

Paper prepared for presentation at the ACESA 2006 International Conference
Emerging China: Internal Challenges and Global Implications
13-14 July 2006
Victoria University Conference Centre
Level 12, 300 Flinders St, Melbourne

**Regional Growth, Disparity and Convergence in China and India:
A Comparative Study**

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Draft only
Not for citation

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Abstract

Economic growth in China and India has attracted many headlines recently. As a result, the literature comparing the two Asian giants has expanded substantially. This paper adds to the literature by comparing regional growth, disparity and convergence in the two economies. This is the first of its kind. The paper presents a detailed examination of economic growth in the Chinese and Indian regions over the past twenty years. It also provides an assessment of regional disparity in the two countries and investigates whether there is any evidence of regional convergence during the period of rapid economic growth. It attempts to identify the sources of regional disparity and hence draw policy implications for economic development in the two countries in the near future.

Regional Growth, Disparity and Convergence in China and India: A Comparative Study¹

Since the early 1990s, the world has witnessed rapid economic transformation and growth in China and India. This has subsequently triggered a boom in comparative studies of the two Asian giants.² This paper adds to the literature by focusing on regional growth in the two countries. In particular, it attempts to explore how regional economies in the two vast countries have scored in economic growth and assess whether regional disparity has deteriorated or not as economic liberalization deepens. It is found that substantial regional disparity exists in China and India. This disparity has shown the trend of increase in both countries during the period of rapid economic growth in particular since the early 1990s. However, the increase in regional disparity in both countries largely reflects the enlarging gap between the super rich regions and the rest of the economy. In other words, economic growth has not led to catch up effects in the relatively poor regions as postulated by the new growth theories (Abramovitz 1986). This study also shows that variations in infrastructure development and the level of urbanization are the main sources of regional disparity in both countries. In China, the export sector also plays a role in affecting regional development. In India, human capital development in recent years may also affect regional disparity.

The rest of the paper is organized as follows. The next section presents some stylized facts about regional growth in the two economies. The paper then sheds some light on regional convergence and divergence in the past decades. This is followed by regression analyses to explain the sources of regional disparity. The concluding comments are presented in the final section.

¹ Work on this paper was supported by an UWA Research Grant.

² Recent comparative studies of China and India include Swamy (2003) and Srinivasan (2004) on reforms and economic performance, Srinivasan (1994) and Balasubramanyam and Wei (2005) on international trade, Kehal (2005) on foreign investment, Singh (2005) and Wu and Zhou (2006) on bilateral relationships, and Wu (2007) on the service sector, to cite a few.

Regional Growth in China and India

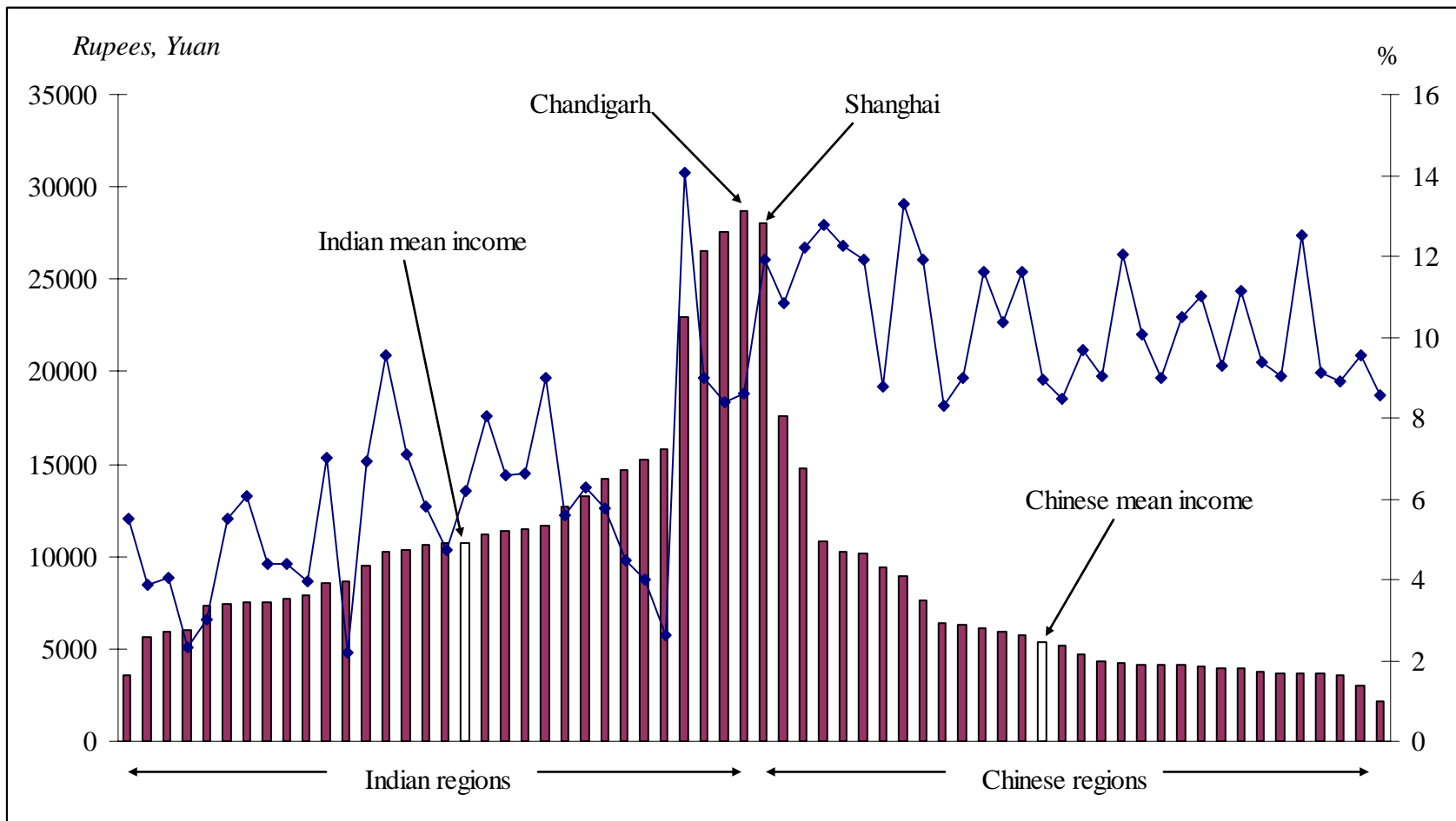
During 1980-2005, China and India has achieved phenomenal economic growth at the average rate of 9.7 and 5.9 per cent, respectively.³ These growth rates are unprecedented in the two countries' history. However, there are substantial variations in growth across the regions of the two economies. Figure 1 presents the distribution of real gross regional products (GRP) per capita and GRP growth rates in China and India in 2001.⁴ Several observations can be made.

First, in both countries, the regions (China's provinces and special municipalities and India's states and union territories) can be divided into two groups ie. the most urbanized areas including Shanghai, Beijing and Tianjin in China and Chandigarh, Goa and Delhi in India and the rest of the economies. As expected, the most urbanized regions have the highest per capita income in both economies. Thus, one could conclude that the level of urbanization is positively associated with the level of economic development among the regions. Second, the gap between the rich and the poor is much bigger in China than in India. For instance, the ratio of per capita GRP in China's richest region (Shanghai) over that in the country's poorest region (Tibet) in 2001 was 13.1 which is much greater than the similar ratio, 8.1, in India ie. the ratio of per capita GRP in Chandigarh (the richest) over that in Bihar (the poorest). Third, if the super rich regions (three municipalities in China and four states in India) are excluded, regional disparity appears less severe in the two countries. Without the super riches, the income ratio of the richest region over the poorest region was 5.0 in China and 4.4 in India in 2001. These are still high but seem to be close to those in economies at the similar stage of development. For example, the ratio of per capita income of the richest state over the poorest state was 5.8 in the US in 1900, 3.0 in Italy in 1950, 2.4 in France in 1950, 2.8 in Japan in 1955 and 2.2 in the US in 1990.⁵

³ These rates are author's own estimates using official statistics of China and India published by the National Bureau of Statistics (various issues) and Reserve Bank of India (2005), respectively.

⁴ The 2001 data are employed here as there are too many missing data in more recent statistics for Indian states.

⁵ These statistics are based on data reported in Barro and Sala-i-Martin (1995). Tokyo is excluded from the comparison.



Notes: Ranking is based on the value of 2001 gross provincial product (GPP) per capita in China and 2001/2002 net state domestic product (NSDP) per capita in India. Growth rates are the average rates during 1994-2001. In 2001, US\$1=47.186 rupees and 8.277 yuan. Data are drawn from the National Bureau of Statistics (various issues) and Reserve Bank of India (2005).

Figure 1 Regional Ranking and Growth Rates

As for the rates of regional growth, they are very diverse in both countries. According to Figure 1, as expected, the average rate of growth is higher in China than in India. China's most developed regions tend to grow faster than the country's least developed regions. In India, the fastest growing regions appear to be the "middle classes", ie. those states with per capita income ranked between the super riches and the poorest states. Perhaps, due to

Table 1 Ranking of Chinese and Indian Regional Economies

Chinese regions	1980	2001	Indian regions	1980	2001
Shanghai	1	1	Goa	2	1
Beijing	2	2	Delhi	1	2
Tianjin	3	3	Pondicherry	3	3
Zhejiang	12	4	Andaman & Nicobar Islands	5	4
Jiangsu	11	5	Punjab	4	5
Guangdong	15	6	Maharashtra	6	6
Liaoning	4	7	Haryana	7	7
Fujian	19	8	Gujarat	8	8
Shandong	17	9	Tamil Nadu	16	9
Heilongjiang	5	10	Nagaland	20	10
Hebei	8	11	Karnataka	14	11
Jilin	9	12	Himachal	11	12
Hubei	20	13	Sikkim	13	13
Xinjiang	14	14	Kerala	15	14
Inner Mongolia	13	15	Andhra Pradesh	18	15
Shanxi	10	16	West Bengal	10	16
Anhui	27	17	Tripura	23	17
Hunan	21	18	Meghalaya	19	18
Qinghai	7	19	Arunachal Pradesh	12	19
Guangxi	22	20	Rajasthan	26	20
Henan	25	21	Madhya Pradesh	21	21
Jiangxi	23	22	Jammu & Kashmir	9	22
Sichuan	24	23	Manipur	17	23
Ningxia	6	24	Assam	24	24
Shaanxi	16	25	Orissa	22	25
Yunnan	26	26	Uttar Pradesh	25	26
Gansu	18	27	Bihar	27	27
Guizhou	28	28			

Notes: China's Hainan, Chongqing and Tibet are excluded from the ranking exercises due to missing data. So are India's Chandigarh, Jharkhand, Chhattisgarh and Uttaranchal. Ranking is based on the value of gross regional product (GRP) per capita. Indian ranking is based on the 1980/1981 and 2001/2002 financial year statistics.

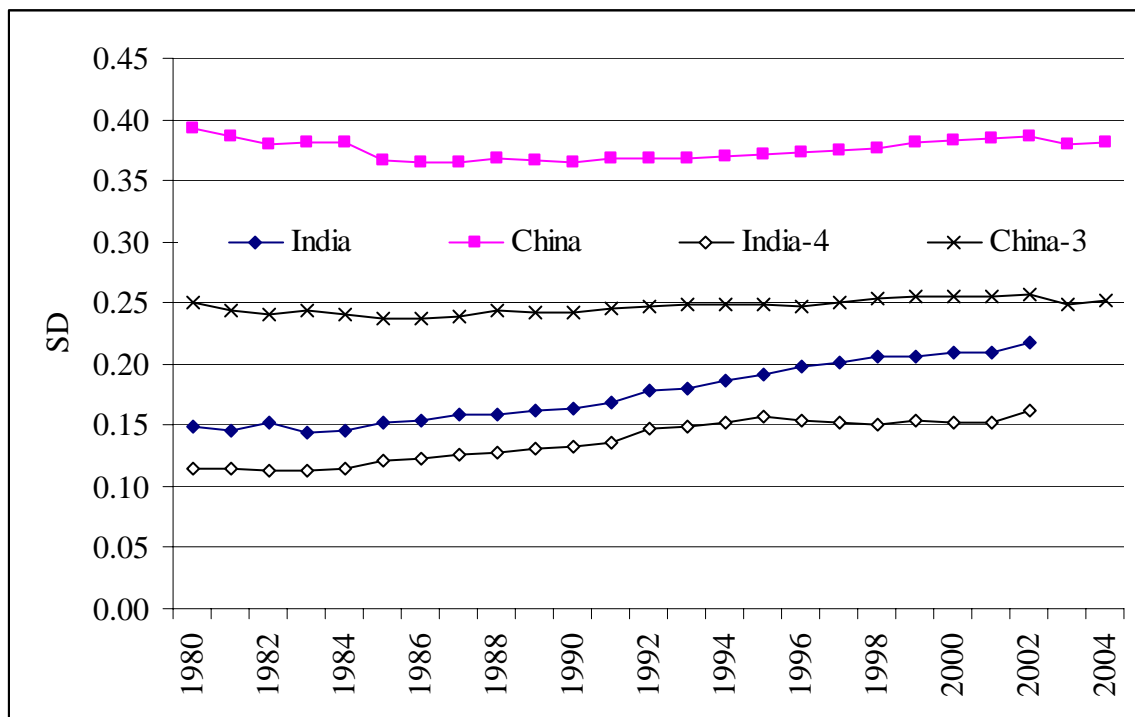
these variations in the rates of growth, the ranking of the regions between 1980 and 2001 changed considerably in China and modestly in India according to Table 1. In China, only five of the top ten regions in 1980 remain in the top-ten group in 2001. The major winners in China are the coastal regions such as Zhejiang, Jiangsu, Guangdong, Fujian and Shandong. These regions are also the beneficiaries of China's economic reforms as they were offered special policy initiatives under the concept of "letting some get rich first". Thus, economic policies have played an important role in affecting regional disparity in China in the past two decades. In India, between 1980 and 2001, eight of the top ten regions maintained their top positions. Only two states, Tamil Nadu and Nagaland, moved into the top-ten category. In addition, the ranking of the top eight regions in India has remained the same with the exception of Goa and Delhi swapping their positions.

Thus, with regard to changes in regional disparity over the past two decades, China and India are very different. One may argue that India's democratic system makes it impossible for the country to pursue a biased development strategy as China has adopted over the period. The deteriorating regional disparity in China is hence partly attributed to the country's economic policies while In India it may be more related to non-institutional factors such as historical and geographic reasons. For example, Rao et al. (1999) argued that India's more developed regions with relatively better infrastructure, human resources and accessibilities to markets have been able to exploit the opportunities offered by economic liberalization better than the relatively poor states. Sachs et al. (2002) claimed that Orissa's vulnerability to floods and devastation from tropical cyclones are partly attributed to its poor performance in agriculture and hence the overall state economy.

Regional Convergence or Divergence

In the growth literature, two types of convergence have been defined and applied, ie. the sigma-convergence and beta-convergence (Barro and Sala-i-Martin 1995). In this paper, sigma-convergence is measured by the standard deviation of the logarithm of the gross regional product (GRP) per capita. Two sets of samples are employed for each country. That is, one set contains all regions in each country and the other excludes the super rich

regions according to the 2001 ranking of per capita GRP. The estimation results are presented in Figure 2. In comparison, Chinese regions have shown greater dispersion than Indian regions according to Figure 2 which depicts the two curves for China above the Indian ones. The chart also presents evidence of modest regional convergence in China in the 1980s particularly during the first half of the 1980s. This observation is consistent with findings reported in other studies (eg. Raiser 1998, Demurger et al. 2002 and Wu 2004). However, since the early 1990s, Chinese regions have shown the tendency of divergence which is mainly reflected in the widening gap between the three large municipalities and other provinces. Figure 2 shows clearly that the standard deviation across regions excluding the three municipalities hardly changed in the 1990s, implying income differences being relatively stable.



Notes: SD stands for the standard deviation of the logarithm of gross provincial product per capita in China and net state domestic product per capita in India. India-4 is calculated excluding the four super rich regions (Chandigarh, Goa, Delhi and Pondicherry) and China-3 is based on all regions but three super riches (Shanghai, Beijing and Tianjin).

Figure 2 Sigma-convergence of Regional Income

In the case of India, there was little change in regional disparity in the first half of the 1980s but regional divergence has taken place since 1984 when Rajiv Gandhi took office and initiated the first wave of economic reforms. However, the trend of regional divergence seems to be originated from different sources in the late 1980s and since the early 1990s. In the late 1980s, divergence occurred mainly between regions excluding the four super rich states (Chandigarh, Goa, Delhi and Pondicherry). This is clearly demonstrated in Figure 2 where the two curves for Indian are almost parallel to each other during the 1980s. But, since the early 1990s when more comprehensive reforms were introduced in the aftermath of the 1991 balance of payment crisis, regional divergence seems to be driven by the widening gap between the super rich states and rest of the economies. In the absence of the super riches, regional disparity remains unchanged in the 1990s (ie. almost a horizontal line with a value of 0.15 as shown in Figure 2). This is similar to the observation in China in the 1990s. That is, with the exclusion of the super rich states, regional disparity has remained almost at the same level in both economies since the early 1990s while the gap between the super riches and the rest of the economy has become larger. These findings are in sharp contrast to popular perception about regional inequality in China and India during the reform periods (Jian et al. 1996, Rao et al. 1999).⁶ Thus, in many existing studies, regional disparity may be inflated due to the impact of several highly urbanized economies among the regions (the three municipalities in China and Chandigarh, Goa and Delhi in India).

The observed sigma-convergence or divergence is mirrored in the estimation results of beta-convergence which are summarized in Table 2. The estimated values of beta and t-ratios in parentheses are derived from the following non-linear regression

$$\log y_{iT} - \log y_{i0} = A - (1 - e^{-\beta T}) \log y_{i0} + \varepsilon_i \quad (1)$$

where y_{iT} and y_{i0} are income per capita at periods T and 0, respectively, and ε_i is the standard white noise. In the case of India, all scenarios considered here show evidence of regional divergence during 1980-2001. In China, the estimation results in Table 2

⁶ In this study, “regional inequality” refers to inequality between Chinese provinces and Indian states. Inequality within the provinces/states is not addressed here but becomes increasingly important in both countries. For empirical studies, see Knight et al. (2004) and Kanbur and Zhang (2005) on China and Bhanumurthy and Mitra (2004) on India.

demonstrate the trend of regional convergence in the first half of the 1980s. This reflects however a fall in the gap between the three largest cities (Shanghai, Beijing and Tianjin) and the rest of the country. Without the three municipalities, the findings in Table 2 do not show significant evidence of convergence among the regions in China.

Table 2 Estimation Results of Beta-convergence

	Group I		Group II	
	beta (t-ratios)	n	beta (t-ratios)	n
China				
1980-1987	0.0067 (1.982)*	28	0.0044 (0.760)	25
1987-2002	-0.0020 (-0.676)	30	0.0003 (0.037)	27
1980-2002	0.0013 (0.486)	28	0.0034 (0.680)	25
India				
1980/81-1995/96	-0.0428 (-1.071)	27	-0.0435 (-0.742)	24
1995/96-2001/02	-0.0035 (-0.310)	31	0.0158 (1.303)	27
1980/82-2001/02	-0.0083 (-1.719)	27	-0.0045 (-0.606)	24

Notes: Group I includes all regions for which data are available in the two countries. Group II excludes China's Shanghai, Beijing and Tianjin, and India's Chandigarh, Goa, Delhi and Pondicherry, respectively. These regions are the city states or provinces in the two countries. * indicates significance at the level of 5 per cent. The numbers under "n" represent the size of the samples used.

To sum up, the results from the analyses of both sigma-convergence and beta-convergence illustrate that, during the period of high economic growth, the regions in China and India have shown the tendency of divergence. The latter has mainly been driven by the enlarging gap between several highly urbanized regions and the rest of the economies in the two economies. This trend of divergence seems to be relatively more severe in India than in China in recent years though China's regional disparity in absolute terms is much worse than India's. In both countries, it seems that regional disparity has been relatively stable if several super rich regions (provinces or states) are excluded from the analysis. This is contradictory to popular perception that regional disparity has deteriorated in both China and India since the early 1990s.

Sources of Regional Disparity: A Regression Analysis

The results discussed in the preceding sections indicate the existence of regional disparity in both China and India. There is however no evidence of regional convergence though both economies have experienced phenomenal growth over the past decades. This section attempts to provide an explanation of the sources of regional disparity. A regression approach is employed. To introduce this approach, consider the following income equation

$$y = \beta_0 + \sum \beta_i x_i + \varepsilon \quad (2)$$

where y represents a measure of income eg. income per capita, and x_i ($i=1, \dots, n$) are a list of variables that affect income. Equation (2) can be estimated using the ordinary least square (OLS) technique. Given the estimates $\hat{\beta}_i$, the prediction of income is $\hat{y} = \hat{\beta}_0 + \sum y^i = \hat{\beta}_0 + \sum \hat{\beta}_i x_i$. Morduch and Sicular (2002) show that the proportional contribution of the i^{th} component to inequality measured using the variance or squared coefficient of variation is given as follows

$$S_{CV}^i = S_{Var}^i = \frac{\text{cov}(y^i, y)}{\text{var}(y)} \quad (3)$$

To estimate the system of equations (2) and (3), the following empirical model is considered

$$\log(y) = f(\text{inf}, \text{hum}, \text{urb}, \text{ind}, z) + \varepsilon \quad (4)$$

where y , inf , hum , urb , ind and z represent real gross regional product (GRP) per capita, infrastructure, human capital, urbanization, industrialization and a control variable. The selection of these variables is very much dictated by the availability of regional data in the two countries. For the same reason, equation (4) is estimated for each country using two 1-year cross-sectional data sets representing the 1990s and the current period, respectively. The variables identified in equation (4) are also popular candidates in growth analyses.⁷ A more detailed description of the variables is provided as follows.

⁷ These variables are also included in the sixty variables identified by Sala-i-Martin (1997).

Infrastructure The condition of infrastructure development plays an important role in economic development. Well developed infrastructure such as roads and telecommunications can help reduce business costs and improve efficiency, and hence is a key prerequisite for attracting domestic as well as foreign investment. The level of infrastructure development is expected to be related to income positively. For the India model, access to drinking water is employed as the proxy of infrastructure development and the information is available for each state for the years 1991 and 2001.⁸ Another indicator which may also capture the activities of infrastructure development is investment in transport in each state.⁹ This variable is included in the Indian model as a control variable. For the Chinese model, as access to drinking water is very much universal in China, telecommunication density across the regions is employed as a proxy of the level of infrastructure development.¹⁰

Human Capital The role of human capital in economic growth is highlighted in the new growth theory (Benhabib and Spiegel 1994). The measurement of human capital stock is however difficult and controversial.¹¹ This paper simply employs regional literacy ratios as an indicator of human capital development among the regions in China and India.

Urbanization Preliminary analysis in the preceding section provides clear evidence about the relationship between the level of income and the degree of urbanization in both China and India. Thus, a variable reflecting the progress of urbanization is included in equation (4) so that the contribution of urbanization to regional disparity is analyzed.

Industrialization Regional disparity could be driven by structural differences between the regional economies in each country. More industrialized regions are expected to be more developed and hence have higher per capita income. For example, Bhattacharya and Sakthivel (2004) found that India's more industrialized states grew much faster than the less industrialized states during the reform period. To examine the effect of economic

⁸ The sources of data are listed in the appendices.

⁹ Canning (1998) presented a detailed study of measuring the stock of infrastructure in the world.

¹⁰ The same data for India are not available unfortunately.

¹¹ See, for example, Benhabib and Spiegel (1994), Pritchett (1997) and Temple (1998).

structure on regional disparity, the share of the manufacturing sector in GRP is employed as a proxy of the level of industrialization in the empirical models.

International trade Openness to trade and investment is expected to play an important role in economic development.¹² This is confirmed by recent development experience in both China and India. The two economies, in particular China, have benefited substantially from foreign investment and access to foreign markets through exports and imports. While regional trade figures are not available in India, the shares of the value of exports over GRP for the Chinese regions are included as a control variable.

The estimation results are presented in Table 3. The table shows that the chosen variables can explain a large proportion of the variation in regional income per capita. Another important conclusion can also be drawn from the table. That is, variations in infrastructure development and urbanization are the main sources of regional disparity in both countries. This is consistent with the findings about the role of infrastructure by Nagaraj et al. (2000) and urbanization by Sachs et al. (2002). In addition, human resource development tends to play a key role in affecting regional disparity in recent years in India. In the case of China, international trade also plays a role in influencing regional development. As for the level of industrialization, it is not the dominant contributor to regional disparity.¹³ In fact, surprisingly, none of the variables is statistically significant. Thus, there may be some room for improvement eg. the use of alternative variables. These findings imply that, to reduce regional disparity, governments in China and India should seriously deal with regional differences in the level of infrastructure development and urbanization.

¹² There is a large body of literature on the relationship between economic development and trade. Readers may refer to Edwards (1992) and Harrison (1996).

¹³ Mitra (1992) and Ravallion and Datt (1996) showed that industrial growth had nominal impacts on rural and urban poverty in India.

Table 3 Estimation Results

Indian model	1991		2001	
	$\hat{\beta}_i$	shares (%)	$\hat{\beta}_i$	shares (%)
<i>intercept</i>	6.4987 (0.2258)*		6.8447 (0.3470)*	
<i>infrastructure</i>	0.0067 (0.0027)**	24.5	0.0042 (0.0021)***	6.6
<i>human capital</i>	0.0055 (0.0033)	8.1	0.0226 (0.0046)*	36.1
<i>urbanization</i>	0.0086 (0.0034)**	25.5	0.0099 (0.0026)*	34.2
<i>industrialization</i>	0.0058 (0.0070)	5.3	0.0099 (0.0040)**	8.5
<i>transport</i>	9.8615 (2.7220)*	16.0	1.4260 (1.3281)	0.9
R^2	0.8064		0.8619	
adjust- R^2	0.7554		0.8305	
Sample size	25		28	
Chinese model	1990		2000	
	$\hat{\beta}_i$	shares (%)	$\hat{\beta}_i$	shares (%)
<i>intercept</i>	6.7894 (0.2356)*		7.4887 (0.3377)*	
<i>infrastructure</i>	0.0859 (0.0340)**	30.4	0.0480 (0.0117)*	65.7
<i>human capital</i>	0.0013 (0.0036)	1.4	0.0370 (0.4396)	0.2
<i>urbanization</i>	0.0139 (0.0045)*	37.2	0.0059 (0.0054)	15.7
<i>industrialization</i>	0.0046 (0.0047)	6.7	0.0010 (0.0049)	0.5
<i>export</i>	0.6489 (0.2497)**	11.9	0.4319 (0.3078)	9.2
R^2	0.8757		.9129	
adjust- R^2	0.8498		.8954	
Sample size	30		31	

Notes: All four regressions are tested for heteroscedasticity. The null hypothesis of homoscedasticity for India in 1991 is rejected and hence the weighted least square approach is employed to re-estimate the model. Standard errors are reported in the parentheses. *, ** and *** represent significance at the level of 1%, 5% and 10%, respectively.

While the findings in Table 3 provide important implications, they are subjected to several qualifications such as the problems of endogeneity and outliers. The regression results from OLS may be biased due to endogeneity but lack of data makes it impossible to apply alternative approaches such as the two-stage least square method. The impact of outliers can however be assessed and the results are presented in Table 4.¹⁴ The outliers for each data set are identified by examining the residuals from the regressions in Table

¹⁴ Only the decomposition results are presented.

3.¹⁵ The regressions excluding the outliers are re-run. Table 4 shows that the explaining power improves after the exclusion of the outliers in each case. The decomposition of the sources of regional disparity is in general consistent with the results in Table 3. That is, infrastructure and urbanization variables still account for the major shares of regional disparity.

Table 4 Sensitive Analysis

Contributing factors	India		China	
	1991	2001	1990	2000
<i>infrastructure</i>	10.3	17.4	30.3	59.2
<i>human capital</i>	6.5	30.1	1.4	
<i>urbanization</i>	41.6	37.1	35.5	24.3
<i>industrialization</i>	9.0	3.1	8.9	
<i>transport/export</i>	25.4	1.0	11.5	9.7
Total	92.7	88.6	87.6	93.2

Notes: The numbers in the table represent percentage contributions. Three outliers are identified and excluded for the 1991 model (India), one for the 1990 model (China), two for the 2000 model (China) and three for the 2001 model (India). For the 200 Chinese model, human capital and industrialization variables have insignificant coefficients and are excluded from the final regression.

Concluding Remarks

This paper presents some preliminary findings comparing regional economic growth, disparity and convergence in China and India. It is found that regional economic development in China and India is unbalanced. Relatively more developed regions in both countries have forged ahead with no evidence of catch-up by the backward regions. As a result, regional disparity has deteriorated though the two countries enjoyed unprecedented growth over the past two decades. In particular, the gap between the super rich regions and the rest of the economy in both countries has widened since the early

¹⁵ It should be pointed out that the choice of outliers is based on an ad hoc method which determines the number of outliers to be excluded and in the meantime maintains a reasonable size for the new data sample after the exclusion of the outliers in each case.

1990s. While regional disparity is in general more severe in China and in India, it is rising fast in India than in China in recent years. The Chinese government is now fighting hard to reduce regional disparity and build a harmonious society. India would face the same problem if the current trend of rising disparity continues. India could learn from the Chinese experience and try to avoid repeating China's mistakes.

This study also shows that variations in urbanization and infrastructure development are found to be major contributors to regional disparity. While both countries have to build more infrastructure and speed up urbanization, they should also aim for a more balanced strategy among the regions. In addition, it seems that human resource development also plays a role in affecting regional disparity in India in recent years while, in China, the export sector is found to be a positive contributor to regional disparity. These findings, though subjected to qualifications, may point out the direction for policy responses by governments in China and India in the near future.

Appendices: Sources of Data

Chinese statistics are drawn mainly from the *Statistical Yearbook of China* compiled by the National Bureau of Statistics (various issues). Indian data come from several sources including the *Handbook of Statistics on the Indian Economy* published by the Reserve Bank of India (2005), the *Handbook of Urban Statistics* compiled by the National Institute of Urban Affairs, Department of Urban Development and *Five Year Plans*, Planning Commission, Government of India.

References

- Abramovitz, Moses (1986), "Catching Up, Forging Ahead, and Falling Behind", Journal of Economic History 46(2), 385-406.
- Balasubramanyam, V.N. and Y. Wei (2005), "Textile and Clothing Exports from India and China: A Comparative Analysis", Journal of Chinese Economic and Business Studies 3(1), 23-37.

- Barro, Robert J. and X. Sala-i-Martin (1995), Economic Growth, New York: McGraw-Hill Inc.
- Benhabib, J. and M. Spiegel (1994), “The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country Data”, Journal of Monetary Economics 34, 143-174.
- Bhanumurthy, N. R. and Arup Mitra (2004), “Economic Growth, Poverty, and Inequality in Indian States in the Pre-reform and Reform Periods”, Asian Development Review 21 (2), 79-99.
- Bhattacharya, B.B. and S. Sakthivel, (2004), “Regional Growth and Disparity in India: Comparison of Pre-and Post-reform Decades”, Economic and Political Weekly, March 6, 1071-1077.
- Canning, David, 1998, “A Database for the World Stocks of Infrastructure, 1950-95”, World Bank Economic Review 12, 529-47.
- Démurger, S., J. Sachs, W.T. Woo, S. Bao, G. Change and A. Mellinger (2002), “Geography, Economic Policy and Regional Development in China”, Asian Economic Papers 1(1), 146-97.
- Edwards, S. (1992), ‘Trade Orientation, Distortions and Growth in Developing Countries’, Journal of Development Economics 39, 31-57.
- Harrison, A. (1996), ‘Openness and Growth: a Time–Series, Cross–Country Analysis for Developing Countries’, Journal of Development Economics 48, 419–47.
- Jian, T., J.D. Sachs and A.M. Warner (1996), “Trends in Regional Inequality in China”, China Economic Review 7, 1-21.
- Kanbur, Ravi and Xiaobo Zhang (2005), “Fifty Years of Regional Inequality in China: a Journey through Central Planning, Reform, and Openness”, Review of Development Economics 9(1), 87-106.
- Kehal, H.S. (ed) (2005), Foreign Investment in Rapidly Growing Countries: the Chinese and Indian Experiences, Basingstoke, Hampshire and New York: PalgraveMacmillan.
- Knight, John, Shi Li and Renwei Zhao (2004), “Divergent Means and Convergent Inequality of Incomes among the Provinces and Cities of Urban China”, Research Paper No. 2004/52, World Institute for Development Economics Research.

- Mitra, A. (1992), "Growth and Poverty: the Urban Legend", Economic and Political Weekly, March 28, 659-65.
- Morduch, J. and T. Sicular (2002), "Rethinking Inequality Decomposition with Evidence from Rural China", The Economic Journal 112, 93-106.
- Nagaraj, R., A. Varoudakis and M.A. Veganzones (2000), "Long-run Growth Trends and Convergence across Indian States", Journal of International Development 12(1), 45-70.
- National Bureau of Statistics (various issues), China Statistical Yearbook, Beijing: China Statistics Press.
- Pritchett, L. (1997), "Where Has All the Education Gone?", Policy Research Working Paper No.1551, the World Bank, Washington DC.
- Raiser, M. (1998), "Subsidizing Inequality: Economic Reforms, Fiscal Transfers and Convergence across Chinese Provinces", Journal of Development Studies 34, 1-26.
- Rao, M.G., R.T. Shand and K.P. Kalirajan (1999), "Convergence of Income across Indian States: A Divergent View", Economic and Political Weekly, March27-April 2 (www.epw.org.in).
- Ravallion, M. and G. Datt (1996), "How Important to India's Poor Is the Sectoral Composition of Economic Growth", The World Bank Economic Review 10(1), 1-25.
- Reserve Bank of India (2005), "Handbook of Statistics on the Indian Economy", <http://www.rbi.org.in/scripts/publications.aspx>.
- Sachs, J.D., N. Bajpai and A. Ramiah (2002), "Understanding Regional Economic Growth in India", Asian Economic Papers 1(3), 32-62.
- Sala-i-Martin, Xavier (1997), "I Just Ran Two Million Regressions", American Economic Review (Papers and Proceedings) 87, 178-83.
- Singh, Swaran (2005), China-India Economic Engagement: Building Mutual Confidence, CSH Occasional Paper No.10, French Research Institutes in India.
- Srinivasan, T.N. (1994), Agriculture and Trade in China and India: Policies and Performance since 1950, San Francisco, Calif. : ICS Press

- Srinivasan, T.N. (2004), "China and India: Economic Performance, Competition and Cooperation: An Update", Journal of Asian Economics 15, 613-36.
- Swamy, S. (2003), Economic Reforms and Performance: China and India in Comparative Perspective, New Delhi: Konark Publishers Pvt Ltd.
- Temple, J. (1998), "Robustness Tests of the Augmented Solow Model", Journal of Applied Econometrics 13, 361-375.
- Wu, Yanrui (2004), China's Economic Growth: A Miracle with Chinese Characteristics, London and New York: RoutledgeCurzon Press.
- Wu, Yanrui (2007), Service Sector Growth in China and India: A Comparison, China: An International Journal (forthcoming).
- Wu, Yanrui and Zhangyue Zhou (2006), Bilateral Trade between China and India: Journal of Asian Economics (forthcoming).