Chin. Geogra. Sci. 2011 21(6) 715–722
doi: 10.1007/s11769-011-0500-2
www.springerlink.com/content/1002-0063

# Regional Disparity and Convergence of China′s Inbound Tourism Economy

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**Abstract:** Comprehending regional characteristics and influencing factors of China′s inbound tourism economy is important to make effective policies that will help inbound tourism develop harmoniously and shrink regional disparity. This paper studied the regional disparity and convergence of China′s inbound tourism economy during 1996–2008 with the methods of $\sigma$-convergence, club convergence and $\beta$-convergence. The results indicate that 1) inbound tourism receipts per capita (ITRPC) of the whole country, the eastern, central and western regions presented the rapid increasing trend; 2) ITRPC of the whole country was characterized by convergence; 3) the eastern region presented club convergence, but the central and western regions did not show this trend; 4) the star-hotel levels and investment in fixed assets for the tourism industry per capita had a same trend to growth rates of ITRPC, promoting inbound tourism development, and there was no difference among the 31 provinces (municipalities) in the mainland of China; 5) but the proportion of employed persons in the tourism industry accounting for total population and the proportion of the tertiary industry accounting for GDP had a reversal trend to growth rates of ITRPC, shrinking the provincial disparity in inbound tourism economy, and there were differences between the developed provinces and the developing provinces. Based on these analyses, we put forward some suggestions for the developing provinces to speed up inbound tourism economy.

**Keywords:** inbound tourism receipts; regional disparity; $\sigma$-convergence; club convergence; $\beta$-convergence; China

**Citation:** Wang Shuxin, He Yuanqing, Wang Xueding, Zhu Guofeng, Cao Weihong, 2011. Regional disparity and convergence of China′s inbound tourism economy. *Chinese Geographical Science*, 21(6): 715–722. doi: 10.1007/s11769-011-0500-2

## 1 Introduction

The development level of inbound tourism is an important symbol of measuring internationalization and maturity of a country or a region′s tourism industry. In 2008, the number of inbound tourist arrivals to China were $1.30 \times 10^8$, and inbound tourism receipts (ITR) reached USD $4.08 \times 10^{10}$. Inbound tourism has been a very necessary part of China′s tourism industry (Chen and Huang, 2006). However, China′s inbound tourism is with spatial unbalanced development, due to differences in geographical location, tourism resource endowments, socio-economic development, transport and infrastructure. The trend of unbalanced development has attracted many scholars′ attentions. For example, studying regional disparity of inbound tourist distribution with the spatial analysis method (Ma and Li, 2001); analyzing provincial competitiveness of inbound tourism using the methods of factor analysis and cluster analysis (Wang, 2004); researching China′s inbound tourism development and patterns from 1986 to 2000 with the Box-Jenkins approach (Lim and Pan, 2005); measuring temporal changes of inter-provincial, inter-regional and intra-regional disparity in China′s inbound tourism using Theil index (Chen and Huang, 2006); analyzing regional disparity of China′s inbound tourism economy in perspectives of the growth rates and development levels with the standard deviation and variation coefficient

Received date: 2011-01-10; accepted date: 2011-05-10
Foundation item: Under the auspices of National Natural Science Foundation of China (No. 40971019), National Basic Research Program of China (No. 2007CB411501)
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approaches (Zeng and Cui, 2006); measuring spatial and temporal differences in China′s inbound tourism economy using the Exploratory Spatial Data Analysis (ESDA) method (Guo *et al*., 2009); analyzing the characteristics of China′s inbound tourist flow network with the Quadratic Assignment Procedure (QAP) model (Liu *et al*., 2010); and researching influencing factors to disparity in China′s inbound tourism (Zhang, 1998; Lu and Yu, 2005; Guo, 2007; Zhao, 2008). Although these studies analyze spatial disparity and influencing factors of China′s inbound tourism economy more or less with different methods in a perspective of qualitative analysis or quantitative analysis, there still exist some limitations. Firstly, studying ITR with the convergence method remains underexplored in the present literature. Secondly, most studies are based on static analysis, which can not completely reflect dynamic trends. Thirdly, most studies concerning influencing factors are based on qualitative analysis, which can not effectively identify the changed relationship between ITR and influencing factors. In this paper, we try to study the regional disparity and influencing factors of China′s ITR during 1996–2008 in a perspective of quantitative analysis with the convergence method, which can accurately and completely give expression to dynamic trend and the changed relationship. It has the important theoretical and practical significance to correctly understand regional development characteristics, to further optimize resources allocation and propose effective and various policies to promote China′s inbound tourism industry to develop constantly and harmoniously.

## 2 Methods and Data Sources

### 2.1 Methods

Solow (1956) and Swan (1956), representatives of the new classical economists, considered that different levels of economic development would tend to a steady state eventually because of capital marginal production diminishing, which is called economic growth convergence. Barro and Sala-i-Martin (1992) proposed two kinds of indexes measuring convergence: $\sigma$ value and $\beta$ value. Galor (1996) and Canova (2004) studied club convergence, enriching convergence connotation. Thereafter, the convergence method has been widely and successfully applied to regional disparity in economic development (Peng, 2005; Lin *et al*., 2006; Zhou and Zhang, 2008; Pan, 2010). We try to analyze China′s inbound tourism economy with those methods.

#### *2.1.1 σ-convergence*

$\sigma$-convergence is defined that deviation in ITRPC of different provinces or regions tends to shrink as time passes. Hence, $\sigma$-convergence exists if $\sigma_{t+1}$ is smaller than $\sigma_t$. Or else $\sigma$-convergence does not exist. The equation can be expressed as:

$$\sigma_t = \sqrt{\frac{1}{N-1}\sum_{j=1}^{N}\left[\ln\left(\frac{Y_{jt}}{Po_{jt}}\right)-\frac{1}{N}\sum_{j=1}^{N}\ln\left(\frac{Y_{jt}}{Po_{jt}}\right)\right]^2} \quad (1)$$

where $\sigma_t$ is the numerical value of $\sigma$-convergence at time $t$; $Y_{jt}$ and $Po_{jt}$ are total ITR and population of province $j$ at time $t$ respectively; $N$ is the number of provinces.

#### *2.1.2 Club convergence*

Club convergence is defined that different economic systems in a group whose development levels are close to each other at the initial stage tend to converge eventually if they have similar structure, but no convergence exists among different groups (Galor, 1996). We study club convergence based on the three inbound tourism groups of the eastern, central and western regions of the mainland of China. Besides $\sigma$ values according to Equation (1), Theil index is also used to measure regional disparity and the equations are as follows:

$$\begin{aligned} T_{\mathrm{P}i} &= \sum_{j=1}^{N}\frac{Y_{ij}}{Y_i}\mathrm{Ln}\frac{Y_{ij}/Y_i}{Po_{ij}/Po_i} \\ T_{\mathrm{R}} &= \sum_{i=1}^{3}\frac{Y_i}{Y}\mathrm{Ln}\frac{Y_i/Y}{Po_i/Po} \\ T_{\mathrm{P}} &= \sum_{i=1}^{3}\sum_{j=1}^{31}\frac{Y_{ij}}{Y}\mathrm{Ln}\frac{Y_{ij}/Y}{Po_{ij}/Po} = \sum_{i=1}^{3}\frac{Y_i}{Y}T_{\mathrm{P}i} + T_{\mathrm{R}} \end{aligned} \quad (2)$$

where $T_{\mathrm{P}i}$ is inter-provincial disparity of region $i$; $T_{\mathrm{R}}$ is inter-regional disparity of three regions; $T_{\mathrm{P}}$ is inter-provincial disparity of the whole country; $Y_{ij}$, $Y_i$ and $Y$ are total ITR of province $j$ in region $i$, region $i$ and the whole country respectively; $Po_{ij}$, $Po_i$ and $Po$ are population of province $j$ in region $i$, region $i$ and the whole country respectively.

#### *2.1.3 β-convergence*

The provinces with low ITRPC have higher growth rates than that with high ITRPC, so the former will catch up the latter as time passes, and eventually they will develop at the same speed. That is called $\beta$-convergence, including absolute $\beta$-convergence and conditional $\beta$-convergence. Absolute $\beta$-convergence means that the

initial ITRPC is the only influencing factor to ITRPC. And conditional $\beta$-convergence implies that other explanatory variables affecting convergence are added into the model. The equations of absolute and conditional $\beta$-convergence can be expressed as follows respectively:

$$(1/T)\ln\left(\frac{Y_{jt}/Po_{jt}}{Y_{j0}/Po_{j0}}\right)=\alpha+\beta\ln(Y_{j0}/Po_{j0})+\varepsilon_{jt} \quad (3)$$
$$\varepsilon_{jt}\sim N(0,\sigma^2)$$

$$(1/T)\ln\left(\frac{Y_{jt}/Po_{jt}}{Y_{j0}/Po_{j0}}\right)=\alpha+\beta\ln(Y_{j0}/Po_{j0})+\sum_{k=1}^{n}\gamma_k x_{j0}+\varepsilon_{jt} \quad (4)$$
$$\varepsilon_{jt}\sim N(0,\sigma^2)$$

where $T$ is the length of a time series from 0 to $t$; $Y_{jt}$ and $Po_{jt}$ are total ITR and population of province $j$ at time $t$ respectively; $Y_{j0}$ and $Po_{j0}$ are the initial ITR and population of province $j$ respectively; $\alpha$ is the intercept or constant term; $\beta$ is the autoregressive parameter of the initial ITRPC; $\varepsilon_{jt}$ is the normally and independently distributed error term; $\sigma^2$ is the variance value; $x_{j0}$ and $\gamma_k$ ($k$ = 1, …, $n$) are other explanatory variables and their autoregressive parameter respectively. Particularly, in order to effectively measure ITR changes at every stage, we improve the traditional model and assume $T$ = 1, which can show the disparity in ITR by annual cross section data, and get a changed trend. If $\beta$ value is negative and significant, ITRPC levels have a reversal trend to ITRPC growth rates, and the disparity has been shrinking for the period of 0–$t$, so $\beta$-convergence exists. But $\beta$-convergence does not exist if $\beta$ value is positive. Furthermore, steady value ($\varphi$), convergence speed ($\theta$), and convergence time ($\tau$) can be calculated according to $\beta$ value. The equations are as follows:

$$\begin{aligned}\varphi&=\alpha/(1-\beta)\\ \theta&=-\ln(1+\beta)/t\\ \tau&=\ln(2)/\theta\end{aligned} \quad (5)$$

where $t$ is 12 ( The base year 1996 is 0 period, so the year 2008 is 12 period).

In addition, the index of star-hotel levels, the index of density of expressway and class Ⅰ to Ⅳ highways, and the index of geographical concentration of tourism resources are used extensively. The index of star-hotel levels is an important standard to measure accommodation capacity of a province. The bigger the index is, the higher the capacity is. The equation can be expressed as:

$$S_j=\sum_{n=1}^{5}n\times Q_{n-s} \quad (6)$$

where $S_j$ is the index of star-hotel levels of province $j$. $Q_{n\text{-}s}$ is the number of the $n$-star ($n$ = 1, 2, …, 5) hotels.

The index of density of expressway and class Ⅰ to Ⅳ highways is widely used to measure accessibility of a province. The higher the index is, the better the accessibility is. The equation can be expressed as (Jin *et al.*, 2008):

$$D_j=L_j/A_j \quad (7)$$

where $D_j$, $L_j$ and $A_j$ are the indexes of density of expressway and class Ⅰ to Ⅳ highways, length of expressway and class Ⅰ to Ⅳ highways, and land area of province $j$ respectively.

The index of geographical concentration can effectively measure concentration of tourism resources, which is between 0 and 100. The bigger the index is, the more concentrated the tourism resource is. Based on the method proposed by Wu *et al.* (2003), and Bao and Gan (2004), the equations are as follows:

$$\begin{aligned}G&=100\times\sqrt{\sum_{j=1}^{31}\left(\frac{RE_j}{RE}\right)^2}\\ RE_j&=\sum_{n=1}^{5}n\times Q_{n\mathrm{A}}\end{aligned} \quad (8)$$

where $G$ is the index of geographical concentration; $RE_j$ and $RE$ are tourism resource endowments of province $j$ and the whole country respectively; $Q_{n\mathrm{A}}$ is the number of $n$A ($n$ = 1, 2 …, 5) scenic spots.

### 2.2 Data sources and region divisions

The data of ITR, population, length of expressway and class Ⅰ to Ⅳ highways, and the proportion of the tertiary industry accounting for GDP of the 31 provinces (municipalities) in the mainland of China for the period 1996–2008 were all from National Bureau of Statistics of China (2010). The number of employed persons and investment in fixed assets of transport and catering services came from National Bureau of Statistics of China (1997–2009). The number of star hotels was obtained from National Tourism Administration of China (1997–2009). The number of scenic spots from A to 4A (5A) in 2001 and 2008 derived from National Tourism Administration of China (2010). In addition, ITR, and investment in fixed assets of transport and catering ser-

vices were denoted at constant price based on the year 2000 according to U.S. Census Bureau (2010) and National Bureau of Statistics of China (1997–2009) respectively. The mainland provinces (municipalities) of China were divided into three regions (Wang and Fan, 2004), the eastern region including 11 provinces (municipalities): Beijing, Tianjin, Liaoning, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan; the central region including 8 provinces: Heilongjiang, Jilin, Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan; and the western region including 12 provinces (municipalities): Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang.

## 3 Results

### 3.1 Statistical analysis

Table 1 presents ITRPC characteristics during 1996–2008. 1) ITRPC of the whole country, the eastern, central and western regions all grew rapidly. They were USD 26.45, 50.85, 7.02 and 14.90 in 2008, which were 2.84, 2.72, 4.91 and 2.33 times the number in 1996, with annual growth rates of 9.09%, 8.70%, 14.18% and 7.31% respectively. 2) Inbound tourism developed with territorial characteristics. Among the three regions, in a perspective of absolute levels, the eastern region was the highest, the western region was in the middle, and the central region was the lowest; however, in a perspective of growth rates, the central region was the highest, the western region was in the middle, and the eastern region was the lowest. 3) In 2003, the whole country, the eastern, central and western regions had a severe decline, which suffered a serious setback because of the SARS Crisis. But in 2004, they rebounded sharply, the whole country and the eastern region followed an upward trend, reaching USD 16.30 and 33.08, the central and western regions were USD 3.04 and 9.39 nearly equal to the levels of 2002.

### 3.2 $\sigma$-convergence analysis

Figure 1 displays changes of $\sigma$ values of ITRPC during 1996–2008. 1) The whole country did not have $\sigma$-convergence trend. The $\sigma$ values gradually decreased from 1.56 in 1996 to 1.40 in 2001 at the first stage, indicating the disparity got less; but increased from 1.40 in 2001 to 1.57 in 2008 at the second stage, showing the disparity got greater. 2) The $\sigma$ values of the three regions had different changed trends. The eastern region had a relatively obvious $\sigma$-convergence trend (except 1996). The $\sigma$ values decreased from 3.90 in 1997 to 3.54 in 2008 by degrees, signifying the disparity evidently tended to be smaller. But no $\sigma$-convergence emerged in the central and western regions. The $\sigma$ values increased from 0.45 and 1.42 in 1996 to 1.91 and 3.53 in 2008 in the central and western regions respectively, implying the disparity tended to be larger. 3) Among the three regions, the central region was the smallest in inter-provincial disparity, the western region was in the middle and the eastern region had the largest inter-provincial disparity.

### 3.3 Club convergence analysis

Theil index (Fig. 2) indicates that: 1) $T_{\mathrm{P}}$ obviously tended to decrease year by year, meaning the disparity among the 31 provinces (municipalities) in the mainland of China had become smaller. 2) $T_{\mathrm{P}i}$ of the eastern region continuously decreased, showing the internal disparity had become smaller. In the central region, $T_{\mathrm{P}i}$ increased, implying the internal disparity had become larger. The results are the same as $\sigma$ analysis. But for the western region, the conclusion is not in accordance with $\sigma$ analysis. $T_{\mathrm{P}i}$ was characterized by a W-shape trend, implying the internal disparity fluctuated. 3) $T_{\mathrm{R}}$ did not decrease generally, showing no convergence trend among the three regions. Based on the $\sigma$ values, Theil index, and definition of club convergence, we can get a conclusion of club convergence existent in the eastern region, nonexistent in the central and western regions

Table 1 ITRPC of whole country, eastern, central and western regions during 1996–2008 (USD)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Whole country | 9.31 | 10.08 | 9.95 | 10.98 | 12.84 | 13.67 | 15.41 | 11.31 | 16.30 | 18.77 | 21.43 | 25.73 | 26.45 |
| Eastern region | 18.68 | 19.62 | 20.16 | 21.77 | 24.00 | 26.61 | 30.23 | 24.17 | 33.08 | 37.19 | 41.80 | 49.02 | 50.85 |
| Central region | 1.43 | 1.86 | 1.63 | 1.89 | 2.32 | 2.75 | 3.23 | 1.66 | 3.04 | 3.83 | 4.79 | 6.06 | 7.02 |
| Western region | 6.39 | 7.32 | 6.45 | 7.66 | 9.71 | 9.34 | 10.04 | 5.54 | 9.39 | 10.89 | 12.62 | 16.07 | 14.90 |

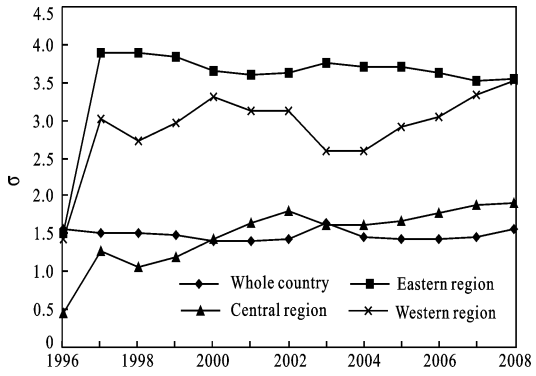


Fig. 1 Changes of $\sigma$ values of ITRPC during 1996–2008

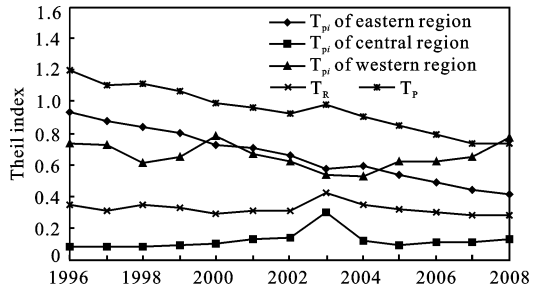


Fig. 2 Changes of $T_{Pi}$ , $T_R$ and $T_P$ during 1996–2008

during 1996–2008. In the eastern region, Beijing, Guangdong and Shanghai with the developed inbound tourism industry had lower growth rates of ITRPC on average by only 1.01%, 5.70% and 7.84% respectively, but Jiangsu, Zhejiang and Shandong with the undeveloped inbound tourism industry had higher growth rates on average by 19.74%, 17.23% and 14.42% respectively compared with other provinces. It had shrunk the internal disparity and brought about a club convergence trend. Whereas in the central region, average growth rates of Heilongjiang and Hunan with the developed inbound tourism industry were still higher, 19.28% and 13.73% respectively compared with other provinces. It had enlarged the internal disparity. In the western region, the disparity fluctuations were closely related to the growth rates of Guangxi, and the correlation coefficient was 0.95 calculated with Eviews 6.0 software package. The disparity became smaller when the growth rate of Guangxi was lower; and the disparity became larger when it was higher compared with other provinces.

### 3.4 $\beta$-convergence analysis

Based on the panel data method, we estimated the coefficients of equations (3) and (4) with Eviews 6.0 software package. It is necessary to judge the effectives of the fixed effect model and the random effect model before doing that. Because the former is better, we adopt the fixed effect model. Table 2 represents the results of regression. The $\beta$ value of absolute convergence is –0.3522, and passes the significant test, revealing that an absolute $\beta$-convergence existed among the 31 provinces (municipalities) in the mainland of China, and the disparity had become smaller. Then we observe whether there is a conditional $\beta$-convergence trend. Tourism resource endowments, socio-economy, geographical allocation, infra-construction, industrial structure, spatial distance can lead to disparity in ITR (Zhang, 1998; Lu and Yu, 2005; Guo, 2007; Zhao, 2008). Based on these analyses and available data, five explanatory variables: the proportion of employed persons in the tourism industry accounting for total population ($\gamma_1$), the star-hotel levels ($\gamma_2$) according to Equation (6), the investment in fixed assets for the tourism industry per capita ($\gamma_3$), the proportion of the tertiary industry accounting for GDP ($\gamma_4$), density of expressway and class Ⅰ to Ⅳ highways ($\gamma_5$) according to Equation (7) are added into the Equation (4) to make a conditional $\beta$-convergence test, reflecting how the labor input, the tourism facility, the capital input, the industrial structure, the infra-construction influence growth rate of ITRPC respectively.

With the five explanatory variables added into the Equation (4) one by one, values of regression become better (Table 2). The $\beta$ values are all negative; four explanatory variables, except density of expressway and class Ⅰ to Ⅳ highways ($\gamma_5$), are all significant at the 1%, 5% or 10% level; model-fitting degrees are from 0.60 (adjusted 0.55) to 0.63 (adjusted 0.57). And testing values of F (it shows whether a model is significant) and DW (it shows whether a model exists autocorrelation, and much nearer to 2 it is, much lower autocorrelation is) indicate that the models are significant and almost non-existent in autocorrelation. Evidently, ITRPC among the 31 provinces (municipalities) had a conditional $\beta$-convergence trend, and the disparity had become smaller. The coefficients of $\gamma_2$ and $\gamma_3$ are positive, implying that the star-hotel levels and investment in fixed assets for the tourism industry per capita had a same trend to growth rates of ITRPC. The coefficients of $\gamma_1$ and $\gamma_4$ are negative, showing that the proportion of employed persons in the tourism industry accounting for total population and the proportion of the tertiary industry accounting for GDP had a reversal trend to growth

Table 2 Regression values of absolute and conditional $\beta$-convergence

| $\alpha$ | $\beta$ | $\gamma_1$ | $\gamma_2$ | $\gamma_3$ | $\gamma_4$ | $\gamma_5$ | $R^2$ | Adjusted $R^2$ | $F$ | DW | $\varphi$ | $\theta$ | $\tau$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.7330*** | –0.3522*** | | | | | | 0.60 | 0.55 | 11.65*** | 1.98 | 0.54 | 3.62 | 19.16 |
| (7.6838) | (–6.7648) | | | | | | | | | | | | |
| 0.9330*** | –0.3752*** | –10.1682*** | | | | | 0.61 | 0.56 | 11.76*** | 1.98 | 1.49 | 3.92 | 17.68 |
| (7.7769) | (–7.1751) | (–2.6767) | | | | | | | | | | | |
| 0.9103*** | –0.3976*** | –11.1966*** | 0.0001** | | | | 0.61 | 0.56 | 11.80*** | 1.97 | 1.51 | 4.22 | 16.41 |
| (7.6215) | (–7.5431) | (–2.9511) | (2.4372) | | | | | | | | | | |
| 0.5188** | –0.4152*** | –12.7522*** | 0.0001*** | 0.0732* | | | 0.62 | 0.56 | 11.70*** | 1.96 | 0.89 | 4.47 | 15.50 |
| (2.1152) | (–7.7753) | (–3.2906) | (2.7564) | (1.8261) | | | | | | | | | |
| 0.9493*** | –0.4314*** | –12.3122*** | 0.0002*** | 0.0936** | –1.3721** | | 0.62 | 0.57 | 11.72*** | 1.96 | 1.67 | 4.70 | 14.73 |
| (3.1109) | (–8.0659) | (–3.1950) | (3.2197) | (2.2968) | (–2.3423) | | | | | | | | |
| 0.9756*** | –0.4350*** | –10.6600*** | 0.0002*** | 0.0820** | –1.4069** | 0.00001 | 0.63 | 0.57 | 11.55*** | 1.98 | 1.73 | 4.76 | 14.57 |
| (3.1963) | (–8.1366) | (–2.6525) | (2.7465) | (1.9745) | (–2.4033) | (1.4231) | | | | | | | |

Notes: $t$-values are in parentheses; ***, ** and * are significant at the 1%, 5% and 10% level respectively

rates of ITRPC. Moreover, according to Equation (5), steady value $\varphi$ increased from 0.54 to 1.73, convergence speed $\theta$ increased from 3.62% to 4.76%, convergence time $\tau$ decreased from 19.16 years to 14.57 years.

## 4 Discussion

The explanatory variable of tourism resources can not be added into the conditional $\beta$-convergence model owing to shortage of annual provincial data. But they are material foundation to attract foreign tourists and develop inbound tourism, especially those in high quality (Bao, 1996). Spatial difference in tourism resources is an important factor to disparity in tourism receipts (Lu and Yu, 2005). Therefore, we argue that the disparity in ITRPC will become smaller when difference in tourism resources among the 31 provinces (municipalities) becomes smaller. We adopt the index of geographical concentration to measure spatial difference in tourism resources for the period of 2001–2008 (The initial year is 2001, when scenic spots from A to 4A were all appraised and selected). According to Equation (8), the index of geographical concentration of the 31 provinces (municipalities) was 5.02 in 2001 and 4.52 in 2008, indicating that tourism resources had a balanced distribution trend, and the difference became smaller. The change had shrunk the disparity in ITRPC by region, and made a contribution to convergence.

The analysis shows that the whole country did not have $\sigma$-convergence trend. However, $T_P$ tended to converge, and results of absolute $\beta$-convergence and conditional $\beta$-convergence also support the convergence conclusion. Hence we consider that there was a convergent trend of ITRPC among the 31 provinces (municipalities). In addition, the result, a $\beta$-convergence trend and no $\sigma$-convergence trend, proves $\beta$-convergence is an insufficient condition for $\sigma$-convergence, which is the same as analysis of Barro and Sala-i-Martin (1992).

The convergent trend of ITRPC among the 31 provinces (municipalities) in the mainland of China is not in accordance with the conclusion by Pan (2010): generally, there had been no convergence of economic growth in China since 1990. That is to say, the disparity in ITRPC had become smaller, but that in economic growth had become larger, they had different changed trends. Club convergence emerged in the eastern region, which is the same as the consequence of club convergence in economic growth (Peng, 2005; Zhou and Zhang, 2008; Pan, 2010); but club convergence did not emerge in the central and western regions. The result of the External-Internal (E-I) index by Liu *et al.* (2010) can confirm it well: tourists could freely flow among different provinces in the east region, owing to their strong cohesion, but most provinces in the central and western regions were still isolated from each other and confined to themselves. It is evident that there was an integration trend among the provinces in the eastern region; nevertheless in the central and western regions, the provinces with the developed inbound tourism industry were speeding up developing, and there was not an integration trend among the provinces.

The convergent trend meant the disparity between the developed provinces and the developing provinces had become smaller. Which influencing factors played roles in the changed trend? The star-hotel levels and investment in fixed assets for the tourism industry per capita had a same trend to growth rates of ITRPC. Namely that they had helped inbound tourism develop, and there was no difference among the 31 provinces (municipalities) in the mainland of China. But the proportion of employed

persons in the tourism industry accounting for total population and the proportion of the tertiary industry accounting for GDP had a reversal trend to growth rates of ITRPC. Namely that they had shrunk the provincial disparity, and there were differences between the developed provinces and the developing provinces. Most provinces with high proportion of employed persons in the tourism industry accounting for total population and the proportion of the tertiary industry accounting for GDP were advanced in the inbound tourism industry. Their marginal efficiency of increasing labor input and enhancing the proportion of the tertiary industry accounting for GDP was lower compared to the developing provinces, which had resulted in lower growth rate, and shrunk the disparity eventually.

## 5 Conclusions and Suggestions

### 5.1 Conclusions

ITRPC of the whole country, the eastern, central and western regions increased quickly with territorial characteristics. ITRPC of the whole country was characterized by convergence. The eastern region had a club convergence trend, but the central and western regions did not show the trend. The star-hotel levels and investment in fixed assets for the tourism industry per capita had a same trend to growth rates of ITRPC, they had helped inbound tourism develop, and there was no difference among the 31 provinces (municipalities) in the mainland of China. But the proportion of employed persons in the tourism industry accounting for total population and the proportion of the tertiary industry accounting for GDP had a reversal trend to growth rates of ITRPC, they had shrunk the provincial disparity in inbound tourism economy, and there were differences between the developed provinces and the developing provinces.

### 5.2 Suggestions

In order to have a balanced development of China′s inbound tourism economy, and shrink the disparity in regional economy, the developing provinces should emphasize four aspects: 1) to establish a club of inbound tourism destinations by strengthening relationship with the developed provinces and eliminating barriers hindering integration; 2) to make growth of ITRPC by increasing the number of hotels and investment in fixed assets for the tourism industry; 3) to shrink the disparity in inbound tourism economy by increasing labor input and speeding up the tertiary industry; 4) to attract more inbound tourists by increasing the number of scenic spots and improving them in quality.

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