

Income Inequality in China

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Introduction

Economic reforms and strong growth in agriculture, industries and services in China over two decades have been accompanied by increased spatial income inequality. There are many literatures about income distribution in China and the whole world as well. Chen J and Fleisher (1996), Kai-yuen T (1996), Jian T.; Sachs J.D.; Warner A.M.(1996), Gustafsson and Shi L (1998), Zhao X.B.; Tong S.P (2000), Wan G.H. (2001) use different kinds of theories such as Gini-coefficients and other models to explain the situation of income gap between regions and between rural-urban in China. They measure a considerable number of characteristics at household level and other levels and try to find the causes to income inequality. Fang C; Zhang G X. and Fan S. (2002), Gibson J and Huang J (2003) investigate the poverty and inequality in urban China during the period of rapid urban reforms. They point out that the incidence of urban poverty declined from 1992 to 1995, but increased from 1996 to 1998 when urban reforms deepened.

Some scholars pay much attention to more down-to-earth reasons for income gap enlarging. Morduch J., Sicular T.(2002) examine inequality decompositions by income source, and provides an efficient and flexible way to quantify the roles of variables like education and age in a multivariate context. By studying employment rewards in urban China, Adamchak D.J.; Chen S.; Li J.(1999) indicate that workers' accessibility to material resources varies significantly by their occupations and affiliated work units. They point out that both work units and occupation have effects on income generation; work units show mixed effects on housing space; and educational attainment and self-employment appear to have far greater influence on income than political credentials in an economic reform era.

This paper investigates how reforms and rapid economic growth have resulted in such a regional divide. By using GE model, we attempt to explore two issues: (1) the trend of income inequality more recently in China; and (2) the factors behind the dynamics of income inequality, especially the roles of adopted policies in enlarging the income gap. We consider that almost two decades into the implementation of Deng Xiaoping's 'get rich first' policy and 'coastal development strategy', income inequality and an imbalance in regional development have emerged as two of the most disturbing factors affecting contemporary China. Therefore, the development policies favored certain areas and industry, which brought unequal economic development in China, should be reconsidered and readjusted. For example, we conclude that government policy and

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uneven development of non-farm activities are major factors to blame, and creating jobs for people is a better long-term strategy to reduce regional inequality. A further decomposition analysis shows that rapid economic growth has been the major force behind reduction in urban poverty, but the poverty reduction impact would have been even greater if worsening income distribution had been avoided.

I. Economic Growth and its Influences on Income Distribution in China

1. Rapid economic growth and the changes of economic structure in China

Since 1978, the economic reforms have led China's structural transition from a planned economy to a market economy. Reforms have been driving the high economic growth in China. The average annual growth rate of GDP at comparable price was 9.4% from 1979 to 2001.

Economic transition in China has gone hand in hand with rapid industrialization of the country. Since the end of the 1980s there have been large changes in the composition of industrial sectors. According to the national statistics, the average annual growth rate of GDP in constant price was 9.7% between 1991 and 2001; in the meantime the average annual growth rate of agriculture was around 3.7% while the average annual growth rate of manufacture sector and service sector were 13.1% and 8.9% respectively. In rural China, the local industry also has grown remarkably. Increasingly, rural enterprises in the 1980s have been the growth engines of the whole rural sector. In fact, the development has been so rapid that since 1987 rural enterprises have accounted for more than half of total rural output.

At the same time, the industry structure changed significantly with the rapid decline of the primary sector and the swift rise of the tertiary sector. As we show in Table 1, the proportion of the primary industry in the GNP as a whole declined from 30.1% in 1980 to 15.2% in 2001, while the proportion of the tertiary industry in the GNP increased from 21.4% in 1980 to 33.6% in 2001.

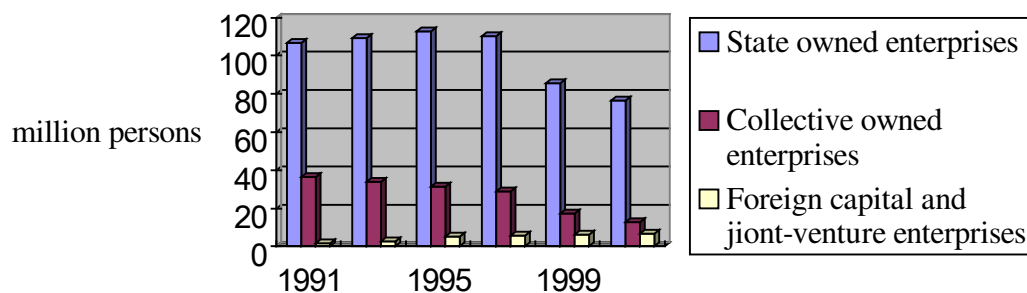
Table 1: GNP Value by Industry in China

	(billion Yuan, in current prices)					
<i>Item</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2001</i>
GNP	451.8	896.4	1854.8	5847.8	8944.2	9593.3
(%)	(100)	(100)	(100)	(100)	(100)	(100)
Primary Industry	135.9	254.2	501.7	1199.3	1462.8	1461.0
(%)	(30.1)	(28.4)	(27.0)	(20.5)	(16.4)	(15.2)
Secondary Industry	219.2	386.7	771.7	2853.8	4493.5	4906.9
(%)	(48.5)	(43.1)	(41.6)	(48.8)	(50.2)	(51.1)
Tertiary Industry	96.6	255.6	581.4	1794.7	2987.9	3225.4
(%)	(21.4)	(28.5)	(31.3)	(30.7)	(33.4)	(33.6)

Sources: SSB (State Statistical Bureau), *China Statistical Yearbook* 1996, 2002.

The rapid economic reform leads to a significant change in ownership structure in Chinese industries. Along with the change in ownership structure, the employment structure in China changed obviously. In urban China, the number of employed persons in the public-owned sector such as State-Owned Enterprises (SOEs) and Urban Collective Owned Enterprises decreased from 142.9 million in 1991 to 89.3 million in 2001, dropped by 37.5%. While the employment in the non-public sector such as private enterprises, self-employment, and joint venture and foreign-invested enterprises increased enormously from 9.25 million in 1991 to 43.3 million in 2001, increased by 368%. During 1991-2001, the annual growth rate of employees in state-owned and collective-owned enterprises is minus 3.3% and minus 9.8%, and the growth rate in foreign capital and joint-venture enterprises, private enterprises, and self-employment is 15.1%, 36.5%, and 11.9% respectively. The increased employment in the non-state sectors especially in private enterprises abstracted lots of workers laid off by the state sectors in recent years.

Figure 1. The Change of Employment structure in Urban China



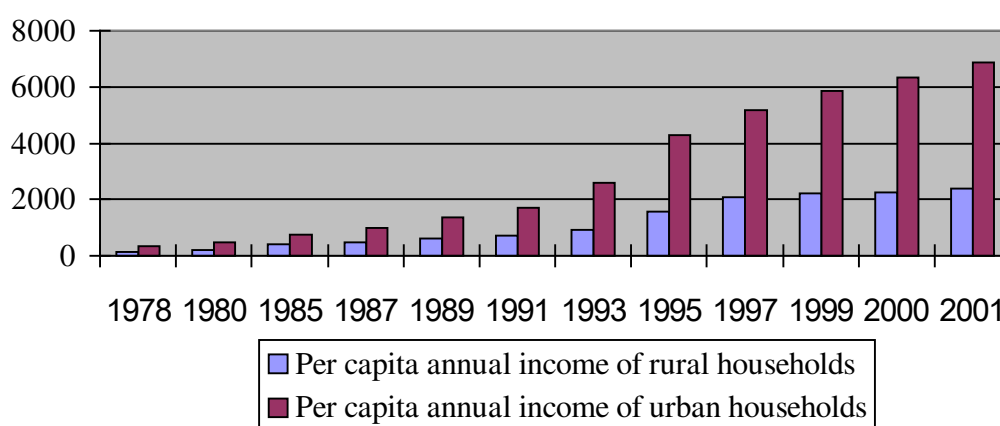
Sources: SSB, *China Statistic Yearbook*, 1994, 2000 and 2002.

2. Influences on income distribution by economic reform and growth

A better understanding of patterns of economic growth and development is essential to a better understanding pattern of income distribution and inequality. In the pre-reform era, China had been an equalitarian society and the degree of income inequality had been extremely low. A large proportion of income was implicit subsidies through reallocation. Most people had an almost uniform mode of consumption in food, clothing, daily appliances and transportation, but the allocation of luxury goods like apartments, telephones and cars was highly restricted to the privileged groups. Before 1978, Gini coefficient of income distribution in China was lower than most of the developing countries. Gini coefficient in urban area was below 0.16 and that in rural area was between 0.21 and 0.24. In most developing countries, the range of Gini coefficient in urban area was between 0.37 and 0.43 while Gini coefficients in rural areas were between 0.34 and 0.40 over the same period (Zhao and Li, 1997).

Economic reform in China leads to rapid economic growth and corresponding changes in all aspects of the economy. Important socio-demographic indicators also point towards better living-conditions on average for the Chinese people and continuous reduction of the number of people living in poverty. The annual per capita disposable income of urban residents had risen from 343.4 Yuan in 1978 to 6860.0 Yuan in 2001, increased about 20 times, and the per capita annual net income of rural households has risen from 133.6 Yuan in 1978 to 2366.0 Yuan in 2001, increased about 17.7 times (see Figure 2)¹. Total rural population living under the official poverty line decreased from 260 million in 1978 to 34 million in 2001.²

Figure 2. Per capita annual income of urban and rural households



Source: SSB, *China Statistical Yearbook*, 1994 and 2002.

¹ According to the definition of SSB, disposable income of urban households refers to the actual income of the sample households that can be used for daily expenses, i.e., total income minus personal income tax, sample household subsidy and expenditure on household sideline production. Total income of urban households refers to the total actual income of the sample households, including regular or fixed income and occasional income. The income of a circulating nature such as withdrawal from bank deposits, loans borrowed from relatives or friends, repayment of loans received and various temporary collection of money are excluded. Net income of rural households refers to the total income of the permanent residents of the rural household during a year after the deduction of the expenses for productive and non-productive business operation, the payment for taxes and the payment for collective units for their contracted tasks, which can then be spent for investments in productive and non-productive construction, for consumption in daily life and for savings deposit. It is a comprehensive indicator to show the actual level of the income of the peasants' household. The net income of the rural households includes not only the income from the productive and non-productive business operation, but also the income from the non-business operation, such as the money remitted or brought back by the members of the household who are in other places, the government relief payment and various subsidies. It includes not only the cash income, but also the income in kind. But the income borrowed from banks, friends and relatives is excluded (SSB, 2002).

² The official poverty line in China is below the World Bank one-dollar-a-day poverty line (in 1993 PPP term). In the official standard, the rural poverty fell from 30.7% in 1979 to 9.5% in 1990 and to 4.6% in 1998. A World Bank estimation put rural poverty at nearly four times, at 42.8% in 1990 and it fell to 24.2% in 1997 (Park and Wang, 2001). Although the levels of poverty differ substantially between official and World Bank estimates, the trend is similar – poverty has dropped half between 1990 and 2000.

In the process of the reform, traditional planned and equalitarian income distribution mechanism has broken up. A market-driven distribution system provides more incentives for productivity and creativity, which has significant impacts on changes in inequality of income distribution in China.

As we can see, economic reform in China has been promoting rapid economic growth. However, not everyone benefits equally from fast economic growth. Ownership structural readjustment and the reform of state-owned enterprise resulted in some economic entities with their own economic interests. While development and disequilibrium made some enterprises and individuals to be ahead of others ---these enterprises and individuals are the very ones “to be rich first” and therefore formed the pulling-force for laborers mobility--- others wanted to catch up no matter whether they are indeed able to do so or not, which brought the pushing-force for laborers mobility, and thus became one of the key reasons for income disparity among employees.

The changes in enterprise ownership structure and employment structure have great impacts on income distribution in China (Li Shi, 1998). In general, joint ventures and foreign-invested enterprises pay much higher wages than the SOEs. The difference of the average cash income is significant in the 1990s. Table 2 shows the comparison of the average cash income between the state-owned units and units of other types of ownership. On the one hand, the change of employment structure impacted the wages of staff and workers in different ownership units; on the other hand, the decline of employment in state-owned enterprises means the increase of the layoffs and unemployment in urban area, which enlarges the income inequality in urban area.

Table 2: the Comparison of the Average Cash income in Different Ownerships

	(Yuan)					
	1985	1990	1993	1996	1999	2001
State-owned Units (Yuan)	1213	2284	3532	6280	8543	11178
Units of Other Types of Ownership (Yuan)	1436	2987	4966	8261	9829	12140
Difference (Yuan)	223	703	1434	1981	1286	962
Ratio	1.18	1.31	1.41	1.32	1.15	1.08

Source: SSB, *China Statistical Yearbook*, 1994 and 2002.

1). Deteriorating trend

Accompanied by the reform process, the trend of income inequality has been enhanced in recent years (Kahn, Griffin, and Zhao, 1992; Gustafsson and Li, 1998; Knight and Li, 1999). In general, the rise in overall inequality in China is driven by the urban-rural gap, inter-regional disparities, and intra-rural as well as intra-urban inequality.

The changes of income distribution in China can be divided into three stages: The first stage is from 1978 to 1984, which is a “growth and equality” stage. In this stage, the annual increase rate of residents' income was above 10% and the Gini coefficient rose slowly. National Gini coefficient increased from 0.288 in 1981 to 0.297 in 1984 estimated by World Bank. The second stage is from 1985 to 1989. The character of this stage was "low growth and inequality". The annual increase rate of residents' income was below 1% in this stage, however, Gini Coefficient increased from 0.297 in 1984 to 0.349 in 1989, which suggests the income inequality enlarged very quickly. The third stage began since 1989 up to the present, which characterizes as "growth and inequality". Residents' income increases speedily again with the annual growth rate arriving at 7%, while Gini coefficient ascended from 0.38 in 1995 (World Bank, 1997) to 0.403 in 1998 (World Bank, 2001).

Table 3: Gini Coefficient in Rural China and Urban China

Year	Gini coefficient in rural ^a	Gini coefficient in urban ^b
1978	0.212	0.16
1979	-	-
1980	0.241	0.16
1981	0.241	0.15
1982	0.232	0.15
1983	0.246	0.15
1984	0.244	0.16
1985	0.227	0.19
1986	0.304	0.19
1987	0.289	0.20
1988	0.305	0.23
1989	0.319	0.23
1990	0.310	0.23
1991	0.307	0.24
1992	0.313	0.25
1993	0.329	0.27
1994	0.321	0.30
1995	0.341	0.28
1996	0.323	0.28
1997	0.329	0.29
1998	0.337	0.30
1999	0.336	0.295
2000	0.354	0.32
2001	0.322	

Sources: a. SSB (2002), *China Rural Citizen Survey Yearbook*, 2002, p29.

b. SSB (2001), *Analysis the gap between the poor and rich by Gini coefficient*, Annex 2, <http://210.72.32.26/was40/detail?record=11&channelid=6697&presearchword=%BB%F9%C4%E1%CF%B5%CA%FD>

Table 3 presents the results estimated by SSB, which show the change in income growth and income inequality in terms of Gini coefficient in rural and urban China from 1978 to 2000. While Gini coefficient in rural areas increased by 67% from 0.212 in 1978 to 0.354 in 2000, that in urban areas increased by 100% from 0.16 in 1978 to 0.32. The change of Gini coefficient shows the tendency of income inequality in China aggravates gradually. During 1978-1984 when the focus of economic reform was on rural area, Gini coefficient in rural areas increased from 0.212 in 1978 to 0.244 in 1984, whereas Gini coefficient in urban areas kept almost unchanged (from 0.15 to 0.16). When the emphasis of the reform was shifted to urban areas, Gini coefficient in urban areas went up swiftly to 0.23 in 1988. The inequality in rural areas simultaneously expanded as well. Gini coefficient in rural areas arrived to 0.305 in 1988. During the period from 1989-1991, national economy stepped into adjustment, so Gini coefficient in both urban and rural areas changed a little. After 1992, the income inequality enlarged speedily and Gini coefficient increased substantially, which in rural areas reached 0.354, and that in urban areas ascended to 0.32 in 2000. On the whole, whether in urban or in rural areas, income disparity based on Gini coefficient shows an enlarging tendency.

National Gini coefficient swift change in recent years further shows that the inequality of income distribution is intolerably high as income gap is fast widening. While national Gini coefficient in the past 5 years (1995-1999) changed a little (see the following figures, those in the parenthesis is Gini coefficient each year: 1995(0.389), 1996(0.375), 1997(0.379), 1998(0.386), 1999(0.397)), the figure rocketed in 2000(0.458) (SSB, 2001). Many researchers generally agree that the actual Gini coefficient in China is already more than 0.5. Were out-of-salary and unlawful incomes such as taxation evasion, monopoly rent and group consumption taken into account, national Gini coefficient would be much higher.

Based on the different data of household survey samples, there are many estimations of Gini coefficient in China (Chen Zongsheng, 1991; World Bank, 1997; Khan and Riskin, 1999; Gustafsson and Li, 2001; Meng, 2001). Using the samples from two surveys conducted by the Institute of Economics, Chinese Academy of Social Sciences in 1988 and 1995, Gustafsson and Li estimated that Gini coefficient in rural areas increased from 0.338 in 1988 to 0.418 in 1999, in urban areas from 0.233 to 0.333 and the national coefficient from 0.381 to 0.444 (Gustafsson and Li, 2001). Although the Gini coefficient based on the two surveys in 1988 and 1995 is different with the Gini coefficient stemmed from SSB, the tendency of rising Gini coefficient and enlarging income disparity in rural, urban, and the whole country is the same.

2). Broadening urban-rural gap

The income gap between urban and rural parts of China has a long history. The ratio of urban per capita income to rural per capita income was 2.36 times in 1978, which was

higher than other developing economies in Asia (around 1.5 times on average). In the beginning of the reform, income gap decreased owing to substantial growth of rural household income. However, since the mid 1980s, the rural-urban income gap has been increasing.

Income disparity between urban and rural area reflected a change of economic development. As the foregoers and beneficiaries of the reform and the governmental policies, rural areas gained a rapid economic growth from the end of 1970s to the mid-1980s, which resulted in an income increase for farmers in a great range, and narrowed the income gap between urban and rural area. However, income disparity between rural and urban areas enlarged with urban economic system reform launching and speeding up since the mid-1980s. Market prices for agro-product declined and in the meantime village and township enterprises developed slowly afterwards, farmers' income growth gradually falls behind that of the urban people. In 1994, the income disparity reached a peak, the ratio of per capita income in urban area to that in rural area was 2.59. The gap narrowed mainly because government raised farm products purchasing price in a short period from 1995 to 1997. However, as the purchasing price declined again since 1997, the income gap also enlarged, and the per capita income ratio between rural and urban areas arrived 2.57 in 2001 (see Table 4).

Table 4: Incomes of Urban and Rural Households and Urban-Rural Gap

Year	Per capita income in rural (in current price)	Rural index ^a	Per capita income in rural (in constant price)	Per capita income in urban (in current price)	Urban index ^b	Per capita income in urban (in constant price)	Ratio ^c (in constant price)
1985	397.6	1.00	397.6	739.1	1.00	739.1	1.86
1990	686.3	1.65	415.9	1510.2	1.65	912.9	2.19
1991	708.6	1.69	419.3	1700.6	1.74	978.2	2.33
1992	784.0	1.77	442.9	2026.6	1.89	1073.3	2.42
1993	921.6	2.01	458.5	2577.4	2.19	1175.7	2.56
1994	1221.0	2.48	492.3	3496.2	2.74	1275.7	2.59
1995	1577.7	2.91	542.2	4283.0	3.20	1337.9	2.47
1996	1926.1	3.14	613.4	4838.9	3.48	1389.3	2.26
1997	2090.1	3.22	649.1	5160.3	3.59	1437.0	2.21
1998	2162.0	3.19	677.7	5425.1	3.57	1519.9	2.24
1999	2210.3	3.14	703.9	5854.0	3.52	1661.6	2.36
2000	2253.4	3.14	717.6	6280.0	3.55	1768.3	2.46
2001	2366.4	3.17	746.5	6859.6	3.58	1918.2	2.57

a. Rural index means consumer price index in rural areas, (1985=1). SSB(2002), P295.

b. Urban index means consumer price index in urban area, (1985=1), calculated by the authors according to "9-2 Fixed-base Price Indices" in SSB (2002), P295.

c. Ratio of per capita income in urban to per capita income in rural.

The disparity between urban and rural China is very large. The absolute difference of per capita income between urban households and rural households increased from 182 Yuan in 1978 to 4493 Yuan in 2001. In recent years, the income gap has been further

widening. From 1998 to 2001 per capital income in current price for urban households averaged 5425.1 Yuan, 5854 Yuan, 6280Yuan and 6859.6 Yuan respectively, while the figure stood at 2162 Yuan, 2210.3 Yuan, 2253.4 Yuan and 2366.4Yuan for rural dwellers. The former was 2.51, 2.65, 2.79, 2.90 times respectively of the later.

Figures from State Statistics Bureau shows that the growth rate of farmers' income dropped from 8.5% in 1996 to 1.9% in 2000, while that for urban residents has stayed around 7% for the same period. Net income of rural residents only amounted to 34.5% of urban residents' in 2001, which is 6% lower compared with 40.5% in 1997.

Actual per capita disposable income of rural dwellers slowed down since the 9th FYP (Five-Year Plan) began in 1996, and remains unchanged up to the present. Although per capita net income of rural households increased from 1926.1 Yuan in 1996 to 2366.4 Yuan in 2001, and the actual decreasing rate of per capita net income of rural households reached the bottom in 2000 and recovered to some extent in 2001, the absolute increasing sum is very small. The growth rate of per capita disposable income in current price of urban residents in the four years from 1996 to 2000 are respectively 6.6%, 5.1%, 7.9% and 7.3%, while those of rural residents are 8.5%, 3.4%, 2.2% and 1.9% (Zhang Qifu and Lin Zhaoxia, 2002).

The real ratio of urban resident's per capita income to that of rural dwellers increased from 1.86:1 in 1985 to 2.57:1 in 2001. China is one of those countries with the highest ratio of this kind in the world (Guo Wei 2002). If some hidden income and social welfare of urban residents were included, income gap between urban residents and rural residents would be much wider. According to World Bank's estimation, China's ratio of urban-rural per capita income in 1997 would reach 4:1 if urban residents' various forms of social welfares were calculated. That is to say, an average urban resident's per capita annual income would surpass one rural household annual net income. The gap between the consumption level of urban residents and that of farmers is 9 years (Guo Wei 2002).

Urban-rural income gap in China continues to be widening greatly in recent years. The income of both urban and rural residents increased quickly in the first half of 2002 with income of employees increased faster and the level of laid-off workers descending. Average labor payment of urban employed workers increased 17.9% and 16.8% respectively in the first and second quarter of 2002. The increasing range of disposable income of urban residents is almost 12% higher than that of rural residents.³ Thus it continues intensifying the trend of urban-rural income gap spreading in recent years.

The household income data in this section comes from SSB. Many studies discussed the limitations of the official data (Khan, Griffin, Riskin and Zhao, 1992; the World Bank, 1997; Bramall, 2001). The main problems include: a) inadequate coverage of the informal economy and the subsistence rural economy; b) imputed rent is excluded from rural and urban housing; c) social medicine and education subsidy are excluded from

³ <http://www.china.com.cn/chinese/zhuanti/249793.htm>.

the urban household income; d) moving peasants in city are not included in the official urban sample; e) inadequate allowance for the spatial effects of inflation, etc.

Consequently there exists underestimation of both rural and urban household income, and the underestimate extent of urban income is higher than that of rural income (Lishi, 2002). So, the official income data still can illustrate the tendency of the enlarging urban-rural gap, and the gap is more serious than what we show above. Besides, in order to describe the long trend of income change, the official data represents the only data source covering a reasonably long period of time in China.

3). Worsening regional disparities

Since the late 1970s, China has followed Deng Xiaoping's "Let some get rich first" policy and "costal development strategy", which has historically switched the national development priority from the inland to the eastern coastal regions. China's triple transitions(decentralization, market-orientation, and globalization)have fundamentally changed the mechanisms underlying regional development. For example, Chinese government committed a huge amount of capital in eastern region to improve the infrastructure and investment environment.

As a consequence of the uneven economic development, income gap widens from region to region. People in developed areas gained higher income than those in developing and underdeveloped areas, which made the income disparity between coastal and inland, urban and rural areas, and within regions, more obvious.

The uneven regional income distribution is clearly shown in Table 5 and Table 6.

Table 5: Regional Disparities: Per Capita Income of Urban Household

(Yuan, in current price)

Region	1981	1989	1993	1996	1999	2000	2001
Average	458	1261	2337	4377	5854	6280	6860
Eastern region	476	1441	3140	5371	7146	7682	8448
Central region	397	1084	2118	3576	4837	5165	5641
Western region	468	1200	2287	3733	5302	5681	6186
Ratio of Eastern to Central to Western	1.20 : 1 :1.18	1.33 : 1 :1.11	1.48 : 1 :1.08	1.50 : 1 :1.04	1.48 : 1 :1.10	1.49:1: 1.10	1.50:1: 1.10

Source: Calculated from SSB, 1994, 1996, 2001 and 2002. Eastern region includes Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, Guangxi, Hainan. Central region includes Shanxi, Inner Mongolia, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei, Hunan. Western region consists of Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shanxi, Gansu, Qinghai, Ningxia, and Xinjiang.

Table 5 and 6 suggest that the region disparity of income distribution has been widening

since 1978. In urban China, the ratio of eastern region to central region to western region increased from 1.20:1:1.08 in 1981 to 1.50:1:1.10 in 2001, at the same time, the ratio increased from 1.25:1:0.91 in 1978 to 1.64:1:0.76 in 2001 in rural China. The region gap either in urban or in rural accelerated to widen in 1990s, but the region disparity in rural is larger than that in urban.

Table 6: Regional Disparities: Per Capita Income of Rural Household

(Yuan, in current price)

Region	1978	1985	1992	1995	1999	2000	2001
Average	134	398	784	1578	2210	2253	2366
Eastern region	164	513	1156	2346	3237	3341	3542
Central region	132	380	712	1422	2058	2071	2155
Western region	120	323	619	1052	1520	1569	1640
Ratio of Eastern to Central to Western	1.25 : 1 : 0.91	1.35 : 1 : 0.85	1.62 : 1 : 0.87	1.65 : 1 : 0.78	1.57 : 1 : 0.74	1.61:1: 0.76	1.64:1: 0.76

Source: Calculated from SSB, 1994, 1996, 2000 and 2002.

Although the central government has launched the strategy of developing the West since 1999, the income gap between East and West keeps widening. A recent comparison among Eastern, Central and Western parts shows that the per capita GDP of Western and Central parts only accounted for 40.7% and 52.2% respectively of that in the East, and the per capita consumption expenditure of the former two only accounted 57.6% and 69.6% respectively for that of the latter in 2001 (Zhong He 2002)

In a word, the economic reform since 1978 quickens rapid economic growth and improves average living standard in China in general. However, the inequality of income distribution has increased since reform and exacerbated in the 1990s. All the urban-rural gap, regional disparity, and intra-urban and intra-rural inequalities have been expanding since 1978. As a developing country with lower average income level, the increase of income inequality seems accompanied by high economic growth. However, though economic growth spurred to widen income inequality in China, the relationship between economic growth and income inequality is non-linear. With sustainable economic growth, it is possible for the margin growth rate of income disparity to decline.

II. Measuring and Explaining Inequality in China⁴

1. Data Sources and Income Definition

The main data used in this section for the decompositions are from three surveys,

⁴ Wei Zhong (senior fellow at the Institute of Economics, Chinese Academy of Social Sciences) made all calculations in section II.

conducted by the Institute of Economics, Chinese Academy of Social Sciences, with the assistance from the State Statistics Bureau in Beijing. The samples were derived from large samples of the State Statistic Bureau. The first survey of household income in 1988 was implemented in the spring of 1989, which surveyed about 20,000 households (10,515 in the rural sample and 9,001 in the urban sample) and covered 28 provinces in the rural sample and 19 provinces in the urban sample. The provinces were chosen by a consideration of geographic differences in China as a whole. The second survey refers to the year of 1995 and was conducted during the period of January to March 1996. Subject to budget constraints the sample size for the second survey was reduced to 15,000 households (with 8,000 in rural areas and 7,000 in the urban areas), and the rural samples and urban samples covered 19 provinces and 11 provinces⁵ respectively. In early 2000, the Institute of Economics conducted a new household income distribution survey. With fewer budget, the third survey only inquired about 3,000 households in urban and covered 6 provinces. The rural data in 1999 come from a routine survey on the rural livelihood in China, conducted by the State Statistics Bureau. The sample includes 3,000 households in the whole country.

The household income refers to wages, pensions, managerial income, transferring income from public (exclude pensions) and private, property income, the other income (include the income in kind), taxes, and all kinds of fee turning over to the higher authorities. The more accurate definition of rural household income consists of:

Labor income = wages + bonus + labor income of retiree + other labor income + pensions

Managerial income = net household income from business operation that cannot be attributed to individuals (include agriculture and non-agriculture) + income from business operation by individuals.

Transferring income from public (exclude pensions) = income from governments and collectives (difficulty subsidies, alms, distributions from the collective commonweal, etc.)

Transferring income from private = the money remitted or brought back by the members of the household who are in other places + estovers + alimony + donations

Property income = interests + dividends + capital bonus + rents

Other income = income in kind + other income can not be classified

The precise definition of urban household income is as follows:

⁵ The 11 provinces include: Beijing, Shanghai, Jiangsu, Liaoning, Anhui, Henan, Hubei, Guangdong, Sichuan, Yunnan, and Gansu. Among them Beijing, Jiangsu, Liaoning, Henan, Sichuan, and Gansu are included in 1999 survey.

Labor income = wages + bonus + labor income of retiree + other labor income + pensions

Managerial income = income from business operation before taxes by private enterprises and self-employed individuals + income from business operation by families

Transferring income from public (exclude pensions) = income from governments and collectives (difficulty subsidies, alms, distributions from the collective commonweal, etc.), including allowances and subsidies from government and enterprises.

Transferring income from private = the money remitted or brought back by the members of the household who are in other place + estovers + alimony + donations.

Property income = interests + dividends + capital bonus + rents.

Tax expenditure = the expenditure of all kinds of taxes.

Other income = income in kind + other income cannot be classified.

2. Decomposition analysis of income components

We use the Generalized Entropy (GE) measures (Cowell, 1995) to analyze the income distribution in this section. Formally, it is defined as

$$GE(\alpha) = \frac{1}{\alpha(\alpha - 1)} \left[\frac{1}{n} \sum_{i=1}^n \left(\frac{y_i}{\bar{y}} \right)^\alpha - 1 \right] \quad (1)$$

where n is the number of individuals in the sample, y_i is the income of individual i , \bar{y} is the arithmetic mean of all incomes, and α is a parameter. The range of GE is from zero to infinity, with zero representing an equal distribution (all incomes identical) and higher values representing higher levels of inequality.

As the parameter α increase, the GE measures become less sensitive to inequality at the lower end of the distribution and more sensitive to inequality at the upper end. In other words, the more positive α is, the more sensitive $GE(\alpha)$ is to income differences at the top of the distribution; the more negative α is, the more sensitive it is to differences at the bottom of the distribution. Three special cases are of particular interest, corresponding to values of α of 0, 1 and 2. $GE(0)$ is the mean logarithmic deviation, and $GE(1)$ is the Theil index of inequality.

$$GE(0) = \frac{1}{n} \sum_{i=1}^n \log \frac{\bar{y}}{y_i} \quad (2)$$

$$GE(1) = \frac{1}{n} \sum_{i=1}^n \frac{y_i}{y} \log \frac{y_i}{y} \quad (3)$$

$GE(2)$ is half the square of the coefficient of variation, CV , where,

$$CV = \frac{1}{y} \left[\frac{1}{n} \sum_{i=1}^n (y_i - \bar{y})^2 \right]^{1/2} \quad (4)$$

In order to describe the sources of inequality, we have a horizontal decomposition at first. “Within group” inequality, $GE_w(\alpha)$, is measured from

$$GE_w(\alpha) = \sum_{j=1}^K g_j GE(\alpha)_j \quad (5)$$

where $GE(\alpha)_j$ is simply the value of the $GE(\alpha)$ measure applied to sub-group j and the sub-group weights g_j are given by

$$g_j = v_j^\alpha w_j^{1-\alpha} \quad (6)$$

where v_j and w_j are the income shares and the population shares, respectively of the sub-groups $j=1,2,\dots,K$.

The measure of “between group” inequality, $GE_B(\alpha)$, involves re-estimating total inequality when each member of each sub-group j is given the mean income for that sub-group, \bar{y}_j , and then calculating

$$GE_B(\alpha) = \frac{1}{\alpha(\alpha-1)} \left[\frac{1}{n} \sum_{j=1}^K \left(\frac{\bar{y}_j}{\bar{y}} \right)^\alpha - 1 \right] \quad (7)$$

where \bar{y} is the mean income for the whole population. Then

$$GE(\alpha) = GE_w(\alpha) + GE_B(\alpha) \quad (8)$$

On the base of these calculations, a simple measure of the contribution rate of the between group inequality or the within group inequality to the total inequality is:

$$H_B(\alpha) = GE_B(\alpha) / GE(\alpha) \quad (9)$$

$$H_w(\alpha) = GE_w(\alpha) / GE(\alpha) \quad (10)$$

In Table 7 we present the horizontal decomposition of Chinese rural by three subgroups: eastern region, central region, and western region. Table 7 shows that the total inequality in rural China had been enlarged from 1988 to 1995 and turns down in 1999. For example, the $GE(1)$ increased 14.8% from 0.2332 in 1988 to 0.2676 in 1995, and then decreased 20.0% to 0.1990 in 1999. The within-group inequality is the main source for the total inequality in rural China, which occupies more than 4/5 of the total inequality. But between-group inequality is also important, which takes up about 13%--19% of the total inequality. Compared with 1995, the between-group inequality reduced lightly in 1999 ($GE_B(1)$ increased from 0.0352 to 0.0379), but the contribution rate of between-group increased 44.6% from 13.16% in 1995 to 19.03% in 1999.

Table 7: the Horizontal Decomposition of Income Inequality in Rural China

	1988	1995	1999
$GE(0)$	0.2176	0.2479	0.1983
$GE_w(0)$	0.1854	0.2128	0.1603
$GE_B(0)$	0.0322	0.0352	0.0380
Total inequality	100.00	100.00	100.00
$H_w(0)$	85.20	85.82	80.84
$H_B(0)$	14.80	14.19	19.16
$GE(1)$	0.2332	0.2676	0.1990
$GE_w(1)$	0.2000	0.2324	0.1611
$GE_B(1)$	0.0332	0.0352	0.0379
Total inequality	100.00	100.00	100.00
$H_w(1)$	85.76	86.84	80.97
$H_B(1)$	14.24	13.16	19.03
$GE(2)$	0.3591	0.4321	0.2559
$GE_w(2)$	0.3244	0.3963	0.2174
$GE_B(2)$	0.0347	0.0358	0.0385
Total inequality	100.00	100.00	100.00
$H_w(2)$	90.34	91.71	84.96
$H_B(2)$	9.66	8.28	15.03

Table 8 shows the horizontal decomposition of income inequality by three regions (eastern, central, and western regions) in urban China. From 1988 to 1995, the total inequality in urban China had sharply increased, as $GE(1)$ increased from 0.0925 to 0.1889. But in 1999 the $GE(1)$ declined to 0.1592, it means the total inequality reduced a little; anyway the degree of total inequality is much higher than 1988. Comparing with the rural within-group inequality, the urban within-group inequality attributes more to the total inequality, which contributes more than 90% to the total inequality. Although the total inequality was changeable during 1988 to 1999, the contribution rate of within-group inequality to total inequality kept as an increasing trend. The within-region inequality attributed 95.78% to total inequality in 1999, and the contribution rate of between-region inequality declined to 4.22%. It illustrates that the contribution rate of between-region inequality to total urban inequality contracted quickly.

Table 8: the Horizontal Decomposition of Income Inequality in Urban China

	1988	1995	1999
$GE(0)$	0.0925	0.2214	0.1632
$GE_w(0)$	0.0828	0.2035	0.1563
$GE_B(0)$	0.0097	0.0179	0.0069
Total inequality	100.00	100.00	100.00
$H_W(0)$	89.51	91.93	95.75
$H_B(0)$	10.49	8.08	4.25
$GE(1)$	0.0986	0.1889	0.1592
$GE_w(1)$	0.0888	0.1706	0.1525
$GE_B(1)$	0.0098	0.0182	0.0067
Total inequality	100.00	100.00	100.00
$H_W(1)$	90.06	90.34	95.78
$H_B(1)$	9.94	9.66	4.22
$GE(2)$	0.1308	0.2220	0.1945
$GE_w(2)$	0.1209	0.2032	0.1880
$GE_B(2)$	0.0099	0.0187	0.0065
Total inequality	100.00	100.00	100.00
$H_W(2)$	92.43	91.56	96.63
$H_B(2)$	7.57	8.44	3.36

Table 9: The Horizontal Decomposition of Income Inequality in the Whole Country

Sub-groups		<i>GE(0)</i>		<i>GE(1)</i>		<i>GE(2)</i>	
		Total	Within Between	Total	Within Between	Total	Within Between
Three regions	1988	0.1932	0.1711	0.1910	0.1684	0.2576	0.2343
	(%)	(100)	(88.56)	(100)	(88.17)	(100)	(90.95)
			(11.44)		(11.83)		(9.05)
	1995	0.2830	0.2571	0.2791	0.2527	0.3887	0.3615
	(%)	(100)	(90.87)	(100)	(90.55)	(100)	(93.00)
			(9.13)		(9.45)		(7.00)
	1999	0.3007	0.2542	0.2928	0.2466	0.3837	0.3370
(%)	(100)	(84.54)	(100)	(84.22)	(100)	(87.83)	
			(15.46)		(15.79)		(12.17)
Rural-Urban	1988	0.1932	0.1696	0.1910	0.1670	0.2576	0.2329
	(%)	(100)	(87.78)	(100)	(87.43)	(100)	(90.41)
			(12.22)		(12.57)		(9.59)
	1995	0.2830	0.2403	0.2791	0.2338	0.3887	0.3398
	(%)	(100)	(84.92)	(100)	(83.78)	(100)	(87.43)
			(15.08)		(16.22)		(12.57)
	1999	0.3007	0.1861	0.2928	0.1757	0.3837	0.2591
(%)	(100)	(61.88)	(100)	(59.98)	(100)	(67.52)	
			(38.12)		(40.02)		(32.47)
Six-Regions	1988	0.1932	0.1460	0.1910	0.1453	0.2576	0.2121
	(%)	(100)	(75.57)	(100)	(77.12)	(100)	(82.34)
			(24.43)		(22.88)		(17.66)
	1995	0.2830	0.2101	0.2791	0.2059	0.3887	0.3114
	(%)	(100)	(74.25)	(100)	(73.77)	(100)	(80.13)
			(25.75)		(26.23)		(19.87)
	1999	0.3007	0.1589	0.2928	0.1561	0.3837	0.2425
(%)	(100)	(52.84)	(100)	(53.29)	(100)	(63.21)	
			(47.16)		(46.71)		(36.79)

Because of great disparity between rural-urban, geographical regions in China, and the difficulty of collecting data set, the inequality decomposition of the whole country is rare. In this paper we try to decompose income inequality by three dimensions, i.e.

rural-urban divide, east-central-west subgroups, and rural-urban and east-central-west combined. Table 9 shows the size of the within-group inequality and between-group inequality and their relative contribution to total inequality.

The change of the total inequality in the whole country was enlarged during 1988 to 1999. $GE(1)$ increased 46% from 0.1910 in 1988 to 0.2791 in 1995, and increased 4.9% to 0.2928 in 1999. It illustrates that, compared with 1988; the total inequality in early 1990s enlarged significantly, but slightly enlarged in the late of 1990s.

As for the sub-group of three regions, the within-group inequality contributes mostly to the total inequality, and the enlargement of total inequality is mainly induced by the within-group inequality. From 1988 to 1995, the contribution rate of within-group ($\alpha = 1$) is between 84.22% to 90.55% and the contribution rate of between-group is 9.45-15.79%. The contribution rate of within-group increased firstly and then declined, which means the income disparity of three regions had been reduced in the early 1990s but enlarged again in the late of 1990s. However, the change degree is slight as showed in Table 9.

Concerning the sub-group of rural-urban, the contribution rate of within-group keeps a declining tendency but the degrees are different. From 1988 to 1995, the contribution rate of within-group ($\alpha = 1$) mildly declined from 87.43% to 83.78% but sharply went down to 59.98% in 1999. Which means in the latter half of 1990s the income inequality between rural and urban rapidly magnified.

When integrating the rural-urban and west-central-east dimensions, we come up with six regions⁶. Influenced by the different trend of rural-urban and west-central-east, the income disparity decomposition of six regions shows some unlike tendency. Since 1988, the role of between-group has boosted up gradually. From 1988 to 1995 the contribution rate of between-group mildly increased, but which rapidly ascended after 1995. The enlargement of the rural-urban disparity mainly induces this kind of change as we analyze above.

Because total income is made up of streams of income originating in different ways, it is important to know how much of the total inequality in total incomes arises from inequality across individuals in various income sources. This kind of decomposition is called vertical inequality here.

Let total income y consist of income from various sources s , such that

$$y = \sum_{s=1}^s y_s . \quad (11)$$

⁶ The six regions are Rural-East, Rural-Middle, Rural-West, Urban-East, Urban-Middle, and Urban-West.

A decomposition of total inequality I is made up of

$$I = \sum_{s=1}^s I_s . \quad (12)$$

The proportion of total inequality that derives from sources is then simply

$$i_s = I_s / I \quad (13)$$

and $\sum_{s=1}^s i_s = 1.$

With the above definition of household income in rural China, we show the decomposition results in Table10.

Table10: The Vertical Decomposition of Income Inequality in Rural China

Income and its components	1988			1995			1999		
	i_s	I_s	f_s	i_s	I_s	f_s	i_s	I_s	f_s
Labor income	23.95	0.2029	8.42	32.77	0.1416	22.67	42.93	0.1099	30.16
Managerial income	53.08	0.4498	81.15	61.00	0.2636	76.27	51.97	0.1330	71.54
Property income	0.23	0.0019	0.17	0.56	0.0024	0.58	2.61	0.0067	1.22
Transfer income (from private)	2.85	0.0242	2.69	2.39	0.0103	2.69	2.88	0.0074	0.99
Transfer income (from government)	16.00	0.1356	8.00	2.64	0.0114	0.89	0.10	0.0003	0.10
Other income	4.24	0.0359	3.27	1.39	0.0060	2.00			
Negative tax	-0.35	-0.0029	-3.70	-0.75	-0.0032	-5.10	-0.50	-0.0013	-4.01
Total income	100	0.8475	100	100	0.4321	100	100	0.2559	100

Notes: (1) $f_s = \bar{y}_s / \bar{y}$ is the mean income from source s divided by the mean of total income.

(2) In the case of the GE (2) measure, $I_s = i_s$ GE (2).

Table 10 shows that the most important source enlarging total inequality is labor income. Even in 1988, when the share of labor income was just 8.42%, the contribution rate of inequality was almost 3 times as its contribution rates to income. In 1999, the contribution rate of labor income to total inequality arrived at 42.93%. This is because in rural China, only a very small proportion of people have wages and pensions, and these people may be concentrated in high-income regions. Transfer income from private (exclude 1995) and government also broaden total inequality. Since just a small part of peasants go out to make a job in city, and transfer income from government is exclusively paid to a small number of people (e.g. the authorities in rural China). Managerial income was the most important source to narrow rural total inequality. The share of managerial income in total income arrived at 71.54 in 1999, but its contribution rate to total inequality only occupied 51.97. Managerial income from agriculture played

a leading role to narrow the gap in rural China. It must be noticed that the transfer income from government was bigger than the tax in 1988, while it's smaller than the tax in 1995 and 1999. That means the rural family bore the positive tax. This situation aggravated the burden of peasants and enlarged the inequality between rural and urban area. And it can partly illustrate why the rural problem became more and more a serious social problem.

Table 11: the Vertical Decomposition of Income Inequality in Urban China

Income and its components	1988			1995			1999		
	i_s	I_s	f_s	i_s	I_s	f_s	i_s	I_s	f_s
Labor income	66.16	0.3384	76.53	88.05	0.1954	92.24	86.32	0.1679	94.98
Managerial income	7.82	0.0400	2.64	2.53	0.0056	1.22	8.70	0.0169	2.57
Property income	1.64	0.0084	0.87	4.99	0.0111	2.26	1.78	0.0035	1.18
Transfer income (from private)	9.12	0.0467	4.97	4.83	0.0107	4.39	2.92	0.0057	2.28
Transfer income (from government)	7.99	0.0409	14.56	0.01	0.000	0.22	1.40	0.0027	2.01
Other income	8.34	0.0426	0.70	1.39	0.0031	1.89	0.24	0.0005	0.18
Negative tax	-1.07	-0.0055	-0.27	-1.80	-0.0040	-2.23	-1.35	-0.0026	-3.21
Total income	100	0.5115	100	100	0.2220	100	100	0.1945	100

Notes: The same as Table10.

Table 11 shows the decomposition of urban income inequality by income source. Firstly, although they are not the main components of the income, managerial income and property income played the role to enlarge the urban total inequality. Secondly, on the contrary to the rural China, labor income decreased total inequality in urban China. For example, the share of labor income to urban total income was 94.98 in 1999, but its contribution rate to total inequality was 86.32. In a word, the wage income was the main source to urban total income, and played an important role to narrow inequality. Thirdly, the transfer income from government played the role to decrease income disparity in urban China as opposed to in rural China. But, the transfer income from private is opposite, which enlarged the urban income disparity.

Table 12: the Vertical Decomposition of Income Inequality in the Whole Country

Income and its components	1988			1995			1999		
	i_s	I_s	f_s	i_s	I_s	f_s	i_s	I_s	f_s
Labor income	46.28	0.3528	31.76	70.60	0.2744	52.52	94.29	0.3618	68.16
Managerial income	28.83	0.2198	54.24	21.16	0.0822	44.07	0.72	0.0027	31.11
Property income	0.67	0.0051	0.41	2.64	0.0103	1.30	1.72	0.0066	1.20
Transfer income (from private)	4.65	0.0355	3.47	3.79	0.0147	3.42	2.96	0.0114	1.75
Transfer income (from government)	15.11	0.1152	10.25	1.28	0.0050	0.60	1.75	0.0067	1.22
Other income	4.47	0.0341	2.39	1.44	0.0056	1.96	0.21	0.0008	0.11
Negative tax	-0.02	-0.0001	-2.52	-0.90	-0.0035	-3.87	-1.65	-0.0063	-3.54
Total income	100	0.7524	100	100	0.3887	100	100	0.3837	100

Notes: The same as Table10.

In the vertical decomposition of income inequality in the whole country, we find an interesting phenomenon that is accompanying the growth of the share of labor income; its role to enlarge income disparity went up more quickly, from 46.28% in 1988 rose to 94.29% in 1999. It means, most of income disparity could be explained by labor income in 1999. On the contrary, the share of managerial income decreased during the same time, and its contribution rate to income disparity fell sharply. In 1999, although the share of managerial income is near 1/3, its contribution rate to income disparity is only 0.7%. Another problem should be discussed is transfer income from government and official tax. The share of government transfer income is 10.25%, far higher than the share of tax 2.52% in 1988. But in 1995 and 1999, the share of government transfer income rapidly declined, and the share of tax increased more or less, which formed the negative net transfer from government to residents and shows that the transfer function of government was badly weakened

III. Income Inequality in China: Causes and Policy Implications

The conclusion made by using Generalized Entropy (GE) measure in the second section supports the analysis mentioned in the first one. We can see that total inequality had been enlarged in rural, urban and the whole China from 1988 to 1999; within-group inequality was the main source to total inequality. Between-group inequality was also important, especially in rural China. The result of vertical decomposition is more complex. Urban labor income reduced urban total inequality, but rural labor income enlarged rural total inequality. On the contrary, urban managerial income increased urban total inequality, while rural managerial income narrowed rural total inequality. Besides, farmers as low-income colony had born the positive tax in China, which magnified the disparity between the rural and the urban and expanded the total inequality in China.

There are many causes making income inequality worse, here we will analyze the main sources and policy factors, which give impacts on income inequality in China.

1. Urban-rural dual economic structure is the root of income inequality in China

This structure emerged in the late 1950s, which means that population, economic and social lives were divided into two different areas: people from rural can not easily move into urban area; rural and urban residents enjoyed different rights and duties; a great deal of rural resources was drawn out to cities for industrialization. These arrangements have seriously blocked the rural development. Although China's continuous high economic growth for more than two decades has greatly lessened its systematic urban-rural differences, two different social systems are still in operation; the disadvantages in rural area remain fundamentally unchanged up to the present, even in the foreseeable future. Cities have the advantages of infrastructures, dense capital, information, and market, which let the rural area be far behind. In order to chase high

benefits, enterprises prefer to locate in cities and their radiated regions with better conditions of infrastructures. Difference between urban and rural area will continue to enlarge national income inequality gap.

Some existing institutional arrangements such as tax system, education and health care, employment and migration regulations, etc may all contribute to further enlarging urban-rural gap. For example, income tax system plays an important role in enlarging rural-urban income gap in China. The dual tax systems that have a direct impact on income distribution are the personal income taxes mainly functioning for employees in urban areas and agricultural taxes for rural households. The former are based on salaries and the latter on arable land size. In rural China, farmers are also required to pay various fees to the local government, besides the agricultural tax. Although these fees have been annulled in the process of tax and fees reform, the added agricultural tax actually takes the form of these fees. Tax payments of urban workers are much lower than that paid by their rural counterparts. Though the rural economy is less prosperous, the latter have still burdened heavy taxes. Tax system aggravates rural-urban income gap and income inequality in China as a whole.

Rural welfare system in China has enlarged the rural-urban income gap as well. In term of education, average national budget per capita expenditure for primary education in 1995 was 265.78 Yuan, of which only 198.69 Yuan for rural area (Guo Wei 2002), which means compulsory education results in different fiscal appropriation and wages for teachers in urban and rural areas. Villagers have to pay extra money to sustain education expenses, for example, school infrastructure construction, textbooks, etc. Other public services at the village and township levels such as medical care services, and infrastructure mainly depend on fees collected by the local governments. As a result, poor villages normally have to collect as much as richer villages if they intend to provide the same public service coverage. In one word, farmers in poor villages have to pay a higher proportion of their income as extra fees.

The gap between urban and rural areas can be related to the characteristics of urban vs. rural economies. In terms of agricultural development, high input cost, low products prices, lack of high value-added agricultural products, and small demand elasticity of primary products make agricultural growth destined to develop slower than the second and third industries when the whole economy grow to some extent. Although the percentage of the primary industry in national gross domestic product dropped from 30% in 1978 and 25% in 1989 and to 18% in 1998, and further to 15.2% in 2001⁷, the employment rate in primary industry remained as high as 49.8% in 2001. It indicates that the second and third industries in China have not well developed to create enough job vacancies for those from the shrinking primary industry. This is why China enjoyed a steady increase in its national income on the one hand, and on the other hand experienced a serious rural problem, urban-rural income gap has been very large, and is even further widening, since it began to carry out reform and opening-up policy,

⁷ <http://www.chinadaily.com.cn/highlights/party16/statistics/1111statistics.htm>.

especially after mid-1980s.

2. Urban economic reform and SOEs reform produce urban poverty and worsen income inequality

The gap between the rich and the poor in urban area has been widening since the 1990s. A large number of the poor are those laid-offs produced from SOEs after urban economic reform launched since the middle of 1980s, most of which cannot compete with others in the labor market. The emergence of some poor groups was attributed to the institutional arrangements. We must pay more attention to marginal groups in urban area here, the reasons are: firstly, the number of urban poor increases very rapidly in China; secondly, the poor in China used to be regarded mainly in rural area, the emergence of the urban poor seems more obvious today.

The urban poor emergence is closely related to the reform of SOEs. SOEs reform and a series of reforms from labor employment system to medical care and other parts of social security reform also contribute a lot to income inequality in urban area.

SOEs reform now becomes the key to China's economic reform. SOEs was a central component of the economy for almost 40 years and about 100 million people, or two-thirds of the urban workforce had been employed in such enterprises. Under the former central- planned economy, nearly all urban Chinese were assigned to government-owned work units, which guaranteed them a place to live as well as staple food subsidies, medical care, pensions and basic education for their children. Those employers in SOEs cared little about their products quality and market. Under the protection of state, SOEs worried not about going bankrupt even if they were operated with low efficiency.

However, with market economy being carried out particularly during the last decade, more and more SOEs with persistent structural problems became financially loss-makers, and were unable to compete with the non-state sectors and faced a strong pressure in market competition.

SOEs reform has been put on the agenda since early 1990s, which the major target is to SOEs structural adjustment. Industries have gone through structure upgrading with the help of foreign investment and new technologies in major cities in China, especially those in eastern coastal regions. Macroeconomic policy change led to a worsening unemployment situation. Many SOEs had to partially or completely cease their production or even go bankruptcy. Any of the problems such as investment, project repetition, overproduction, lack of capital and staff redundancy, might leave the SOEs with no choice but to reform in order to increase economic efficiency, thus a great number of lay-off workers emerged in big cities.

The impact on income distribution is enormous with SOEs reform. Under the full employment policy in the past, the people ate from the same 'great rice pot'; more workers were employed than necessary. Unemployment was veiled. However, with economic reform deepening, the past permanent stable employment system known as the 'iron rice bowl' has been dismantled. The income of these laid-off workers was sharply reduced, and so is their social welfare level, some were even dropped into the list of those who are living on drawing the minimum living allowance. Official data show that there were 11.707 million urban residents nationwide drawing the minimum living allowance in 2001, with 2.301 billion Yuan for the minimum living allowance coming from the central finance.⁸ Today, laid-off workers from SOEs become a more serious problem in China.

Urban unemployment is becoming critical and intractable. According to the data in *China Statistics Yearbook 2002*, the registered unemployment rate in urban area is 3.6% in 2001, that is 6.68 million unemployed in the whole labor force. But, a survey made by State Statistics Bureau itself in 1997 found that this urban unemployment rate reached 4%, or 9 million people. What is even worse is that the official figure does not include those industrial workers who have been laid off by their employers. They are called "Xiagang"(Laid-off) workers, who have been "temporarily" forced to leave their job because of the poor performance of their enterprises. Their relationship with the enterprises has not been cut off completely; and they are not officially classified as unemployed. A total of 17.50 million workers were thus laid off or partially laid off in 2001. Considering that there are about 46.50 million newly increased urban labors and more than 250 million surplus rural labors all over the country, unemployment is one of the most serious problems in China.

Although government at all levels comparatively care much about creating more job opportunities/vacancies in 2002, net urban units job occupants reduced 3.972 million in the first half year compared to that of the same period of 2001. Urban registered unemployment population further increased to 7.33 million. Employment rate ascended to 3.8%.⁹

Numerous laid-offs enlarge urban income disparity. The unemployment and underemployment have become the dominant factors contributing to urban poverty apparently.

Another influence on income inequality is institutional changes in wage determination within the state-owned sectors. SOEs have been allowed to make decisions by themselves on wages distribution, bonuses and various subsidies. This means that when wages are set with emphasis on productivity improvement, education and skill would be more rewarded than before and consequently wage difference between workers of different skill-levels has been increasing. At the same time, traditional labor-intensive

⁸ *White Paper on Labor and Social Security in China*, Xinhua, April 29, 2002.

⁹<http://www.china.com.cn/chinese/zhuanti/249793.htm>, Dec 20, 2002.

industries have begun to suffer decreasing income. The income level of tech-intensive and capital-intensive industries is rising rapidly, which means that in the field of income distribution, knowledge and technology have become an active participating factor, which embody their fulfilled value.

3. Some policy preferences should be responsible for the income gap in China

Policy preferences further aggravated the income disparity along with geographic condition differences. “Let some people get rich first” policy, coastal development strategy, etc. made coastal provinces getting richer than inland provinces. Eastern region acquired favorable policies different from Central and Western in the fields of tax, credit and investment, etc., which are important causes to regional gap. ‘Southeastwards Flying Peacock’¹⁰ and the concentrating foreign investments in Eastern and Coastal areas made Central and Western’s development even more difficult.

Uneven regional development of township and village enterprises (TVEs) caused regional disparity in China. China has introduced a series of reforms in rural areas since 1978. The new policies include encouraging the establishment of TVEs, etc. TVEs have experienced remarkable development and become the growth engines of the rural sector. In fact, their development has been so rapid that since 1987 rural enterprises have accounted for more than half of total rural output (Chan Hing Lin and Chan Kai Ting 2000). The annual average income of rural residents coming from TVEs reached more than 700 Yuan in 1998, and one third of increased income was realized by TVEs. However, the development of TVEs is uneven in three regions. TVEs in eastern region accounted for more than half the TVEs employment and two-thirds of TVEs added value in 1998. As the uneven spatial development actually exists, eastern areas residents have benefited disproportionately from the sector's growth.

Although TVEs became unexpectedly flourishing since the reform, this advantage soon disappeared as urban reform deepened since mid-1980s. The growth speed of rural second industry had been obviously slowing down since the 1990s, especially in Central and Western areas, with the fact that many TVEs in these regions came into stagnation. These enterprises encountered difficulties in production and managing, accordingly income of their employees and staffs was greatly affected and reduced.

¹⁰ This indicates the current situation of labor force moving from China’s Central and Western to East coastal areas caused by the actual salary difference and other different treatments in these regions.

Table 13: the Uneven Regional Development of TVEs in 1998

	Eastern region	Central region	Western region	National
Number of TVEs (million)	8.42	7.31	4.23	20.03
Share of TVEs (%)	42	36.5	21	100
Number of employees (million)	64.31	42.17	18.89	125.37
Share of employees (%)	51.3	33.6	15.1	100
Value-added of TVEs (billion Yuan)	1340.3	688.6	189.8	2218.7
Share of value-added (%)	60	31	9	100

Source: SSB, *China Statistical Yearbook*, 1999.

The author calculated these regional figures and shares.

The unbalanced allocation of foreign direct investment (FDI) has contributed to regional income inequality as well. China saw a rapid FDI growth since 1979, with an annual average growth rate of 38.7 percent. The amount of foreign capital actually utilized increased from 4.65 billion US\$ in 1985 to 59.36 billion US\$ in 2000. It has been found that FDI significantly promoted the economic growth in China by contributing to domestic capital formation, increasing exports and creating new employment opportunities (Sun Haishun, 1998). However, uneven regional distribution of FDI exacerbated intra-regional economic disparity and income distribution.

Table 14: Regional Distribution of Realized FDI in China (US\$ million)

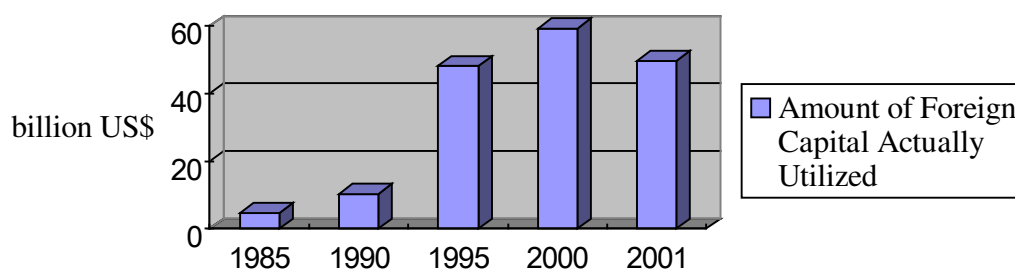
Regions	1983-89		1990-96		1997-2001	
	Value	%	Value	%	Value	%
Eastern	10225	90.7	138855	88.1	189238	87.3
Guangdong	5141	45.6	45829	29.1	58601	27.0
Fujian	757	6.7	16889	10.7	19783	9.1
Jiangsu	324	2.9	18807	11.9	31458	14.5
Zhejiang	160	1.4	5341	3.4	7878	3.6
Shanghai	944	8.3	13519	8.6	18115	8.4
Shandong	646	5.7	10623	6.7	13447	6.2
Hebei	72	0.6	2490	1.6	4920	2.3
Beijing	1256	11.1	5544	3.5	9188	4.2
Tianjin	287	2.5	5358	3.4	9688	4.5
Liaoning	379	3.4	6975	4.4	10017	4.6
Guangxi	202	1.8	3272	2.1	3310	1.5
Hainan	292	2.6	4208	2.7	2805	1.3
Central	470	4.2	13388	8.5	20864	9.6
Western	584	5.2	4948	3.1	6781	3.1
Total*	11279	100	157596	100	216820	100

*"Total" here refers to total FDI registered in all regions. It does not include FDI introduced by

government ministries, which was less than two per cent of the national total in 1990-1996. **TVEs have contributed also to employment of rural surplus labor in the 1980s, on average about 10 million from agriculture to local industries and services annually. This, however, also slowed down or even stopped in the 1990s, when TVEs were privileged.

Source: SSB, *China Statistical Yearbook*, 1984-2002 and *China Regional Economy: A Profile of 17 Years of Reform and Opening-Up*.

Figure 4. The Growth of Foreign Capital Actually Utilized in China



Source: SSB, *China Statistical Yearbook*, 1994 and 2002.

FDI in China was distributed overwhelmingly in the coastal area since 1979, which accounted respectively for 90.7%, 88.1% and 87.3% of the total FDI during the periods of 1983-1989, 1990-1996 and 1997-2001 (see Table 14). Although FDI gradually spread over the vast inland region in the 1990s, its regional distribution pattern only slightly changed. Given its proximity to Hong Kong both geographically and culturally, Guangdong province is the single largest recipient of FDI.¹¹ It occupied nearly 45.5 % of national FDI during 1983-1989 and nearly one-third during 1990-1996 and 1997-2001. While the share in total national FDI occupied by the central region increased more than doubled from 4.2% in 1980s to 8.5% in the 1990s, that of the western region displayed a declining trend, from 5.2% to 3.1%. On the one hand, national FDI grew from US\$11.3 billion to US\$216.8 billion in absolute terms; on the other hand, the trend of slow progress in FDI spreading in inland China is even more difficult to alter. (Sun Haishun, 2002).

There are two major factors underlying the unbalanced regional distribution of FDI in China. First, the open-door policy has been primarily oriented to the coastal region since 1979. Second, the coastal region has advantages over the inland regions both in terms of economic development conditions and investment environment.

The unequal distribution of FDI among regions is one of the important factors causing regional income disparities. Most foreign-invested enterprises locate in the Eastern

¹¹ Much of foreign investment actually comes from overseas Chinese.

region, which presents a great challenge to the state enterprises. From the beginning, foreign-invested enterprises could claim superiority —thanks to their strength in capital, technology and management—over the state enterprises in the competition for domestic and international markets. This challenge became even more vital for state enterprises in the 1990s when foreign-invested enterprises increased rapidly, and Chinese government changed its traditional protection policies in response to this challenge. SOEs have to render themselves more efficient via strategic reform that involved “increasing efficiency by reducing payrolls”. This resulted in a wave of producing laid-off workers from the mid-1990s, thus enlarging inequalities and increasing urban poverty.

Diversified income distribution of foreign-invested enterprises adds to income inequality amongst Chinese urban employees. (Xinping Guan, 2001) On the one hand, higher income in foreign-invested enterprises has contributed to income inequality in different kinds of enterprises; on the other hand, income inequality within foreign-invested enterprises is generally much higher than that in state-owned and collective-owned enterprises. As to most of the foreign-investors in China, keeping labor cost as low as possible is important, so while they pay those unskilled in their enterprises low salaries, their managerial and technical personnel can get a much higher wage, even by reference to international standards. Thus uneven economic development and the specific policies made some regions develop much faster than others.

4. Policy flaws in the reforms accelerate income disparity

Policy loopholes utilized by some officials and personnel for personal gains have also increased the income inequality. The most widespread practice is tax evasion. It is estimated that 50% of income taxes are lost, and 90% of individual dealers and 80% of private enterprises are believed to be evading taxes each year. For example, some officials took advantage of the two pricing system carried out by state enterprises and private enterprises to make side incomes. However, interest rates offered by state banks were also exploited for the real estate operations. As evidenced by an unofficial document in 1988, goods price difference between state-owned enterprises and the market were as high as 150 billion Yuan. Similarly, loan interest difference between the ‘two track’ systems amounted to 113.9 billion Yuan. These differentials provided opportunities for abuses. Thus reform produced a newly rich group, of which has become affluent by illegal means.

5. Monopolization of some industries worsens income inequality

Cross-industries income inequality is a serious phenomenon. There has multiple factors contributing to inequality of cross-industrial income distribution.

First, the monopolized nature of some industries must take responsibility for income

inequality among sectors. Some industries are strategic enterprises, which can enjoy certain privileges in property rights and fix their own prices. Compared to other industries, the income of employees and staffs in some state-owned monopolized industries such as aviation, post, railway, telecommunication, electric power, gas, water supply, finance, security, insurance, etc. are comparatively higher, and so are their social security and welfare level. Most of the employees and staffs in those high-income sectors are equal to the so-called 'white collars' or belong to medium-high-income groups, among which some will eventually evolve to be rich group. Employees and staffs from other state-owned industries such as manufacture, mining, agriculture, forestry, animal husbandry, fishery, wholesale and retail, etc. have not only suffer from low income, but face the problems of being laid off and even unemployed. Even those employed are underpaid.

6. The rising of private enterprises attributes to income inequality

The policy of open to the outside world and reforms enhanced the development of private and foreign-funded enterprises. In 2001 there were 443,000 private enterprises in China with a registered capital of 1,406.8 billion Yuan and 31.7 million workers. Private entrepreneurs have grown rapidly, taking advantage of opportunities provided by the market reforms. Most of the employer of these enterprises are successful in their causes get much higher income than those employees, and have become the newly rich group in China. The opening up policy has also produced a great number of foreign-invested enterprises and joint ventures enterprises that have offered higher wages (1.6 times on average) to hundreds of thousands of urban workers. In addition, there are managers, technocrats, cadres of public enterprises, singing and film stars joining the newly rich groups. The significant expansion of these newly rich has thus widened income inequality in China.

7. Income from other sources has also contributed to income gap

Non-professional incomes derived from interest, dividends and rent, welfare allocations etc, have also been responsible for widening income gap in China. Restructuring of the employment system and economic diversification means that income of residents is not dependent on wages alone, income can be increased from other sources--- second job or personal investment, etc.

Property reform and the development of capital market and housing market made some people get various kinds of assets income. In 1995, 20% of China's richest urban households owned 48.0% of the total financial assets, while the poorest 20% possessed only 4.0%. The gap in the ownership of financial assets is much greater than that of income. Income from financial assets in 1996 made up 10.5% of urban households, rising from only 0.3% in 1978.

V. Measures to decrease income disparity and policy suggestion

The two decades of economic reform in China has changed its income structure tremendously. Overall inequality was not increased in early stages of the reform in the 1980s, since former disadvantaged groups managed to become better off than the formerly advantaged, i.e. state workers. However, with the transition of economy to a market and foreign oriented model since the 1990s, income inequality has become much more obvious, characterized by a rapid enlargement of income gap between rural and urban, among regions, as well as among the different groups and sectors. Raising all people's living standards in China is the basic goal of the economic development and a crucial factor for expanding domestic demand and stimulating sustained economic growth. For this purpose, measures must be taken to create more jobs, increase residents' income, distribute income more equally, improve social security system, and ensure a more comfortable life for the people. It is time that the Chinese government should take some measures to achieve the purposes.

First, more attention should be paid to a coordinated development among population, resources and environment. The strategy of Developing the West is of great significance to expanding domestic demand, promoting sustained growth of the national economy and coordinated economic development among various regions, and finally to the achievement of a common prosperity.

In the past, dual economic structure limited the rural-to-urban migration in China. Since the opening-up in the 1980s, this process has put a great pressure on the household administrative system, sometimes even enlarges the income gap between regions. The widening income gap between regions should not attribute to the migration; on the contrary, it is a consequence of limiting social mobility, not only in terms of labor migration but also of all factors for mobility. The best way of reducing the income inequality is to encourage social mobility, including flows of labor, capital and technology between urban and rural area, and between regions.

Second, the existing tax policies should be adjusted, because the tax system in China has not counterbalanced the increase in income inequality. The main function of these policies is to raise finance revenue, and basically has no function of restraining income disparity. Some taxes and fees have even enlarged the income disparity among people. For example, various items of fees collected from farmers are sometimes levied upon according to individuals, which results in enlarging income disparity. Interest tax and income tax policy cannot be functioning as income adjustment. Although some tax policies may have income-adjusting function, actually they have not functioned effectively with the low tax and fee levying efficiency. For example, personal income tax could essentially function as lessening income disparity among residents, but the lack of effective auditing results in a great deal of personal income tax evasion and escape. National personal income tax in 2000 was about 66 billion Yuan, most of which was not levied by the high-income layer--only 1% of national population possess 45%

of social wealth--, but by the wage-owners layer (28 billion Yuan, which amounted to 45% of the total personal income tax). It shows that current tax system aiming at resident individuals should be adjusted with an objective to lessen income disparity among residents and to restrain enlarging income disparity among residents.

To prevent the excessive expansion of income inequality, China should protect legal income, regulate excessive income and put down unlawful income. Tax system should cover comprehensively personal income tax as the main part, supplemented by taxes from earnings in the stock exchange, saving account interests, as well as inheritance benefits. Special consumption tax and private property tax should also be imposed.

Third, wage system reform is a key target to lessen income gap. Wage policy should be able to regulate the income distribution and reduce income gap. China's wage system at present is too complex to implement properly. There are too many income sources. For example, a worker's wage income may be composed of the basic wage, work-age wage, positional wage and welfare subsidies. Many welfare incomes and subsidies are in the form of housing and other types of benefit, while hidden and even illegal income is difficult to calculate. The government is in no way clear about the non-official income sources. Illegal income should be penalized and even confiscated.

Forth, active fiscal policy should be continuously implemented, which has effectively boosted domestic demand and promoted sustained, rapid and sound economic development. Active fiscal policy is an efficient means to promote economic growth and ease various economic and social contradictions, as a stable economic growth system is not in effect. Active fiscal policy is still the necessary support required under a heavy pressure of employment and reemployment, especially the employment posts conversion caused by industry shocks after China's entry into WTO.

Fifth, a better-designed and well-operated social security net can help establish a harmonized society. Although the Chinese government has made a great deal of efforts to eliminate poverty, one of the serious problems facing the government is that more than half of its population (workers and their dependants) is excluded from any type of formal social security and welfare protection, let alone those rural residents. They can share neither the contributory-based social insurance scheme nor tax-financed social assistance. The government should expand the formal social security programs to those excluded. Meanwhile, we must notice that the extension of the formal social security systems can not be the only answer to satisfying the social protection needs of increasing numbers of workers and farmers outside the net. It needs establishing new systems or complementing the old systems that better suit their needs and contributory capacity.

China needs setting up a minimum wage system and subsistence warranty system. The minimum wage is to guarantee that working people would attain the basic income. The subsistence warranty will protect low-income families and unemployed persons from

poverty. The subsistence warranty system was first established as early as in 1993, but proved to be ineffective. The second was set up in June 1993 in China's largest city—Shanghai. After 2 years of implementation, a total of 116 cities had adopted this system in 1995. The State Council officially recommended the system nationwide at the end of 1997. This subsistence warranty had been implemented in 372 cities by January 1998, representing 55.9% of the total number of Chinese cities, which cover 29 provinces, autonomous regions and state municipalities. An increasing number of urban poor have been protected under the program that has an annual investment of 1.2 billion Yuan, but the standards of the present subsistence warranty vary among cities and are actually very low. The relief fund granted to a poor household is confined to 80–350 Yuan in different cities that can only protect poor families from absolute poverty.¹²

Sixth, vocational training should be taken as a priority in government expenditure bills and a major concern of social protection. Vocational training system is an important measure to reduce income gap between rich and poor. As we know, the most vulnerable people are those who are unskilled and semiskilled, with poor qualification and lower education background. They are at the bottom of the labor market, once their job lost, the survival would be the main problem. By providing training support, laid-off workers can improve their human capital and be beneficial to both their competition in labor market and economic growth. Basic education and timely re-training are the most important capacity buildings of the people, and also the essential part of social security net.

There is a need to create new jobs and implement the re-employment projects through retraining. The tertiary sector was underdeveloped and the public sectors were the only channel to provide employment in the past. Now that the tertiary sector and private enterprises have been developing, the unemployed and laid-off workers should be encouraged to find jobs in these fields. Re-employment service centers have been set up to help the unemployed and laid-off workers in some cities for some years. Unemployment management is a new cause for government department of labor protection.

Finally, competition policy in monopolized industries should be encouraged. The monopolized industries rely on the protection provided by the strict economic regulation system. To solve the problem of extortionate income of employees in monopolized industries, further economic system reform should be implemented. In order to lessen the gap between monopolized and non-monopolized industries, central government should regulate some industries, especially the monopolized industries, and relax the regulations of some industries and build up fair competition mechanism.

In short, from the above analysis, we can draw a conclusion that China has been going through a profound transformation phase to the market system. Market reforms have a

¹² An interview made by the Ministry of Civil Affairs, P.R.C.

dual nature. On the one hand, market reforms have a great vitality that has created a wealthier China and offered most of the Chinese people a better material life, but on the other hand, they have also produced unintended problems. Widening income disparity is a pressing problem China facing now. Deepening of the reforms will be much more difficult if the income inequality issue is not tackled more effectively.

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