Income Inequality in China and India: Structural Comparisons

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Introduction: the Theoretical Framework of Structural Comparisons

Comparative studies between China and India are becoming more and more popular now in the international level. A majority of these studies are from the perspective of international relations and not so much from that of economics. This study will focus on the comparison of income distribution and inequality in China and India.

There are many similarities between China and India in terms of eco-social structures and development background, which justify any comparison between the two nations. Firstly, the Chinese and Indian economies have never been influenced by the notion of a planned economy and both countries deem social justice and equality a common goal. Secondly, the two largest developing countries are facing many types of inequalities that include inner-urban, inter-rural and rural-urban regional disparities that are caused by industrialization and modernization; Thirdly, the societies of the two nations reveal the typical characteristics of a dualistic economy and social structure. In fact rural-urban development remains unbalanced. And lastly, they are currently undergoing tremendous transformations due to reform and openness, which substantially affect income distribution and inequality in both China and India. The state and its redistributive policy have also deeply affected income inequalities.

It is very hard to say whose income inequality is better or worse, this is not the aim of this study. The purpose of this comparison is to identify the structural differences in income inequality between the two countries. Using the structuralism methodology, this study will compare the structural differences of income inequality among inner-urban, inner-rural, rural-urban, inter-regional communities in China and India. The causes and consequences of income inequality will also be discussed in relation to the two nations' eco-social structures and development background.

The rest of this paper is as follows: part one reviews the available literatures on the topic; part two discusses data collection and methodology; part three details the structural comparison of income distribution between China and India; part four contains comprehensive explanations for the structural differences in income inequality between China and India; and last part is the conclusion.

Review of Literature

Many researches have been done on income distribution in China and India. Most of

them were only about China or India individually. Chinese studies on income distribution and poverty are often based on two data sources: one is the State Statistics Bureau (SSB), an official source of data; and the other is the three surveys conducted by the Institute of Economics, Chinese Academy of Social Sciences. Scholars think that China's regional disparities have been expanding, based on the data from the mentioned sources (Angang Hu, Shaoguang Wang, 1995 and 2002; Houkai Wei, 2000). The Chinese Academy of Social Sciences emphasizes personal income inequality in China's rural and urban area. Their findings show that the Gini coefficient is 0.45. They have also shown that the disparities between central-western China and eastern China have been increasing (Renwei Zhao, Shili, Ximing Yue, 1999, 2002), while the gaps between the rural and urban areas in central-western China have been widening (World Bank, 2001; Ravallion, 1996; Ravi Kanbur, 2003; Lishi, Ximing Yue, 2005).

Personal inequality in Indian rural and urban areas as well as regional disparities are the emphasis in the study of India's inequality, which uses the National Sample Survey (NSS) data that cover most states in India. Most of the studies look into the overall inequality in India and measure the Gini index by taking consumption or expenditure as a proxy. Other empirical studies have found increasing regional inequality, particularly since 1991 when the economic reforms and openness were launched (Das and Barua,1996; Rao, Shand and Kalirajan, 1999; Kurian, 2000).

Very few studies focus on the comparisons of income inequality between China and India. Many scholars make comparative studies based only on the World Development Indicators(WDI) that show most countries' Gini index. They point out that inequality is much higher in China than in India according to the latter's low Gini index shown in WDI. The problem here is that the variable of Gini index's measurement is different in China and in India. The Chinese Gini Index is measured by income, but that of India is by expenditure or consumption. Apparently, in the latter, the Gini calculation is lower than that of the former (Heng Quan, 2006). So it is not right to compare the two nations' inequality using this method.

It is worth mentioning that there is one comparative study that has examined patterns of regional inequality and has discovered the driving forces behind patteren changes in China and India using expenditure data (Kiran Gajwani, Ravi Kanbur, Xiaobo Zhang, 2006). In addition, Borooah's study using microdata compares income inequality in rural China and rural India (Vani K Borooah, Bjorn Gustafsson, Li Shi 2005).

All these studies and findings are very insightful and helpful in our understanding of China's and India's income distribution and inequality. But some mention only one aspect of the problem For example, only the regional disparity between the two nations was studied in Kanbur's comparison, while only rural inequalities were compared in Borooah's study. The gross structural income inequality in the two countries and the structural differences between them are not studied systematically, including the causes and consequences of differences in structural inequality.

Data Collection

The data on Chinese rural and urban incomes as well as inter-provinces GDP all come from the China Statistical Yearbook. Another source and reference comes from the three surveys conducted by the Institute of Economics, Chinese Academy of Social Sciences. The Indian Data mostly comes from the National Sample Survey Organization (NSSO) that includes detailed personal expenditure, household data and labor markets. The State GDPs (SDP, 1960-61 to 2000-01) in India are available from the EPW Research Foundation (EPWRF). In addition, this study also uses the household income and expenditure surveyed by NCAER as a reference. The Chinese and Indian Gini Index comes from the Global Poverty and Inequality Database (GPID) and the UNU/WIDER World Income Inequality Database (WIID) collected by the World Bank.

Structural Comparisons of Income Distribution between China and India:

Income level in China and India

Economic growth and income growth is the foundation of income distribution and equality. It is very clear from table 1 that the GNI per capita in China, at USD1230, was nearly one notch higher than the corresponding Indian level of USD590 in 2004. Undoubtedly, income growth is one thing, income distribution is another, and both of them do not act together spontaneously, which means that equality does not occur automatically.

rasic i dali ici capita (cop) in china and india						
	1990	2000	2001	2002	2003	2004
China	320	840	900	970	1100	1230
India	390	450	460	470	540	590

Table 1 GNI Per Capita (USD) in China and India

Source: World Bank, World Development Indicators Database, 2005.

Inner-urban Income Inequality in China and India

According to the Global Poverty and Inequality Database (GPID) and the UNU/WIDER World Income Inequality Database (WIID) collected by World Bank, inner-urban income inequality in China and India increased in the 80s. But apparently, Indian inequality is much higher than that in China although the latter is catching up very fast. In fact, the Indian Gini here is measured by consumption which means lower than that measured by income. We can conclude that the actual inner-urban inequality in India is much more serious than that in China.

	Chinese	Indian
	urban Gini	malan
		urban Gini
1978		3/1 71
1981		54.71
1982	16.1	
1983	1011	
1987	12.1	
1988		
1989	15.8	34.08
1990		
1991	15.8	36.75
1995		
1990	16.9	35.57
2001		
1001	17.8	34.80
	10.0	25 50
	18.0	35.59
	17.5	37.98
	28.47	34.34
	20.00	37.06
	29.09	57.00
	31.55	35.0
	33.32	

Table 2 Inner-urban Income Inequality in China and India

Source: 1.Chinese Gini (1981-1991) and Indian Gini (1978–1991) from Deininger and Squire, A New Dataset Measuring Income Inequality, World Bank, 1996(A); 2.Chinese Gini and Indian Gini (1992-2001) comes from "Global Poverty and Inequality Database (GPID), Poverty and Inequality (1996A), World Bank.

Inner-Rural Inequality in China and India

Table 3 indicates that inner-rural inequality in India was higher than that in China from 1978 to the eve of the 1990s, China's inner-rural inequality was higher than that in India after the 1990s. While Indian rural inequality in rural declined in the 1970s and has risen since 1995, China's inequality kept rising since 1978 and then declined

after 1996. As a whole, from 1978 to 1999, China's rural inequality has increased while India's has decreased.

But it is necessary to say here that the overall inner-rural inequality in both China and India are similar especially if we consider other factors. One factor is that the Gini index in China is measured by income but it is measured by expenditure in India. If we think of the income measurement for Gini index, the mass poverty, high rural population, and the 40-50% agricultural workforce who are landless in India (Usta Patnita, 2000) would make the two nations' rural inequality similar, or maybe India's situation would be just a little worse than China's.

More importantly, there are some regional differences in the two nations' inner-rural inequality. According to Borooah (2005), in 1995, the Gini index (0.41) of per capita household income in rural eastern India (0.44) was below that of rural western India at the same period, while those of rural central India and rural western India (0.42 and 0.49, respectively) were above those of rural central China and rural western China (0.33 and 0.37, respectively) (Borooah, Gustafsson, Shili, 2005).

	China's rural Gini	India's
		rural Gini
1978	20.2	20.02
1980	20.Z	30.92
1981	24.00	
1982	24.99	
1983		
1984		
1985		
1986		
1987		20.06
1988		30.00
1989	26.60	
1990	20.09	
1992	07 10	
1993	21.12	
1994		20.22
1995		30.22
1996	20.45	20.12
1997	29.40	30.13
1998		20.51
1999		29.01
2000		

 Table 3
 Inner-rural inequality in China and India

2001		28.23
	30.57	27.72
	32.03	29.88
	32.13	28.59
	34.00	27.65
	33.98	30.17
	33.62	28.43
	33.12	30.56
	33.07	
	35.39	28.11
	36.33	

Source: "Global Poverty and Inequality Database (GPID), Poverty and Inequality (1996A), World Bank

Income distribution between the rural and urban areas in China and India

Inter-Provincial (States) income gap between the urban and rural areas in China and India.

Table 4 and 5 shows the inter-provincial (China) or inter-states' (India) income gap between the urban and rural areas in 2000. The smallest income gap between them is 1.89 (Jiang Su), the ratio in India is 1.18 (Delhi). The average income gap between urban and rural China is 2.79 and 2.05 in urban and rural India. The biggest gap in China is 5.58 (Tibet) and 2.08 in India (Orissa). We can conclude that the income gap between urban and rural China is much higher than that in India, viewed either from the biggest gap, the smallest gap or the average income gap between urban and rural China. Furthermore, there is only one province in China whose urban-rural gap is below 2, the gap in the rest are above 2; while there are only four states in India whose urban-rural gap is over 2, the gap in the rest is below 2.

Table 4 Inter-provinces' income gap between Chinese urban-rural areas in 2000

	Per Capita	Per Capita		
	Annual	Annual Net	Datia of	
Duraniana	Disposable	Income of	Katio or	Daula
Provinces	Income of	Rural	urban to	Kank
	Urban	Households	rurai	
	Households			
Jiang su	6800.23	3595.09	1.89	1
shanghai	11718.01	5596.37	2.09	2
Zhe jiang	9279.16	4253.67	2.18	3
Tian Jin	8140.50	3622.39	2.25	4
Bei Jing	10349.69	4604.55	2.25	5
Liao Ning	5357.79	2355.58	2.27	6
He bei	5661.16	2478.86	2.28	7
Heilongjiang	4912.88	2148.22	2.29	8
Fu Jian	7432.26	3230.49	2.30	9
Ji Lin	4810.00	2022.50	2.38	10
Jiang Xi	5103.58	2135.30	2.39	11
He Nan	4766.26	1985.82	2.40	12
Hu Bei	5524.54	2268.59	2.44	13
Shang Dong	6489.97	2659.20	2.44	14
Hai Nan	5358.32	2182.26	2.46	15
Shan Xi	4724.11	1905.61	2.48	16
Nei menggu	5129.05	2038.21	2.52	17
Guang Dong	9761.57	3654.48	2.67	18
An Hui	5293.55	1934.57	2.74	19
National	6279.98	2253.42	2. 79	
Ji Nan	6218.73	2197.16	2.83	20
Ning Xia	4912.40	1724.30	2.85	21
Si Chuan	5894.27	1903.60	3.10	22
Guang Xi	5834.43	1864.51	3.13	23
Chong Qing	6275.98	1892.44	3.32	24
Gan Su	4916.25	1428.68	3.44	25
Qing Hai	5169.96	1490.49	3.47	26
Xin Jiang	5644.86	1618.08	3.49	27
Shang Xi	5124.24	1443.86	3.55	28
Gui Zhou	5122.21	1374.16	3. 73	29
Yun Nan	6324.64	1478.60	4.28	30

Source: calculated by Author, according to China's Statistical Yearbook 2001

Table 5 Inter-States' income gap between Indian urban-rural areas in 2000

State/UT	Urban Per	Rural Per	Ratio of	Rank
	capita	capita	urban to	
	Income	Income	Rural	
	Rs./annum	Rs./annum		

Delhi	29364	24852	1.18	1
Haryana	18134	14855	1.22	2
Changdigarh	34509	27256	1.27	3
Punjab	21413	16540	1.29	4
Pondicherry	18938	13215	1.43	5
Rajasthan	15850	10693	1.48	6
Assam	17231	11109	1.55	7
Gujarat	22742	14574	1.56	8
Goa	17440	11017	1.58	9
Karnataka	18394	11300	1.63	10
Kerala	17372	10342	1.68	11
Andhra	19143	11033	1.74	12
Pradesh				
Bihar	12404	6976	1.78	13
Uttar	12257	6738	1.82	14
Pradesh				
Himachal	19881	10816	1.84	15
Pradesh				
Tamil Nadu	24246	12888	1.88	16
Maharashtra	23747	11769	2.02	17
All India	19407	9481	2.05	
Madhya	14719	7079	2.08	18
Pradesh				
Meghalaya	20714	9284	2.23	19
West Bengal	23892	8792	2.72	20
Orissa	15993	5704	2.80	21

Soruce: India Market Demographic report 2002, NCAER, New Delhi, 2003. note: not including Arunachal Pradesh, and other states.

The consumption gap between urban and rural areas in China and India

Table 6 and 7 shows the data on the consumption gap over some years in China and in India, respectively. From table 6, China's consumption gap between urban and rural areas in 1957 was 3.13, then it declined and reached 2.04 in 1984; since 1985, particularly after 1991, it has been increasing gradually and reached 3.29 in 2003, which was higher than the ratio (3.13) in 1957. India's consumption gap keeps a stable rate despite a slight decrease from the 50s to the 80s. Very similarly, it has increased since 1985, particularly after 1991. Compared to China's, the consumption gap between urban and rural India is very small. The biggest ratio in India was 2 which was recorded in 2000, but even that is still lower than that in China whose ratio in 2000 was 3.13. It is very clear from figure 2, that the consumption ratio of urban and rural China is always higher than India's.

Table 6 The consumption ratio of urban to rural in China (1957-2004)

Year	Urban per	Rural per	ratio of
	capita	capita	urban
	household	household	to rura
	consumption	consumption	
1957	222	71	3.13
1978	312	116	2.69
1979		135	
1980	437	162	2.70
1981	457	191	2.39
1982	471	220	2.14
1983	506	248	2.04
1984	559	274	2.04
1985	673	317	2.12
1986	799	357	2.24
1987	884	398	2.22
1988	1104	477	2.31
1989	1211	535	2.26
1990	1279	585	2.19
1991	1454	620	2.35
1992	1642	660	2.49
1993	2111	770	2.74
1994	2851	1017	2.80
1995	3538	1310	2.70
1996	3919	1572	2.49
1997	4186	1617	2.59
1998	4332	1590	2.72
1999	4616	1577	2.93
2000	4998	1670	2.99
2001	5309	1741	3.05
2002	6030	1834	3.29
2003	6511	1943	3.35
2004	7182	2185	3.29

Source: Author's Calculation, according to "Comprehensive Statistical Data and Materials on 55 years of New China". Note: the urban per capita consumption in 1980 is estimated by per capita income due to no specific data.

Table 7 the consumption ratio of urban to rural in India (1954-2001)

year	Urban per capita household consumption Rs.	Rural per capita household consumption Rs.	ratio of urban to rura
1954 - 55	24.7	15.0	1.65
1956-57	25.1	17.0	1.48
1959-60	27.5	20.0	1.38

1961-62	30.9	21.7	1.42
1964-65	36.0	26.4	1.36
1966-67	41.5	30.9	1.34
1969-70	50.4	34.7	1.45
1973-74	70.8	53.0	1.34
1977-78	96.2	68.9	1.40
1983	164.0	112.5	1.46
1986-87	222.0	140.9	1.58
1987-88	245.7	157.7	1.56
1988-89	266.9	175.1	1.52
1989-90	298.0	189.5	1.57
1990-91	326.8	202.1	1.62
July-Dec91	370.3	243.5	1.52
1992	399.0	247.2	1.61
Jan-June93	383.4	244.1	1.57
1993-1994	458.0	281.4	1.63
1994-1995	508.1	309.4	1.64
July95-June96a	599.2	344.3	1.74
Jan-Dec97a	645.4	395.0	1.63
Jan-June98a	684.3	382.1	1.79
July99-June2000	971.6	486.1	2.0
July2000-June2001a	914.6	494.9	1.85

Source: author's calculation, National Sample Survey Organization(NSSO), a. the results are based on thin samples). See Government of India, "Selected Socio-Economic Statistics India 2002", note: the urban and rural consumption is monthly.

Regional disparities between China and India

Table 8 shows the two nations' Gini measured by per capita GDP (Province or State level). We can observe that the two nations' regional disparities have been increasing gradually and that India's increase has been faster than that of China since 1991. It increased rapidly after 1995 while China's regional gap seemed to have declined. Secondly, China's regional differences were higher than that of India before 1990-1991; this could be seen as the lower Gini coefficient in India. But India's gap has grown since 1991 and surpassed that of China after this year.

Table 8 Regional	l disparities	between	China and India	(1980-2002)
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China's Gini Coefficient, India's Gini Coefficient,			nt,	
by per capi	ita GDP in Provincial level	by per capita GDP in Provincial level		
Years	Gini Coefficient	Gini Coefficient	Years	

1980	0.236	0.209	1980-81
1981	0.226	0.202	1981-82
1982	0.220	0.211	1982-83
1983	0.217	0.200	1983-84
1984	0.220	0.205	1984-85
1985	0.223	0.211	1985-86
1986	0.226	0.214	1986-87
1987	0.227	0.217	1987-88
1988	0.228	0.216	1988-89
1989	0.226	0.220	1989-90
1990	0.216	0.224	1990-91
1991	0.229	0.228	1991-92
1992	0.242	0.244	1992-93
1993	0.251	0.239	1993-94
1994	0.254	0.248	1994-95
1995	0.253	0.250	1995-96
1996	0.247	0.262	1996-97
1997	0.249	0.264	1997-98
1998	0.252	0.276	1998-99
1999	0.256	0.278	1999-00
2000	0.245	0.292	2000-01
2001	0.263		
2002	0.267		

Source: China's Gini measured by provincial per capita GDP, data from Chinese Statistical Yearbook, also see "the positive analysis on the effects of China's regional disparity", China Social Sciences, (2005); P117. India's Gini measured by State per capita GDP, data from EPW Research Foundation (India), "Domestic Product of State of India.1960-01 to 2000-01".

Here we cite the top five Indian states (Maharashtra, Tamil Nadu, Gujarat, Punjab,Haryana) whose per capita GSDP (Gross State Domestic Product) is the highest and the bottom six states (Uttar Pradesh , Madhya Pradesh, Bihar, Rajasthan, Orissa, Assam) whose per capita NSDP is the lowest. Observe the disparities and then compare these to those of China. The top five Chinese provinces are Guangdong, Zhejiang, Shanghai, Beijing and Tianjin and the bottom six are Guangxi,Yunnan, Shanxi, Guizhou, Gansu and Tibet .

In India, the gap between the top five and bottom six states has widened. In table 11, the top five states which accounted for 24.7% of the country's total population, had a share of 34.6% of all-states GSDP during the early 1980s, and this share increased to 38.2% during the end of the1990s. On the other hand, the bottom six states which accounted for 41.6% of the country's total population have suffered a decrease in their GSDP share from 35.3% to 26.9% between these two periods. In table 12, the top five provinces in China had a share of 22.1% during the early 1980s and the share increased to 23.5% and 27.3% during the mid 90s and 2001, respectively. On the other

hand, the bottom six provinces have also suffered a decrease in their share of GDP from 19.8% to 12.6%, 10.4% and 8.7% during these three periods.

If we compare the highest Indian state (Punjab) to the lowest state (Bihar) in per capita NSDP, we can find that the gap between them moved up from 3.02 in the early 80s to 4.52 in 2001. Likewise, in China, the ratio in per capita GDP of the highest province (Guang Dong Province) to the lowest province (Tibet) moved from 2.1 in early 1990 to 2.6 in 2001.

D'onnestre i rodaet ni mara (Tinee yearly rinnaar rotage)							
Percentage share of	Percentage share of	Percentage share of	Percentage share of				
GSDP at 80-81 prices,	GSDP at 80-81 prices,	GSDP at 80-81 prices,	GSDP at 80-81 prices,				
Annual averages for	Annual averages for	Annual averages for	Annual averages for				
1980-81 to 1982-83	1990-91 to 1992-93 1993-94 to 1995-96		1998-99 to 2000-01				
Top Five (Total) 34.6	Top Five (Total) 36.2	Top Five (Total) 37.5	Top Five (Total) 38.2				
1、Maharashtra 14.0	1、Maharashtra 15.3	1、Maharashtra 15.3	1、Mahaashtra 15.6				
2、Tamil Nadu 6.9	2、Tamil Nadu 7.1	2、Tamil Nadu 8.1	2、Tamil Nadu 8.3				
3、Gujarat 6.4	3、Gujarat 6.4	3、Gujarat 7.2	3、Gujarat 7.4				
4、Punjab 4.4	4、Punjab 4.3	4、Pubjab 4.0	4、Punjab 3.9				
5、Haryana 2.9	5、Haryana 3.1	5、Haryana 3.0	5、Haryana 3.0				
Bottom Six (total) 35.3	Bottom Six (total) 33.4	Bottom Six (total) 28.1	Bottom Six (total) 26.9				
1 Uttar Pradesh 13.3	1. Uttar Pradesh 12.6	1.UttarPradesh 10.8	1. Uttar Pradesh 10.2				
2 Madhya Pradesh 6.6	2.Madhya Pradesh 6.2	2.Madhya Pradesh 5.1	2、Rajasthan 5.1				
3、Bihar 6.2	3、Rajasthan 4.6	3. Rajasthan 4.8	3、Madhya Pradesh 4.8				
4、Rajasthan 4.0	4、Bihar 3.0	4、Bihar 3.0	4、Bihar 2.8				
5, Orissa 3.0	5、Orissa 2.4	5、Orissa 2.4	5、Orissa 2.2				
6, Assam 2.2	6 Assam 2.0	6 Assam 2.0	6、Assam 1.7				

Table 9 Percentage share of Top Five and Bottom Six States in Terms of Gross Domestic Product in India (Three-yearly Annual Average)

Source: EPW Research Foundation (India), "Domestic Product of State of India,1960-01 to 2000-01", Mumbay (India), Sameeksha Trust 2003.

Table 10 Percentage share of Top Five and Bottom Six Provinces in Terms of Gross Domestic Product in China (Three-yearly Annual Average)

Percentage share GDP at constant pri Annual averages 1981 to 1983	of ices, for	Percentage sh GDP at co prices, 4 averages for 1 1993	are of onstant Annual 991 to	Percentage GDP at prices, averages fo 1996	share of constant Annual r 1994 to	Percentage sha GDP at constant Annual averag 1999 to 2001	re of prices, es for
Top Five (Total) 22.1		Top Five (Tota	1) 23.5	Top Five (T	'otal) 23.8	Top Five (Total)	27.3
1.Shanghai	6.3	1.Guang Dong	9.4	1.Guang Do	ng 9.7	1.GuangDong	10.8
2.LiaoNing	6.0	2. LiaoNing	5.7	2.Zhejiang	6.0	2.Zhejiang	6.8
3.HeiLongjiang	4.7	3.Shnaghai	4.2	3.Shanghai	4.2	3.Shanghai	5.1
4.Beijing	3.0	4. BeiJing	2.6	4.Beijing	2.4	4.Beijing	2.8
5.Tianjin	2.1	5.Tianjin	1.6	5.Tianjin	1.6	5.Tianjin	1.8

Bottom Six (total) 19.8		Bottom Six(total)12.6		Bottom Six(total)10.4		Bottom Six (total) 8.7	
1.Henan	5.2	1.Henan	4.8	1.Sichuan	4.3	1.Guangxi	2.3
2.Sichuan	5.2	2.Anhui	3.1	2.Jiangxi	2.1	2.Yunnan	2.2
3.Anhui	3.6	3.Jiangxi	2.1	3.Shanxi	1.7	3.Shanxi	1.9
4.Guangxi	2.3	4.Guizhou	1.3	4.Guizhou	1.1	4.Guizhou	1.1
5.Yunnan	2.0	5.Gansu	1.2	5.Gansu	1.0	5.Gansu	1.1
6.Guizhou	1.5	6.Tibet	0.1	6.Tibet	0.1	6. Tibet	0.1

Source: Author's calculation, data (1981-1996) from "Comprehensive Statistical Data and Materials on 55 years of New China"; data (1999-2001) from "Chinese Statistical Yearbook, 2000, 2001, 2002".

Interestingly, China's regional development shows that the coastal area has fared much better than the central and western areas in economic growth and social progress during the period of reform and openness. Compared to that of China, India's regional growth and income gap is much diversified, which means that not all states in the coastal area have experienced growth and development. Orissa which is located in the coastal region is still very poor. Another point of difference is that not all of the poorer states lagged behind. For example, Rajasthan, which was one of the poorer states (Montek Ahluwalia, 2000) . So we can say that the trend of regional divergence is very similar between China and India since the initiation of reform and openness for both them. However, there are also more structural differences in regional disparities between them.

The structural differences of income inequality between China and India: some sources and explanations

Considering that many scholars and researchers have offered various explanations to the causes of the transformations in the income distribution in China and India, this study would focus on the causes and their effects on the structural differences in income inequality between China and India, particularly from the international perspective.

Land reform, education, government, and rural inequality in China and India

Land institution plays a very important role in the rural growth of the two countries. China has had a relative successful land reform during the 50s. All farmers' land distribution is equal in the national level and this has been the foundation of rural economic growth and income increase among farmers. After 1978, another rural reform called household contract responsibility system was implemented, and this has greatly improved greatly farmers' incentives for production. At the same time, China has promoted good basic education and health services in the rural areas after the new country's establishment and this has created a considerable amount of human capital to support the development of non-agriculture ventures¹ as well as provide educated farmers with market opportunities during the period of reform and openness. It seems that all these reforms and policy measures created a very positive effect on farmers' income increase and rural poverty reduction. Actually, farmers' income increased very fast in 1980-1984, and consequently, rural poverty declined remarkably.

Yet, there are still other factors that have created a negative effect on rural income distribution. For one, rural household education is different in very family due to many reasons. Those who have a good education always get much more human capital and apparently have more opportunities to become wealthier than those who have no education or less education. Furthermore, regional differences have also created regional rural income disparity; for example, farmers who live in fast growing eastern China have a higher income than those who live in western China. Another factor is the high dependence on agriculture. But government support for the rural areas has been reduced and moved to urban areas during the period of reform and openness. Moreover, the Chinese farmers' burden became very heavy due to many kinds of fees and charges imposed on them, fees such as education fees, health service fees and the so-called "unwarranted pooling of funds, arbitrary requisition of donations and exaction of fees from enterprises"(San Luan). Lastly, in recent years about 40 million farmers who have lost their lands due to urbanization (Xiwen Chen 2006), have become the new rural poor. Because of these factors, inner rural income distribution has worsened and income inequality has increased gradually since the period of liberalization and openness. The partial privatization of hospitals and the destruction of the traditional health service system in rural areas have added to the burden of the farmers and exacerbated inequality.

As in the early years in China, Indian farmers benefited from the early land reform, especially in the dismantling of the Zamindari's system. From the beginning of 1963-64, India adopted Green-Revolution-type technologies which accelerated agricultural growth and increased farmers' income. Because this led to a considerable drop in poverty, this could explain why rural inequality declined from 1970-1990.

Yet, compared to that of China, India's land reform is not exhaustive and until now there still exists mass inequality in land distribution. From the India Report on Agricultural Census, we can see that about 62% of the those who hold lands have only 17.2% of the operational land holdings, while about 1.6% of those who hold lands have 14.8% of the land holdings. But medium and large holdings together have 40% of the land area, but these holders together cover only about 7.3% of those who hold lands. So about 92% of the land holdings (marginal, small and semi-medium) have only less than 60% of the land area.²

More importantly, with India's integration into globalization and the implementation of liberalization, the unequal distribution of land has generated more problems for farmers and has increased rural inequality since 1991. Firstly, most farmers who have

no land or only have a little do not have access to financing programs to develop non-agriculture ventures that could increase their household income. Sometimes they were forced to borrow money from unorganized financial sectors that impose unusually high interest rates.³ They could hardly pay their debts, pushing some farmers to commit suicide⁴. Secondly, although the green-revolution produced a positive effect on agricultural growth and farmers' income, it also brought about other negative effects such as higher cost in seeds, irrigation and technology. At the same time, the prices of agricultural products declined in recent years due to India's entry into the WTO regime. As a result, farmers' income increase actually slowed down and agriculture growth has become very unstable since 1991.

Meanwhile, public services in the rural areas such as basic education and heath service system are still poor, although some public goods like village roads, drinking water, and electricity have been provided due to election demand. In many Indian villages, even in Punjab and Gujarat where economy growth is better than in the other states, there are no sufficient education resources in public schools. There are not enough classrooms or school desks, which results in poor teaching quality because students have to sit under the trees or on the ground to study⁵. This led to less and poor human capital, and as a result, non-agricultural development was very slow in rural areas. The effects of rural growth on poverty reduction were not as remarkable as those in China.

India's public distribution system (PDS) gave little assistance to poor farmers. Particularly, it was very weak in providing the poor improved access to food. Actually the planning and coverage of the PDS have been inadequate⁶. So, poor government policy could not alleviate the worsening income inequality in rural areas. Actually, there is compelling evidence that the move towards liberalization and the integration into globalization have exacerbated rural inequality in India⁷.

Economic growth, employment, abnormal income and urban inequality in China and India.

Market reform and openness have accelerated the urban economic growth in China and India and contributed to urban poverty reduction (Datt,1997,1999). Interestingly, urban inequality in these two nations has been increasing very fast and but in the comparison, India's urban inequality is much higher than China's.

There are three reasons for this: First, the fast development of service sectors in the Indian urban areas would be a key to high inequality. In India, the leading service sectors such as finance, IT and real-estate, R&D, absorb only a few skill-intensive laborers and highly educated talents. They usually require high human capital and consequently, can generate higher income than other types of labor. Furthermore, India's manufacturing is very small and they could not absorb a big employment share,

so there is very high unemployment in urban areas. In contrast, China's leading sector in the urban areas is a very developed manufacturing that has generated many jobs and has therefore made a positive effect on urban inequality.

The employment and income gap between the organized and unorganized sectors in the urban areas is another source of inequality in urban India. (Arun Kumar, 2005). In China, although the SOE reform produced new laid-off workers at one time, many private economies and FDIs created new job opportunities in urban areas and this has helped reduce urban inequality.

The urban slums are another source of inequality, although it is more of a consequence of the disparity between rural and urban life. Now there nearly 40 million people living in the Indian urban slums. They are poor and have no stable job, contributing to urban poverty. In urban China there are no slums due to the very strict residents' registration system (Hukou) which discourages labor mobility, but there is a big gap between rural and urban areas in China due to "Hukou".

Finally, black income in China and India plays a very important role in urban inequality. China's black income was about 10-15% of the GDP in 2004 (Zhang Fan,2004) while India's black economy was about 40% of the GDP in 1999-2000 (Arun Kumar, 1999). In the former, corruption, smuggling and other sources of illegal income produced a negative effect on income distribution. In the latter, according to Arun Kumar, if one looks at the white economy alone, the ratio of per capita income between the bottom 40% and the top 3% would be 1:11.5, but if we include the black income, this ratio would be 1:57 (Aum Kumar, 2002).

Democracy, labor mobility, urban-biased policies and the gaps between rural and urban areas in China and India

Viewed from either income or consumption, the gap between rural and urban areas in India are smaller than that in China. The reason for this is that in India, free labor mobility helps in narrowing the gap between rural and urban economies, but also contributes to inner-urban inequality. Another reason is that there is a close positive relation between democracy and the provision of rural public goods. According to the author's survey, Indian (central and federal) governments pay more attention to rural public goods and provide villages with basic education, health services, roads, drinking water and electricity, etc., as these are seen in terms of votes.

From 1985, China's reform and development concerns had moved to the urban areas and many policies and projects have been implemented to develop the urban economy and industrial sectors only. Urban areas developed faster while rural growth slowed down. The farmers' income increased slowly in the 80s and 90s. The urban-biased policies indeed play a key role in the increasing gap between rural and urban economies in China. Lastly, China implemented the strict Hukou system to limit migration, so the rigid labor policy had a negative effect the rural-urban gap in China.

FDI, human capital, governance, policy and the regional inequality in China and India.

The integration of FDI and sufficient human capital determines regional growth in China and India. Location advantages, infrastructure, FDI and government support policies affect regional inequality in China. There is no doubt that the policy "let part regions become richer first" was the biggest policy contributor to regional inequality in China.

In India, the green revolution implemented in some states where there was good weather, irrigation and favorable initial conditions brought about unequal regional growth. Only a few states such as Punjab, Haryan and Tamil Nadu have achieved high growth in agriculture, but other states where the initial conditions were not good enough to support the green revolution, were left behind. India's regional disparities in growth may have also arisen because some states are better managed and therefore able to create an environment (like education and human capital, infrastructure and transparency, and so on) that encourages growth. In contrast, some poor states such as Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh (BIMARU) have poor governance, popular corruption and low administrative efficiency.

Conclusion

This study systematically detects income inequality in China and India and stresses the structural differences between them. Some causes and consequences of structural inequality differences were also emphasized.

From the perspective of structural comparison, the main findings are: 1) the inner-urban income inequality in China and India increased in the 80s, but apparently, Indian urban inequality is much higher than that of China, although the latter's inequality is also increasing fast; 2) rural inequality in the two nations would be similar but the distribution of inner-rural inequality constitute some of the regional differences in the two nations; 3) in terms of income or consumption, the gap between rural and urban areas in India is smaller than that in China; 4) the regional disparities within the two nations have been increasing gradually. China's regional differences have been higher than those in India before 1990-1991, but India's regional gap has increased rapidly since 1995 while China's regional gap seemed to have declined in recent years.

The causes of these trends in inequality and the structural differences between China and India are very complex. Looking at them positively, reform and gradual openness within the two nations have eliminated obstacles that resulted from old institutions and systems. There is now an environment conducive to socio-economic progress. In China, the continuous high growth has established a stronger foundation for poverty reduction and inequality improvement. Likewise, India's democracy could provide poverty reduction if there is a good political environment. It has narrowed the substantial inequality between urban and rural areas through the provision of basic public goods for villages and farmers.

On the negative side, some institutions are still the stumbling blocks to the alleviation of inequality and these actually erase the positive effects of high growth on poverty reduction and alleviation of inequality. To a large extent, they have been the major reasons for the increasing inequality in the two countries. In India, the half-baked land reform is responsible both for agricultural development and inner-rural inequality; in China, the strict Hukou system meant to limit migration is a main source of enormous rural-urban gaps.

Economically, India's unequal growth and unbalanced industrial structures are important factors in income distribution and urban inequality, particularly through employment.

The Indian government's support policies have led to poor public education, PDS, and did not improve the situation of the poor in rural and urban areas, while China's urban-biased policies have brought about regional disparities.

In brief, institutional factors and the government's biased policies have caused China's inequality, while economic structures, unequal growth, and lack of education determine India's inequality. Other social factors, such as caste, should not be neglected in India.

From the development perspective, the worsening income distribution and the increasing inequalities have become one of the biggest challenges for two nations. For China, it prevents the creation of a harmonious socialist society; for India, this problem is a political threat to reform and openness and reduces the people's trust in government.

Some policies should be proposed for the two countries. China must rethink its income distribution policy and change its urban-biased growth policy, try to increase transparency, and reduce illegal income. India must implement an equitable land reform, adjust its economic structures, and build a labor-intensive industrial program. At the same time, it must improve public education, particularly rural basic education, and instill democracy and its proper practice.

Endnotes:

1 In the countryside, if growth is primarily concentrated in the non-farm sector, its ability to reduce poverty depends on the quality of human resources and initial development conditions (like infrastructure, power,), see Ravallion& Datt, 1996..

2 See All India Report on Agricultural Census, 1990-91, Dept. of Agriculture and Co-operation & Fertiliser Statistics, 1999-2000, The Fertiliser Association of India & Agricultural Statistics at a Glance 2003, Ministry of Agriculture, Govt. of India & India Yearbook 2003, Manpower Profile.

3The Punjabi farmer today leads the country in rural indebtedness. We have come to a situation where the total annual rural debt of the state—Rs 24,000 crore in 2003-04—is more than its gross annual earnings from agriculture. According to a recent report of the National Sample Survey Organization (NSSO), each Punjabi farmer has a debt of Rs 41,576, against the national average of Rs 12,505. See Agrarian Crisis In Punjab: Groping In the Dark, By Jatinder Preet, 31 March, 2006,Countercurrents.org

4 I spoke with Prof. Utsa Patnaik, 2006;also see S. Mohanakumar, R. K. Sharma, 2006

5 I saw this situation in many villages when I visited Gujarat, Punjab and other palaces.

 $6\,$ See Mundle & Tulasidhar (1998), also see Jha, Murthy and Seth (1999).

7 See Kamal Nayan Kabra (2005), ASG Group, 2004-2005, Disequalising Growth.

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