

China's Dragon Economy: Achievements and Challenges

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1. Phenomenal growth from 1978 to 2007

The People's Republic of China is probably the biggest success story of economic growth of any major economy in the last half century. A comparison of the GDP per capita (based on purchasing power parity (PPP) in constant 2005 US dollars) of selected Asian countries (some of which are considered 'Asian miracles') from 1960 to 2007 would show that in 1980 China had the lowest GDP per capita, but by 2007 it had already overtaken India, the Philippines and Indonesia (see Chart 1a).

If the growth path of the Asian countries in the same sample were placed on equal footing in 1980 (the GDP per capita in 1980 of all the countries are indexed to 100), China would be the best performer among all the countries, increasing its purchasing-power GDP per capita almost 10 times (960%) between 1980 and 2007 (see Chart 1b). The next best performer, Korea, increased its GDP per capita only by 450% from 1980 to 2007. Thailand increased its GDP per capita 340% during the same period; Malaysia and Indonesia between 250% to 260% and the Philippines a mere 122% (increasing only 22% in 27 years!) Except for the Philippines, all the other countries are some of the best Asian performers and considered by many analysts as Asian 'miracles.' China's performance between 1980 and 2007 bested all of them!

The next two sections discuss how China was able to be the world's best performer from 1980 until the onset of the Great Recession. China's experience provides clues on why successful economic development has eluded many developing countries.

2. Initial conditions of China's phenomenal growth before 1978

The role of initial conditions in the success of economic reforms in China starting in 1978 is quite controversial. While many of the events that occurred before the economic reforms in 1978 were traumatic and caused tremendous suffering (the Great Leap Forward is said to have caused one of the biggest famines in the 20th century), they also resulted in initial conditions that definitely contributed to the rapid economic development of China. Most analysts agree that the initial conditions before the economic reforms of the late 1970s and early 1980s were good enough so that the Chinese economy was able to sustain high growth for several decades and thus to 'take off' and achieve economic transformation.

2.1 *Displacement of the landlord class and the establishment of agricultural and rural communes*

In many developing countries, the failure to carry out agrarian reform caused stagnation in rural areas because of the lack of competitiveness and low productivity. Land continued to be monopolized by big landlords, and powerful large traders or 'compradors' controlled the credit/trading sector. In China, the Communist Party was able to remove the landlord and rural commercial elites through expropriation when it took power in 1949. And although the communes monopolized the land, inputs, credit and output quotas, the inefficiencies and backwardness were more easily overcome once the Party had mobilized the household responsibility system to improve agricultural production.

2.2 *An industrial base and forced savings*

Because of China's Marxist ideology before the adoption of the market economy approach, the Communist Party and the government were intent on creating a strong industrial base. In fact, some of the most painful policies had to do with forcing the rural sector to allocate resources away from agriculture to industry. Similarly, consumers were forced to cut their spending in order to generate savings to finance the high investments in the industrial sector. While these policies indeed

caused economic growth to fall at that time (and sometimes led to such episodes as the famine of the Great Leap Forward), they nonetheless caused significant industrialization and provided invaluable experience in the manufacture of industrial products, in both downstream and upstream sectors. It is also true that many of the state-owned industrial enterprises were at first not competitive and had obsolete technology and machines. But the experience of industrial production and the exposure of these enterprises to proper economic incentives during the economic reform period allowed the production techniques and capital goods to be modernized. In short, the Chinese economy did not have to start from scratch in its economic transition to more sustained and more sophisticated industrialization after the economic reforms. The Chinese economy already had a sufficient base of heavy industrials (steel, petrochemicals) when the market was opened up. The large domestic market of China (China was not only the world's most populous nation but its majority peasant population had benefitted from land reform) also enabled economies of scale to be achieved in many industries. Finally, the admittedly painful policy of deliberately restricting consumption spending had taught the Chinese household to be big savers. Indeed this stifled the rise of a healthy variety and quality of consumer goods during the pre-reform period; but the high savings rate became a positive factor during the economic transition that enabled high investments to be allocated to the productive sectors, especially once the surpluses had been shifted from the state to the private sector.

2.3 A strong human capital base

Like many socialist economies (most prominently Cuba), China invested seriously in providing effective and adequate provision of health, education and other social services to the majority of the population in both urban and rural areas, usually incorporating indigenous methods and techniques. The existence of a highly educated, healthy and productive population put China in the company of the East Asian 'miracle' countries whose strong human resource base enabled them to achieve accelerating growth (defying the limits to growth—the eventual diminishing marginal product of inputs—that

economists usually assume in economic production) once the conditions of 'take off' had been put in place. With a strong productive and highly educated work force, together with 'knowledge' technology, the limits to growth achievable by a country become much less restricted.

2.4 *Decentralized local government with local capacity for economic and political management*

Because of the politicization of economic and administrative activities of local governments and the existence of party collectives in rural and urban local government units, there existed during the economic reform years an adequate and competent network of local government units that could undertake economic, administrative and political activities. This local government institution no doubt intervened in the private lives and, oftentimes, human rights of much of the population, but this capacity to undertake economic, administrative, regulatory and political management during the economic transition and into the present period, no doubt as well, became a positive factor (at least in terms of economic growth) during the economic transition period and the current period. In fact these units were essential in the initial successes of the township and village enterprises (TVEs) since many TVEs were initiated and managed by these local administrative units.

3. Phase I of economic reforms: 1978 to early 1990s

The flaws and inefficiencies of the planned socialist economy of China and the Soviet Union are well-known. The basic problem simply was that neither the central government nor the local governments could practically and efficiently plan all the outputs of state-owned enterprises (including agricultural communes) and the allocation of outputs for a myriad of products. Furthermore, the absence of competition among firms/producers/farmers and the lack of economic incentives (such as retaining some profit from their outputs) resulted in low productivity, poor quality and lack of variety of products and lack of innovation and technological upgrading by firms and producers. The allocation problems and productivity/growth problems—aside from

frequent policy swings by the government—caused low growth and low income in pre-reform China.

3.1 *China's gradualist approach vs. Russia's shock treatment*

When China's leaders decided in late 1978 that drastic reforms had to be undertaken to improve the economy, there was no discrete change in government; the Communist regime, unlike in the USSR, did not disintegrate and turned into a capitalist state overnight. The gradualist approach of China bore very fruitful results as opposed to the shock treatment (or 'big bang') of immediate privatization, market liberalization and deregulation in Russia which wreaked havoc and led to economic collapse in the first decade of economic transition and brought about the rise of the Russian 'mafia,' which exists up to this very day.

A comparison of the GDP per capita of Russia and China based on purchasing power parity (PPP) constant US dollars will show the difference in the approaches of the two countries (see Chart 2a). China's data cover from 1980 (near the start of its economic reforms) to 2007, while that of Russia cover from 1989 to 2007. The Communist regime collapsed in Russia in 1989 after shock treatment reform. Although Russia's GDP per capita was still much higher than China's because of a much earlier industrialization history, China after the economic reforms saw increasingly positive growth which even accelerated in the 1990s and 2000s. Russia's economy, on the other hand, collapsed between 1990 and 1998 (nearly a decade of massive decline) and only started to register significant growth in the period from 1999 to 2007.

Artificially putting the two economies on the same footing in 1989 (the year Russia started its reforms) makes clearer the point made in the preceding paragraph (see Chart 2b). China had continuous growth from the early reform years of the early 1980s and its growth even accelerated in the 1990s and 2000s. Russia from its position in 1989 declined until 1998 and only started to grow significantly (but not as fast as China) in the period from 1999 to 2007. The chart emphasizes that China had strongly outperformed Russia as its economy increased 368% from its level in 1989. Russia increased only 6.5% from 1989 to 2007, remaining practically on the same level after 18 years.

The theoretical and conceptual rationale for this should be easy to grasp. Russia destroyed all its institutions without any viable replacements. Most importantly, the shock treatment assumed that the capitalists existed all along and would, in a snap, behave like developed countries' capitalists once the privatization, liberalization and deregulation had been undertaken. What happened instead was that the former Communist bosses transformed into the Russian 'mafia' and acquired and stripped enterprises and factories of their assets.

China's gradualist transition—whether or not it was partly or accidentally a result of the tensions between the market reformers, on one hand, and old conservative party members who resisted market reforms, on the other—rested on sounder economic rationale. The Chinese approach understood that market forces, the private sector and the profit (economic incentive) motive were not magical 'invisible hands' that, once brought to life in a sweeping once-and-for-all instance, would automatically result in the miracle of economic development.

Instead, retention of profits, the market forces and the positive role of the private sector were the result of the interplay of the following factors: a) retention of profits acted as economic incentives and made producers more productive and innovative; b) market forces helped in the allocation of resources by reducing shortages and surpluses, but market forces had to be regulated for they did not necessarily lead to equitable results; c) reasonable competition was good and resulted in even higher productivity and innovation—and higher quality of products—and reduced costs and output prices as competitors tried to win a bigger share of the market, and c) market forces and economic (profit) incentives need not be effective only in a completely privatized economy; they could also contribute positively to the good performance of state-owned enterprises and collective units. Thus, the first phase of economic reforms did not destroy the existing state-owned enterprises and collective units but allowed them to be reduced gradually and to coexist with an increasing number of private enterprises in what some would call a 'mixed economy.'

The description of the Chinese economic reforms discussed next draws heavily from Naughton (2007).

3.2 *The household responsibility system*

The reforms were first undertaken in agriculture and the rural sector. Communes in charge of large collective lands, in order to increase production, subcontracted production to households and allocated parcels of land to them. A portion of the output—a fixed quota—was supposed to be given to the commune to be allocated to the urban and other areas, but the surplus output of the household could be sold in the market at the going market rate. This reform created economic incentives to increase production and productivity and led to a surge of agricultural production throughout the country. Moreover, the surplus retention and flexible arrangements made rural households increasingly participate in non-agricultural and industrial activities, such as township and village enterprises (discussed in a later section), that would give them even larger incomes and which also led to significant rural industrialization.

Ranis and Fei (1961) showed how a productive agricultural and rural economy based on increasing productivity and incomes in the agricultural and rural sector was essential in providing cheap food and in channeling surpluses to the industrial sector.

3.3 *The dual-track system applied to state-owned enterprises*

Similar to the household responsibility system, a dual-track of plan and market was allowed in the state-owned enterprises. After satisfying the plan—the required quota output sold to the state at a low controlled price—the state-owned enterprises (SOEs) were allowed to sell their surplus output in the market at a much higher price. This again improved the performance and productivity of the SOEs. The dual-track of plan and market allowed the state to achieve production of vital key outputs (such as energy, steel and infrastructure) while at the same time gave economic incentives for SOEs to improve their performance and productivity. Each SOE had its own contract with the state in terms of its tax rate and output quota based on the material-balance plan. But in all instances, SOEs were allowed to sell their surplus output in the market at market prices.

This system allowed SOEs to co-exist with other forms of ownership and, unlike in Russia, there was no need to do a 'big bang' and privatize all SOEs, which dislocated the economy and drastically increased unemployment. It was the economic incentive and management style (retention of profits and exposure to competitive markets) that reformed the SOEs. The reform did not cause unnecessary disruptions and dissatisfaction.

3.4 *Dismantling the barriers to entry: increasing competition*

As early as 1979, firms were slowly allowed to enter the once-monopolized state industries. SOEs therefore saw competition even as they improved their performance due to the economic incentives (retention of surpluses and profits). Private firms and foreign firms in joint ventures were allowed to compete. But many of the new entrants were collective units, like the township village enterprises (TVEs) participating in rural industries.

3.5 *Phasing out the plan*

At first the material-balance planned output quota for SOEs went up as the production of SOEs went up. But starting in 1984 up to the late 1980s, the planned central and local government allocations were just kept steady and were not increased. In the early 1990s, the planned quotas were deliberately reduced such that by the mid-1990s, they had been reduced to a small proportion of the total production of SOEs. The SOEs began to serve more the market and faced competition from new entrants. A market economy therefore blossomed.

3.6 *Relaxing price controls*

The transition to a market economy would not be complete without firms and consumers facing market prices. The quota system set by the plan did not distort market pricing since the surplus of the SOEs were sold at market prices (at the margin, the firms faced market prices). But the first phase of economic reforms also saw the gradual lifting of price controls in consumer goods. Thus both firms, especially SOEs, and consumers faced a real competitive market economy. The expansion of the markets allowed state and non-state firms and consumers

to interact productively with many SOEs which were subcontracting small and rural firms for raw materials, intermediate inputs and services.

3.7 *Allowing more sectors to get out of the state sector*

The expansion of the market system intensified as the government allowed non-core sectors (those outside the heavy industries like steel, energy and infrastructure) to get out of the state sector and allowed non-state ownership in these sectors. More and more sectors joined the market system and a whole array of ownership patterns—TVEs, other collective units, private and foreign firms—joined the SOEs as producers in the economy. This indeed would be a 'mixed economy' in a 'market economy.'

3.8 *The mixed economy and macroeconomic stability*

The mixed economy comprising a state sector interacting with an array of private and collective firms brought about a strong explosion of output and productivity. But there were periodic macro imbalances (to be discussed later). The continued existence of a strong state sector allowed the government to use this sector to correct the imbalances and bring about macro stability. The handles consisted of credit control through the state-owned banks and investments generated in the state sector and SOEs, which could tame overheating, inflationary pressures and large external and fiscal deficits.

3.9 *The continuation of high savings and investment*

The reforms in SOEs and the state sector shifted much of the burden of national savings from the government and state sector to the private sector and households. The giving up of control of many SOEs and allowing them to retain much of their surplus reduced the tax base of the state sector drastically. Fortunately, the private and household sectors that replaced the government and state as the key savings institutions were very big savers. China became the biggest saver in the world as will be discussed in a later section. The explosion of output, productivity and incomes also resulted in an explosion of private savings essential in financing the huge investments of the

country. And massive investments indeed became a crucial driver of high growth and economic development in China. But starting in the 2000s, the very high savings became an obstacle to the necessary expansion of consumption in the domestic market, and the economy became overdependent on investments for growth. This of course would later result in excess capacity of firms, especially when China's growth rates started to slow down starting 2012.

3.10 Reforms without losers

Naughton (2007) called the first phase of reforms as 'reforms without losers.' This was the crux of the success of the gradualist approach. The reforms gave the right economic incentives to the existing economic players and not displace them in order not to cause too much dislocation and disruption. The right economic incentives and exposure of producers to the markets and competition allowed a big rise in output, productivity, increasing incomes in the productive areas of the economy. SOEs were not destroyed even as new entrants, including collective units, private firms and foreign firms, were encouraged to participate in the market economy. But characterizing the first phase of reforms as 'reforms without losers' is not entirely accurate.

3.11 Inflationary periods and macro imbalances

The economic reforms during the first phase were not without any problems and hitches. First, many conservative Communist old guards were suspicious of the 'market' reforms as possibly leading China back to the capitalist road. This might have been an important factor that contributed to the gradualist approach to the transition. The approach became a sort of 'two-step forward, one-step backward' pattern.

The economic reform periods were also accompanied by periodic macro imbalances and inflationary periods. The 1979-81 period—the beginning of the reforms—was plagued by fiscal and current account deficits and a mildly suppressed inflation. Inflation exploded in the mid-1980s and in 1988-89 due to the rapid expansion of demand brought about by a booming economy, combined with critical shortages of some basic products. The high inflation hit the urban sectors quite significantly and contributed partly to the dissatisfaction that led

to the Tiananmen protests. Inflation went up in 1985 and, more significantly, to double-digit levels in 1988 (the year before Tiananmen) (see Chart 3).

The other major cause of the Tiananmen protests of course was the lack of political liberalization that accompanied economic liberalization. The decade-long reforms had brought about a rise in living standards in the large urban areas, and had led to rising demands for greater political freedoms.

The Tiananmen protests and subsequent harsh response from the authorities was the biggest disruption during the economic transition period, and almost brought about a turnaround in the economic liberalization policies.

But the economic gains achieved during the first phase of economic reforms were too big to be abandoned. And inflation went back to single digits in the period 1989-1992. But there was still the 'one step backward' in the economic reforms during the period from 1989 to 1991.

Then in 1992, Deng Xiaoping, still the real power behind the government, declared a major expansion of the Special Economic Zones (SEZs) in southern China. The SEZs had been set up more than a decade earlier as part of the first phase of economic reforms. The strong increased promotion of SEZs signalled China's intention to move the reforms from the domestic economy to the export front. In October 1992, the Communist Party, in its 14th Congress, declared and endorsed the 'socialist market economy.' The country was ready to move on to the more radical second phase of economic reforms—this time incorporating more painful 'reforms with losers.'

4. Phase II of economic reforms: 1993-2007

The first phase of reforms consisted mainly of decentralization in the sense that the central state gave up more production activities to the private sector or local collective units. It was also decentralization in the sense that the scope of the 'plan' was reduced and production and its allocation were more and more based on economic incentives and the workings of the market.

All this resulted in the following:

1. The base of state revenue, which was strongly concentrated on state enterprises (SOEs), was diluted and reduced when the state allowed the SOEs to retain their profits and other firms became more dominant in production and in raising sales revenues. Thus government revenues steadily fell from the beginning of the reform period (1978) and reached its lowest around the mid-1990s (see Chart 4). The decline necessitated the formation of a national agency to centralize tax revenue collection.

2. There were periodic tendencies for very harmful inflation which became even worse in 1993-4 compared to the pre-Tiananmen period (see Chart 3). This forced the authorities to undertake strong macroeconomic and monetary policies especially because local and provincial authorities became gung-ho during the high growth periods and high credit and investments expanded without regard for the overheating that could create inflationary pressures.

3. Related to the above point, many state banks both at the central and local levels lent money easily, especially to state-owned enterprises. They ended up with significantly higher non-performing loans (NPLs) starting in the 1990s. The authorities in the late 1990s realized that they had to regulate the financial institutions and take charge of the credit system from the top to the local levels.

4. The proliferation of many firms of different types—SOEs, TVEs, private and foreign firms—and the expansion of so many markets required strong regulatory institutions and strong corporate governance. This demonstrated China's astute understanding of economic liberalization—that it required at the same time a very strong and efficient regulatory framework and set of institutions.

Thus while the first phase of economic reform had more to do with decentralization, opening up of the markets, giving economic agents economic incentives to be productive and innovative, and reducing the planned aspects of the economy, the second phase inevitably had to do with recentralization (a term coined again by Naughton (2007)), regulation and corporate governance.

4.1 Fiscal reforms

In terms of consolidating fiscal revenues, the government, after voluntarily giving up its appropriation of the surpluses of SOEs, imposed and strengthened tax collection among firms. It imposed a 17% value-added tax and other business and income taxes. This move by the national government to strengthen its tax capacity improved government revenues significantly. Government revenues steadily rose starting in the second half of the 1990s until 2007 (see Chart 4). This helped reduce the fiscal deficits that China has been having since the late 1970s and which ballooned in the 1990s and early 2000s.

4.2 Monetary and financial supervision

The People's Bank of China (PBC) was established as the country's Central Bank in 1983. In the second phase of the reforms, it was important for the PBC not only to establish the usual monetary policies and take control of money supply and interest rates but also to control the state-run commercial banks at the national, sectoral and local levels from overlending in a booming economy. In fact the lax financial supervision throughout the 1980s and most of the 1990s created big non-performing loans (NPLs) in state-owned enterprises. The monetary authorities realized towards the mid and late 1990s that the rising NPLs would have to be addressed. The subsidized credit to the state sector was substantially reduced so that the SOEs had to secure loans at market interest rates. In 1999 four asset management corporations were tasked to take the bad loan assets out of the state banking system and to dispose of them in the private sector. The China Bank Regulatory Commission (CBRC) in 2003 took over the bank supervisory functions of the PBC. However, in recent years, the main problem became 'shadow banking' created by the highly leveraged financial system and the credit to the property sector (largely involving local governments and private funds) as well as the informal lending networks. Again the PBC had to strongly move in to stop the harmful trends (discussed in greater detail in a later section).

4.3 *Radical restructuring of SOEs: moving to corporate governance*

The end of the bias towards SOEs was finally sealed with the imposition of the Company Law in late 2003. It forced SOEs to eventually convert themselves as limited-liability corporations subject to corporate governance. This accompanied the trend whereby SOEs were forced to restructure and downsize as a result of extreme market competition from the non-state sector and the imposition of hard budget constraints on them with the removal of subsidized credit. As SOEs became competitive firms and not monopolies, their traditional role of providing social insurance to their workers also disappeared. This, together with many SOEs being downsized or workers being thrown off work, caused significant displacement of workers and hardships to many of them. Clearly, the government had to directly provide basic social services as well as promote viable semi-private health insurance schemes to replace the system of SOE provision of social insurance.

At the same time, the private managerial system of a corporation became more and more the mode of non-SOEs. Many TVEs were converted to de facto private firms as private management took over control from the collective management. The rise of these private firms throughout the entire economy necessitated the development of corporate and private sector regulatory frameworks. In mid-1999, the government set up the China Securities Regulatory Commission (CSRC), which formed a centralized and unified system of securities supervision. The need for quality control and standards brought about the creation of the State Administration of Technical and Quality Supervision. The State Intellectual Property Office was also established during this time. Clearly, the Chinese state had moved away from a command economy state to a regulatory state.

4.4 *Promoting trade and exports*

After a decade and a half of mainly successful economic reforms, the government decided that firms had now become quite productive and competitive so that it was time to significantly open up the economy to foreign trade and more foreign investments. Realizing the potential

of a large educated labor that was cheaper than in most developing countries and an industrial potential to simultaneously manufacture labor-intensive products and technologically competitive products, the authorities decided to go into strong export promotion:

1) After Deng Xiaoping's promotion, the Special Economic Zones (SEZs) became the most dynamic sectors with the zones in Guangdong (especially Shenzhen), Fujian and Shanghai making southern and coastal China the fastest growing areas in the country. The upgrading of the infrastructure of the SEZs was addressed. Their products were of course mostly for export.

2) The renminbi was allowed to depreciate during periods of high trade deficits and high inflation—in 1984-86 and in 1989-90—but the most significant planned devaluation occurred in end-1993 to 1994 after the currency was unified from a two-tiered system and current account convertibility was established which allowed exporters and importers to keep and transact in foreign exchange at market prices. After the more than 50% devaluation in 1994, the exchange rate was fixed at around 8 renminbi to a dollar until the managed float was instituted in 2005.

3) The sharp devaluation in 1994 effectively protected the Chinese economy from too much imports. Then, as exports grew fast, imports were slowly liberalized, quantitative restrictions were relaxed and tariffs were slowly reduced finally culminating in China's entry into the World Trade Organization (WTO) in December 2001. Exports increased at a fast pace in the 1990s and accelerated even more in the 2000s, until the onset of the severe global economic recession in 2008 which also affected China.

4.5 Reform with losers

The second phase of reforms in the 1990s and 2000s—unlike the first phase—was, as Naughton (2007) described it, 'reforms with losers.' SOEs were downsized and their number reduced at a fast rate, and many workers were displaced and/or lost their social insurance and access to vital social services.

Furthermore, the second phase of reforms made the urban, coastal and southern provinces richer at the expense of the rural, interior and

central/western provinces. This increased the disparities and inequities within the system which also exacerbated the ethnic divide between the Han majority on the one hand, and the minorities in more backward regions, on the other. It also involved the resettlement in minority areas of the dominant Hans, which caused resentment to rise among the minorities. The government was quite aware of the increasing disparities across regions, and therefore increased investments and initiated projects in the rural hinterlands and more backward regions.

Lastly, starting in 2008, China experienced the risks brought by participation in the globalization trend, as its exports were hammered by the serious world recession and millions of export workers were displaced. The double-digit growth rate of China slid to 9.6% in 2008 and was expected to go down further to between 9.2% and 7.5% in 2009. China's stock market was also battered like most stock markets across the globe in the second half of 2008 and early 2009.

5. Macroeconomic trends during the high growth years

This section looks at macroeconomic trends during the period of economic reforms.

Among the demand components of Gross Domestic Product (GDP), consumption, which was the dominant component in the early 1980s, slowly declined over the years (see Chart 5). Investments (or gross capital formation), which started at more than 30% of GDP—quite high for a low-income developing country—had long-run cycles, but crossed the 40% level in the 2000s. What rose most over the years were the trade variables—exports and imports. After the sharp devaluation and the liberalization of the external current account beginning in 1994, exports exceeded imports and grew faster than imports, especially in the most recent years before 2008.

Looking at the broad supply-side economic sectors, one could see that at the start of the reforms in 1978, China, unlike other low-income countries, already had a bigger output share of industrial products than agricultural products (see Chart 6). The high growth in the succeeding decades maintained the high share of industry, especially during the export promotion period of the 1990s and 2000s. Agriculture's share declined starting in the mid-1980s (after a big spurt in the late

1970s with the economic reforms in agriculture). What replaced the agricultural share was mainly the industry and service shares, as the economy shifted away from agriculture and became more industrialized and service-oriented.

A more detailed look at the subsectors of the economy (Chart 7) would show that manufacturing (plus public utilities and construction) continued its dominance. What the data hide was the steady shift towards domination by non-SOEs, replacing the SOEs. But it is also important to stress that despite the reduced importance of SOEs, the manufacturing sector continued to dominate the economy and SOEs dominated in the priority sectors pinpointed by the national government.

The service sector, led by finance, private services and public administration, also rose (Chart 7). These are the sectors that provide strong support to production in an expanding economy.

The initial high growth rate of the agricultural sector in the 1980s was because the rural household responsibility system described earlier caused a big rise in agricultural output and productivity (see Chart 8). But because of limited land, agricultural growth was bounded. Thus the succeeding years saw growth in industry and service outpacing agricultural growth. But the growth of industry was definitely the highest one. One should also note the fall in the growth of industry and service in the crisis years of Tiananmen—1989 and 1990.

The domestic savings rate grew cyclically higher from an already high level of more than 30% of GDP in the late 1970s to nearly 50% in 2006 and 2007 (see Chart 9). This very high savings rate allowed China to have a very high investment rate and share. One can also see that the savings-investment deficit in the 1980s and early 1990s was erased in the mid-1990s as the savings-investment surplus was achieved and increased from the mid-1990s onwards.

China's tremendous growth and its success in exporting and in attracting foreign direct investments (see Tables 1 and 2) made it the most powerful country in the world in terms of international reserves accumulation.

China's balance of payments grew tremendously in the period from 2003 to 2007 (see Table 1). This was due to two factors: 1)

the existence of current account surpluses as exports exploded and outpaced imports; and 2) the policy to attract foreign direct investments from the 1990s onwards. By 2007, China's balance of payment surplus was more than 14% of its GDP. This explosion of foreign exchange inflows into China made it an important source of international funds. The 2004-2007 boom in the US was marked by large trade and fiscal deficits. It was China primarily and other developing countries secondarily (including East Asia and Russia) that financed these deficits as they invested their foreign exchange reserves in the US. Even Korea had to run to China aside from the US and Japan to stem the depreciation of the won at the height of the global financial turmoil in late 2008.

In terms of total international (foreign exchange) reserves of the world broken, it was the developed countries which owned much of the world's international reserves until the 2000s when the developed countries' share—especially that of the US and the Euro area—fell drastically (see Table 2). This was mainly due to the rising trade deficits of the US and, in the more recent years, the trade deficits of Europe. Meanwhile, the developing countries's share grew in pace with the growth of their trade and/or current account surpluses in the 2000s before the onset of the global financial and economic meltdown in late 2007.

In 1980, China's share of international reserves was less than 1%. This share grew steadily over the next two decades and shot up in the 2000s. This trend is consistent with the data on China's balance of payments surplus which exceeded 7% of GDP starting in 2003 (see Table 1). From then on, China captured a bigger and bigger percentage of the world's international reserves until it surpassed Japan as the world's biggest holder of international reserves in 2006. In 2007, it held a whopping 15% of the world's international reserves, the top country in the world!

6. China's economy compared with other countries

Comparing the performance of China's economy over the years with that of selected Asian countries and Russia gives insights on the economic changes and achievements of China.

It is well-known that China, before the latest global economic recession, was the most successful exporting country during the last three decades. China's annual export growth in the period from 1978 to 2007 was higher than that of all the countries in Table 3, including the Asian tigers Korea, Malaysia, Thailand and the latest high-growth Asian country, India. If we extend back the data for the other countries to 1960, it would only be Korea that registered higher annual export growth than China because of the strong inroads the former had made in export markets in the 1960s and 1970s.

China has been accused (mainly by conservative policy makers in the US) of practicing mercantilism and protectionism in its export promotion by deliberately and consistently undervaluing its currency. Chart 10a shows the nominal effective exchange rate index of the currencies of China and the newly industrialized economies (NIEs) of Korea, Taiwan, Hong Kong, and Singapore, with 2000 as base year. (The nominal effective exchange rate index increases when a currency strengthens relative to other currencies, and decreases when it weakens relative to other currencies.) China sharply devalued its currency (the renminbi) in 1994 so the Chinese currency was weak, compared to the other currencies, during this period. The renminbi strengthened starting in the mid-1990s and during the East Asian crisis until early 2002. With the renminbi on a fixed exchange rate mode, it weakened thereafter until 2005 as other currencies strengthened with respect to the dollar. In 2005, the Chinese decided to allow the renminbi to become more flexible and market-determined. Thus, the renminbi slowly strengthened. It strengthened most in 2008 and 2009 when other currencies started to weaken against the dollar because of the global financial and economic recession and crisis. In the most recent period, the renminbi was the strongest currency among the strong Asian economies in 2009 as the other economies were hit harder by the global downturn (see Table 10a).

Chart 10b tells a similar story. China's renminbi was much weaker than the currencies of Indonesia, Thailand, Malaysia, the Philippines and India when China devalued in 1994. But the Asian crisis weakened these currencies vis-à-vis the renminbi. China and these second-tier Asian economies' currencies weakened relatively and in tandem in

the period from 2002 to 2005. From 2005 onwards, all these currencies strengthened. But with the global financial and economic crash in 2008 and 2009, many of the currencies weakened significantly, with only China's currency remaining strong and strengthening vis-à-vis the other currencies. What is clear is the fact that China's currency was more stable across the years rather than wildly fluctuating like those of Southeast Asia's (see Charts 10a and 10b). This was the result of stronger controls on exchange rate and capital flow policies. Perhaps currency stability contributed to a better macro and trade environment.

All in all, there is no strong evidence that China was practicing a persistent mercantilist and protectionist strategy of undervaluing its currency to encroach on the markets of other countries. What China's critics usually do not discuss was China's successful upscaling and diversification of its exports from low-end garments to higher-end electronics, appliances and automobile parts, a topic we tackle in the following section.

China's export success story is legendary. Despite the reductionist and biased perception that China's export success was mainly due to mercantilist policies, the more general perception of China's phenomenally successful story of export growth consisted of the following ingredients:

a) The setting up of special economic processing zones in the southern coastal areas of China undoubtedly strongly contributed to China's successful export strategy.

b) China's initially lower real wages and higher worker productivity (translated into lower cost per unit of output and higher product quality) contributed to the appeal of China's export products.

c) Another key component of the strategy was the encouraging of foreign investments to go into joint ventures with state and private enterprises, and to give them strong incentives to transfer technology, undertake additional R&D activities and provide market access to export products.

d) The policy of attracting foreign investment was closely associated with China's conscious efforts to upgrade products and improve technology and the scale content of its manufacturing products.

The technological sophistication of China's exports improved over time as reflected in its EXPY score (see Chart 11). In simple terms, the EXPY score (or export sophistication index) attempts to measure the technological and scale content of the export products of a country.² It is based on the degree of similarity of a country's export composition to that of high-income countries. The strong assumption here is that higher income countries export more sophisticated products in terms of technology and scale.

China increased its score substantially from 1985 to 2006. By 2006, its score had been surpassed only by Korea and was almost equal to that of Malaysia and the Philippines. It must be pointed out that the high scores of the Philippines, Malaysia and Korea were due to the high concentration of these countries' exports on electrical and non-electrical machinery (mostly semiconductors). The share of these exports was more than 50% of total exports in the case of the Philippines, and around 50% in the case of Malaysia. The import content of these electrical and non-electrical machinery was also high as can be discerned from the ratio of the import values to export values of electrical and non-electrical machinery exports in Table 4. The high import content of these types of exports reflected their low value-added. Thus the high scores of the Philippines and Malaysia (and to a lesser extent Korea) could be said to be exaggerated.

On the other hand, the export products of China were more diversified (see Tan (2009) and the following essay by Palanca) and the import content of its exports was much lower. Thus the higher trend in China's EXPY score reflects a more genuine upscaling of its export products.

Comparing China's industry share with that of other countries (Table 5), we see that China's industry share of output had historically been high because of the socialist and planned economy's focus on building a significant industrial base. With the reforms in the 1980s, this share had declined by 1990, with the bias for very heavy industry

² The technical derivation of EXPY can be found in the paper of Hausmann et al., "What You Export Matters" p. 10, <https://www.sss.ias.edu/files/pdfs/Rodrik/Research/What-you-export-matters.pdf>.

already corrected and tamed. But with China's entry into the World Trade Organization and strong performance in the world's export market starting in the 1990s, the industrial share started to rise again, especially in the 2000s when China became the fastest growing export country in the world, and the third largest (after Germany and Japan). This emphasized the composition of China's exports, which was largely concentrated on manufactured products. The high share of industrial output showed by China was similar to the trend showed by the more successful East Asian 'miracles' or export-oriented countries, such as Korea, Malaysia and Thailand. These countries maintained a very high share of industrial output (which had grown through the decades). Indonesia, a moderately successful East Asian country, also had a very high share of industry in total economic output. The countries which suffered periodic economic crises and setbacks (Philippines and Russia) saw their share of industry fall over the years. India, another country seen to be successfully developing economically, was actually still quite service-oriented with a low share of industry in total output, but the share of industry had been going up steadily (see Table 3). The insight that can be gleaned from all this is that China's success as an exporting country strongly contributed to its industrialization process. But perhaps it was its high investment rate financed by its very high savings that contributed most to the growth of its industries and the industrialization process.

It cannot be overemphasized that China's very high savings and investment rates accompanied its high growth and economic development. The thing that really set China apart from the other countries was its high savings rate (see Tables 6 and 7). Even as early as 1970, its savings rate was already higher than that of many countries and this even grew as the decades went by. But the high savings rate did not immediately get translated into very high investment rates until the economic reforms had taken root and the opening up to world trade and export promotion had started earnestly. Thus, China's investment rate did not catch up with that of the other countries until the late 1990s and especially in the 2000s (see Table 7). It must be pointed out that in 2006 and 2007 China's savings and investment rates were

already the highest compared with those of the other countries, including the East Asian tigers, like Korea, Malaysia and Thailand.

What we can conclude from the foregoing is that China's economic development and industrialization during the last three decades was not only an export-led growth phenomenon but also an investment-led growth phenomenon. The combined domestic and external factors that caused China's high growth were also the factors that mitigated the negative effects of the current global economic crash in 2008-9 on its growth, unlike in the case of other countries which were more export-dependent like Singapore, Malaysia, Korea and Thailand. However, as will be discussed later, for China to shore up its domestic demand in the midst of the severe global trade contraction, it is urgent that it significantly increase its consumption and sacrifice its very high savings rate.

7. Successful poverty reduction and human development improvements

Aside from successfully achieving economic take-off, China was also able to very significantly reduce poverty and achieve impressive strides in human development using its economic success. While coming from much higher levels, China by 2004 had achieved a rate of poverty (defined as the percentage of the population earning less than \$1 or \$2 a day) that was similar to or even lower than the rates in many developing countries in East Asia and the Pacific (see Tables 8 and 9).

Comparing China's performance with selected Asian countries, China was able to reduce its poverty incidence much faster than India and countries that had much lower rates in 1990, such as Indonesia and the Philippines (see Table 10).

China continuously improved its human development indices (HDI) scores from 0.53 in 1975 to 0.78 in 2004 (1.0 is the highest possible score) (see Chart 12). Child mortality rates sharply improved in just one decade during the 2000s (see Chart 13). China was able to more than halve the child mortality rate among children under five years of age, from around 40 deaths per 1,000 live births in 2000 to only 18 deaths per 1,000 live births in 2007.

China was able to drastically reduce the incidence of rural poverty from around 30% of the population in 1978 to less than 5% by 2007 (see Chart 13). This translated to a reduction in the number of rural poor from 250 million people in 1978 to less than 25 million in 2007.

Overall China's poverty reduction and improvements in other dimensions of human development were truly remarkable. Other developing countries should study the other measures that China effected aside from rapidly increasing its income during the last three decades.

8. The price of economic success

8.1 *Increased income and regional disparities*

But the economic miracle achieved by China and its successful reduction of poverty were not without costs. First, as is well known, China's high growth was accompanied by increasing income and regional disparities. The ratio of the income of the richest 20% of the population to the poorest 20% of the population across decades increased considerably from the 1980s to the 1990s to the 2000s (see Table 11). None of the ratios of the other countries in Table 11 deteriorated as much as China's. By the early 2000s, China, together with the Philippines, had the worst ratio.

The causes of this can be gleaned from the Gini coefficient of China for the national economy, and the urban and rural economies (see Chart 14). Three important observations can be made:

- a) First, all three Gini coefficients—for the national economy, the urban and the rural economies—went up from 1981 to 2001. This meant that inequality was worsening over time.
- b) Second, the Gini coefficient for the rural economy was higher than for the urban economy, which meant that income disparities were worse in rural areas.
- c) Third, the Gini coefficient for the national economy was higher than both the Gini coefficients for the rural and urban sectors. This implies that there was a great disparity between the incomes of urban and rural areas (income was much higher in the urban areas).

The income gap between urban and rural areas was also worsening as implied by the fact that the curve is increasing.

That incomes in both rural and urban economies would worsen is to be expected when a planned economy turned itself into a market economy, as described in the first part of this paper. First, the adoption of the profit motive caused many state and non-state firms to collapse or be downsized and workers to be laid off. In the old system state enterprises were always protected even if they had losses and workers did not lose their jobs. Aggravating this was the fact that under the new market economy local governments and the national government did not anymore provide social services and social safety nets to the workers unlike in the the old system; this was replaced by health insurance schemes for which workers had to pay premiums and whose coverage was not universal. These were the price to pay for achieving efficiencies and increased productivity.

The main manifestation of inequality in China was disparities among provinces. The coastal areas and metropolises, together with the successful export processing zones in the southern coastal areas, had very much higher and growing incomes than the inner hinterlands, which were largely rural. This is shown clearly in the 2007 human development index (HDI) and indices for life expectancy and education of China's provinces (see Table 12) and the GDP per capita of provinces and of rural and urban areas (see Table 13). There were wide disparities in the human development index (HDI) and indices for life expectancy and education among China's provinces. Shanghai had almost perfect scores in all three indices (close to one), while Tibet had the lowest index on HDI and life expectancy. The disparities between incomes in the rural and urban areas were also very clear. And the differences among provinces and regions were very large. Compare, for example, the GDP per capita of Shanghai and Beijing with Guizhou, Tibet and Xinjiang. Guizhou (a province with many ethnic minorities but also with many Chinese Han settlers) had the lowest GDP per capita. Many of the poor provinces are provinces of the ethnic minorities.

It should therefore come as no surprise that there is discontent in Tibet and Xinjiang (a Muslim province), not only because of ethnic

discrimination or the desire to gain independence, but because of poverty and income disparity with the rest of China, aggravated by the fact that Han Chinese who were richer were resettling there in big numbers and taking over many of the businesses and choice positions.

The Chinese authorities did not turn a blind eye to the regional disparities and took corrective measures, including increasing government investments in the inner non-coastal provinces. The authorities also instituted a 'big brother-little brother' program whereby a rich province provided financial and market support to a poor province. But the task was enormous since the national and local governments were also pouring large investments into the rich areas and building massive sophisticated infrastructure there (e.g., the massive constructions of buildings and infrastructure in Shanghai). But the biggest difficulty was that, with the development of better infrastructure in the poorer (inner) regions, more Han settlers were going to the poorer provinces, settling there and taking over many of the businesses. This increased the ethnic conflicts in the hinterlands. The government tried to address this problem by affirmative action, giving indigenous peoples priority in jobs and schools in the poor regions, but the problems remained gargantuan as shown by the intermittent eruption of ethnic discontent and violence in Xinjiang and Tibet, aggravated by the heavy hand of the government in suppressing the riots and discontent.

8.2 *Exposure to excessive volatilities caused by a globalized world economy*

Another cost of opening up was exposure to the wild volatilities of a globalized world economy whose financial and trade markets are highly and intricately interlinked. We saw China's high inflation in the 1980s and early 1990s and the need to adjust the renminbi significantly. These were internal adjustments the Chinese economy had to make to participate as a market economy in the global arena. But within two decades, two big regional or global crises had appeared that threatened China's successful economic story. The first was the Asian crisis of 1997-98, which came mainly from the financial and capital account flows. This China weathered very easily because of its

foresight of having strong capital controls—which shielded it from any major short-term capital flight—and its having gigantic international foreign exchange reserves which shielded it from the speculative attacks on its currency which other East Asian countries (including Japan) had to struggle against.

But from 2008 up to 2010, the global financial and economic meltdown and its aftermath lowered China's export growth and trade surplus. Together with many other internal problems, the economic growth rate suffered and unemployment worsened.

As of 9 November 2008, the Chinese government had announced a RMB4 trillion (\$586 billion) stimulus package (the second largest in the world after that of the US). With China's announcement of its gargantuan fiscal stimulus, the global stock markets temporarily zoomed up. The stimulus package as announced in March 2009 had the following components:

1. Public infrastructure development comprising RMB1.5 trillion or 38% of the total stimulus package. This included railways, roads irrigation and airport construction.
2. RMB1 trillion for reconstruction work in Sichuan and other areas hit by the magnitude 8 earthquake in May 2008.
3. RMB370 billion for social welfare plans comprising low-cost housing, rehabilitation of slums and other social safety net projects
4. Another RMB370 billion for rural development and technology advancement. Rural projects included building public amenities, resettling of nomads, supporting agriculture works and providing safe drinking water. Technology advancement aimed to upgrade the Chinese industrial sector geared towards high-end production to move the sector away from the more export-oriented and labor-intensive products.
5. RMB210 billion allotted to promoting energy saving, poison gas emission cuts, and other environmental engineering projects.
6. RMB150 billion allotted for educational, cultural and family planning projects.

The stimulus package worked as the growth rate of China remained above 9% in 2008 and 2009 and went up to 10.4% in 2010. Leading the growth was industrial output growth, especially in urban areas.

But the good performance of China's economy during the Great Recession years 2008-9 as well as higher growth in 2010 was reversed starting 2012 when the growth rate drastically slowed down to below 8%.

9. The big challenges in the present period

China is in the headline nowadays due to its much slower growth. Since China seemed at first to have weathered well the Great Recession in 2008-09 with more than 9% growth rates and recovered in 2010 by growing more than 10%, everybody expected the good old days to return in China. Unfortunately China's growth rate dipped to below 8% in 2012 and continued to go down until 2014. This lower growth is expected to continue in 2015, with some predicting that this could go below 7% in 2015.

What is clear is that China has experienced slower growth in the latest years, signaling that double-digit growth for China may be over (see Chart 15).

It seems that the series of world crises since the late 1990s has affected China's growth rate. The Asian crisis of 1997-1999 and the mild US and global recession in 2001 brought down China's growth rate to below 10% in the late 1990s and early 2000s. But the strong world economic recovery from 2003 to 2007 (initially due to very low interest rate policies) led by the US, raised China's export and investment-led growth higher and higher, eventually reaching more than 14% in 2006. The subprime crisis starting in 2007 and the ensuing US-led global Great Recession in 2008-2009 brought the growth rates down to below 10%, but still at a respectable rate of more than 9%. The slowing of growth beginning 2012 to below 8% took the world by surprise and led to speculations that there will be another global slowdown led by the European Union, Japan and China. China's GDP growth rate in 2014 was 7.4%, the lowest in 25 years, and the bad performance of manufacturing in surveys in January and February 2015 caused many China analysts—including the IMF and UBS (the biggest bank in Switzerland)—to predict that growth in 2015 and thereafter will fall to below 7%. These analysts are also debating whether there will be a 'hard' landing or 'soft' landing for China.

9.1 Strong exposure to globalization

As discussed earlier, China's strong exposure to globalization initially brought it success with its high export growth making it the largest exporting country in the world and the second biggest country in terms of economic size. But the upshot was China was no longer insulated when crises occurred. Exports and economic confidence both suffered during global crises and global recessions. Most likely both of these external factors contributed to China's recent poor economic performance. But the latest China slowdown is mainly due to internal factors which we now discuss.

9.2 Necessary structural and political changes

After decades of high growth, China cannot continue on its high growth path in exactly the same way since a maturing economy has to undergo necessary structural and political transformation to go on to the next higher level. These transformations are difficult to achieve partly because many parts of China are already highly developed (e.g., Shanghai and Shenzhen) while the non-coastal hinterlands are still very much underdeveloped. The Chinese authorities are experiencing difficulty in shifting the composition of domestic demand from investments to consumption. To succeed they have to convince Chinese households and individuals to stop saving and begin consuming. This would mean among others giving Chinese migrants from the rural areas access to social services—education, health, social security and benefits. This would also require drastically changing the *hukou* (household registration) system to be more inclusive and efficient. Social security and social services should be strengthened and made more accessible and affordable to ordinary citizens. These moves are necessary to assure people in a country with an aging population to save less for emergencies and other social security reasons. In the hinterlands, incomes will have to increase, so development of the more underdeveloped areas is crucial. The shift to higher consumption should eventually yield some results as wages increase as a result of the Chinese government's raising of minimum wages and as the economy shifts from manufacturing and industry to services.

There is debate as to whether higher wages will strongly adversely affect exports as well as business in general. The view of the author is that this will help the shift to consumption and in the rebalancing of the economy towards depending more on domestic demand rather than on export demand, especially in the current volatile globalized setting. Moreover corporate profits are unduly large and make up a big share of total savings, a significant part of which is kept as retained earnings. The shift to wage earnings should again have a positive impact on consumption and income distribution. But with these policies and when investments actually shift to consumption, economic growth will definitely initially slow down.

Among the demand components of GDP, the share of gross domestic capital formation (investments) continued to climb and dominate in the period from 1996 to 2013, especially in recent years (see Chart 16). But the latest information (Chen 2015) suggest that consumption was the key driver and biggest contributor to growth in 2014, which hopefully means that the difficult struggle to get consumption significantly up is producing results. The share of exports and imports in GDP has also gone down. What is clear is that China can no longer rely too much on its open economy and external demand and must shore up its domestic demand, especially consumption.

Looking at the economic sectors in GDP, it is clear that the share of the services sector has risen since the mid-2000s and that there has been a shift of the economy from industry to services since 2012 (when growth started to significantly slow down) (see Chart 17).

Finally, major political changes are happening. Corruption has been pinpointed as a major hindrance to achieving higher economic and political maturity for China. President Xi Jinping is seriously undertaking an anti-corruption drive, which by February 2015 has already disciplined 180,000 party members (Lingenheld 2015). In the short run, the drive is causing some instability as many citizens and corporations are sending their money out of the country resulting in major capital outflows. While some are worried about this trend, most analysts do not think it will be a major problem since China has a tremendous ammunition of foreign reserves (close to \$4 trillion).

9.3 Financial instability

Those predicting a 'hard' landing usually point to the highly leveraged economy of China as a precursor to financial and economic collapse similar to what happened in the US and Europe in 2008 and 2009.

By mid-2014, the total debt load of China had reached 280% of GDP (Da Costa 2015). This is similar to the debt load of developed countries and much above that of developing countries. About 1/3 of this debt consisted of loans in the 'shadow banking' sector, that is, these loans were given by non-banking entities many of which were connected to banks (through off-balance sheet accounts). These entities included trust firms, insurance companies, hedge funds, pawn-brokers, and informal lenders. By 2014, total debt in shadow banking is estimated to have reached \$9 trillion (Rasmus 2015). The biggest debtors were corporations and local governments. This seems to have shaken some analysts as they feel major defaults are very probable due to the overspending ways of local governments. Much of the debts went to the property sector, which could lead to the bursting of a bubble and result in a mountain of defaults.

The People's Bank tightened monetary policy in 2013 and the first half of 2014 to tame credit growth, harden the budget constraint on local governments and crack down on the unregulated shadow banking sector by limiting its size and by closely monitoring it. All this contributed to the lower growth we have witnessed in recent years. Shadow banking seems to have been tamed as its growth had declined considerably in 2014 (Scott 2015) with the growth of trust loans, commercial bills and entrusted loans falling significantly in 2014. With the problem of shadow banking now reduced if not totally eliminated the People's Bank lowered reserve requirements and cut policy rates by 25 basis points twice (in November 2014 and in February 2015). This switching back to the loosening of monetary policy was part of the government's attempt to stimulate growth, but the outcome of these moves remain unclear.

Many analysts believe a disastrous financial crisis similar to that experienced by the US will not happen in China because the People's

Bank has more capacity and freedom to bail out banks, corporations and local governments. Moreover, there is little foreign debt in China's high debt load, thus there is little likelihood of a foreign debt problem or a sovereign default happening, even if the government assumed private debts like what happened in Latin America (especially Argentina), East Asian countries, Greece and crisis-prone developing countries. But some believe that China might still make a mistake by bursting the property bubble, leaving the banking sector undercapitalized and not fixing the financial system. This could lead to asset deflation and a stagnant economy as what happened to Japan for more than a decade (Coy 2014).

9.4 Prospects

In summary, it is almost certain that China will go on a lower growth path in the coming years and for some years to come. There is now controversy whether China will experience a 'hard' landing. Many China experts discount the possibility of a hard landing given that China is aware of its high debt burden and shadow banking problems and has undertaken measures to tackle these. The property bubble appears to have already been deflated as property prices have slowly gone down. Justin Lin (2015) predicts continuing good prospects for China because of the technology latecomer effect whereby it can upgrade technologically by imitating the inventions of and learning innovations from developed countries. He sees the current lower growth as more a problem of external demand than of domestic demand. He also predicts that China will be able to successfully shift to higher consumption as the middle class grows and accumulates income and wealth (see He 2015).

The World Bank (2014) also sees the current slowing of growth as a result of China's conscious policy to have quality and more sustainable growth. In other words, China is far from being out of the global economic superpower game.

10. Lessons the Philippines can learn from China's growth experience

There are many lessons that developing countries, especially the Philippines, can learn from China's success story. First, the initial conditions for China's success discussed in section 2 has not been achieved by the Philippines. This includes genuine agrarian reform and equitable wealth distribution, a strong industrial and human capital base, adequate savings in the economy, and strong local government governance and growth of local economies and domestic demand in the economy. We discuss some of this more thoroughly in this section and point out more lessons the Philippines can learn.

10.1 A strong domestic economy with strong domestic demand

One reason why China seems to be a resilient economy is because it is not just a strong export economy but is also a strong economy with very high savings and investments. The authorities are very much aware that an investments share of more than 40% is too high and that domestic demand must shift to consumption. Still, the balance of domestic and external demand in the composition of China's GDP made it more able to absorb external shocks such as the great global recession. Investments share and growth in the Philippines has historically been very low compared to other East Asian countries, although this has improved somewhat in the current high growth years of the Aquino administration. Still, the Philippines has a long way to go to catch up as investments is just 20.5% in 2014, which was a good year. The Philippine economy is also highly dependent on huge remittances of overseas workers and/or more exports which are restricted to low-end electronics/semiconductor products. Domestic demand grows only because the remittances of workers increase consumption. This kind of growth is too externally dependent and too vulnerable to external shocks, as the Philippines is now again experiencing.

To improve the domestic economy and increase investments, domestic demand will have to be strong as a result of better income and wealth distribution dispersed throughout all the regions and provinces of the country. This will create a stronger peasant and rural

sector, and a working class and middle class with robust and growing purchasing power.

This requires the Philippines to undertake genuine agrarian reform (as China had done decades ago), progressive taxation with tax revenues coming mainly from rich individuals and rich corporations, higher infrastructure spending in poor regions and provinces (as China is trying to do), provision of adequate and quality social services—education, health, social welfare and protection—to the poor and vulnerable (which China has addressed when workers lost their social protection from state firms and local governments). Confidence in the economy and government should continue and this is being challenged now in the last year of the Aquino administration, and especially in a completely unclear and uncertain picture of what the new administration will look like in 2016.

10.2 Avoid too much dependence on short-term capital flows

China had and still has the foresight of not opening up its capital account sector and of imposing strict capital controls. Foreign direct investments by multinational companies (MNCs) are allowed but selectively (since thousands of MNCs want to enter China), and only those that facilitate technology transfer and access to export markets can set up shop in China. The Philippines, on the other hand, offers a lot of fiscal incentives for FDIs (such as income tax holidays and free import duties), but FDI inflows are much smaller compared to other Asian economies and technology transfer has not happened over the many decades.

China strictly regulated financial flows to its equities and bond markets, while the Philippines and other East Asian countries opened up their stock markets and sovereign and corporate bond markets to international finance. This made the Philippines and other East Asian economies very prone to contagion from regional or global crises. The Philippines has already allowed this contagion to happen three times. First, by borrowing billions of petrodollars in the 1970s, the Philippine collapse in 1984-85 was as much a Latin American debt crisis (a la Mexico and Brazil) as it was a political upheaval against the Marcos dictatorship. In 1997-98, the Philippines suffered pure

contagion from Thailand, Korea and Indonesia as foreign money in the stock and bond markets as well as short-term foreign loans exited from the country out of pure fear of the region; it was a flight away from liberalized economies like the Philippines. In 2008 and 2009, the Philippines and other East Asian countries again experienced capital flight from short-term foreign investors as they flew away from 'risk.' All these external crises led to strong currency depreciation, losses of confidence and serious recessions or slowdown in the economy.

China never allowed these volatile short-term flows to come into the country in massive amounts in the first place, and so did not suffer the financial crises that the Philippines and other countries suffered through sheer contagion from the external world.

10.3 Economic and political stability and correct policies

There has been a lot of debate whether economic development in developing economies is more conducive under authoritarian or democratic governments. Singapore's authoritarian government from Lee Kuan Yew's time to the present period, as well as China's strong and authoritarian state, are often used as examples of the need for 'enlightened' authoritarianism to lead a developing country. But how can one explain democratic Chile, South Korea and Taiwan today, as they grew quite well before this global recession? Indonesia is one country that has been doing well because of the high confidence it has inspired in investors because of better, more democratic and cleaner government.

The question therefore is actually the wrong one. The question should be: Is the government, whether authoritarian or democratic, providing economic and political stability to instill confidence in the economy? Are the economic policies and industrial policies the right policies for the country? Are these policies implemented correctly with the intended impact and benefits going to the right sectors and areas?

This is where the Philippines had failed in the past and where other East Asian 'miracles' had succeeded. The Philippines had the unfortunate experience of unstable governments that were overthrown, or were threatened to be overthrown, because of charges of corruption and/or human rights abuses. Or the governments, even if not

overthrown, were exposed to political and economic scandals that left economic confidence in shambles. The Aquino administration has so far managed to gain more economic confidence and sovereign upgrades which has significantly increased economic growth including much higher growth rates in manufacturing and investments. Much of the confidence has been based on perceived better governance and fiscal management of the country. This confidence was severely threatened last year when the Supreme Court declared the government's Development Disbursement Acceleration Program as unconstitutional and with government bungling in the Mamasapano incident that caused 44 members of the Special Action Force of the police to be killed. But more disturbing is the uncertainty raised by the coming presidential elections. So far there is no presidential candidate in sight for 2016 who can manage to win the same confidence in governance and in the macroeconomy as the present administration. The leading candidate (who is in the opposition) is being investigated for corruption and hidden wealth, and more and more evidence are being unearthed. While more viable candidates might come up, the main political party of the current President (including the President himself) is slow to select a strong contender since its original candidate is doing very badly in the surveys.

10.4 Industrial policy and technical upgrading, and genuine economic development

But short-term economic confidence is not enough to generate genuine economic development. Long-term confidence will be attained only if the economy becomes vibrantly strong and remains so in the long-term.

China under the planned economy—and under the present market economy—had a very strong industrial policy that consciously aimed at the upgrading of products and of the technological processes of production. MNCs were required to transfer technology to a domestic firm. They were also required to invest in R&D in order to contribute more knowledge to the economy. We have seen that in China's current fiscal stimulus package several hundred billions of yuan have been allotted to technological advancement, away from labor-intensive

export-oriented products to more technologically superior products and processes requiring more highly skilled workers. This has been the strategy for two decades now, and has allowed China to go up from low-end garments (which it still has a foothold of) to highly sophisticated electronic chips and equipment.

The Philippines, on the other hand, has one of the lowest share of manufacturing and industry in East Asia. It is in the low-end spectrum of technology, including its number one export, semiconductors, which is dependent on imports of high-end chips and inputs from other countries. Much of the low-tech exports are actually sent to China to be assembled into the high-tech final industrial exports of China.

The economic structure under the current administration remains the same with no clear industrial policy in sight. Despite improvements in the country's score and ranking in governance and fiscal reforms, the latest Global Competitiveness Survey (2014) shows the Philippines' rating on infrastructure and technology remaining as low as before.

This is because of the lack of industrial policy and there is lack of any evidence that Philippine production (especially manufacturing and agriculture) is advancing technologically and improving in productivity for the long-term. This also explains why the confidence-generating growth of the current administration is not translating into strong foreign investments inflows that contribute to the technical and skills upgrading of the economy.

Furthermore, genuine economic development can be achieved only with social and political cohesion of society. This implies alleviation and strong reduction of poverty, equitable regional development and the implementation of strong social policies in favor of the lower income groups. This also implies a resolution of armed conflicts that are deleterious to economic stability and investment growth. All of these the Philippines still has to achieve.

10.5 Learning from China's mistakes

We can also learn from China's mistakes. Most recently, China's policies favoring strong investments in real properties, with the strong

participation of local governments, created a property bubble which is slowly bursting, as property prices have started to fall. The lax credit policies which allowed huge debts to be amassed by the property sector resulted in large debts and the rise of 'shadow banking' that is threatening to lead to large defaults and to bring down the entire financial sector. China is now very conscious of this situation and is walking a delicate balance between avoiding too much credit in the property sector and following laxer policies to stir the economy to higher growth especially as its growth has significantly slowed down.

The Philippines has recently witnessed huge increases in property investments. There is now a general feeling of a property glut, especially in high rises and condominiums. The same illness that afflicted the US in the 2008-9 Great Recession, and the illness that plagued China these past few years, might come to our own doorsteps due to lax and careless support for property investments.

Finally both China and the Philippines suffered in 2008-9 after opening themselves strongly to the global economy. The external shock from the US and Europe in the Great Recession and its repercussions caused economic slowdown and large uncertainties in the path the economies are traversing. China has learned that it should now balance its demand towards more domestic consumption and the domestic market, and has taken steps in this direction. The Philippines is still treading the previous path of more and more openness to the global markets without consciously increasing domestic demand.

It seems that the Philippines has not learned the lessons that it should have learned from its East Asian neighbours, particularly China. Hopefully, it will not take too long for the Philippine government and civil society to realize that, perhaps, a change in economic development strategy is needed to direct us to genuine social and economic transformation.

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Charts and Tables

Chart 1A. GDP per Capita PPP (constant 2005 \$): China and Selected Asian Countries

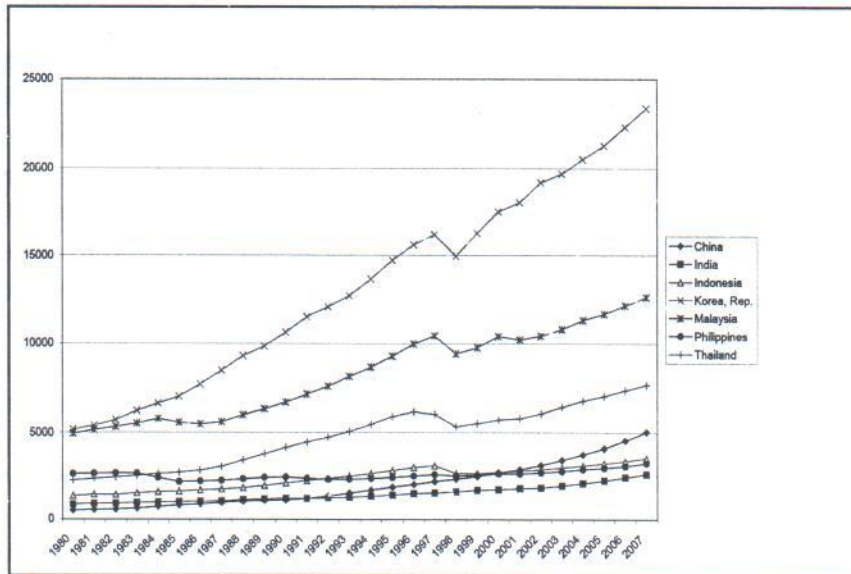


Chart 1B. GDP per Capita Index (1980=100) based on PPP 2005 constant \$: China and Selected Asian Countries

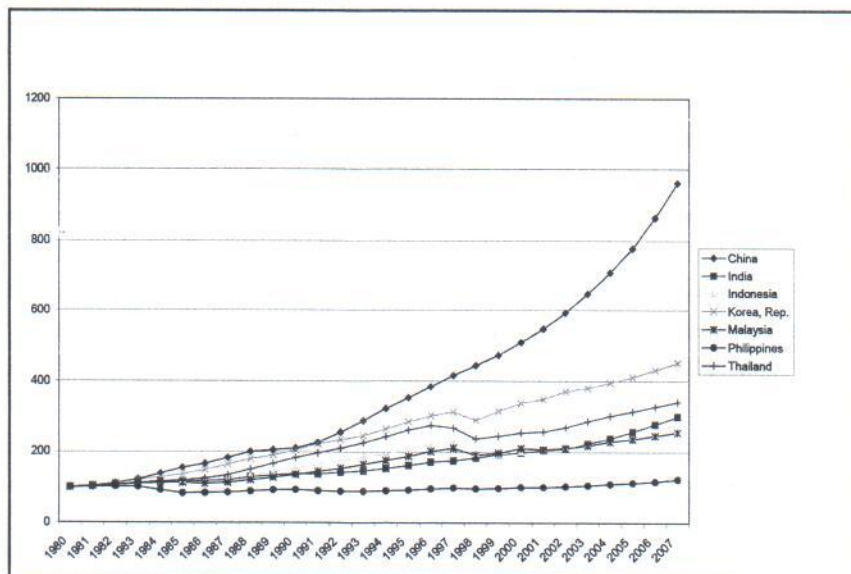


Chart 2A. GDP per Capita PPP in constant 2005 \$: China and Russia

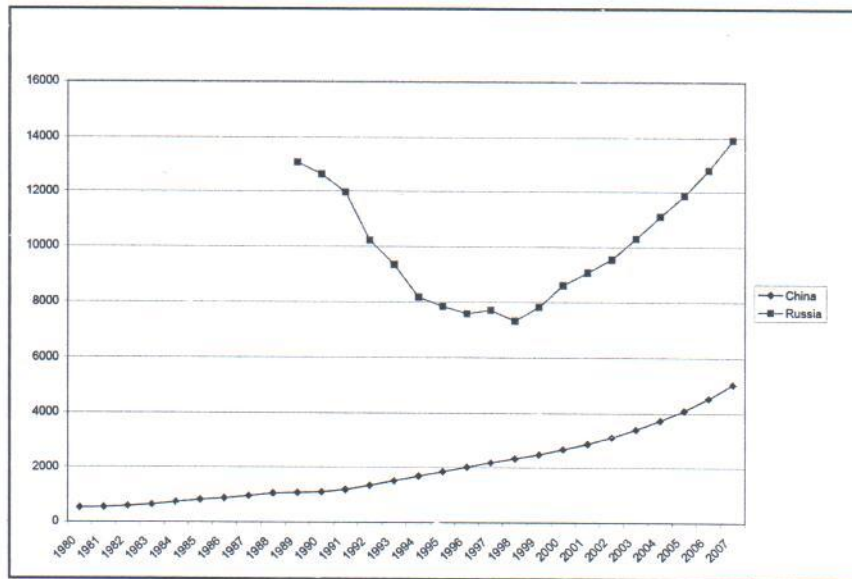


Chart 2B. GDP per Capita Index (1980=100) based on PPP 2005 constant \$: China and Russia

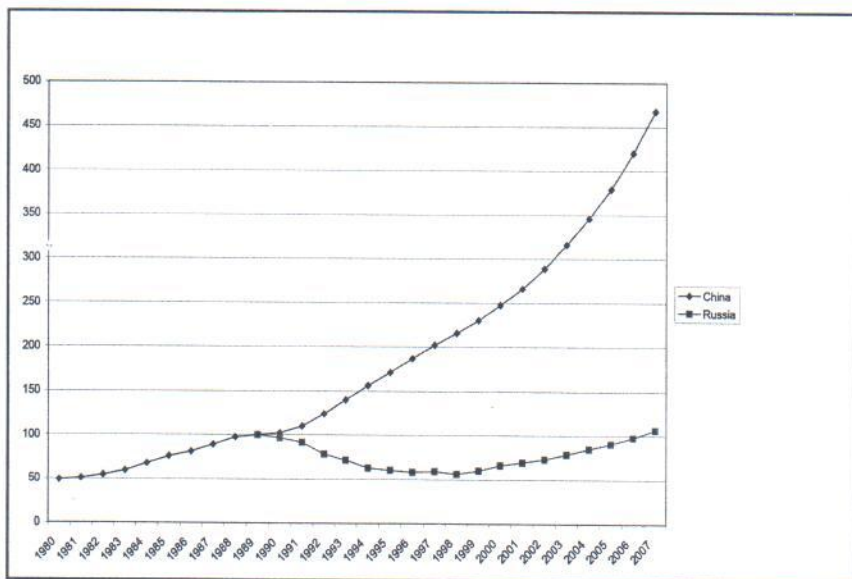


Chart 3. Inflation of GDP Deflator

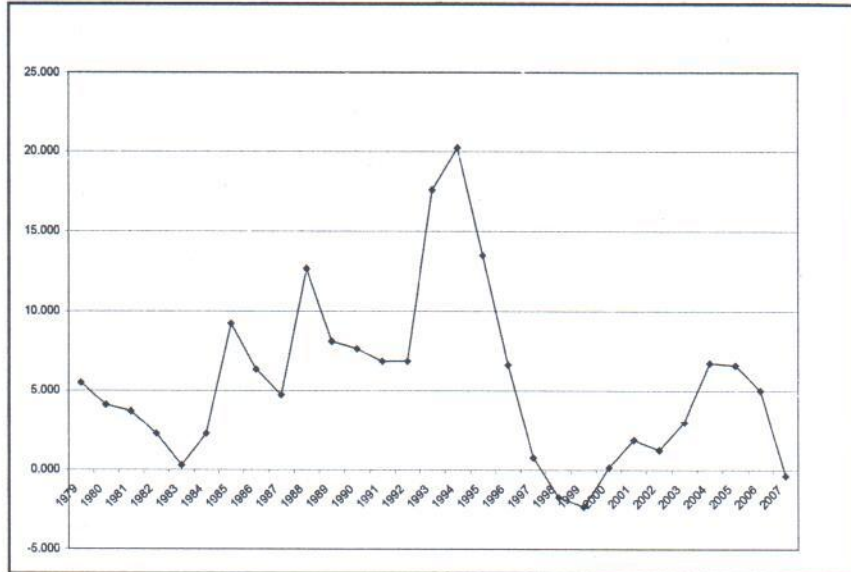


Chart 4. China: Gov't Revenue, Expenditure and Deficit (% of GDP)

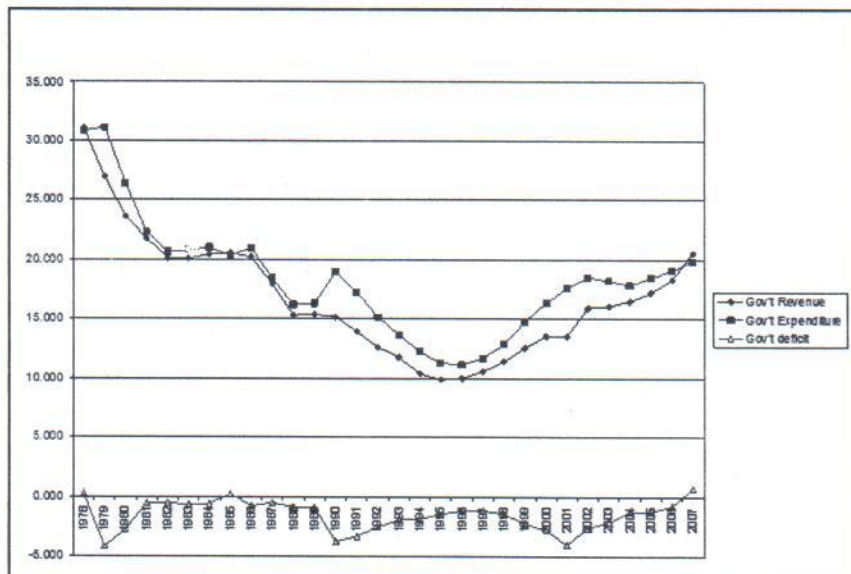


Chart 5. China: GRP Demand Components: 1982-2007

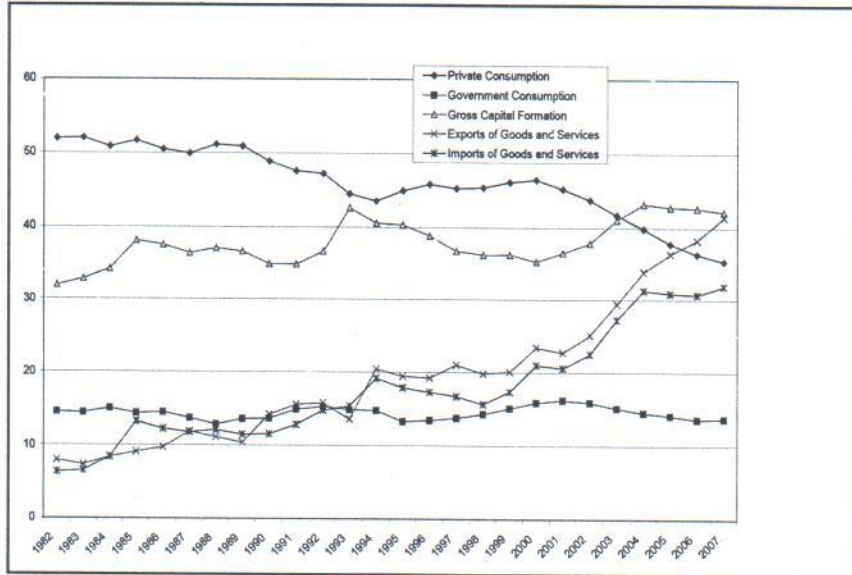


Chart 6. Share of Broad Economic Sectors (% of GDP)

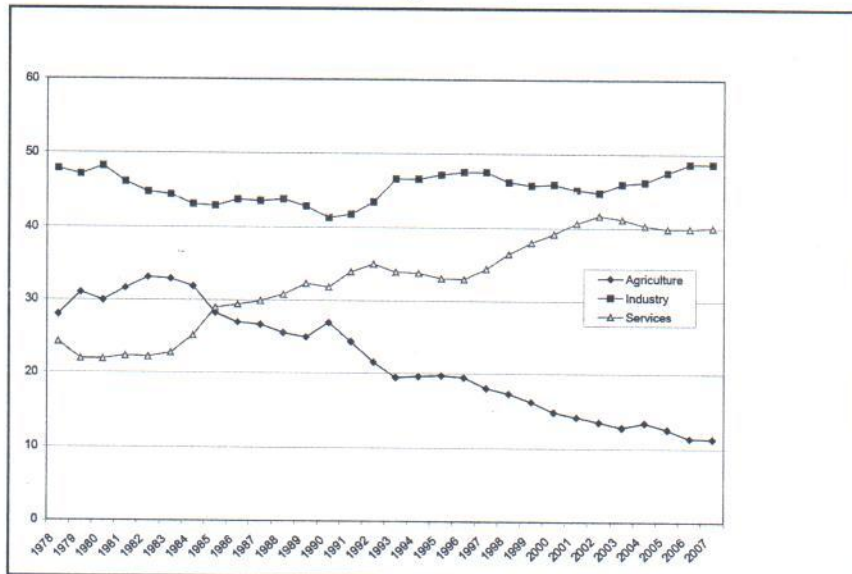


Chart 7. Share of Economic Sectors, % of GDP

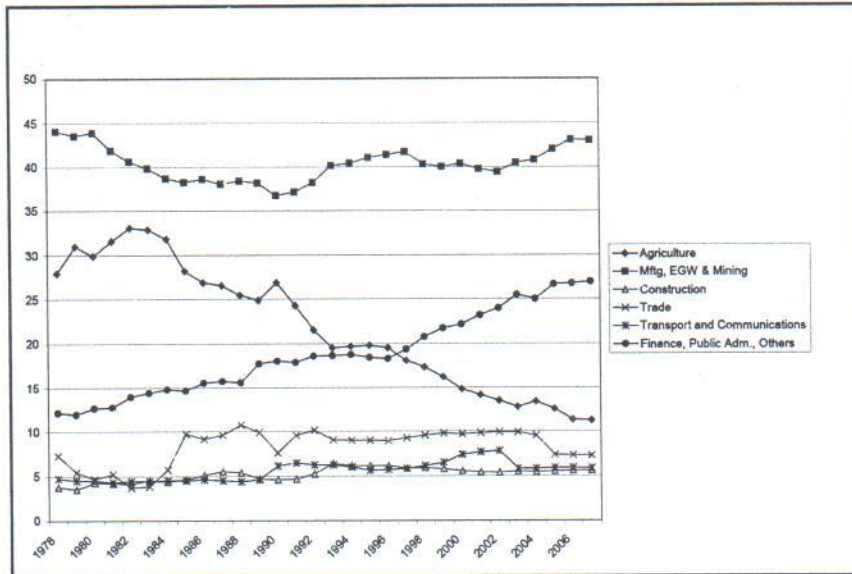


Chart 8. Annual Growth Rate of Broad Economic Sectors (% Change)

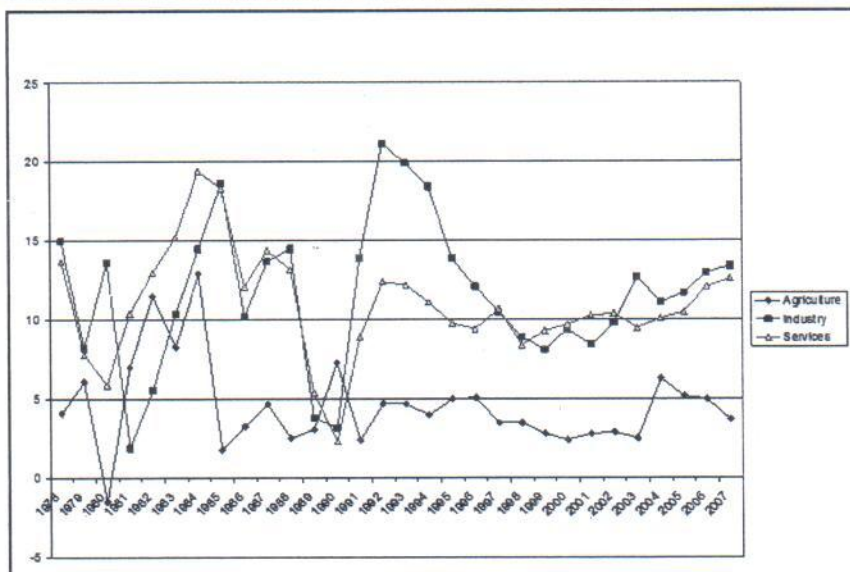


Chart 9. Gross Domestic Savings and Gross Domestic Capital Formation, % of GDP

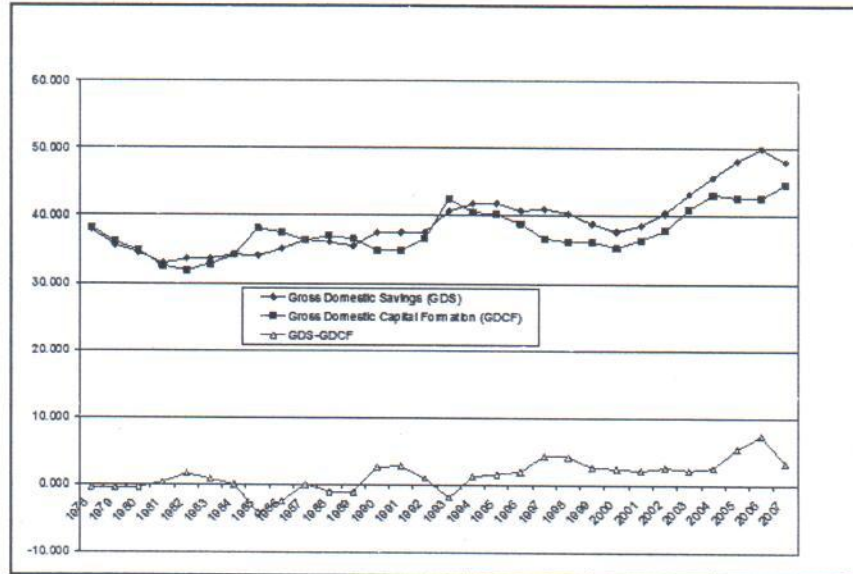


Chart 10A. Nominal Effective Exchange Rate Index (2000=100): China and the NIEs

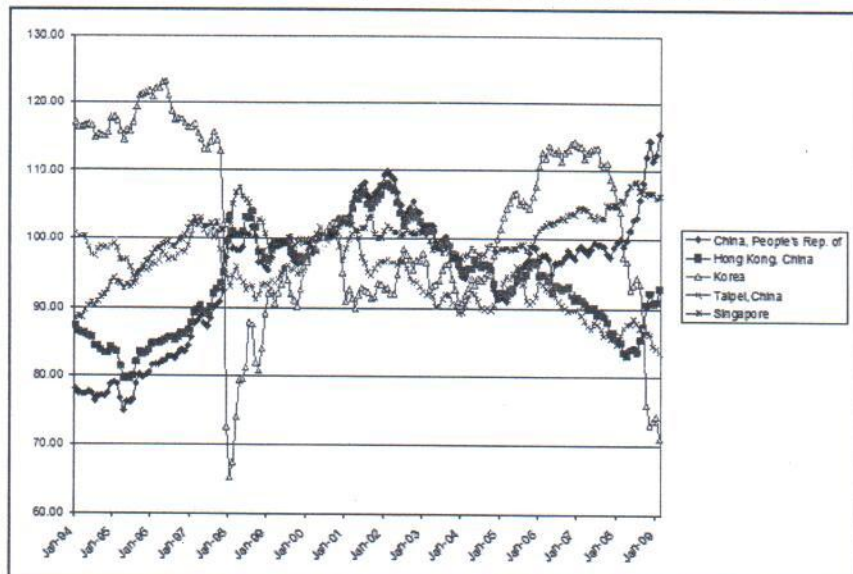


Chart 10B. Nominal Effective Exchange Rate Index: China, India, Malaysia, Thailand, Indonesia and Philippines

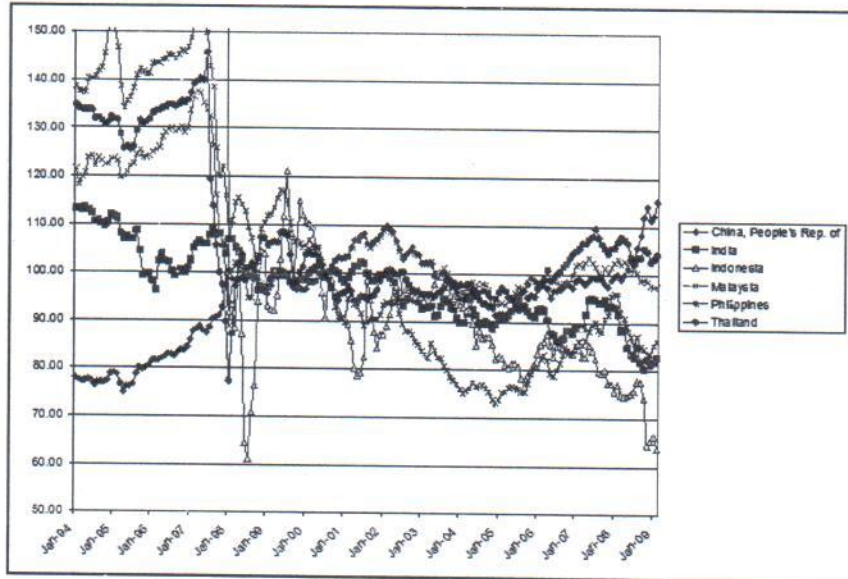


Chart 11. EXPY Scores of Selected Countries

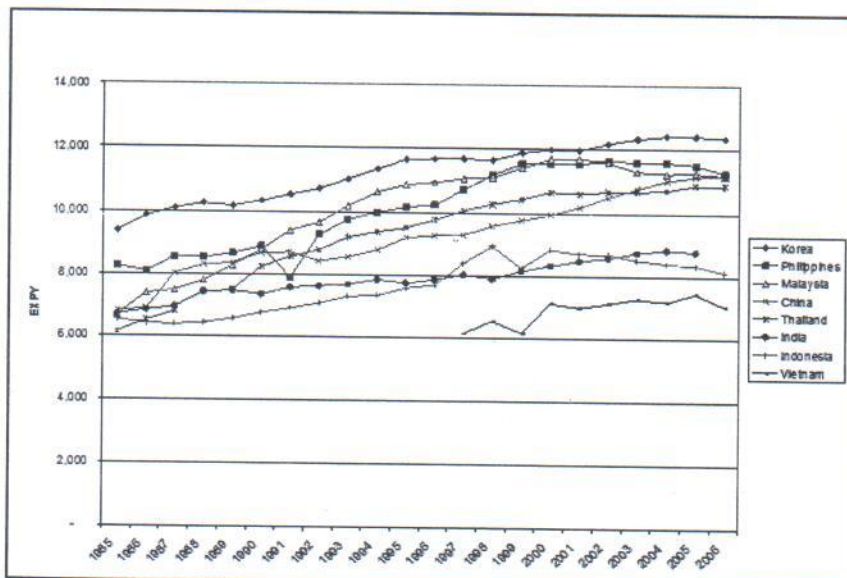
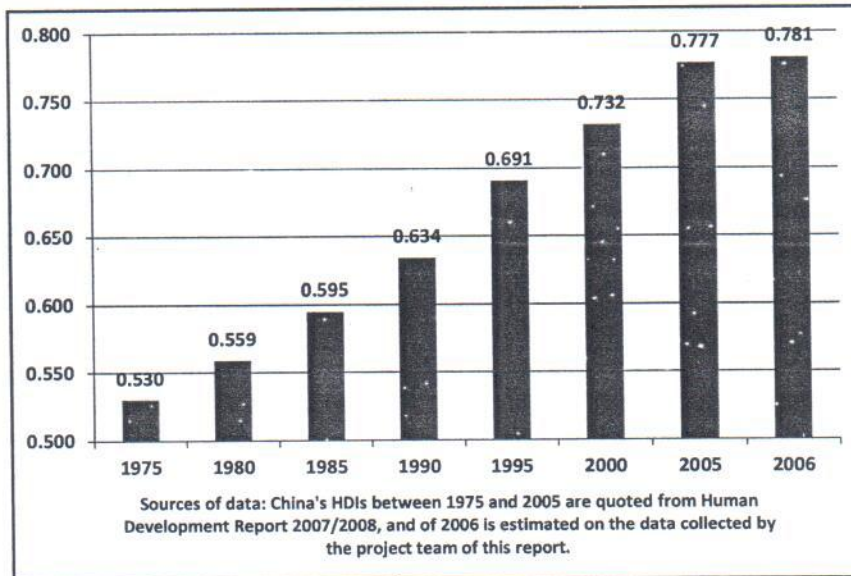
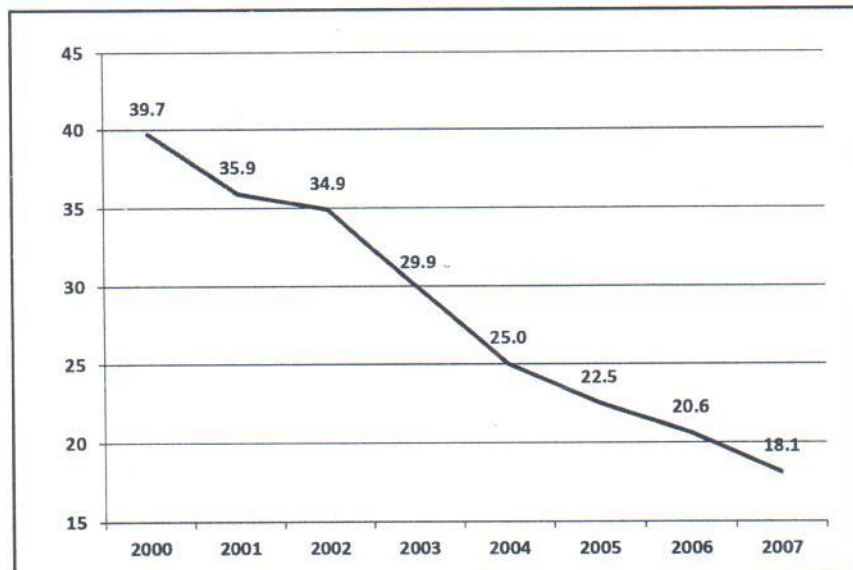


Chart 12. China's Human Development Index (HDI): 1975 to 2006



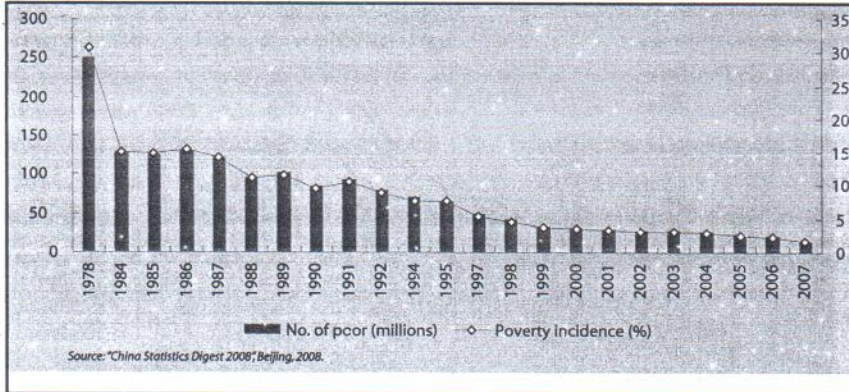
Source: UNDP (2008), Human Development Report: China 2007/08

Chart 13. Under-Five Child Mortality Rate (out of 1,000 live births)



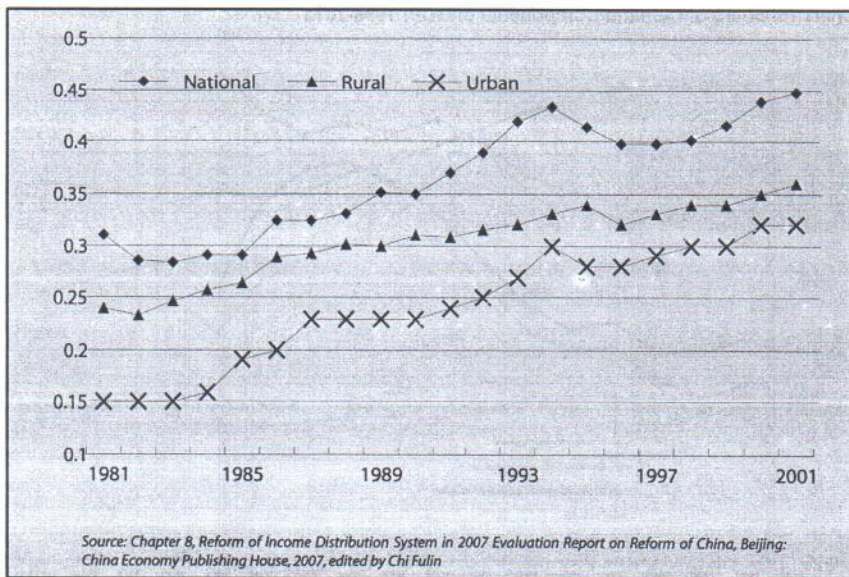
Source: UNDP (2008), Human Development Report: China 2007/08

Chart 13. China's Incidence of Rural Poverty



Source: UNDP (2008), Human Development Report: China 2007/08

Chart 14. Gini Coefficient of National Income



Source: UNDP (2008), Human Development Report: China 2007/08

Chart 15. China's GDP Growth: 1996-2014

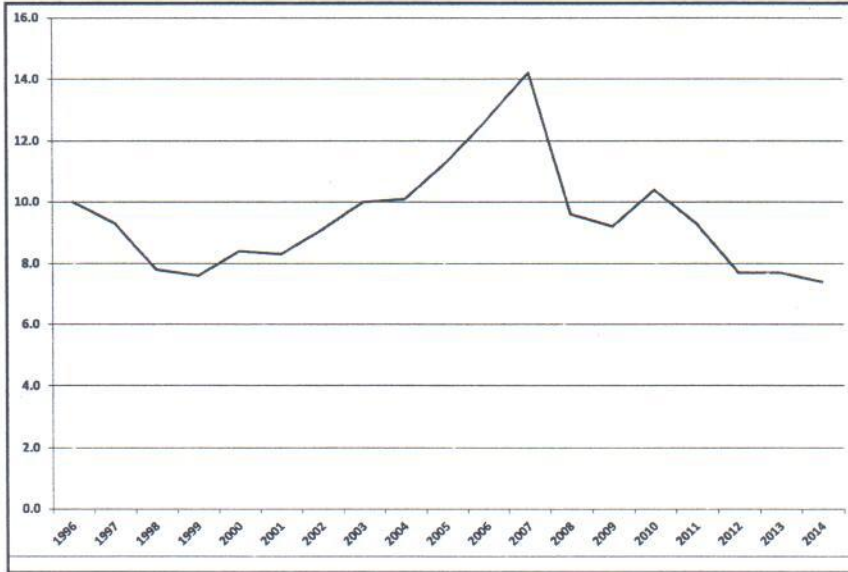
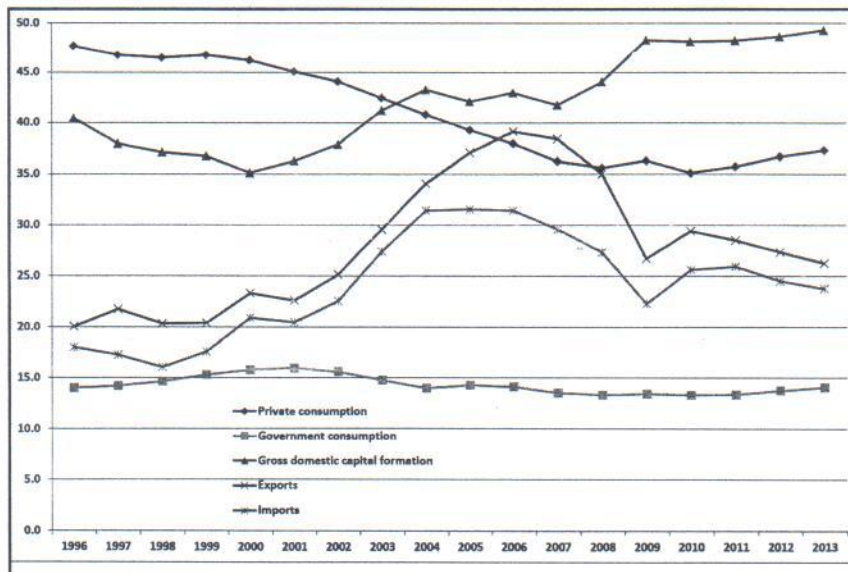


Chart 16. Share of Demand Components of GDP: 1996-2013



	1982	1985	1988	1990	1993	1997	2000	2003	2005	2006	2007
External Balances											
Current Account	1.9	-3.7	-0.9	3.0	-1.8	3.8	1.7	2.8	7.0	9.1	11.5
Exports (goods)	7.2	8.1	9.9	12.7	11.8	18.5	20.9	26.6	33.1	35.0	37.6
Imports (goods)	-5.7	-12.4	-11.2	-10.5	-13.5	-13.9	-18.0	-23.9	-27.3	-27.1	-27.9
Financial Account	0.1	2.9	1.7	0.8	3.7	2.1	0.2	3.2	2.6	0.1	2.2
Net FDI	0.1	0.3	0.6	0.7	3.6	4.2	3.1	2.9	2.9	2.1	3.7
Net Portfolio Inv.	0.0	1.0	0.2	-0.1	0.5	0.7	-0.3	0.7	-0.2	-2.4	0.6
Net Other Inv.	0.0	1.6	0.9	0.2	-0.4	-2.8	-2.6	-0.4	-0.2	0.5	-2.1
Overall BOP	2.1	-0.8	0.6	3.0	0.3	3.6	0.9	7.1	9.0	8.9	14.2

Source: IMF, International Financial Statistics

	1980	1990	1995	2000	2003	2005	2006	2007
World	409756	933043	1473712	2022103	3153808	4244317	5090950	6449079
As % of Total:								
Advanced Economies	45.4	44.4	45.0	48.2	39.1	34.3	29.3	23.7
Euro Area				9.2	4.8	3.0	2.6	2.1
Japan	4.7	5.9	8.4	13.5	14.2	13.8	11.5	9.3
United States	3.0	5.4	3.4	2.1	1.6	0.9	0.7	0.6
Emerging & Dev. Economies	29.9	14.7	22.3	28.5	28.2	35.6	37.1	39.6
Africa	3.7	1.3	1.2	2.1	1.9	2.7	2.9	2.8
Developing Asia	7.2	5.0	8.5	12.3	14.3	19.1	19.5	21.0
China	0.5	2.2	3.4	6.4	8.7	13.5	14.0	15.0
Eastern Europe	1.2	1.4	3.7	4.6	5.1	6.9	7.8	8.3
Russia			0.7	0.9	1.6	2.9	3.9	4.6
Middle East	12.9	3.5	3.0	3.7	2.6	2.8	2.8	3.1
Latin America	7.4	3.6	5.9	5.9	4.2	4.2	4.1	4.4

Source: IMF, International Financial Statistics

Country	Period	Annual Growth	Period	Annual Growth	Exports in Constant 2000 US dollars, in billions \$						
					1960	1970	1980	1990	2000	2006	2007
China	1978-2007	13.3	1978-2007	13.3	na	na	43.0	74.7	279.6	989.1	1214.3
India	1960-2007	9.0	1978-2007	10.0	2.7	5.4	11.4	19.0	60.9	145.0	155.9
Indonesia	1960-2007	5.5	1978-2007	4.6	9.2	13.5	32.7	35.8	67.6	103.1	111.4
Korea, Rep.	1960-2007	17.5	1978-2007	12.1	0.2	2.7	17.6	49.2	208.9	386.1	432.8
Malaysia	1960-2007	8.5	1978-2007	9.9	3.5	6.1	12.9	35.0	112.4	154.3	163.5
Philippines	1960-2007	5.7	1978-2007	5.5	4.6	7.4	15.8	20.6	42.1	59.4	62.6
Thailand	1960-2007	10.3	1978-2007	10.5	1.3	3.3	8.2	29.9	82.0	116.9	124.5
Russian Federation	1989-2007	2.2	1989-2007	2.2	na	na		139.6	114.4	189.0	203.0

Source: World Bank, *World Development Indicators* and Asian Development Bank, *ADB Key Indicators*

Ratio of Imports Values to Export Values of Electrical and Non-Electrical Machinery						
	2000	2001	2002	2003	2004	2005
Korea	77.2	72.1	69.7	64.1	65.6	66.9
Malaysia	82.4	83.5	83.2	85.3	82.5	83.1
Philippines	81.4	95.5	94.9	91.7	93.7	90.3
Share of Electrical and Non-Electrical Machinery to Total Merchandise Exports						
	2000	2001	2002	2003	2004	2005
Korea	38.9	42.3	43.6	43.5	40.9	38.8
Malaysia	57.1	57.5	54.4	52.1	51.8	50.1
Philippines	71.3	73.2	71.2	71.4	69.0	66.1

Source: Calculated from United Nations Commodity Trade Statistics Database (COMTRADE)

	1960	1970	1980	1990	2000	2006	2007
China	44.89	40.49	48.52	41.61	45.92	48.68	48.64
India	19.56	20.79	24.69	26.88	26.19	29.28	29.42
Indonesia	15.05	18.69	41.72	39.12	45.93	47.05	46.74
Korea, Rep.	17.71	26.02	36.55	41.57	40.74	39.63	39.40
Malaysia	19.40	27.39	41.04	42.20	50.73	49.94	50.63
Philippines	27.63	31.65	38.79	34.47	32.27	31.63	31.32
Thailand	18.52	25.31	28.68	37.22	41.99	44.55	43.85
Russian Federation	na	na	na	48.35	37.95	37.95	38.57

Source: World Bank, *World Development Indicators*

	1960	1970	1980	1990	1997	2000	2006	2007
China	20.40	24.23	29.27	26.03	32.88	34.11	42.54	42.17
India	14.95	13.77	18.38	23.02	23.03	22.73	32.48	33.91
Indonesia			21.57	28.34	28.31	19.85	24.13	24.86
Korea, Rep.	15.42	25.56	32.22	37.08	35.62	31.09	29.04	28.78
Malaysia	16.45	18.18	29.94	33.04	43.11	25.56	20.89	21.95
Philippines	17.59	18.08	27.22	23.11	24.42	21.18	13.83	14.90
Thailand	18.76	23.74	27.77	40.38	33.78	21.97	28.51	31.36
Russian Federation				28.70	18.29	16.86	18.44	21.04

Source: World Bank, *World Development Indicators*

	1965	1970	1980	1990	1997	2000	2006	2007
China	20.40	24.23	29.27	26.03	32.88	34.11	42.54	42.17
India	14.95	13.77	18.38	23.03	23.03	22.73	32.48	33.91
Indonesia			21.57	28.34	28.31	19.85	24.13	24.86
Korea, Rep.	15.42	25.56	32.22	37.08	35.62	31.09	29.04	28.78
Malaysia	16.45	18.18	29.94	33.04	43.11	25.56	20.89	21.95
Philippines	17.59	18.08	27.22	23.11	24.42	21.18	13.83	14.90
Thailand	18.76	23.74	27.77	40.38	33.78	21.97	28.51	31.36
Russian Federation	na	na	na	28.70	18.29	16.86	18.44	21.04

Source: World Bank, *World Development Indicators*

Region	(a) Poverty measures for \$1 a day									
	1981	1984	1987	1990	1993	1996	1999	2002	2004	
East Asia and Pacific (EAP)	57.73	39.02	28.23	29.84	25.23	16.14	15.46	12.33	9.05	
of which China	63.76	41.02	28.64	32.98	28.36	17.37	17.77	13.79	9.90	
Eastern Europe + Central Asia (ECA)	0.70	0.51	0.35	0.46	0.46	4.42	3.78	1.27	0.94	
Latin America + Caribbean (LAC)	10.77	13.07	12.09	10.19	10.19	8.87	9.66	9.09	8.64	
Middle East+North Africa (MNA)	5.08	3.82	3.09	2.33	2.33	1.69	2.08	1.69	1.47	
South Asia	49.57	45.43	45.11	43.04	43.04	36.06	34.92	33.56	30.84	
of which India	51.75	47.94	46.15	44.31	44.31	39.94	37.66	36.03	34.33	
Sub-Saharan Africa (SSA)	42.26	46.20	47.22	46.73	46.73	47.72	45.77	42.63	41.10	
Total	40.14	32.72	28.72	28.66	28.66	22.66	22.10	20.13	18.09	
Total excl. China	31.35	29.69	28.75	27.14	27.14	24.45	23.54	22.19	20.70	
(b) Number of people										
Region	1981	1984	1987	1990	1993	1996	1999	2002	2004	
East Asia and Pacific (EAP)	796.40	564.30	428.76	476.22	420.22	279.09	276.54	226.77	169.13	
of which China	633.66	425.27	310.43	374.33	334.21	211.44	222.78	176.61	128.36	

Table 8. Poverty Measures for Percentage of Population and Number of People with Income of \$1 a Day

Eastern Europe + Central Asia (ECA)	3.00	2.27	1.61	2.16	16.94	20.87	17.90	6.01	4.42
Latin America + Caribbean (LAC)	39.35	50.90	50.00	44.60	38.83	42.96	49.03	48.13	47.02
Middle East+North Africa (MNA)	8.81	7.26	6.41	5.26	4.53	4.38	5.67	4.88	4.40
South Asia	455.18	445.05	471.14	479.10	436.74	452.91	463.40	469.55	446.20
of which India	363.72	359.41	368.60	376.44	376.14	378.91	376.25	377.84	370.67
Sub-Saharan Africa (SSA)	167.53	199.78	222.80	240.34	252.26	286.21	296.07	296.11	298.30
Total	1,470.28	1,269.56	1,180.73	1,247.68	1,170.17	1,087.81	1,108.61	1,051.46	969.48
Total excl. China	836.62	844.29	870.30	873.35	835.96	876.37	885.83	874.85	841.12

Source: Lustig, Nora, "Inequality and Poverty: Definitions, Evolutions, and Determinants: Inequality and Poverty Lecture Series," Spring 2009, home.gwu.edu/~nlustig/SESSION1INEQANDPOV/PPT1.ppt

Table 9. Poverty Measures for Percentage of Population and Number of People with Income of \$2 a Day												
(a) Poverty measures for \$2 a day												
Region	1981	1984	1987	1990	1993	1996	1999	2002	2004			
East Asia and Pacific (EAP)	84.80	77.17	68.53	69.73	65.04	52.49	49.34	41.68	36.58			
of which China	88.12	79.00	68.64	72.16	68.13	53.34	50.05	40.94	34.89			
Eastern Europe + Central Asia (ECA)	4.60	3.93	3.08	4.31	16.53	17.97	18.57	12.88	9.79			
Latin America + Caribbean (LAC)	28.45	32.25	29.57	26.25	24.09	25.24	25.31	24.76	22.17			
Middle East+North Africa (MNA)	29.16	25.59	24.24	21.69	21.41	21.40	23.62	21.09	19.70			
South Asia	88.53	87.01	86.57	85.62	82.22	82.12	80.41	79.73	77.12			
of which India	88.92	87.89	86.98	86.30	85.33	84.12	82.67	81.37	80.36			
Sub-Saharan Africa (SSA)	74.52	76.98	77.36	77.05	76.09	76.42	75.85	73.81	71.97			
Total	66.96	64.25	60.73	60.79	59.44	55.52	54.24	50.69	47.55			
Total excl. China	59.08	58.87	57.89	56.78	56.43	56.26	55.63	53.85	51.58			
(b) Number of people												
Region	1981	1984	1987	1990	1993	1996	1999	2002	2004			
East Asia and Pacific (EAP)	1,169.74	1,115.97	1,040.71	1,112.93	1,083.21	907.83	882.70	766.26	683.83			
of which China	875.77	819.11	744.07	819.11	802.86	649.47	627.55	524.24	452.25			
Eastern Europe + Central Asia (ECA)	19.78	17.38	14.03	20.07	77.83	84.88	87.94	60.75	46.25			
Latin America + Caribbean (LAC)	103.90	125.58	122.30	114.85	111.08	122.30	128.44	131.14	120.62			

Table 9. Poverty Measures for Percentage of Population and Number of People with Income of \$2 a Day

Middle East+North Africa (MNA)	50.56	48.62	50.24	48.91	51.80	55.40	64.50	60.92	59.13
South Asia	813.04	852.39	904.21	953.00	973.99	1,031.48	1,067.15	1,115.54	1,115.77
of which India	624.92	658.92	694.71	733.13	767.39	798.07	825.00	853.32	867.62
Sub-Saharan Africa (SSA)	295.46	332.87	365.02	396.32	422.11	458.37	490.58	512.62	522.34
Total	2,452.47	2,492.81	2,496.50	2,646.09	2,721.72	2,665.66	2,721.31	2,647.22	2,547.94
Total excl. China	1,576.70	1,673.70	1,752.42	1,826.98	1,918.86	2,016.19	2,093.75	2,122.98	2,096.69

Source: Lustig, Nora, "Inequality and Poverty: Definitions, Evolutions, and Determinants: Inequality and Poverty Lecture Series," Spring 2009, home.gwu.edu/~nlustig/SESSION 1 INEQ AND POV/PPT.ppt

Table 10. Poverty headcount ratio at \$1 a day (PPP) (% of population)		
	1990	2003
China	33.0	13.4
India	42.1	30.7
Indonesia	20.5	6.5
Malaysia	0.6	0.2
Philippines	19.7	14.1
Thailand	10.1	0.7
Poverty headcount ratio at \$2 a day (PPP) (% of population)		
	1990	2003
China	72.2	41.6
India	86.1	78.0
Indonesia	70.9	50.5
Malaysia	11.4	9.0
Philippines	54.9	44.4
Thailand	43.3	27.8
Source: Asian Development Bank		

Table 11. Income ratio of highest 20% to lowest 20%			
	Early 1980s	Early or Mid 1990s	Late 1990s or Early 2000s
China	5.6	8.6	10.6
India	5.1	5.4	4.7
Indonesia	5.2	4.7	5.2
Korea			6.8
Malaysia		11.7	7.1
Philippines	10.0	11.0	9.7
Thailand		9.4	8.3
Source: Asian Development Bank			

Rank		Life expectancy index	Education index	GDP index	HDI
	China	0.792	0.826	0.724	0.781
1	Shanghai	0.886	0.929	0.937	0.917
2	Beijing	0.852	0.924	0.915	0.897
3	Tianjin	0.832	0.929	0.881	0.881
4	Zhejiang	0.828	0.855	0.838	0.840
5	Jiangsu	0.815	0.853	0.821	0.830
6	Guangdong	0.805	0.861	0.819	0.828
7	Liaoning	0.806	0.884	0.775	0.822
8	Shandong	0.815	0.840	0.789	0.815
9	Hebei	0.792	0.867	0.733	0.797
10	Heilongjiang	0.790	0.873	0.725	0.796
11	Jilin	0.802	0.863	0.720	0.795
12	Fujian	0.793	0.821	0.772	0.795
13	Shanxi	0.778	0.866	0.702	0.782
14	Inner Mongolia	0.748	0.829	0.761	0.779
15	Henna	0.776	0.834	0.693	0.768
16	Hubei	0.768	0.840	0.692	0.767
17	Hainan	0.799	0.818	0.684	0.767
18	Chongqing	0.779	0.832	0.681	0.764
19	Hunan	0.761	0.849	0.675	0.762
20	Shaanxi	0.751	0.840	0.677	0.756
21	Guangxi	0.772	0.842	0.650	0.755
22	Xinjiang	0.707	0.836	0.712	0.752
23	Jiangxi	0.733	0.841	0.658	0.744
24	Sichuan	0.770	0.803	0.654	0.742
25	Anhui	0.781	0.783	0.646	0.737
26	Ningxia	0.753	0.785	0.673	0.737
27	Qinghai	0.684	0.751	0.672	0.702
28	Gansu	0.708	0.731	0.623	0.687
29	Yunnana	0.675	0.756	0.627	0.686
30	Guizhou	0.683	0.740	0.554	0.659
31	Tibet	0.656	0.554	0.652	0.621
Note: All the HDIs are estimated by CIPD's project team					
Source: UNDP (2008), <i>Human Development Report: China 2007/08</i>					

Table 13. Per capita GDP (in yuan): National, urban and Rural: China's provinces			
	Per capita GDP	Urban residents' per capita disposable income	Rural residents' per capita net income
National	16,084.00	11,759.45	3,587.04
Beijing	50,467.00	19,977.52	8,275.47
Tianjin	41,163.00	14,283.09	6,227.94
Hebei	16,962.00	10,304.56	3,801.82
Shanxi	14,123.00	10,027.70	3,180.92
Inner Mongolia	20,053.00	10,357.99	3,341.88
Liaoning	21,788.00	10,369.61	4,090.40
Jilin	15,720.00	9,775.07	3,641.13
Heilongjiang	16,195.00	9,182.31	3,552.43
Shanghai	57,695.00	20,667.91	9,138.65
Jiangsu	28,814.00	14,084.26	5,813.23
Zhejiang	31,874.00	18,265.10	7,334.81
Anhui	10,065.00	9,771.05	2,969.08
Fujian	21,471.00	13,753.28	4,832.75
Jiangxi	10,798.00	9,551.12	3,459.53
Shandong	23,794.00	12,192.24	4,368.33
Henan	13,313.00	9,810.26	3,261.03
Hubei	13,296.00	9,802.65	3,419.35
Hunan	11,950.00	10,504.67	3,389.62
Guangdong	28,332.00	16,015.58	5,079.78
Guangxi	10,296.00	9,898.75	2,770.48
Hainan	12,654.00	9,395.13	3,255.53
Chongqing	12,457.00	11,569.74	2,873.83
Sichuan	10,546.00	9,350.11	3,002.38
Guizhou	5,787.00	9,116.61	1,984.62
Yunnan	8,970.00	10,069.89	2,250.46
Tibet	10,430.00	8,941.08	2,434.96
Shaanxi	12,138.00	9,267.70	2,260.19
Gansu	8,757.00	8,920.59	2,134.05
Qinghai	11,762.00	9,000.35	2,358.37
Ningxia	11,847.00	9,177.26	2,760.14
Xinjiang	15,000.00	8,871.27	2,737.28

Source: *China Statistical Yearbook 2007*

Table 14. Human, Social and Economic Indicators of China's Provinces					
	Life expectancy	Combined school enrolment ratio (%)	Adult literacy rate (%)	Per capita GDP (Yuan)	Per capita GDP
National	72.50	66.56	90.69	16,084.00	7,660.00
Beijing	76.10	86.10	95.53	50,467.00	24,034.89
Tianjin	74.91	87.03	95.90	41,163.00	19,603.87
Hebei	72.54	72.88	93.58	16,962.00	8,078.15
Shanxi	71.65	68.54	95.58	14,123.00	6,726.07
Inner Mongolia	69.87	67.33	90.64	20,053.00	9,550.23
Liaoning	73.34	73.51	95.88	21,788.00	10,376.53
Jilin	73.10	69.39	94.79	15,720.00	7,486.64
Heilongjiang	72.37	71.76	95.03	16,195.00	7,712.86
Shanghai	78.14	88.48	95.08	57,695.00	27,477.22
Jiangsu	73.91	74.60	90.64	28,814.00	13,722.66
Zhejiang	74.70	76.98	89.80	31,874.00	15,179.98
Anhui	71.85	67.62	83.70	10,055.00	4,788.69
Fujian	72.55	68.98	88.69	21,471.00	10,225.56
Jiangxi	68.95	70.59	90.79	10,798.00	5,142.54
Shandong	73.92	70.20	90.87	23,794.00	11,331.88
Henan	71.54	67.57	91.36	13,313.00	6,340.31
Hubei	71.08	71.70	90.17	13,296.00	6,332.22
Hunan	70.66	67.66	93.48	11,950.00	5,691.18
Guangdong	73.27	68.61	94.89	28,332.00	13,493.11
Guangxi	71.29	64.62	93.99	10,296.00	4,903.47
Hainan	72.92	64.49	90.50	12,654.00	6,026.46
Chongqing	71.73	68.86	90.30	12,457.00	5,932.64
Sichuan	71.20	66.12	87.44	10,546.00	5,022.53
Guizhou	65.96	59.57	81.21	5,787.00	2,756.06
Yunnan	65.49	59.78	83.50	8,970.00	4,271.96
Tibet	64.37	57.41	54.35	10,430.00	4,967.28
Shaanxi	70.07	70.77	90.65	12,138.00	5,780.72
Gansu	67.47	63.98	77.73	8,757.00	4,170.52
Qinghai	66.03	63.98	80.70	11,762.00	5,601.65
Ningxia	70.17	66.45	84.56	11,847.00	5,642.13
Xinjiang	67.41	64.20	93.34	15,000.00	7,143.75

Note: the data on average life expectancy of different provinces/municipalities/autonomous regions are results of the 5th national census in 2005 taken from "China's Statistical Yearbook 2006," combined school enrolment ratios are calculated on the data in Table 6, and adult literacy rates and per-capita GDP are taken from "China Statistical Yearbook"

Source: UNDP (2008), *Human Development Report: China 2007/08*

