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The Rise of China and Its Implications for the World Economy

Yih-chyi Chuang
Department of Economics
National Chengchi University

1. The rise of China

Since the adoption of open trade policy in 1978, for the past thirty years China has grown tremendously, between 1978-2007 China GDP grew at 11.29% per year, an increase of 67 folds outperforming any country in the world. In economic size, China is in the fourth place of world ranking only next to the U.S., Japan, and Germany.¹ Based on its past performance, China will inevitably become the largest economy in the world, according to several research resources.² However, due to its large population and relative backwardness in technology, the standard of living measured by per capita GDP in PPP is only \$6,000 about one sixth of the advanced countries. Table 1 shows the economic performance of the world top 5 largest economies.

Table 1 Economic performance of the World top 5 largest economies

Country in world ranking by GDP	GDP in 2007 (billions of US dollars)	Average economic growth rate: 1978-2007	Per capita GDP (PPP) in 2007	Total exports in 2006 (billions of US dollars)	Share of world trade
1. U.S.	\$13,811.2	6.41%	\$47,000	\$1037.3	8.60%
2. Japan	\$4,376.7	5.34%	\$34,200	\$647.1	5.36%
3. Germany	\$3,297.2	5.40%	\$34,800	\$1112.3	9.22%
4. China	\$3,280.1	11.29%	\$6,000	\$969.1	8.03%
5. U.K.	\$2,728.0	7.65%	\$36,600	\$443.4	3.68%

Source: 1. The World Factbook, Central Intelligence Agency, 2008.

2. China in the thirty years of economic development, Social Sciences Academic Press, China, 2008.

¹ In 2008, China surpassed Germany as the world third largest economy.

² For example, according to the Chinese economist Yifu Lin's estimation, China will become world largest economy by 2030.

China's trade with the rest of world also increased substantially for the past three decades, total volume of trade increased from \$20.64 billions in 1978 to \$2173.83 billions in 2007, ranked the third place in world ranking, with an average annual growth rate of 17.42%. For the same period, the degree of openness measured as share of total trade to GDP surged from 9.74% to 66.91%, and the share of exports grew from 6.62% to 37.13%, compared to a rather constant 10% in the case of the U.S. representing a highly open economy to the world. Balance of trade had turned from trade deficit \$1.14 billions in 1978 to trade surplus \$262.19 in 2007 resulting in an accumulated foreign reserves of \$1,528.25 billions ranked first place in the world. Soon China will become world's largest exporter as well.

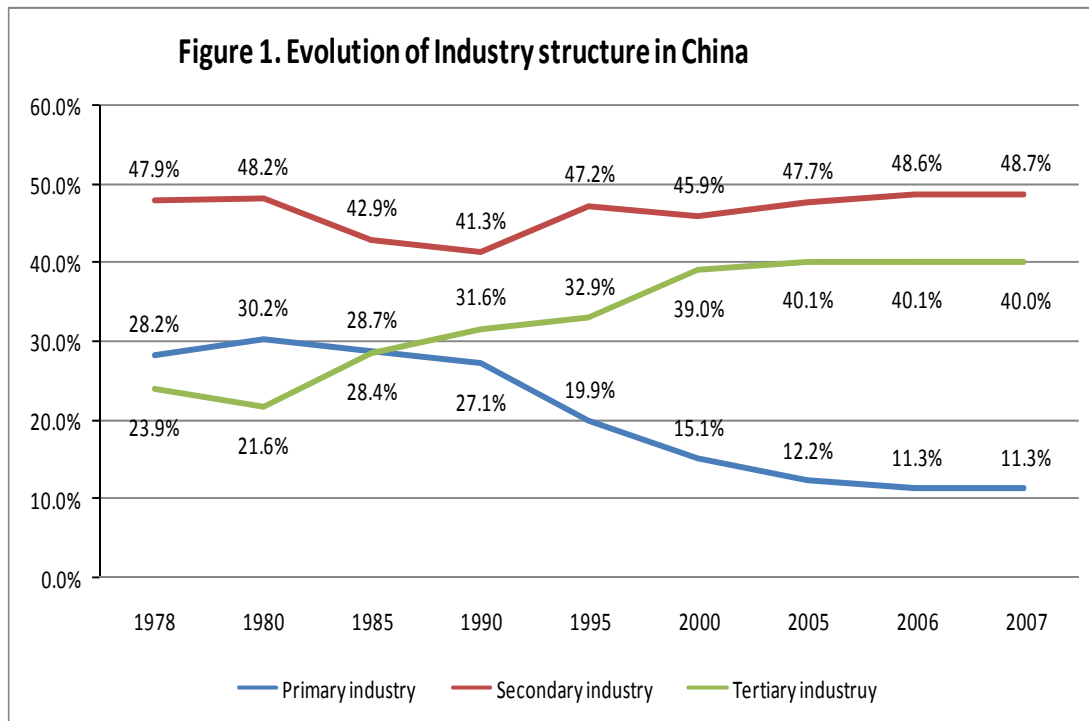
The growth of Chinese economy also reflected a rapid structure change of industry. From Figure 1, the share of primary industry decreased significantly from 28.2% in 1978 to 11.3% in 2007, while that for tertiary industry increased from 23.99% to 40.0%. Note that the share of secondary industry remained relatively stable as the largest sector of the economy with a share of 48.7% in 2007. The rapid economic growth of Chinese economy was supported by rapid accumulation of fixed capital formation and foreign direct investment, which also brought advanced technology to the domestic industry. Figures 2 and 3 present the trend of fixed capital formation and foreign direct investment. Probably about three quarters of China's growth since 1978 has come from the accumulation of capital, which in large part due to its high savings rates. China has saved an average of 37% of GDP over the reform period. Successful firms have to save retained earnings since they cannot rely on bank loans or debt markets. People have to save for health,

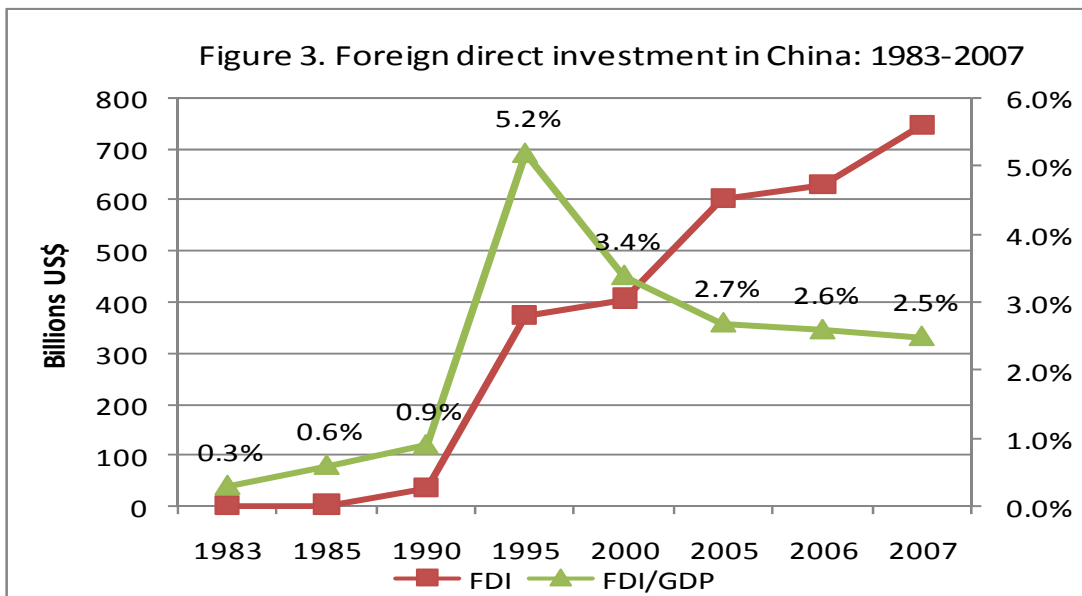
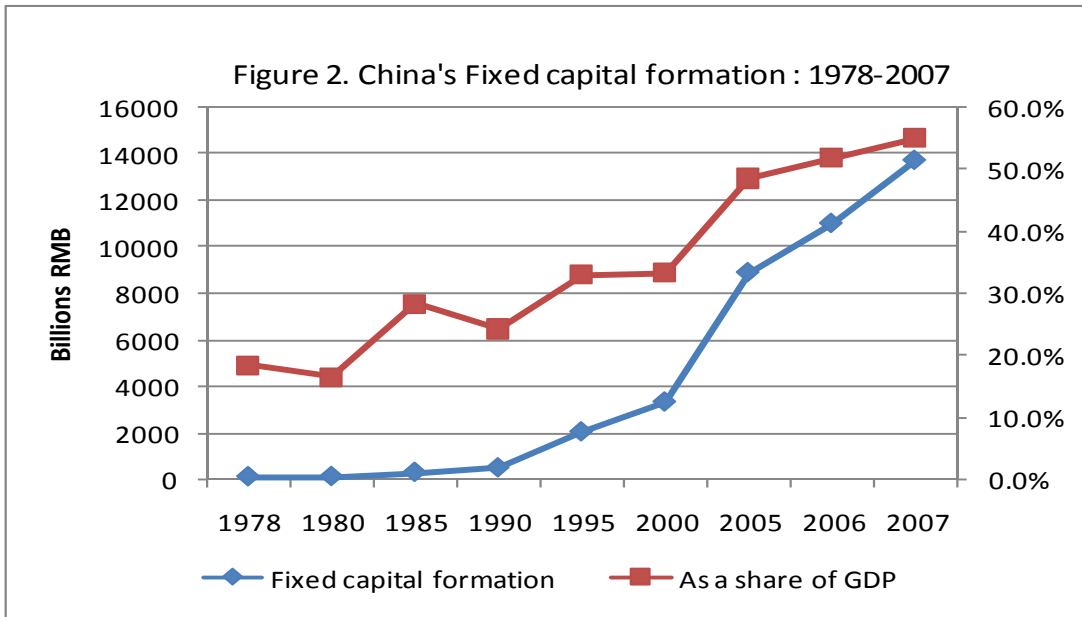
education and housing since these costs are increasingly borne by the individual rather than the state.

As the capital accumulated, Figure 4 shows that the structure within the industry sector also changed from focusing on labor-intensive light industry at the early development stage between 1978-1990 to capital-intensive industry after early 1990s. In 2006, the shares for light and heavy industries are 30.0% and 70.0%, respectively. Moreover, Figure 5 shows that the industry output share of high-tech industry increased from 7.5% in 1978 to the peak of 14.4% in 2003 and then gradually declined to 11.1%, reflecting the technology-upgrading of the manufacturing sector. In the high-tech industry, the output share of foreign invested enterprises consistently increased from 44.4% in 1978 to 73.5% in 2004, representing majority of FDI in China was concentrated on the high-tech industry, which received enormous technology transfer from advanced countries and hence contributed to domestic technology-upgrading. Those foreign invested enterprises were more export-oriented as their export share kept increasing over time from 18.58% in 2000 to 30.60% in 2005 contributing to the accumulation of China's foreign reserves. Figure 6 shows that the export share of industry products also climbed from 49.7% in 1980 to 94.95% in 2007. Among those industry products, machinery and transportation equipment products boosted from 9.36% in 1980 to 49.91% in 2007. After thirty years of economic development, China has become a manufacturing-base economy.

The China's industrialization also reflected on the development of more technology sophisticated products. Figure 7 shows the output trend of information, communication, and technology (ICT) industry. Its value added increased from \$7.6 billions RMB in 1985 to \$1300 billions RMB, an increase of 171 folds and became the largest industry in China

and the second place in world ranking only next to the U.S. Figure 8 shows the export trend of ICT industry increasing from \$21.5 billions in 1996 to \$459.5 billions in 2007 with a export share of 37.73% and over 10% of world total export of ICT products. In 2006, the top 3 export of ICT products were notebook computer, cellular phone, and IC chips.





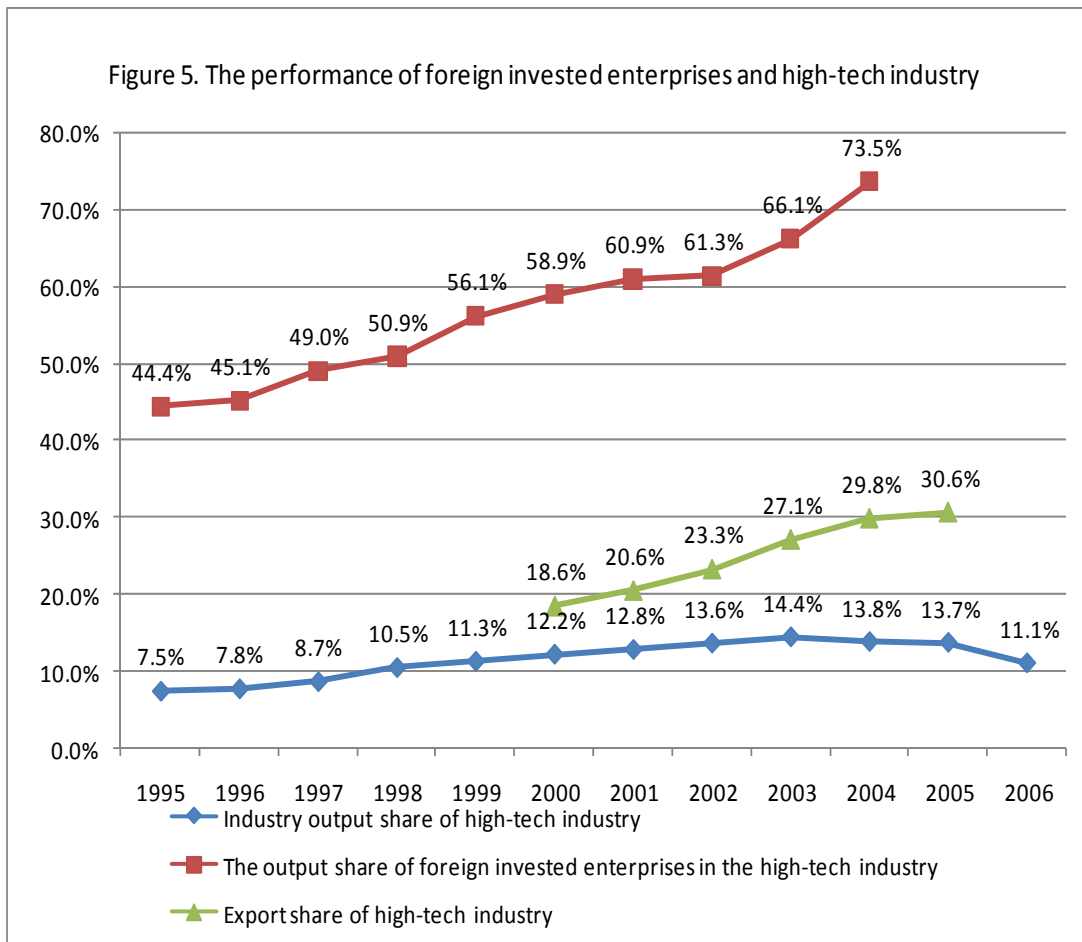
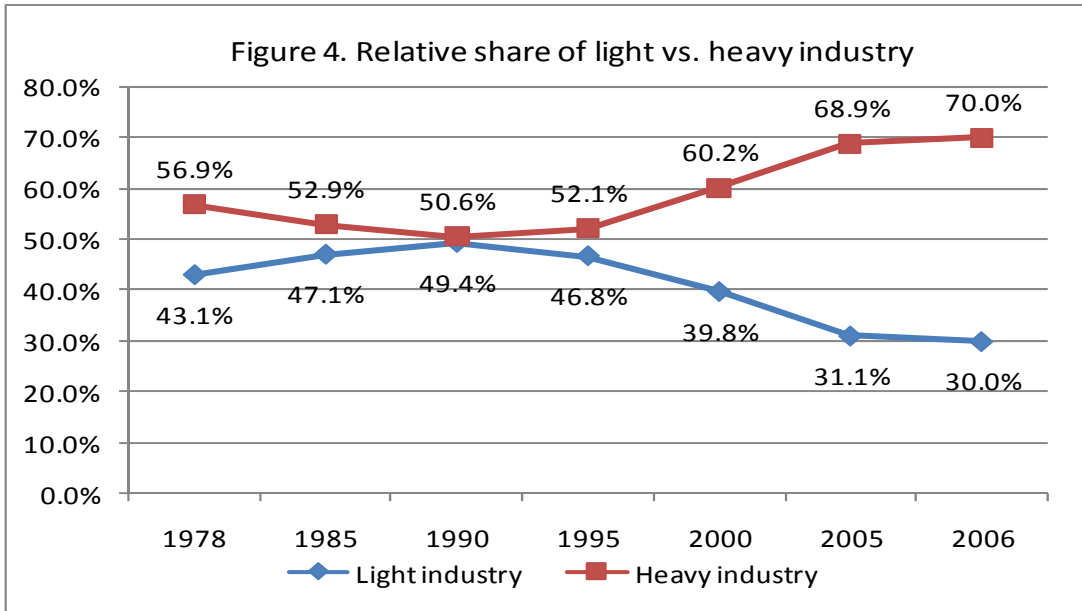
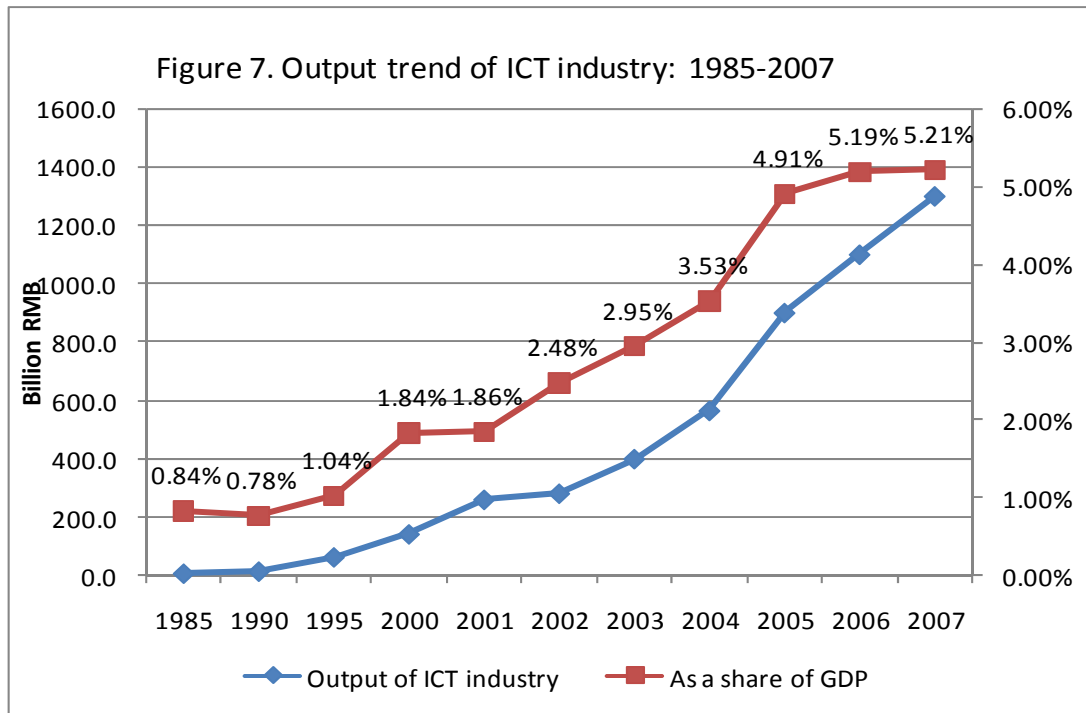
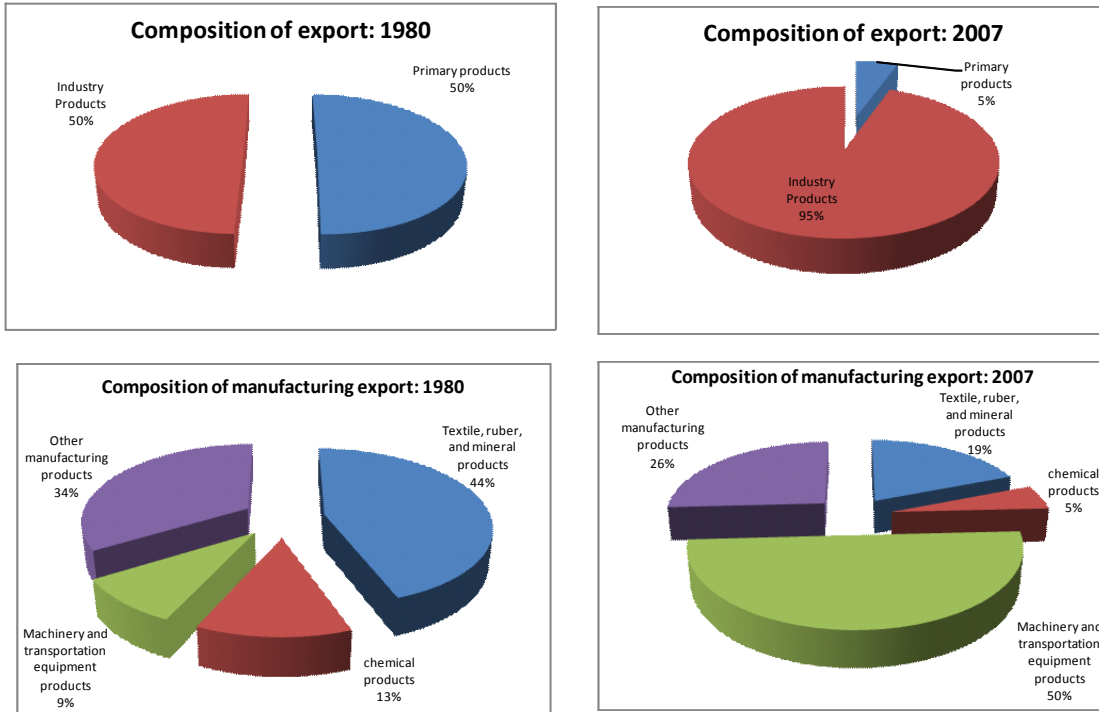
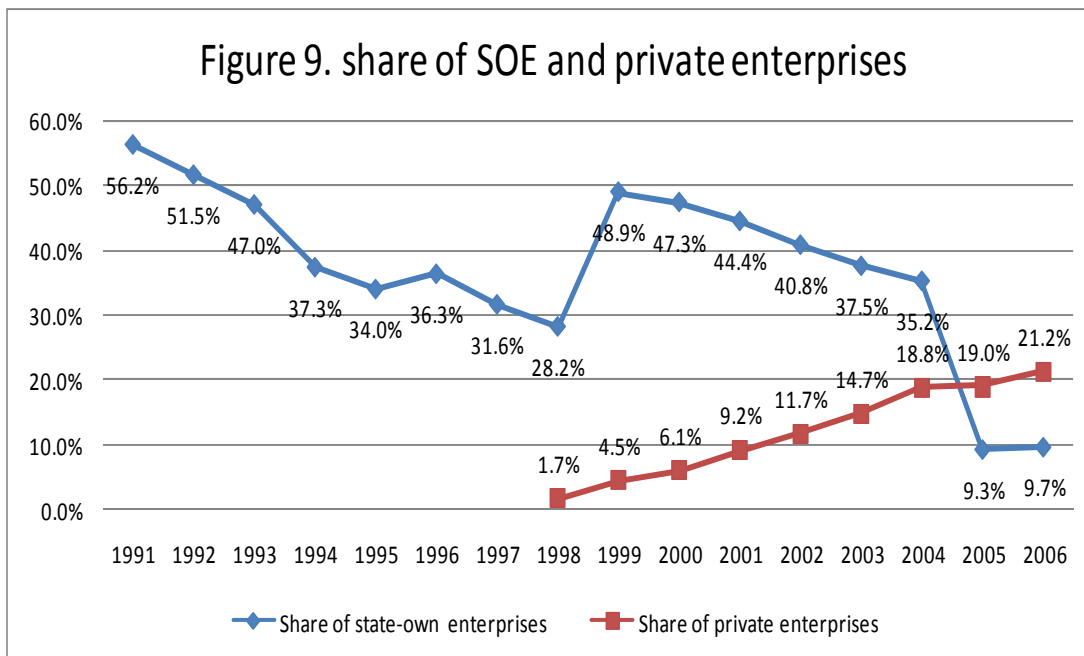
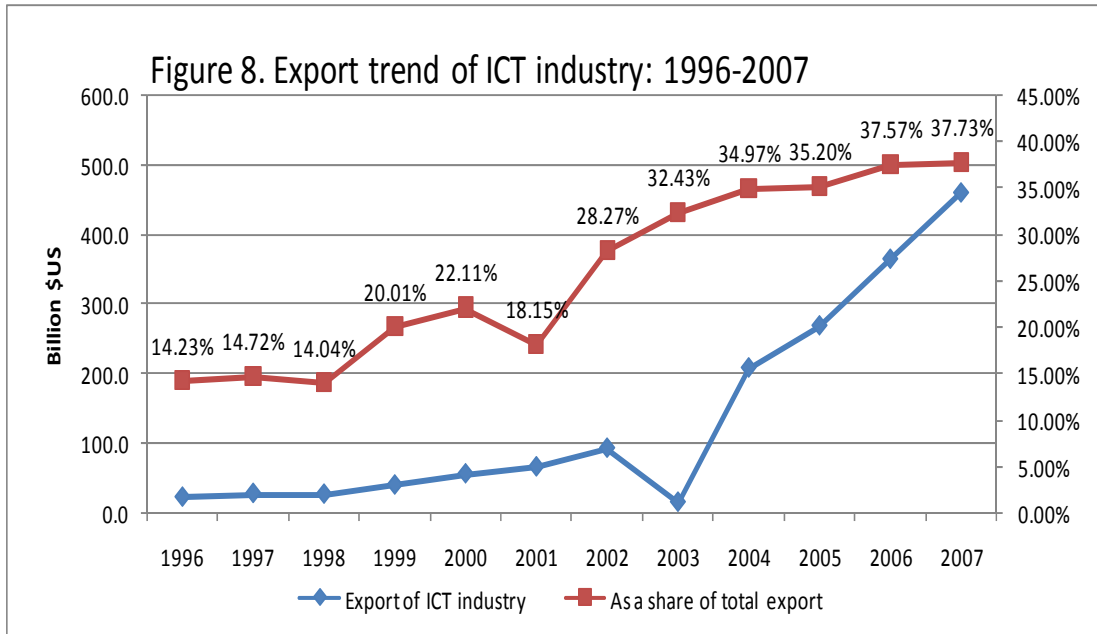


Figure 6. Composition of export: 1980 vs. 2007





The development of Chinese economy also reflected on the increasing share of private sector relative to the public sector. In 1987, Chinese government implement a privatization policy that allows private sector to do subcontracting business, which in

certain degree allowing for the establishment of autonomous private enterprises and the separation of ownership and management rights. Corporation Law was further implemented in 1994. Figure 9 shows that the output share of state-owned enterprises had significantly decline over the years from as high as 56.2% in 1991 dropped to less than 10% in 2006, while that of private enterprises had gained from 1.7% in 1998 to 21.2% in 2006, an average annual growth rate of 5.3%. The living standard of worker had also improved, the average wage rate per worker increased from \$615RMB in 1978 to \$21,001RMB in 2006 with an average annual growth rate of 14.2%.

In, sum, the past economic reform followed by open trade policy has successfully changed China towards a more outward-oriented and manufacturing-base economy and the standard of living in China has also greatly improved which substantially reduced the poverty. The successes of Chinese economic reform is mainly due to the institutional changes from a central planned economy to a market-oriented socialist economy, which provides the right incentive system for the private sector, with the adoption of a comparative advantage development strategy, allowing for the full play of China's abundant surplus labor.³

3. Challenges confronting Chinese economy

Thought the thirty years of rapid economic development has brought prosperity to the China, there are still many challenges confronting Chinese economy. Among those include:

³ See, for example, Lin, Fang, Zhou (2003) for the similar argument for the success of China's economic development.

Low labor productivity

Using official exchange rate, China's labor productivity between 1978 and 2007 was only 1.2 to 5.43% of the U.S. In PPP measure, China's labor productivity was 12.75% of the U.S in 2007. Independent of the choice of data, china is still at a very low development level compare to the U.S. It appears to be at a stage of economic development where other Asian countries started out about one quarter of a century ago. Most of the China's traditional labor-intensive industries are losing competitiveness due to low productivity. Further opening up to international competition after its WTO accession in 2001, Zeng (2005) claims that it will generate a big challenge of creating 100-300 million new jobs in the coming decade to absorb the millions of laid-offs, rural emigrants and newly added labor force. With low re-employment rate of about 10%, it actually exacerbates the problem.

In 2007, the export shares of electric and electronic machinery and high-tech products were 57.58% and 28.56%, respectively. It seems to imply that production technology in China has enhanced greatly. However, two third of machine and equipment investment in total fixed capital investment were mainly from imports. As procession and assembly are the major form of production in many industries, imports of machine and equipment are prevailing in industries such as optics and fiber manufacturing 100%, IC chips 85%, petrochemicals 80%, automobile, numerable machine tools, and textile machinery 70%. However, the ratio of value added of those assembly industries is considered low compared to those of advanced countries. The average labor productivity of those Chinese industries is about one twentieth of that of their counterparts in the U.S. or Japan. Among thirty thousands assembly firms in China, none is in the rank of the

world top 500 firms.

Apparently, China faces the challenges to change its industry structure and production process by creating more jobs and enhance its labor productivity through further technology upgrading and innovations.

Indebted state-owned enterprises and banking system

Though the share of State-owned enterprises has declined overtime, however, SOEs remain actively and employ a large share of labor force. The major problems of Chinese SOEs are their great losses and low abilities of making profits. Nakagane (2000) discusses reasons that lead to poor management and low efficiency in SOEs including (1) Government interventions or lack of enterprises' autonomy. (2) The so-called "soft budget constraint" that no state enterprise, particularly of relatively large size, would be allowed to go in bankruptcy, even if they run long in deficit. (3) Various "historical legacies" and social burdens borne by these enterprises. State firms, for instance, have provided medical cares for their employees. Pensions for the retired employees are a matter of their enterprises. Moreover, excessive employment characterizes SOEs as an important measure for social security. Their workers and employees cannot be dismissed by the state. (4) Low quality of enterprise managers, who are less adaptive to changing market environment than those in the non-state sector. They are not entrepreneurs in the true sense, but bureaucrats at any rate. They are appointed by the government not according to their business ability, but based on their rankings in the bureaucratic hierarchy. Lin and Li (2006) also claim that the lack of viabilities of SOEs due to excessive policy burdens put on SOEs has caused the cost inefficiency; and removing

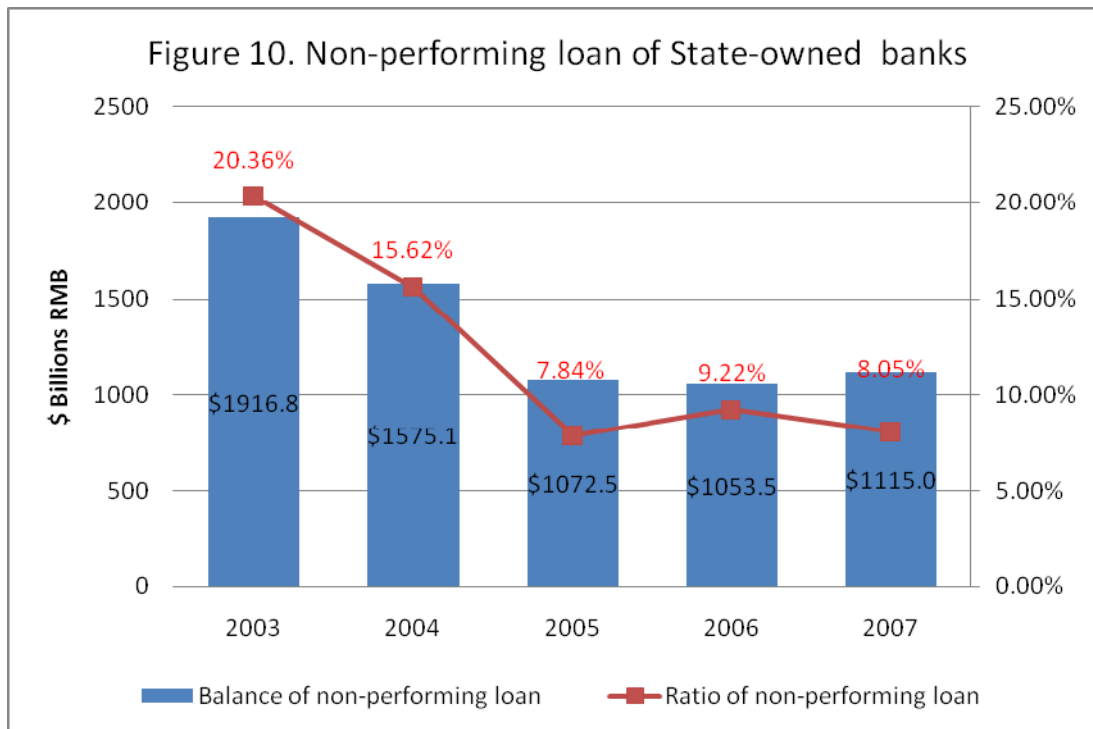
policy burden and effective external mechanism of enterprise governance need to be established. Table 2 shows the efficiency and profitability of SOEs. From 1985 to 1995, their wage share had increased from 22.02% to 37.08% and average wage in 1995 was above that of private industry. However, SOEs' profit ratio had significantly declined and their labor productivity was significantly less than that of private industry.

Table. 2 SOE Efficiency and Profitability								
	Wage Share (%)		Profit-Tax Ratio (%)		Average Wage (yuan)		Labor Productivity (10000 yuan)	
	1985	1995	1985	1995	1985	1995	1985	1995
Total	25.14	33.1	35.06	15.64	1042	5,086	1.277	7.492
State-owned Enterprises	22.02	37.08	32.94	13.45	1164	5,546	1.598	6.739
Collective-owned Enterprises	34.84	33.15	46.96	22.26	863	3,811	0.799	6.17
Private Industry		16.83		50.71		4,086		9.797
Joint Industry	21.08	32.79	64.44	18.45	1051	5,491	1.681	9.196
Share-holding Industry		26.22		25.63		6,891		12.482
Foreign Founded Industry	23.16	17.8	31.9	20.29	2138	7,590	4.693	19.548

Source: Table 2., Nakagane (2000).

At early 2000s, the scale of nonperforming loan in China's banking system is considered to be huge. In 2001, the nonperforming loan of state-own banks reached \$2.3 trillions RMB, with a NPL ratio of 25.37%. The cause of NPL is mainly the result of soft budget constraint of SOEs. Owing to the policy burdens of SOEs, state-owned banks intentionally grant loans to SOEs even knowing that those SOEs may not be able to payback the loans. After the Asian financial crisis in 1997 and later the China's accession to WTO, marketization of state banks became an inevitable means to improve efficient in the banking system. This includes financial restructure to increase capital adequacy ratio of the four state banks, establishment of Asset Management Cooperation to solve NPL

problem, improvement in internal governance and external control, and transferring state banks into stock banks and encouraging them to go public in domestic and oversee stock markets.⁴ Figure 10 shows a significant improvement of NPL between 2003 and 2007 with a NPL ratio less than 10% since 2005. Therefore, a further reform to remove policy burden of state-owned enterprise and banks becomes a critical issue, and privatization and marketization seem the right direction to go for the future development of SOEs and banking system.



The erosion of government revenue and an increase in government budget deficits

⁴ As of January 2nd 2008, the world's top three banks in terms of market value were all Chinese state holding banks—the Industrial and Commercial Bank of China, the Construction Bank of China and Bank of China. However, these valuations are probably based on the expectation of China's rapid economic growth, and not based on them enjoying high profitability or their management talent becoming world class.

A fiscal centralization reform was implemented in 1994, the central government established its own tax collection system which resulted in the erosion of tax revenue received by local government. The share of tax revenue by central government increased from 22% in 1993 to over 50% after 1999 and reached 54.1% in 2007. However, the expenditure share between central and local governments has not changed accordingly. On the contrary, the expenditure share of local government increased steadily from 52.6% in 1978 to 76.9% in 2007. Since 1994, the expenditure share of local government had reached 70%. Apparently, revenue received and expenditure required were imbalance for local government. This change significantly affects Chinese government's ability to provide public goods and services. Over 55% of public expenditure incurred by provincial government and below. City and township governments provided 100% of unemployment benefits and social welfare expenditure. County and village governments offered 70% of total education budget and 55-60% of health care expenditure. As there are multiple levels of government hierarchical system in China and local governments cannot raise money by issuing public bonds as in the Western countries, the imbalance in revenue and expenditure of local government has become a severe problem since the 1994 fiscal reform.⁵ Figure 11 shows the time trend of local government's revenue and expenditure as a share of GDP.

The effect of 1994 Fiscal reform on China's economic growth is inconclusive, for example, Ma (1997) finds positive effect, while Zhang and Zou (1998) find negative

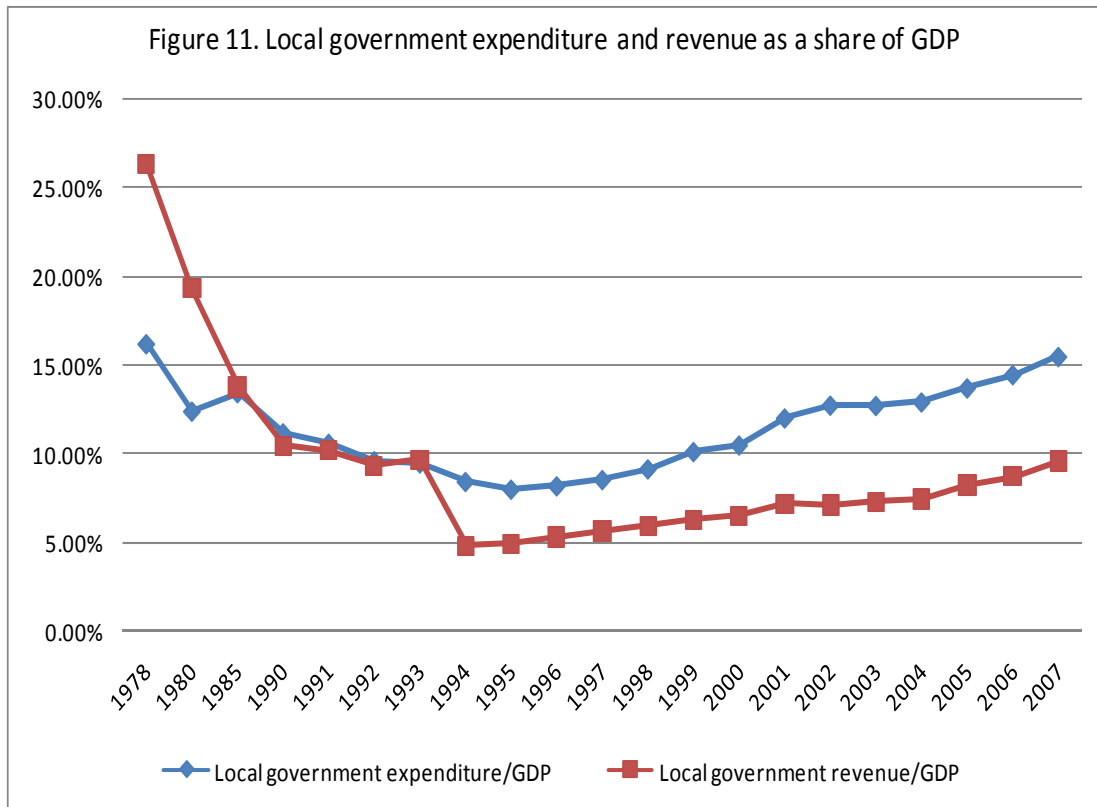
⁵ In order to cope with the increasing burden of expenditure share by local government, an extra- and off-budgetary revenue has been emerging by collecting local revenue extorted by trick or by force from fines and local fees to compensate the financial gap of the local government. This extra- and off-budgetary revenue usually escapes from the monitor of central government and jurisdiction, and it in turn becomes a hotbed for bribery and corruption. In 2006, the estimated outside budget revenue was \$640.8 billions RMB, about 15.63% of total government fiscal revenue.

correlation. Kanbur and Zhang (2005) show that fiscal centralization reform in 1994 may influence regional income inequality. West and Wong (1995) discuss fiscal decentralization and increasing regional disparities in education and health status.

Since 1978, government revenue and expenditure has increased steadily with a rate higher than the economic growth rate. Government revenue increased from \$112.2 billions RMB in 1978 to \$5,130.4 billions RMB in 2007 with an average annual growth rate of 14.05% and government expenditure rose from \$115.9 billions RMB to \$4,956.5 billions RMB with an average annual growth rate of 13.95%. However, during the period government has run a budget deficit, from \$14.65 billions RMB in 1978 to \$216.25 billions RMB in 2006, with an average budget deficit as a share of GDP around -1.27%. In 2007, the first time that government experienced a budget surplus of \$173.86 billions RMB. As the outbreak of global financial crisis in 2008, Chinese government has recently announced a 4 trillions RMB (or \$580 billions) spending, about 15% of GDP, to stimulate the economy so as to sustain 8% target economic growth rate in 2009.⁶ This stimulus package will lead to a budget deficit as high as \$950 billions RMB or 3% of GDP, a close call according to international standard.⁷ However, with small external debt about 5.11% of GDP and huge foreign reserves of US\$1.95 trillions, China is relatively sustainable for its huge stimulus plan compared to other economies in the world.

⁶ In coping with this wave of global financial crisis, many countries had adopted expansionary fiscal policy to stimulate the sluggish domestic demand. For example, the U.S. proposed a stimulates package of US\$787 billion, about 5.7% of GDP, and the UK, Japan, and Germany are about to spend US\$750 billion, US\$520 billion, and US\$300 billion or equivalent to 2.7%, 1%, and 1% of its GDP, respectively.

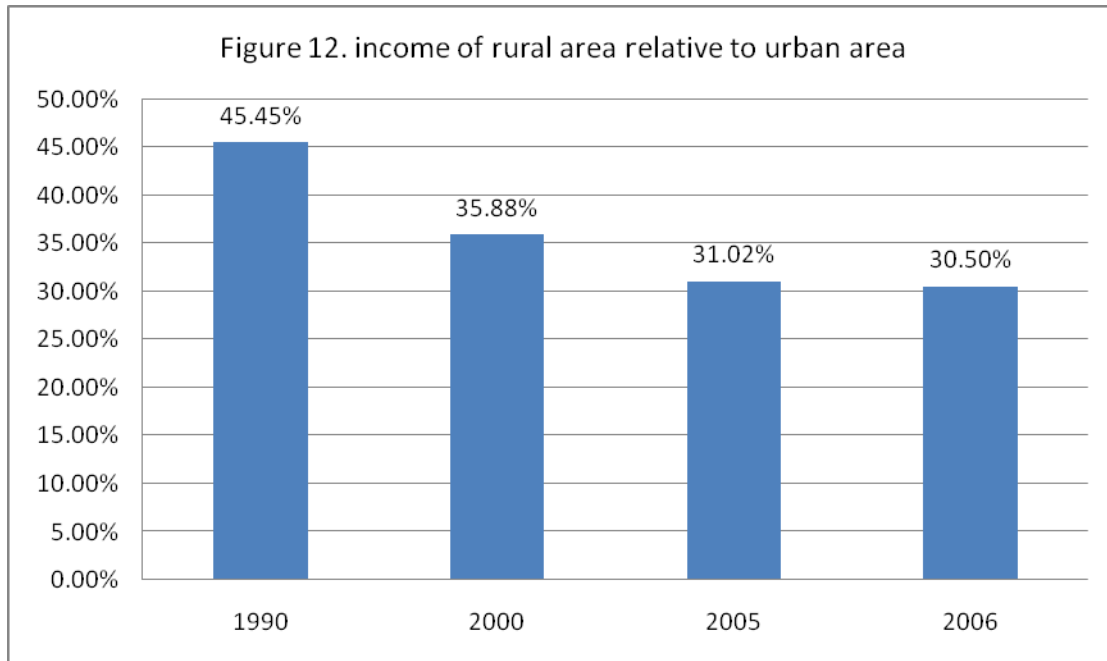
⁷ The U.S. proposes a spending of \$700 billion, about 5% of its GDP, while U.K spends \$75 billion, Japan \$52 billion, Germany \$30 billion, corresponding to 2.7%, 1%, and 1% of their GDP, respectively. According to the CIA World Factbook, the external debt to GDP ratio for the U.S., U.K., Germany, Japan, and China are 99.95%, 374.96%, 159.92%, 34.93%, and 5.11%, respectively.



Widening of Rural-urban inequality and mass floating population from rural to urban area

The economic development of Chinese economy is characterized by mass surplus labor in agriculture sector with a rural-urban dual economy, which lead to the widening of rural-urban disparity and the problem of “San Nong” (literally, “three agrarian”, that is issues related to agricultural, the countryside, and farmers). Despite the growth in per capita income for the past three decades, the ratio of urban income to rural income increase from 2.57 in 1978 to 3.33 in 2007 with income differential increased from \$210 RMB to \$9,645 RMB. The regional income disparity also widened over time. The income differential between eastern and central regions rose from \$60 RMB in 1978 to \$3,133 RMB in 2000, while that of eastern and western regions increased from \$38 RMB

to \$2,152 RMB for the same period. Figure 12 depicts the income of rural area relative to urban area. Using national level data, Shang and Kanbur (2003) find that across provinces and within provinces, between rural and urban areas and within rural and urban areas, social inequalities, such as education and healthcare provision, have increased substantially since the reforms began.



As the economy industrialized, the population share of rural villages decreased significantly from 82.1% in 1978 to 55.1% in 2007, while the share of non-agriculture labor force in total labor force of rural villages increased persistently from 7.1% in 1978 to 38.2% in 2007. The widening of regional disparity under rural-urban dual economy had facilitated mass labor migration from rural area to urban area with a significant amount of population were unemployed or part time workers. As a result, the floating population increased from 70 million in 1993 to 150 million in 2008. It was estimated that 550 million of migrant workers who are farmers and village workers will move to

urban area by 2015, and the floating population will increase with a speed of 6 to 8 million people per year, which amounts to 400 million floating population in the urban area by 2015.⁸

Among those floating population, they are aged between 16 and 40 years old and usually work as laborers in construction, repairing and manufacturing industries, and 80% of them are with middle school education or below, 70% of them receive no training. How to create enough jobs for them would be a hard task for the government but a critical factor for the stability of the society and sustainability of economic development.

However, applying flying geese pattern of development by moving development momentum westward to the central part of China might be a feasible solution. For example, the development of six central key provinces such as Hunan, Hupei, Chaingxi, Honan, Anhuai, Shangxi, and nine central major cities like Wuhan, Hofei, Wuhu, Nanchun, Ganchow, Binchow, Tsingshiang, Jauzou, Taiyuan,⁹ and with the construction of high speed railways and huge labor migration from the east to the west¹⁰ may trigger a new era of China's economic development, which brings concurrent growth from the east to the west and trickles down to all the people involved in the process in general. This westward development strategy is hopefully and very likely to narrow the inequality between the east and the west and between urban and rural areas in the near future provided adequate and sufficient capital injected into the region.¹¹

⁸ Report by The Epoch Times, 2007. 12.14. Website <http://hk.epochtimes.com/7/12/14/56664.htm>

⁹ Geographically, Wuhan is the distributional hub of the central China's economic development.

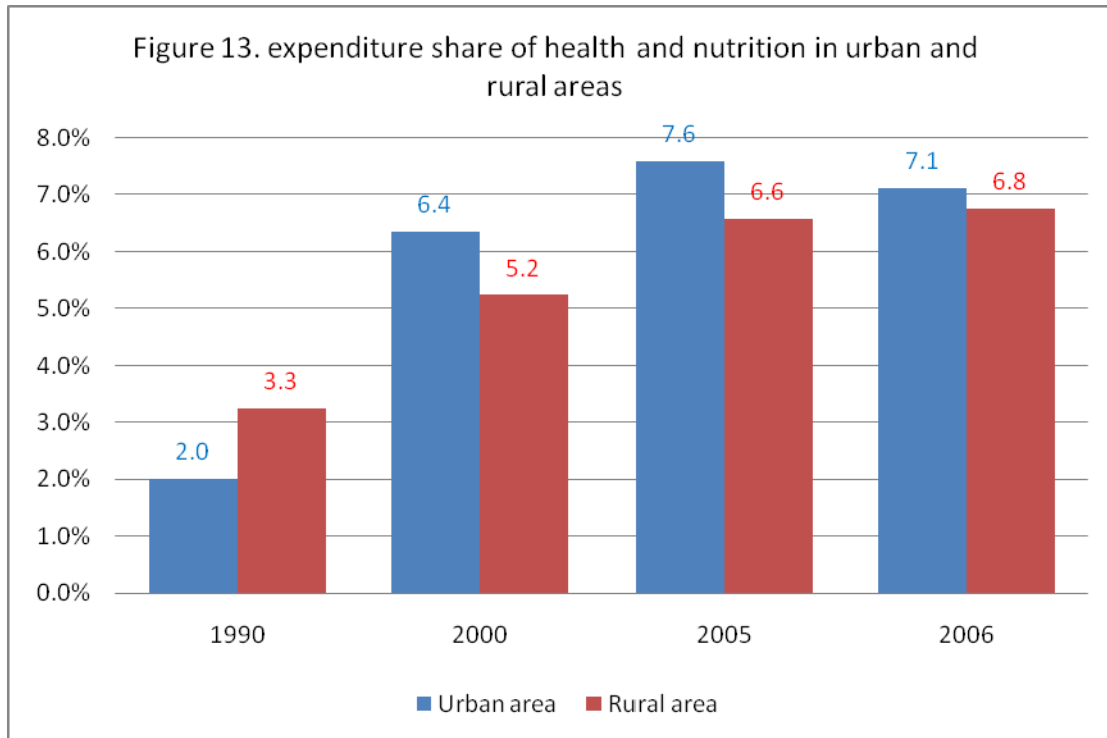
¹⁰ It was estimated by Tsai Jin magazine in China that around ten millions of workers moved west to the inner China.

¹¹ In 2008, the average growth rate of retail sale for the six central key provinces was between 22.7% to 23.7% higher than that of Shanghai's, the most powerful consumption city in China, 17.9%.

The lack of a rural health care system

As the economy developed, however, social development in China is lag behind. Increasing expenditure in health care over time for both rural and urban residents is a common phenomenon. The total expenditure on health care as a share of GDP is 4.73% in 2006, and government budget on health care expenditure is only \$155.3 billion RMB about 17.9% of total expenditure. Figure 13 shows that the expenditure share of urban residents increased from 2.0% in 1990 to 7.1% in 2006, while that of rural residents increased from 3.3% in 1990 to 6.8% in 2006. In 2006, health care expenditure of urban residents was \$620.9RMB about 3.24 folds of that of rural residents' \$191.5RMB. The out-of-pocket expenditure on health care has increased implying an increasing burden on household and public health care system.¹² At the current situation, China seems to have a long way to go in terms of improving equity in financing and provision of essential health care for all.

¹² In China, the Rural Cooperative Medical Schemes and Medical Financial Assistance schemes, for lower-income groups in cities, only reimburse 30% of health costs which means out-of-pocket payments of 70%, regardless of income. According to the OECD's definition of universal access, out-of-pocket payments for health should not exceed 30% of a person's income.



Degradation of Environment

Chinese economy grew at two-digit growth rate in the 1990s. This booming economy, however, has come alongside an environmental crisis. Sixteen of the world's twenty most polluted cities are in China and ninety percent of the country's cities have contaminated groundwater. Industry releases 2,000 tons of airborne mercury each year, which settles into the soil, contaminating 12 million tons of grain each year and threatening food safety, including China's \$31 billion agricultural export market. Time magazine reported that only 6 percent of Chinese agricultural products imported to the United States are free from pollution.

China suffers from the double problems of water shortage and water pollution. About one-third of China's population lacks access to clean drinking water. Its per-capita water supply falls at around a quarter of the global average. Some 70 percent of the

country's rivers and lakes are polluted, with roughly two hundred million tons of sewage and industrial waste pouring into Chinese waterways in 2004. Desertification in China leads to the loss of about 5,800 square miles of grasslands every year. Excessive farm cultivation, particularly overgrazing, is one of the leading causes of desertification.

In 2008, China surpassed the United States as the largest global emitter of greenhouse gases by volume (On a per capita basis, however, Americans emit five times as much greenhouse gas as Chinese.) The increase in China's emissions is primarily due to the country's reliance on coal, which accounts for over two-thirds of its energy consumption. It contributes to sulfur dioxide emissions causing acid rain, which falls on over 30 percent of the country.

China has a population over 1.3 billion. The results of Chinese growing economic prosperity and rapid development mean increasing urbanization, consumerism, and pollution. In 1985, China produced 9,000 passenger cars. By 2007, the number hit 4.8 million, with twenty-three million passenger cars on China's roads. By 2000, motor vehicles were the leading cause of China's urban air pollution.

Evidently, China is on its way to become the world largest polluter. China's State Council, the nation's highest administrative body, reported that pollution cost the country more than \$200 billion in 2005, almost 10 percent of the country's GDP. Thus, a development strategy taking into account of environmental quality is urgently needed for the sustainable development of Chinese economy.

4. Implications for the global economy

China's participation and integration into the world economy

After thirty years of rapid economic development by opening trade with global economy, China today is an important member of the world community. Using purchasing power parity measure, data from World Bank shows that China has a GDP of \$7096 billions ranked as second place in the world only next to the U.S.'s \$ 13,751 billions. The Chinese economy is about a half of the U.S. economy. In terms of per capita GDP, about twenty to fifty years China will surpass the U.S. By 2020, about a quarter of China's population located in some coastal provinces that exceeds the size of the U.S. population could enjoy the same standard of living as the U.S.

China's rapid economic growth also means that China will soon be the world's largest exporter and importers. Since China entered the WTO in 2001, it has almost quadrupled its exports while imports have more than tripled. In 2007, its export of merchandise reached US\$1217.8 billions with 2nd place in world ranking and its imports of merchandise was US\$955.8 billions, third place in world ranking. Its trade surplus reached \$262 billion with an accumulated foreign reserves of \$US1528.3 billions, first place in world ranking. Some 45 per cent of its trade receipts came from Asia, while Europe and North America each obtain 21 per cent of China's exports.

In 2007, China's ratio of exports of goods and services to GDP at 40.83% was more than three times of 11.72% in the case of the U.S. Two third (61.95%) of China's imports originate in Asia and half of them are from ASEAN, it therefore induces economic growth particularly for other Asian countries. About 40% of China's exports go to EU and the U.S. In this regard, China is well integrated in Asian region and the global economy.

China is also adopting international standard and practices. China copies the Company law and stock market regulations from the U.S., models its patent office along the lines of the German patent office, adopts international accounting standards, and as early as 1994 asked its bank to adopt the Bank for International Settlements' capital adequacy ratios. Thus, China is very much integrated into the world economy.

International division of labor and production networking

Among those traded goods, machinery and transport equipment is the leading sector in both China's exports and imports with a corresponding share of 47.44% and 43.16%, respectively. Moreover, 73.89% are imported from Asia and 44.47% are exported to Asia. This rigorous intra-industry trade in machinery and transport equipment implies an international division of labor among Asian economies and an important role played by China as the world factory. Thus, the rise of China promotes international division of labor and global production networking and facilitates the process of regional economic integration in Asia.

The China Price Factor

China's comparative advantage in unskilled labor and mass production in labor-intensive products as a world factory implies a wage constraint for unskilled labors employed in Western industries. It further puts downward pressure on wage and thereby increases unemployment rate in the West. However, the China price provides cheap manufactured consumer goods to the advanced countries, and thereby support the mass consumption in their domestic market and also helps to reduce the pressure on inflation.

Of course, the rapid growth of Chinese economy also increases the demand for raw materials and energy resources such as oil, gas, coal, copper, bauxite, aluminum, iron and steel, which in turn jet up their prices. However, as China is a relatively resource-scarce country, China's impact on long term world market price remains small. In the long run, the prices of natural resources increase only if the marginal cost of extraction increases.

From world factory to consumption market

The center of world economic activity will increasingly shift to Asia. Shocks to the U.S. and European economies, or stagnation of these economies, will have less and less impact on Asia. In 2007, 20.1% of China's exports of goods went to Europe Union and 18.74 to the U.S. For Asia to be self sustainable, the export-oriented strategy adopted by most Asian economies need to switch focus more on the serving of the intra-regional markets, especially the consumption market. As China developed by increasing the purchasing power of the economy and with the accession to WTO, China has the potential capacity to transform the economy from world factory to consumption market. This change will benefit the region by re-strengthening regional production networking on the one hand and increasing intra-regional trade on the other hand, both would definitely not only stabilize Asian regional development but also reduce possible damages generated by external shocks.

The recent global Financial Crisis started at the third quarter of 2008 caused by the sub-prime mortgage loans crisis in the U.S. has gradually transmitted to the global real sector. As a result of sluggish world demand of merchandise trade due to credit crunch and the shrink of personal wealth, export-oriented Asian economies suffered from a

serious hit. In January 2009, China's exports dropped by 17.5%, the largest decline since 1994. In order to stimulate exports, some Asian economies have devalued their currencies. For example, as of early February 2009 the Korean Won has fallen 31% against the US dollar in the past year. Devaluation game is not the appropriate policy at the moment as the decline in exports was mainly caused by the income effect of sluggish external demand not the price per se. The proper policy should be collectively to increase the domestic consumption of Asian economies as a whole to stimulate domestic demand instead of exports.

It is the time to change the twisted structure of the West being engaged in excess consumption, while Asian economies continuously produced and supplied cheap products to the West and saved their earning from exports as foreign reserves to finance the borrowing from the West. Incidentally, the global financial crisis actually provides a precious opportunity to change China from world factory to consumption market which is beneficial to the Asian economy and the formation of Asian regional integration.

However, since 2001 the consumption rate, the GDP expenditure share of final consumption, in China has remained below 60%, far less than the world average of 75% in the same period. The growth of domestic final consumption is also less than that of fixed capital investment and GDP. Moreover, the labor income share has persistently declined since 1996 from 67.74% to 57.68% in 2004, reflecting that the fruit of economic growth did not trickle down to the majority of working class. In this regard, increasing labor income, especially income of rural area, and providing better social safety net, such as social insurance, healthcare, and compulsory education are crucial for reducing high saving rate and stimulating domestic final consumption.

Need to transfer China into a R&D and innovation center

In terms of technology transfer, the West used to play an important role in China through FDI. China received accumulative actual realized FDI \$780 billions. 19.23% of the gross output value of industrial enterprises with annual sales revenue in excess of 5m RMB (USD 0.6m) within China was produced by foreign-funded enterprises, and 10.97% in enterprises funded by Hong Kong, Macao, and Taiwanese entrepreneurs. That is, non-domestic enterprises account for approximately one-third of Chinese industrial output. In 2005 the foreign-funded industrial enterprises alone, with their approximately one-fifth share of industrial output in China, accounted for 58.30% of China exports (and 58.71% of China's imports) reflecting the use of cheap Chinese labor in their production by the West's firms. However, China also starts to invest abroad hence likely to exercise its political influence in the world economy.¹³

Over 50% of total exports are from foreign owned enterprises. In 2007, total trade, export, and import shares of foreign enterprises were 75.7%, 57.1%, and 58.8%, respectively. Of total exports, 50.7% comprised of processed or assembled products. Goods made in China are mostly labor-intensive and low value-added products. Note that the main source of China's trade surplus is from the trade surplus generated by foreign enterprises, especially through their exports of processed or assembled goods. As Chinese assembly firms only received limited profit margin by using cheap labor under assembly production, thus the huge trade surplus may actually represent huge excess

¹³ Cheng and Ma (2007) estimates that China's aggregate FDI outflow will reach \$20 billion around 2008, \$30 billion in the early 2010's, and \$50 billion by 2015.

profits of the multinational enterprises in the advanced countries. The multinational enterprises can extract the export surplus of their foreign affiliates through transfer pricing of intra-firm trade by selling to the parent company at lower price. In 2000, intra-firm export was 15% of China's total exports and 1.2% of world total intra-firm exports.¹⁴ Thus, international division of labor in Asia is fully reflected on the intra-industry and intra-firm trade among multinational enterprises and Asian economies. For the upgrading and sustainability of China's technology, an important step for China at the current stage is to engage in more self R&D activities and eventually turn China from a world factory into an innovation center.

To develop Shanghai as a financial center and internationalization of RMB

Although Hong Kong de facto is a global financial but in order for China to exercise and mobilize capital and credit markets for its own long term development Shanghai has to develop as a regional as well as global financial center. However, at the moment the employment share of financial sector in Shanghai is less than 3% far away from 10% in the case of the most global financial centers, such as New York and London. Therefore, it is still a long way to go for Shanghai to develop as a regional as well as global financial center.

However, since 2000 the huge China's trade surplus with the advanced countries, especially the U.S., has triggered the pressure on the appreciation of Chinese currency RMB. Nevertheless, the major neighboring economies in Asia all enjoy trade surplus with China. Given China liberalizes its capital account the RMB is likely to play an

¹⁴ OECD, AFA and ITS databases, February 2003.

increasingly important role as a world currency or eventually as part of an Asian currency unit. Given the size of Chinese economy and stable economic growth and its closer industrial and trade relations with the neighboring Asian economies, RMB has the potential to become the key currency of the region. Moreover, for the stability of Asian regional development Asia should consider forming an Asian common currency Area, with RMB and Japanese Yen as the anchoring currencies. However, at the moment RMB is not a convertible international currency and the degree of openness for RMB under capital account is also imperfect. Thus, without further openness in financial market, they will limit the degree of acceptance for RMB as a regional key currency.¹⁵

Zhang (2005) claimed that RMB as a regional key currency will certainly be the most important component of Asian monetary cooperation and proposed to take gradual coordinating strategies to realize the RMB Asialization target, which is an inevitable process for RMB internationalization. Notice also that one of the advantages of RMB being an international currency is that it will allow China to have trade deficit which is conducive for China to be a world consumption market.

5. Concluding remarks

This paper investigates the past performance of China's economic development since its open door policy adopted three decades ago, examines the current challenges fronting Chinese economy along its rapid industrialization, and discusses the implications of the rise of China on the global economy. The success of China's economic development can be attributed to the institutional change from a central planned economy

¹⁵ In fact, recently China was seeking to promote RMB as an international currency after signing 650 billion RMB (\$95 billion) in swap agreements with Argentina, Indonesia, South Korea, Hong Kong, Malaysia and Belarus. China and Brazil also proposed to conduct bilateral trade in RMB and Reals.

to a market oriented economy and its high saving rate and rapid accumulation of capital together with a sizeable foreign direct investment. By opening the trade and developing labor-intensive industry to begin with according to its comparative advantage, it enables the Chinese economy to augment its industry base and provide a wealthy environment for the development of private sector.

However, as the economy developed it also encountered several difficulties and challenges, which including increasing regional disparity, worsening government budget deficits, losing profits state-owned enterprises and banking system, degenerating health care system, and deteriorating environmental protection. For the sustainability of the rapid growing economy, the Chinese government needs to pay more attention to the issues and accommodate policies to mitigate the negative impacts. In this regard, further fiscal reform and social welfare programs need to be implemented. Shifting gear of development from eastern and coastal to central and western regions is urgently wanted to realize the benefits of so-called flying-geese pattern of concurrent development.

As for the implications of the rise of China on global economy, measuring either by the size of the economy or the volume of trade in Asia as well as in the world China has been well integrated into the world community. The China price factor has contributed to the stabilization of the price level in world economy and at the mean time sustained the mass consumption in the advanced countries since 1990. Apparently, the rise of China has accelerated the de facto Asia regional economic integration in terms of investment and trade, which facilitate the resources reallocation within the region and create the establishment of regional production networking. The recent development of ASEAN plus 3 can be viewed as the institutionalization of the market-driven process of Asian

regional integration, which in certain extent can be attributed to the rapid rise of China.

The role played by China in the region will be definitely increasing especially after the global financial crisis started from the third quarter in 2008. Asian economies should carefully consider modifying their outward oriented development strategy, which heavily relies on the western countries. The change of Chinese economy from world factory to consumption market will be the critical factor and an inevitable move as China experienced huge trade surplus with the western countries and accumulated tremendous foreign reserves amounts to two trillion dollars. Moreover, the internationalization of Chinese currency, Renminbi, seems plausible as the expected weakening of US dollar in the future due to US government's stimulus fiscal policy and quantitative easing monetary policy to deal with the credit crunch triggered by the sub-prime mortgage crisis. The lesson for Asia from global financial crisis is that Asia as a whole needs to undertake a structural change from the supplier of mass and cheap production with high saving rate to the demander of mass domestic consumption to reap the fruit of economic development. Again, China plays a very important role in this aspect. Therefore, the rise of China has a crucial implication not only for Asia but also for the world economy as a whole. It may take time to accomplish but the trend is foreseeable.

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