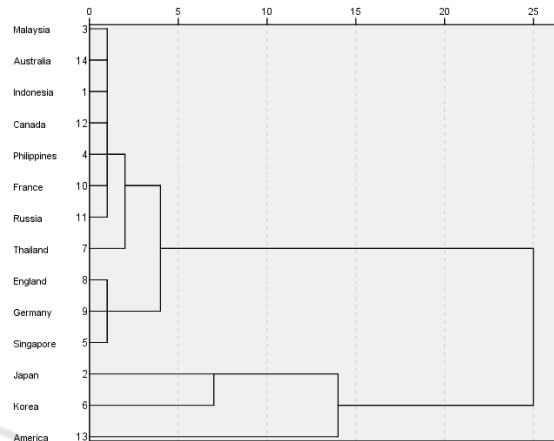
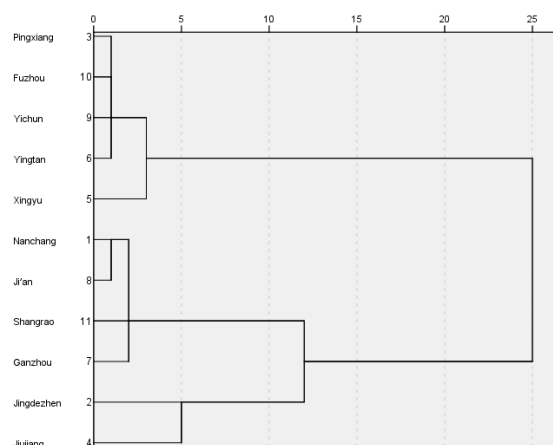


Figure 2: Clustering analysis pedigree chart for the main tourist source markets related to inbound tourism in Jiangxi from 2006 to 2015.

4.2 Clustering analysis on the tourist destination markets related to inbound tourism in Jiangxi

In accordance with the related data, set X_1 =Nanchang, X_2 =Jingdezhen, X_3 =Pingxiang, X_4 =Jiujiang, X_5 =Xingyu, X_6 =Yingtang, X_7 =Ganzhou, X_8 =Ji'an, X_9 =Yichun, X_{10} =Fuzhou, X_{11} =Shangrao (Sun Yicong, 2014), conduct clustering analysis by aid of the SPSS23.0 software to get the clustering analysis pedigree chart for the tourist destination markets related to inbound tourism in Jiangxi (figure 3).

It can be seen from figure 3 that the tourist destination markets related to inbound tourism in Jiangxi from 2006 to 2015 can be divided into 3 types, wherein, Jiujiang and Jingdezhen were contained in type I, the former one owns the Lushan National Park while the latter one owns profound cultural deposits in chinaware, which have unique advantage in developing inbound tourism. Nanchang, Ji'an, Shangrao and Ganzhou were contained in type II, which have rich tourism resources needing to be largely publicized. Pingxiang, Fuzhou, Yichun, Yingtang and Xinyu were contained in type III, which have backward economic development and are needed to be developed largely in their tourism resources.



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Figure 3: Clustering analysis pedigree chart for the tourist destination markets related to inbound tourism in Jiangxi from 2006 to 2015.

5 CONCLUSIONS

5.1 The development momentum of inbound tourism in Jiangxi is strong to effectively promote the development of tourism in Jiangxi.

5.2 The clustering analysis result shows that the main tourist source markets related to inbound tourism in Jiangxi are classified into three types, wherein, Korea, America and Japan are contained in type I, England, Germany and Singapore are contained in type II and other countries are contained in type III; Besides, the tourist destination markets related to inbound tourism in Jiangxi are classified into three types, wherein, Jiujiang and Jingdezhen are contained in type I, Nanchang, Ji'an, Shangrao and Ganzhou are contained in type II, Pingxiang, Fuzhou, Yichun, Yingtan and Xinyu are contained in type III, therefore, it is needed to strengthen the development and publicity of the tourism resources.

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