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Indian and Chinese Economic Trajectories: Future Prospects

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This paper undertakes a critical analysis of India's and China's growth models, and highlights both the differences and vulnerabilities in their structure of growth. The author argues that contrary to popular perception, the global economic crisis has exposed the faultlines in both economies.

Introduction

If the renowned economic historian Angus Maddison's estimates are plausible, India and China accounted for nearly 40% of global output until the late eighteenth century. The ensuing centuries would witness the West's ascendancy and naval intrusion into Asia and, ultimately, the colonisation of India and the semi-colonisation of China. This would dramatically efface Asia's pre-eminent position in the world economy. China's high growth rates since 1978 and India's since 1991 have revived the promise of Asia's giants once again, reclaiming their historic prime

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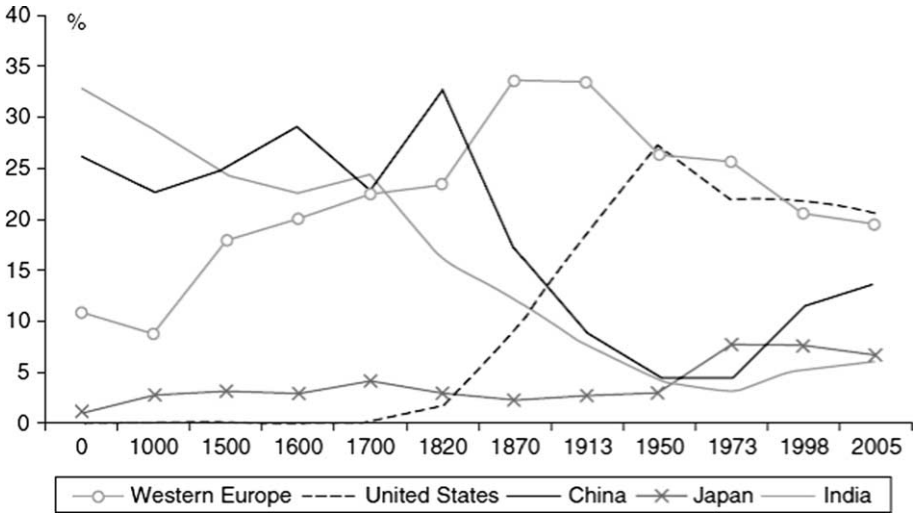

Fig 1. Major economies' share of global GDP (in PPP), 0–2005.
Source: Angus Maddison, *The World Economy: A Millennial Perspective* (Paris: OECD Development Centre Studies, 2001).

positions in the indices of wealth and power (see Figure 1). In recent years, this promise has acquired an aura of inevitability in our national conversations.

The ongoing global economic crisis and the political economy flux in the high-income North suggest that the path to eminence and prosperity for China and India will no longer be as linear as many had begun to assume.

The rationale behind this paper is to present a critical analysis of India and China's growth models, and underscore the vulnerabilities in their structure of growth. Each country has assumed a different path in the global division of labour – China as a large scale manufacturing assembly and processing location for the OECD world; India as an information technology-enabled services (ITES) and software hub and a location for niche skill-intensive manufacturing like automobile components, pharmaceuticals and biotechnology. Both also demonstrate typical characteristics of low-income developing economies, which focus on traditional comparative advantages vis-à-vis natural resources/unprocessed commodities or low-end processed commodities – such as India's iron ore exports, textile exports, China's steel, toys, footwear, etc.

The paths are different because of internal structural conditions in their political economies. In part two, I will discuss these differences and explore the reasons how

India and China have arrived at their present material position. Part three will conclude with a brief reflection on the post-global economic crisis challenges for Asia's two giant economies.

India and China: Vulnerabilities and Main Structure of Growth

What explains the divergence of China and India's role in the global political economy? Let's first look at India's case. In 1980, both India and China were at an identical position in terms of aggregate income. The divergence in the ensuing three decades is captured in the Figure 2.

Today, the average Chinese is more than three times better-off than the average Indian. The change in economic structure in the two economies is evident from Figure 3.

While India's share of services has increased from 37 to 55%, the share of manufacturing (included in industry) has remained nearly constant at 16% of gross domestic product (GDP). The change in the share of manufacturing during this period in India has been about 2.5 percentage points lower than the average country at the same stage of development, while the change in the services share was about 10 percentage points higher than average (even though its employment performance

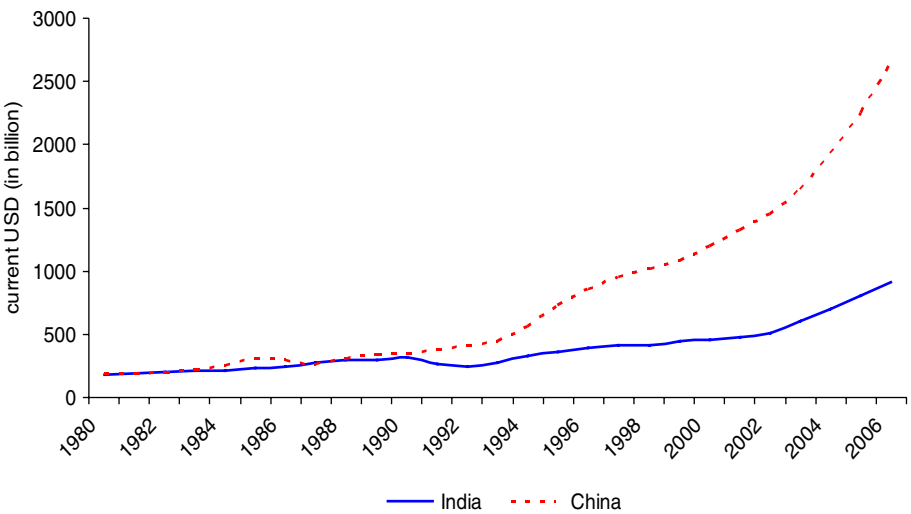

Fig 2. India and China: GDP (current US$).
Source: World Development Indicators 2008, World Bank.

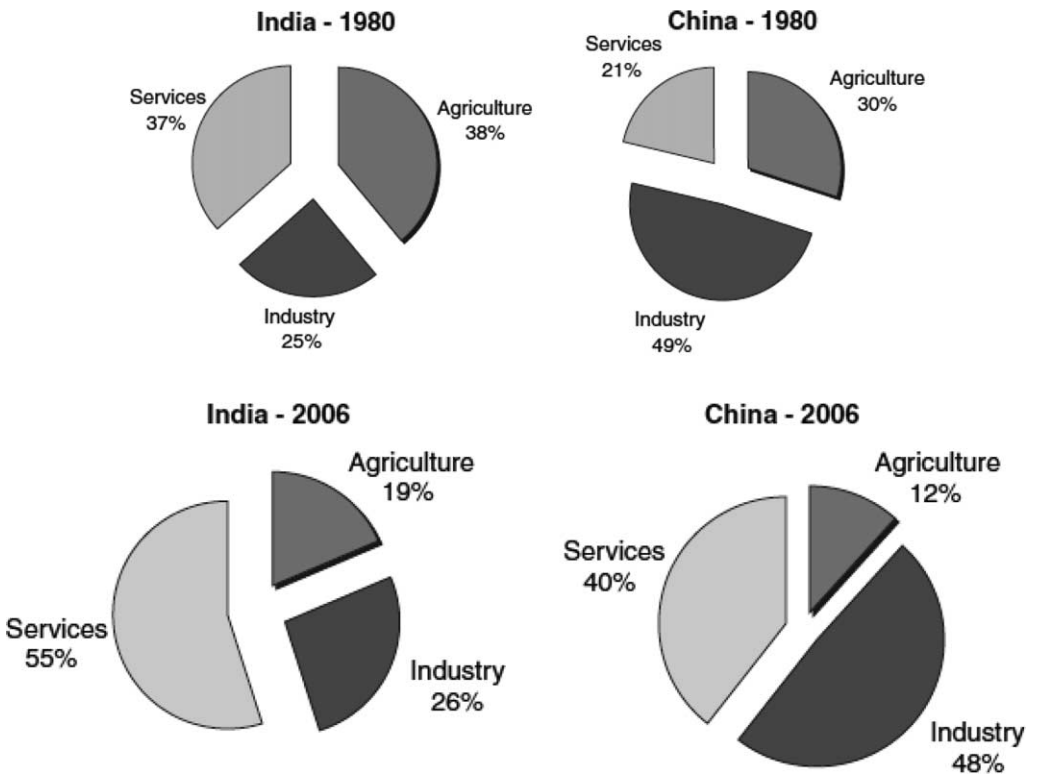

Fig 3. India and China: Changing composition of their GDP.
Sources: India data from Reserve Bank of India Annual Report; China data from China Statistical Yearbook, various issues.

was below average). In contrast, according to a recent Assocham study, China's share of its manufacturing sector to GDP is 35%; South Korea, Malaysia and Indonesia's is 30%; Argentina and Brazil's manufacturing sectors contribute 24% to their national economies.[1]

What explains this Indian puzzle – niche skill-intensive services within a structural bias for a generally services-oriented economy coexisting with a large agrarian base while the manufacturing component (especially labour-intensive manufacturing) lags far behind?

Structural constraints in India have created this pattern – a small pool of skilled workers (25 million undergraduates or higher degree holders) and a simultaneous national illiteracy rate of almost 40%. For instance, in 2000, India spent 86% of per

capita GDP per student in tertiary education, while it spent 14% of per capita GDP per student in primary education.[2] This is a legacy of the 1950s where India's planners invested resources in institutions of higher learning but failed to address the mass illiteracy in the countryside. As education is a dual subject (under the purview of Delhi and the provinces), despite central investment in primary education, the actual deployment and management of funds occurs at the state level and inefficiencies at that level usually stifle investment or its quality on the ground.[3] The share of elementary education in total education expenditure rarely exceeded 50% in India compared to South Korea in the 1950s, which allocated two-thirds of its education spending on primary education.

Figure 4 and Figure 5 show massive illiteracy coexisting with a relatively higher post-secondary or tertiary attainment (absorbed by the services sector) in India.

A second structural factor that created an anti-manufacturing bias was the inability of the state to expand "core infrastructure" goods and rigid labour laws. This unique policy context created a situation of "constrained adaptation" where an inherently entrepreneurial class filled a vacuum created by structural constraints, and channelled resources toward those services industries that relied relatively less on

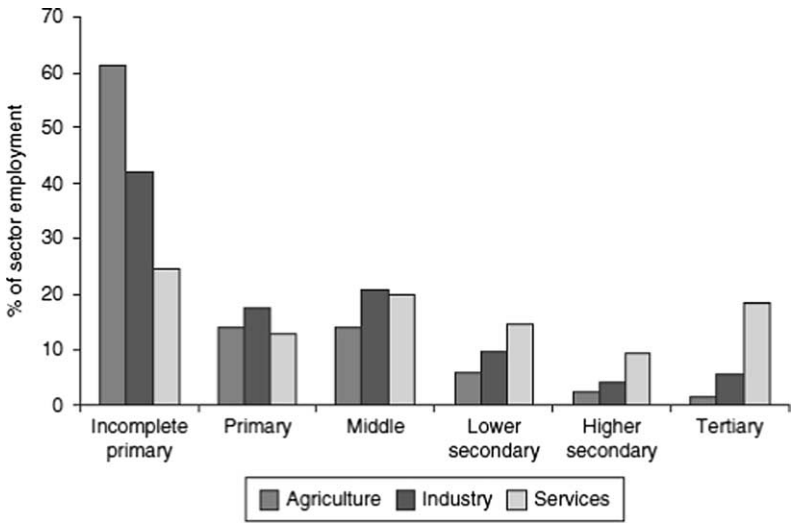

Fig 4. India's education distribution by sectors, 2004.
Source: India National Sample Survey Organization, "Socio-economic Survey, Round 60, January–June 2004," Asian Development Outlook, 2007.

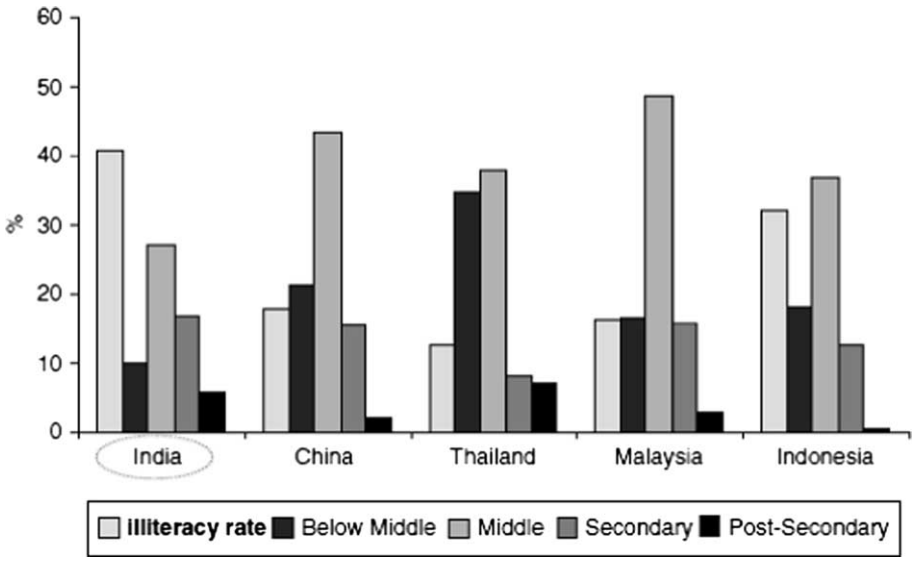

Fig 5. Educational attainment of the total population aged 15–64, 2000.
Source: Barry Bosworth, Susan M. Collins and Arvind Virmani, "Sources of Growth in the Indian Economy," NBER Working Paper 12901, Cambridge, MA, February 2007.

physical infrastructure and where the *relatively* superior tertiary education sector had produced an available base of skilled workers.[4]

Thus, India's services sector was responsible for over 60% of its GDP growth in the 1990s. And the growth acceleration was the strongest in business services, communication, and banking services, followed by hotels and restaurants, and community services. These five sub-sectors together accounted for the entire acceleration in services growth in the 1990s. This trend continued in the 2000s. Services contributed 69% of the overall average growth in GDP between 2002 and 2007, this time with the addition of the fast-growing ITES sector.

A recent study of input–output structure identified 10 vital sectors in the Indian economy based on growth impacts on GDP of efficiency improvements in these sectors. These sectors include electricity, water and gas supply, transport services, railway transport services, coal and lignite, etc. The study found that India's growth rate is at least as sensitive to these sectors as it was prior to the 1991 reforms.[5] It is inefficiencies and underinvestment in these infrastructure sectors that has prevented both a take-off in manufacturing industries and deprived the latter from receiving export-oriented foreign direct investment (FDI).

In contrast, the services sector in general and the information technology and software sectors in particular, which are relatively less capital-intensive in their operations and less reliant on core ''public goods,'' have unsurprisingly flourished, as have certain niche manufacturing sectors that have created their own captive sources of private infrastructure.

More generally, supply-side bottlenecks continue to constrain Indian industry. In the 1980s, India had higher infrastructure stocks in power, roads and telecommunication, and was only surpassed by China in 1990. After the mid-1980s, the pressure on public expenditure from rising deficits constrained public investment. From 1986, public investment in GDP began a steady decline from 11.2% to 5.6% per cent of GDP in 2003–2004.[6] Even today, for every $1 that India spends on infrastructure, China spends $7. Over the past 20 years, India's self-reliance in the production of machine tools has fallen from % to the current 20%.

The gap in infrastructure stocks is now so large that for India to catch up with China's present level of stocks per capita by 2015, it would have to invest 12.5% of GDP per year on infrastructure (see Figure 6).

What are the consequences of India's distorted growth model?

The first adverse consequence of the Indian state's inability to provide core infrastructure goods has been the internationalisation of India Inc.'s operations. India appears to be globalising without industrialising. It is remarkable how globalised India Inc. has become. The empirical evidence is instructive: 50% of the total profits of the top 30 Indian companies come from their overseas operations. Outward investment has totalled nearly $80 billion over the past decade with most of this FDI flowing to the OECD economies led by the United Kingdom and United States.[7] Reserve Bank of India data shows that outward FDI by domestic companies in overseas joint ventures and wholly owned subsidiaries was $18 billion in 2009–2010 and $44 billion in the 2010–2011.[8]

While some would laud this data as evidence of Indian success on the global stage, it is hardly a sign of strength that a capital scarce country is exporting its resources away from the home economy. Further, there is also no evidence to suggest that India's outward-FDI into core OECD economies has produced a flow of knowledge or technology transfers to the Indian economy. A *prima facie* survey of India Inc.'s

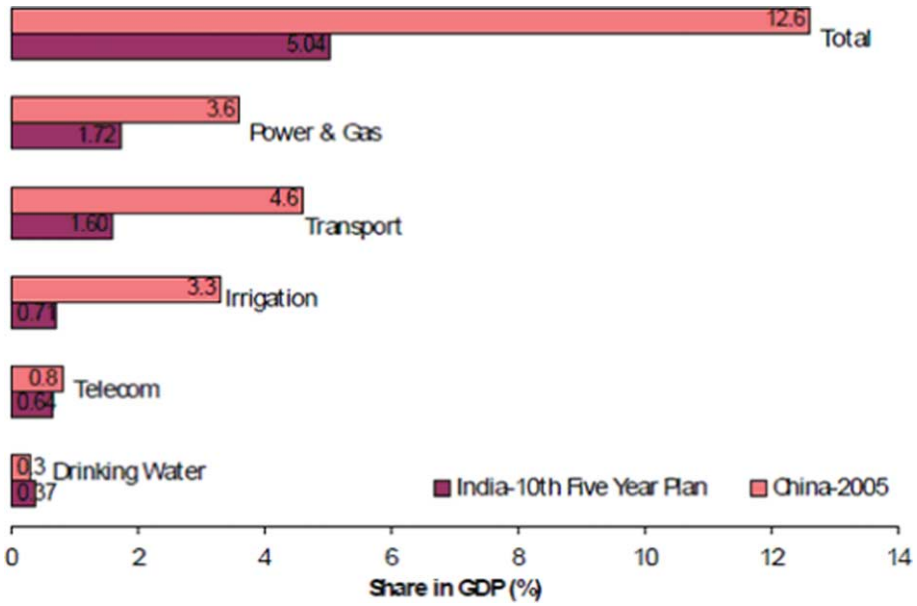

Fig 6. Infrastructure investment (per cent of GDP), India and China.
Source: Poonam Gupta, Rana Hasan, Utsav Kumar, "What Constrains Indian Manufacturing?" ICRIER Working Paper No. 211, March 2008.

acquisitions suggests a pattern of investments linked to servicing consumers and businesses in the core Western economies.[9] By comparison, inbound FDI in the real economy is declining. According to a FICCI study, from 2000 to 2008 India received an average of $3.4 billion of manufacturing-oriented FDI each year. In contrast, China pulled in $40 billion of manufacturing FDI annually during the same period.[10] Again, this paradox stems from the structural bottleneck in the Indian political economy that dis-incentivises investment in manufacturing sectors.

The globalisation of India Inc. has important adverse consequences for India's ability to develop a domestic industrial base that can ultimately feed into both military–technical sectors and science and technology, and research and development (R&D) to produce innovation that enables economies to maintain growth over extended periods.

According to Demos, a UK based think tank, India produces about 6000 science and engineering PhDs each year as compared to China's 15,000 (see Figure 7 and Figure 8). But more importantly, China has stepped up the internationalisation of its

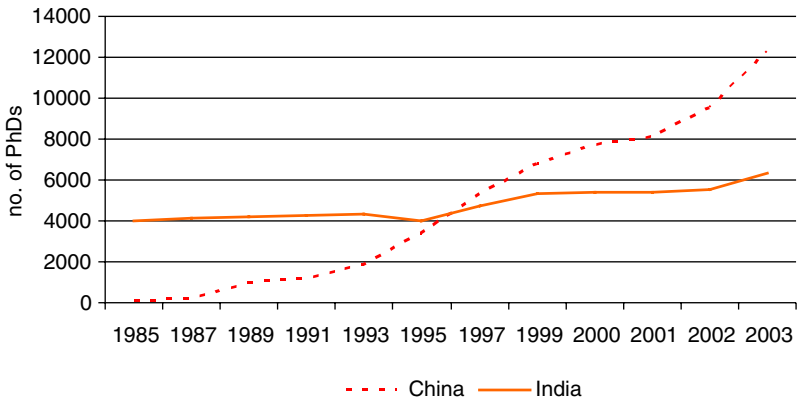

Fig 7. Number of science and engineering (S&E) doctoral degrees.
Source: National Science Board, "Science and Engineering Indicators 2008," National Science Foundation, Arlington, VA. http://www.nsf.gov/statistics/seind08/.

research system, with extensive collaborative networks across Europe, Japan and the United States. By the end of 2007, according to China's Ministry of Commerce, multinational corporations had established 1160 R&D centres in China. The Indian system, in contrast, remains relatively mired in structural problems. The Asian Development Bank recently noted that industrial training in India was lagging behind

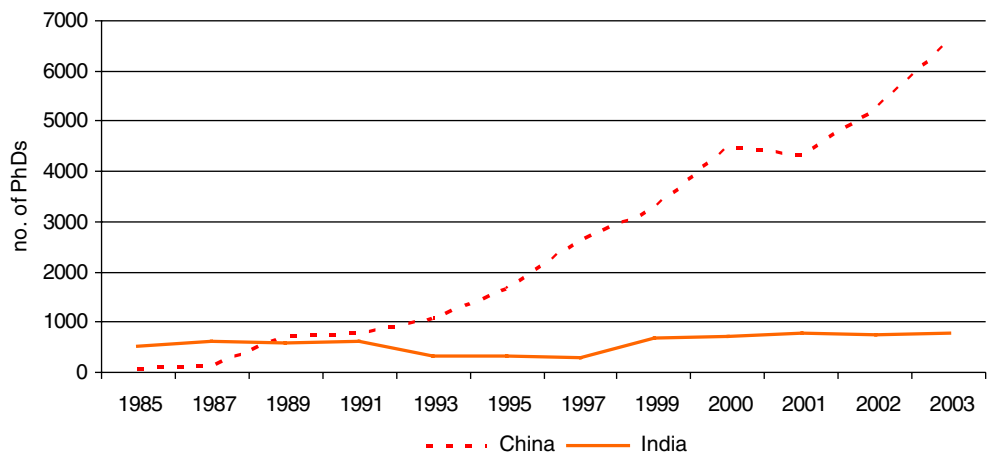

Fig 8. Number of science doctoral degrees.
Source: National Science Board, "Science and Engineering Indicators 2008," National Science Foundation, Arlington, VA. http://www.nsf.gov/statistics/seind08/.

rapid economic growth, with only 12,000 training and vocational institutes, compared to half a million in China. Again, as India's model has created a structural bias against manufacturing, this is reflected in the atrophy of its innovation ecosystem.[11]

The second adverse effect of India's growth model has been its ''jobless'' feature. India's jobless service-sector growth stems from the fact that the sector's growth has been driven largely by a handful of service sub-sectors – that is, ITES, telecommunications and banking. Additional employment generated by these sectors was not able to offset the rapidly falling labour-demand elasticity faced by other service sub-sectors. Further, given the skill-based model of these service sub-sectors, it is unlikely that labour-supply reallocation could occur from the unskilled countryside. In fact, recent shortages of manpower in ITES and banking have drawn its labour supply from tertiary workers intended for the manufacturing sector (such as engineers) creating a crowding-out effect. Importantly, in comparison to China, India is yet to achieve high levels of organised labour-force participation. Ninety per cent of India's 500 million workforce is in the unorganised sector!

A services-oriented focus that relies on skilled workers is therefore an unsustainable model because India's demographic trends are adding more untrained workers to the workforce than the present model can absorb. For example, despite a decade of phenomenal growth, where the ITES sector revenues have touched $70 billion (2010) – accounting for 6% of GDP and 26% of total exports – direct employment generated in this sector was a mere 2.3 million people. The burden of job creation, thus, will always fall upon the manufacturing sector. This impending transformation of India's economic structure has become even more imperative given ongoing demographic shifts in Southern Asia.

India, a demographic latecomer relative to the mature industrial economies and East Asia, is in the midst of a major transition in age structure. The country's working-age population as a share of the total population has risen substantially over the last three decades. And this process is set to continue over the next three decades, during which India will gain about 300 million workers.[12] When an economy's working-age population rises, so can its growth rate – a result known as the ''demographic dividend.'' By 2020, India's working-age population is projected to rise to 600 million – an increase of 100 million workers (see Figures 9, 10 and 11). This amounts to 10 million workers, including 65–70% from the country side, entering the workforce each year.

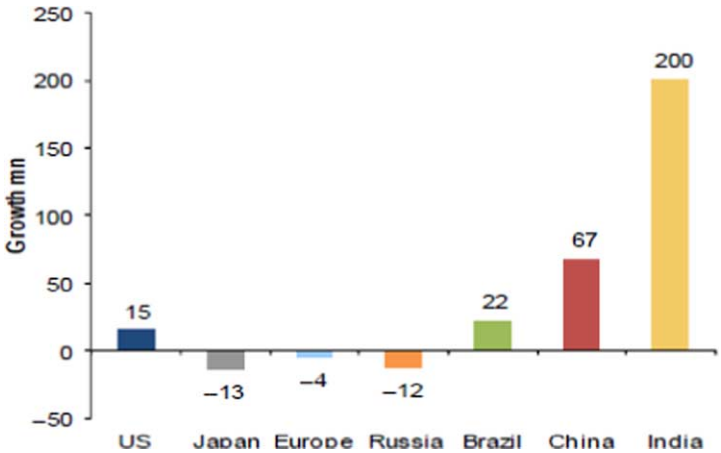

Fig 9. Projected new labour force by 2030.
Source: The Economist Intelligence Unit, 2009.

Leveraging this dividend, however, requires imparting a level of nutrition, healthcare and education to convert a raw human resource into human capital.[13] According to an Assocham 2008 study on the overall education ecosystem, India ranks at sixth place among the seven largest emerging economies led by Russia,

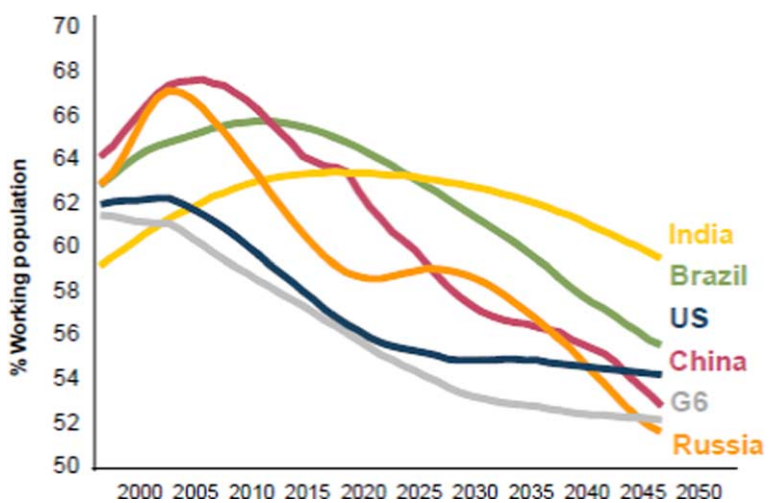

Fig 10. India is poised to display the highest working age ratio in the world, catching up with China in 2020 and with Brazil in 2025.
Source: "India Revisited," Goldman Sachs, June 2010.

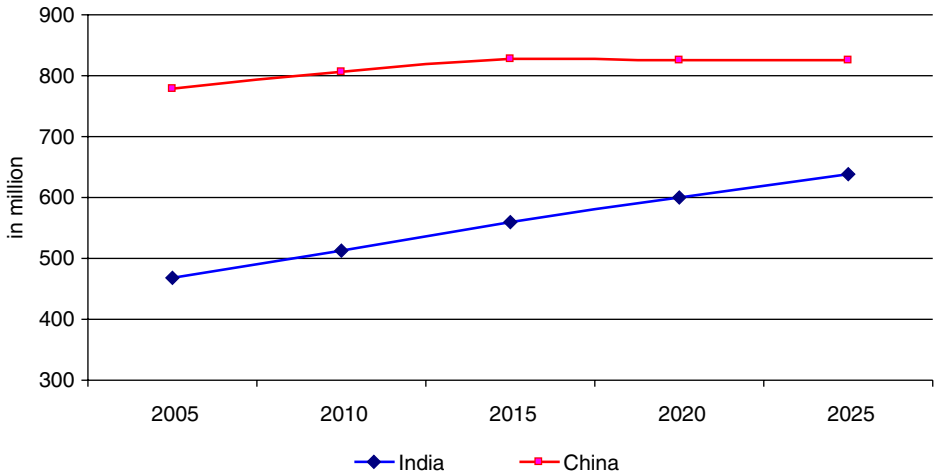

Fig 11. India's labour force catching up with China.
Source: McKinsey Global Institute, 2010.

China and Brazil. India performed poorly on all sectors of education – primary, secondary and tertiary. The gender parity in educational attainment in India was also the lowest among emerging economies with a rank of 116 globally.[14] A 2010 study undertaken jointly by INSEAD and the Confederation of Indian Industry also paints a picture of low innovation. In the lower-middle income group of countries, India ranks eighth below Thailand, Vietnam and Ukraine.[15]

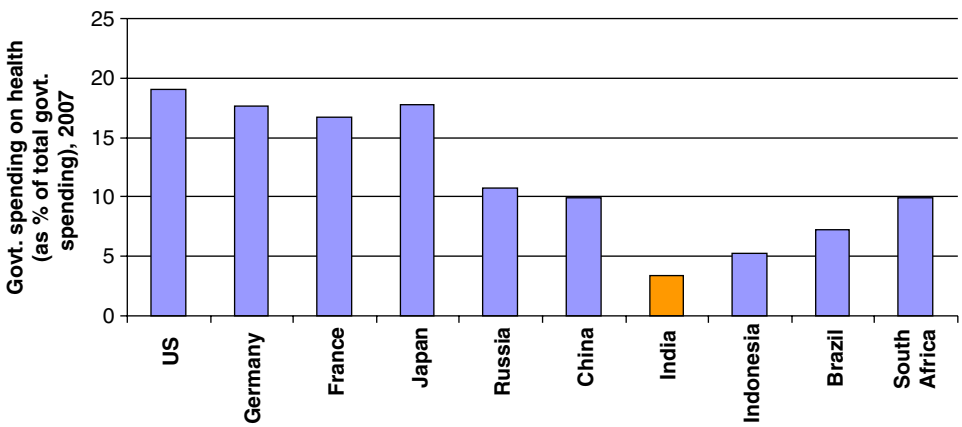

Fig 12. India's relative performance in healthcare.
Source: World Development Indicators, 2009.

Perhaps the most important driver that will enable a reallocation of workers from the country side to suburban manufacturing sectors will be the agriculture sector itself. In the post-reform years, India's changing composition of GDP has squeezed out the share of agriculture from 38% of GDP in 1980 to 15% in 2010. Yet, agriculture's share of employment continues to account for 58% (2001 census).

There has been a structural decline of the countryside – growth decelerated from an annual average of 4.7% per year during the 1980s to 3.1% during the 1990s and further to 2.2% in the 2000s. In contrast, China's agricultural sector continues to grow at over 4%, despite being three decades into the post-reform phase. According to the International Rice Research Institute, in 2004, India produced 124 million tonnes of rice compared to China's 186 million tonnes, despite having almost twice the area under paddy cultivation (42 million hectares versus 28 million hectares).[16]

An unproductive and overburdened countryside has made India's urbanisation and industrialisation quest even more precarious, since releasing rural workers for labour-intensive manufacturing activities (assuming the other structural constraints that impede manufacturing are seriously resolved) can only be sustainable if land reforms and investment in agriculture itself is undertaken. Only a productive countryside can produce the additional food for a larger urban workforce and stave off bottom-up resistance to this restructuring effort in the first place.

China

China's growth model has been essentially predicated on positioning the economic system as a large scale manufacturing and assembly base for OECD economies. The high investment intensity (i.e. heavy industries, infrastructure and construction) that such an export-oriented model requires implies that national savings must remain high, consequently pushing down domestic consumption. Low consumption is a symptom and not a cause of the imbalanced economic structure in China.

The share of GDP contributed by the household sector (wages and consumption) has faced a secular decline in the post-reform era (see Figure 13). From its peak of 56% in 1983, household consumption share fell to 46% in 2000, to the current 35% of GDP, the lowest share among developing economies. (The comparative ratio for India is 56%.) Chinese households have been compelled to suppress their own wages and consumption both to reduce input (wage) costs for

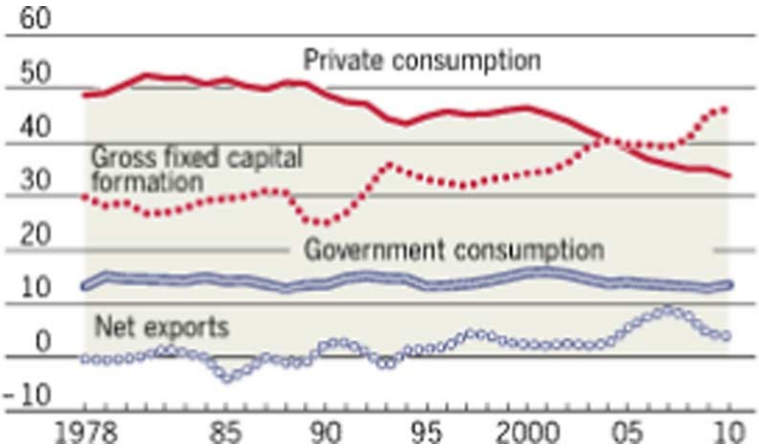

Fig 13. Changing composition of China's GDP, in %.
Source: Martin Wolf, "How China could yet Fail like Japan," *Financial Times*, June 14, 2011.

export-oriented industries and to keep the share of their savings high to compensate for the lack of a social security system.[17] These household savings are channelled through the state-owned banking system that absorbs this capital at extremely low interest rates to finance nation-wide projects.

China's political economy has been consistently transferring wealth from households to provincial governments and corporate firms to maintain a high investment rate. Ultimately, the fruits of this investment have been largely shared by urban Chinese elites and Western consumers in the core regions. Bluntly put, Chinese households have been subsidising Western consumption with Beijing mediating this extraction of wealth. Empirically, this is reflected in China's foreign exchange reserves of $3 trillion, of which $1.61 trillion is parked in US government debt (as of June 2010).[18]

Real gross domestic investment over the post-reform period – 1980–2004 – averaged 37% of real GDP with manufacturing, infrastructure and real estate as the prime drivers of fixed-asset investment in China. The investment rate since 2003 has jumped to the mid-40s (see Figure 14).

To be sure, not all investment in China is geared toward the export–manufacturing complex on China's east coast. There is a broader structural dynamic within China that creates a momentum for investment in urban infrastructure and

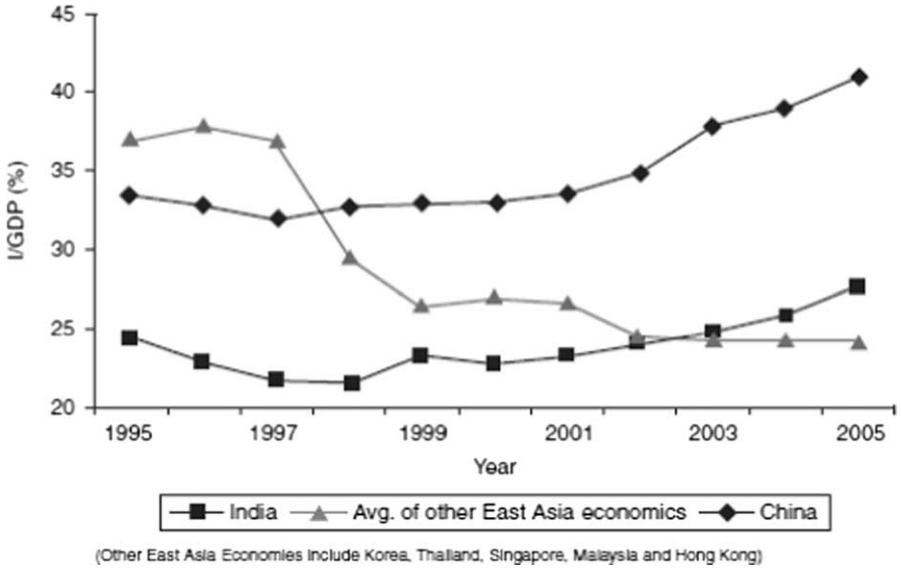

Fig 14. Investment/GDP ratio, 1995–2005.
Source: Shang-Jin Wei, "Das (Wasted) Kapital: Is China Investing Too Much?" http://voxeu.org/index.php?q=node/265. June, 16 2007.

real estate. China's political economy has produced a level of decentralisation where the provinces' share of expenditures has not kept pace with adequate sources of revenue. The 1994 tax reforms altered the fiscal balance of power in China. Thereafter, local governments received only 46% of all tax receipts, with most going to Beijing (which provides some fiscal support to the provinces). Yet, the expenditure burden remained with provincial governments, which account for 77% of all public spending. This mismatch has compelled China's provinces to find off-balance sheet sources of finance.

Until the late 1990s, most Chinese lived in homes provided by their *danwei*, or work unit, and there was no housing market. After Beijing decided to privatise the housing stock, the market took off and local governments began selling land for residential developments that fetched extraordinary prices. By 2010, contribution of land sales to local government revenues had soared to $464 billion, which amounted to 70% of total local government revenues.[19] Much of China's infrastructure investment is financed by this commercialisation of land. Since the provinces are prohibited from raising finance directly through bond markets or the banking system,

they have circumvented this by raising funds via special purpose vehicles that collateralise land. By the end of 2010, according to Chinese government estimates, 6576–10,000 financing vehicles had been established across provinces for raising money.

Land has, therefore, become an indispensable source of income for local governments who have discovered a process of commercialisation and leveraging of real estate and an institutional incentive for over-investment since local governments' investment decisions are not disciplined by the market, and, provincial officials are rarely held accountable for the low profitability or excess capacities their microeconomic decisions create. Further, Beijing's macroeconomic control over this process is not as robust as mainstream economists presume.[20] There is also now growing evidence of a crony–capitalist political economy across provinces where local officials and developers have been systematically colluding in this land conversion bonanza. Inevitably, a social backlash is simmering as this trend has neither produced adequate affordable housing nor satisfied rural residential dwellers who are beginning to protest against rising cases of forcible evictions.[21] Apparently, in response Beijing recently ordered local governments to ensure at least 70% of all land sales are dedicated for subsidised housing, slum redevelopment and small and medium-sized flats. Few observers, however, expect these restrictions will be adhered to.

At the national level this has produced an investment rate of over 50% and a rising incremental capital–output ratio (ICOR), which measures the amount of investment required to produce an additional unit of GDP. In 2009 China's ICOR was more than double its average in the 1980s and 1990s. In contrast, during Japan's investment boom, its ICOR was 3 ($3 of investment produced $1 of GDP); China's from 1991–2003 was 4.1. It is currently above 6, suggesting a structural pattern for over-capacity in the Chinese system.

Figure 15 reveals that as the global slowdown became evident, Beijing unleashed state investment as a counter-cyclical stimulus of up to almost 15% of GDP. Massive investments financed through the banking system drove an infrastructure boom across provinces. China pumped in nearly US$ 1.5 trillion in 2009 and 2010. Naturally, such an explosion in money supply and state investment in infrastructure and real estate is not sustainable for the fundamental reason that Chinese households cannot absorb this surplus level of investment given its true purchasing power. Indeed, in some sectors such as steel, highways, railroads and airports, China's

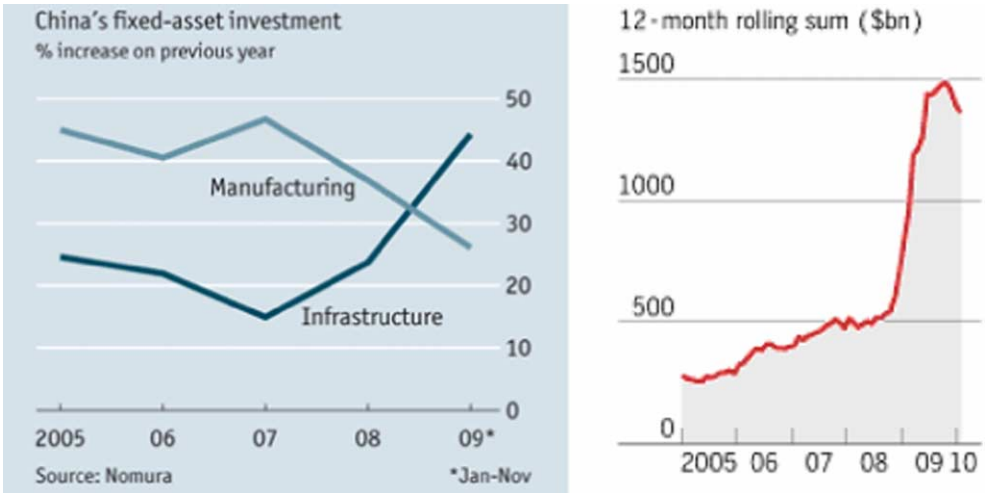

Fig 15. Beijing substituted domestic investment for decline in exports(left); new bank lending (right).
Source: Thompson Reuters Datastream.

infrastructure capacity has reached a surplus that cannot be absorbed even in the medium term.

Ultimately, China's real estate bubble will confront a decline in prices, and, should this coincide with a global economy that cannot absorb mainland production infrastructure, Beijing would be confronted with formidable multidimensional policy dilemmas. To illustrate via a simple example – it is estimated that even if just 10% of China's shoe exports were transferred to the domestic market, the whole shoe market in China would be saturated. This type of huge export-oriented capacities exists across manufacturing sectors, which underscores China's dependence on the global economy.

Thus, until China makes the strategic readjustment towards a normal consumption-oriented society by enabling the market to discipline the systemic misallocation of resources – capital, labour, energy and other scarce resources, whose prices should go up and investment go down – along with fiscal policy reform to end the perverse policy incentives that drive provincial over-investment, China's economic model will remain imbalanced. Thus, Beijing's present macroeconomic strategy is more akin to a holding operation to buy time until the global economy – on which China's growth model depends – recovers.

Multinational Corporations Drive China's Trading System

China's investment-intensive model has always implied the availability of an external outlet to keep the system from become unsustainable. This is where China's role in world trade fits in to which I now turn.

In 2010, China accounted for 19.8% of world manufacturing output, fractionally ahead of the United States with 19.4%, according to data by IHS Global Insight.[22] In 1990, China accounted for only 3% of the total. China is today the world's second-largest economy (in current dollar terms), biggest exporter (if members of the European Union are treated as separate economies), second-largest importer, and, holder of the largest stock of foreign currency reserves.

Figure 16 and Figure 17 capture China's role as a processing semi-periphery: raw material imports (including energy imports in the form of 10 million barrels per day of oil and 100 million tons of thermal coal) from the periphery feed China's industrial infrastructure and manufacturing that ultimately supplies the core.

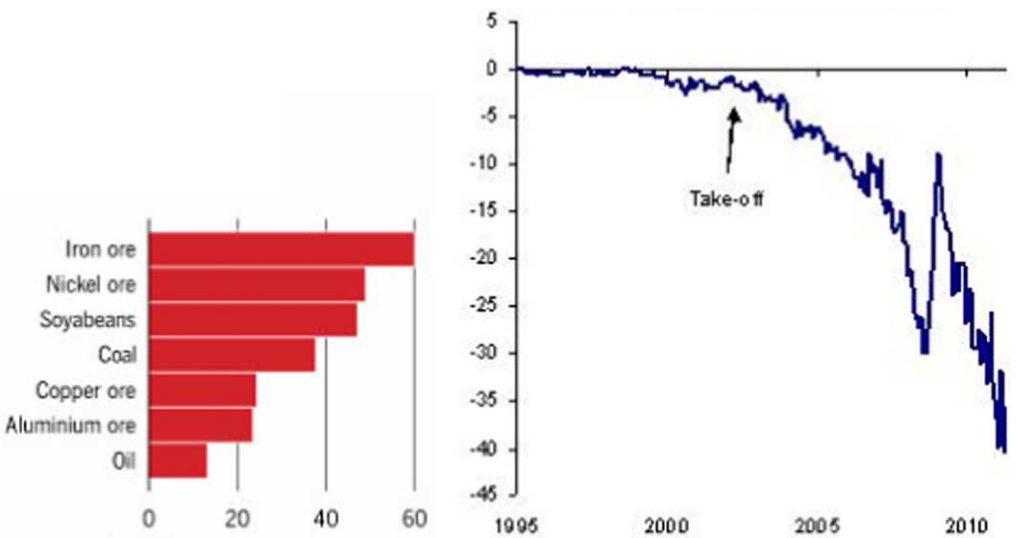

Fig 16. Commodity imports as a percentage of world imports, 2009 (left); China primary resource trade balance (in US$ billion) (right).
Source: Martin Wolf, "How China should Rule the World," *Financial Times*, March 22, 2011.

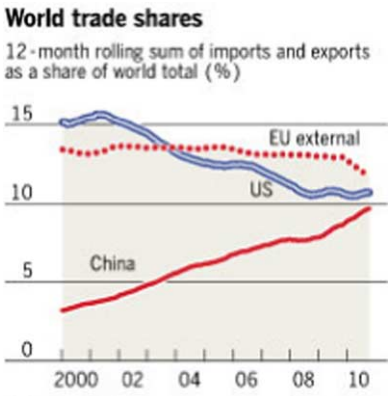

Fig 17. World trade shares: 12-month rolling sum of imports and exports as a share of world total (%).
Source: Thompson Reuters Datastream.

How does one interpret this status of a massive trading nation? Is this an endogenous development?

To appreciate the trend at play we have to understand the dynamics that underlie the very impressive statistics of exports and imports. China's exports are broadly composed of two major categories: processed finished consumer electronic products with high-technology components that are imported and unskilled-labour-intensive manufactures such as furniture, toys, garments and shoes (see Figure 18).

Overall, 55% of Chinese exports are accounted for by processed trade; 45% by conventional trade, more in line with Chinese actual stage of development. China's processed trade has been built on the back of enormous export-oriented FDI that has flowed from OECD multinational corporations (MNCs) into China. Of the top 500 companies operating in the mainland, 280 firms or 56% are from manufacturing industries, and less than 30% are from service-related industries. These manufacturing industries are largely of the reprocessing type, where China has become a transnational assembly "hub" or "conduit" for other Asian exporters. This export hub is concentrated on China's east coast. Nearly 90% of China's exports still come from the nine coastal provinces on China's eastern seaboard.

Indeed, the extent of investment (FDI) from the core – the United States, the EU and Japan – into China has been such that China has become a major driver for the

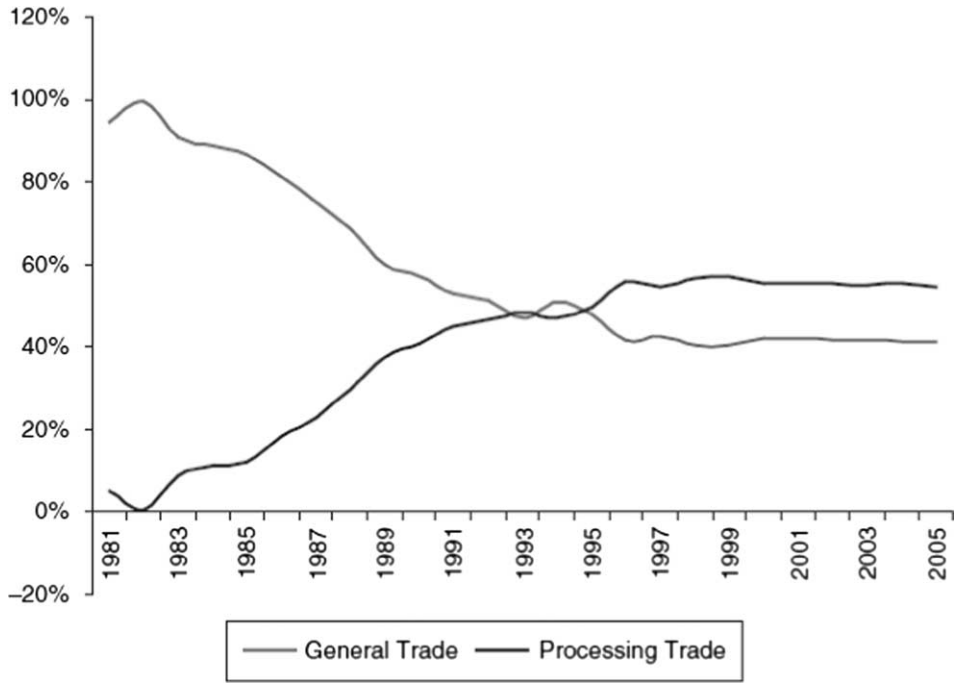

Fig 18. China's exports.
Source: China Statistical Yearbook, 2006.

global economy. In 2007, China surpassed the United States' contribution to global GDP growth (around 16%) (see Figure 19).

Yet, given that final demand for China's export-oriented complex continues to be the G-3 (the United States, the EU and Japan) one cannot classify China's growth as an endogenous development.

Thus, China's model is dependent on the core regions both at the final demand level and at the supply or production stage. Let's explore how this interdependence works.

The economic interdependence of East Asia cannot be appreciated without an appraisal of manufacturing supply-chains, and China's rapid emergence as a "conduit" in this process. Over the past decade, production fragmentation has become more pronounced in the region. A number of electronic and machinery industries are now characterised by a vertical division of labour – the slicing up of the manufacturing process where each economy is specialising in a particular stage of

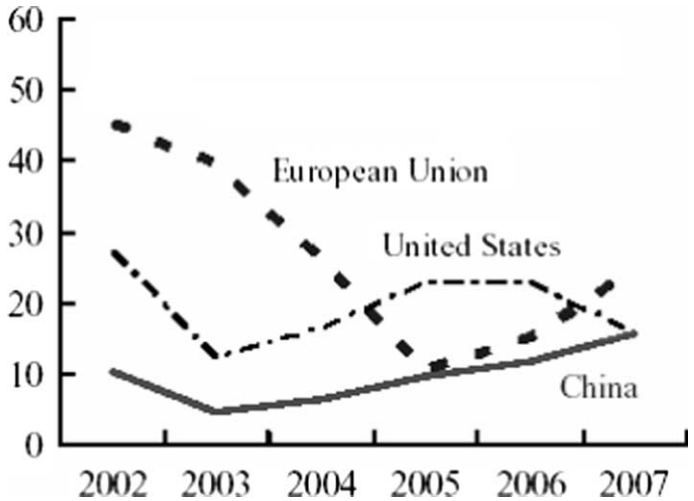

Fig 19. Contribution to global growth, in market exchange rates (in %).
Source: World Bank, ''China Quarterly Update,'' May 2007.

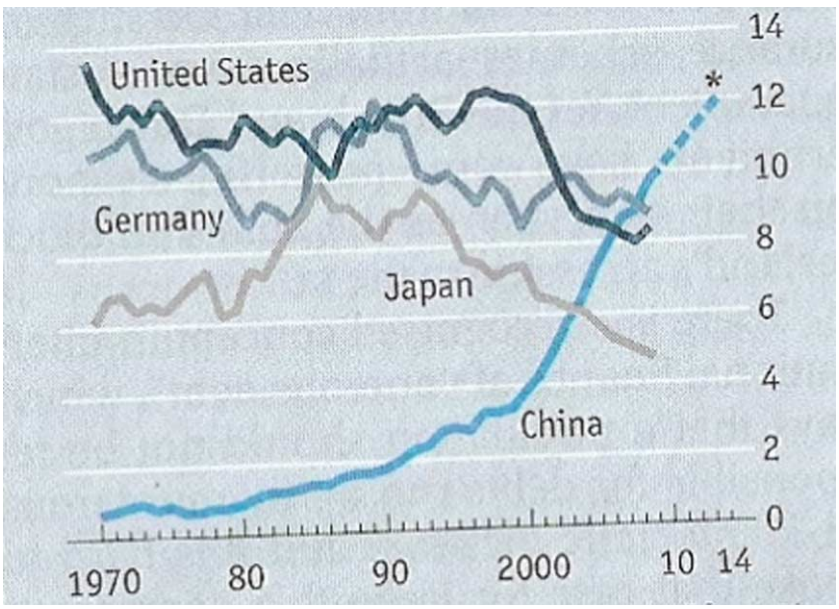

Fig 20. Share of world exports. *IMF forecast.
Source: Economist Intelligence Unit, 2010.

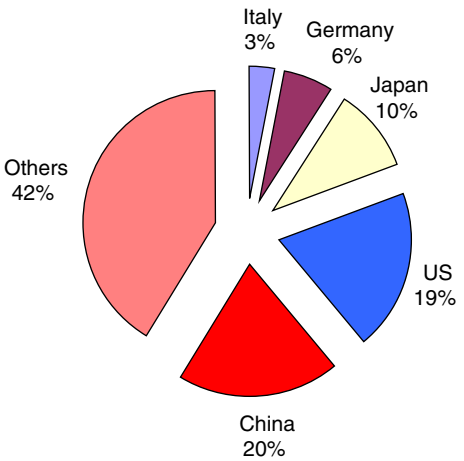

Fig 21. Value added in manufacturing, 2010.
Source: Peter Marsh, "US Manufacturing Crown Slips," *Financial Times*, June 20, 2011.

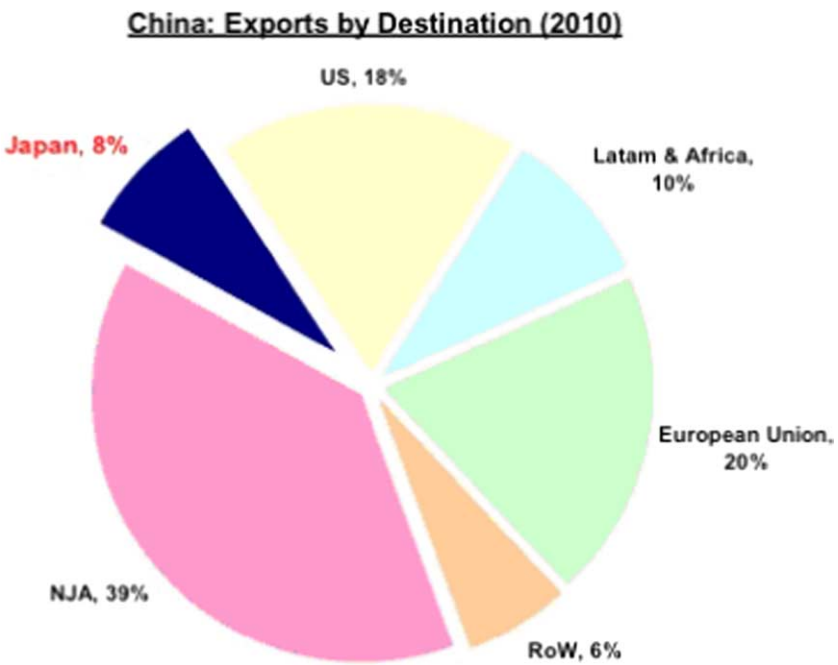

Fig 22. 46% of China's exports flow to the core regions – the United States, the EU and Japan.
Source: China Statistical Yearbook, 2011.

the production sequence of a single product that is eventually shipped out from Chinese ports to Western markets. These products are primarily manufactured by MNCs headquartered in Japan, South Korea, the United States, Europe, or Taiwan.

China has emerged as a central assembly point where high-technology components once produced in the core are exported to China where they are processed by MNC subsidiaries or affiliates only to be shipped back again for further processing and re-exported to China as organised components for final assembly and subsequent shipment to Western markets.[23] Such dynamic back-and-forth trade links, whereby several countries in the region participate in various stages to produce a single product has come to be known as vertical intra-industry trade (VIIT). More than 70% of intra-East Asian trade consists of intermediate goods or components used in production.

FDI into China has played a vital role in restructuring intra-industry trade in the region. The United States has invested in more than 59,000 projects in China at a total value of $65 billion. Between 1998 and 2007, offshore employment to China by US based manufacturing firms increased from around 100,000 to around 600,000. In 2008, China held more US affiliate jobs than any other country in the world. Similarly, over 27,000 EU companies have invested over $56 billion in China. A sizable share of these final products went back to the EU as exports. Japan has established 30,000 companies and joint ventures with an investment of $60 billion. Japanese firms employed 9.2 million workers on the mainland and contributed 12% of China's total corporate tax revenue. South Korea has 30,000 enterprises with an investment of $35 billion. Singapore has invested $31 billion in 16,000 projects. Taiwanese firms alone account for 60% of China's IT hardware exports and are estimated to have invested $100 billion on the mainland.

The following statistics are instructive and reveal the extent of MNC involvement in China's economy, and the interdependence between the core regions and China in general, and, between the United States and China in specific:

- In 2010, there were 690,000 registered foreign companies in China, with an FDI stock of more than $1 trillion. Even if we assume that 25–40% of all FDI in China is "round tripped" back into the mainland[24] that still leaves a staggering range of $600 billion–$750 billion in true FDI.

- From 1985 to 2007, MNCs in China increased their share of total trade from 10 to 60%, and currently 80% of the value of their exports is imported. Currently, over 50% of China's total exports are accounted for by processing or assembly related manufacturing.
- In 2009, foreign-invested enterprises (FIEs) accounted for 56% of total exports, 66% of China's trade surplus.
- Seventeen of the top 20 MNCs exporters in China operate in electronic-related manufacturing, indicating the industry where production fragmentation is the highest. Eighty-three per cent of China's high-tech exports are driven by foreign firms. And 75% of China's high-tech exports are accounted by information communication and technology (ICT) products, which are dominated by Taiwanese firms. By 2009, Taiwanese IT companies had relocated 95% of their assembling capacities in ICT products (laptop PCs, digital camera and i-phones and i-pads) into mainland China.[25]
- In 2008, the total sales of American goods in the Chinese market, including goods exported from the United States to China, amounted to $225 billion, close to the value of goods China exported to the United States in 2008, which stood at $252 billion.
- Fifty-eight per cent of all imports into the United States come from US subsidiaries operating in China. China is the second-largest trade partner and the fastest-growing export market for the US economy.
- According to the US–China Chamber of Commerce, 71% of US-funded ventures made profits in 2009, with 46% of them posting higher profit ratios in China than in any other country.

As alluded to above, the final markets for East Asian exporters led by China lie outside developing Asia. The United States (18%), the EU (20%) and Japan (8%) account for 46% of Chinese exports, which as described also serves as an export platform for other regional exporters. Thus, intra-regional interdependence (between China and East Asia) is fuelled by an inter-regional interdependence (between China and the West).

What Figure 23 shows is that East Asia is channelling its production through China and further onto Western markets. China is a ''conduit'' in this process importing high-tech components from its advanced neighbours – Japan, South Korea

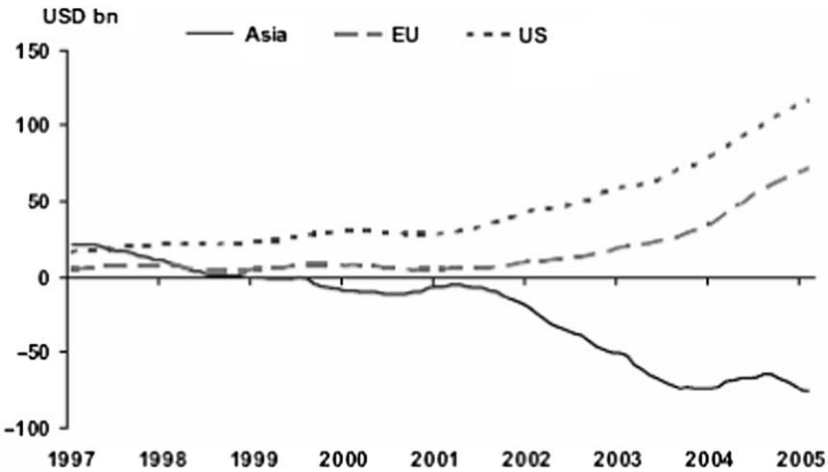

Fig 23. China's trade balances: mirror image.
Source: CEIC Database.

and Taiwan – and then assembling, processing and re-exporting these as electronic products. Thus, the surplus between China and the Western economies is actually a de facto surplus for the East Asian region as a whole.

Evidently, what we view as ''Chinese'' exports are in reality part of a complex trade and investment web that spans across East Asia. This has important implications.

First, China's manufacturing edifice must not be exaggerated since it is primarily the point of final assembly and shipment to Western markets. Most of the sophisticated R&D and high-tech components that go into China's electronic exports continue to be manufactured in the United States, Japan, South Korea or Taiwan. What many view as ''Chinese'' exports in fact involve the contributions of a large number of state and non-state economic actors, and the value-addition that occurs in China is only a very small percentage of the final product. The higher end of the value chain remains in direct control or supervision of MNCs from the core regions. China participates in these MNC-led regional production networks, albeit as one of its most profitable locations given the scale of its assembly platforms and the size of the labour force that China offers.

To be sure, there has been a gradual relocation of some mid-value manufacturing to the mainland as China has been able to localise production while China's advanced

neighbours have moved up the value chain. But even here, MNCs (Japanese, South Korean, Taiwanese and American) have led the process and continue to control major elements of the supply chain via affiliates or subsidiaries. The classic contemporary example is the case of Apple Corporation's iPhone: of the $179 it costs to produce an iPhone, a mere $6.5 or 3.5% of the total value addition can be attributed to Chinese workers who assembled high-tech parts and components designed and produced in core economies (or by core MNCs with Chinese operations) such as the United States, Japan, South Korea and Germany.[26]

Second, the United States has been an important beneficiary in this division of labour. It is estimated that 60% of all imports into the United States emanate from US subsidiaries or subcontracted firms operating in China. Thus, not only are US MNCs in East Asia playing a vital role in what is exported back home, the surpluses that China accumulates have been recycled into US government debt, perpetuating the asymmetric global division of labour.

Third, the US trade deficit with China is in fact a de facto trade deficit with East Asia and bilateral statistics do not and cannot capture the complexity of contemporary supply chains. In other words, East Asian economies are running trade surpluses with China, which in turn runs trade surpluses with Western markets. Thus, conventional bilateral statistics distort the true capabilities of economies – in this case greatly exaggerating China's industrial prowess.[27]

As one recent study on China's political economy notes:

> *''It is not a case of the East Asian regional economy rising as a challenge to the US, but rather a case of US economic actors being inextricably interlinked with the regional economy itself ... China is acting as the manufacturing conduit through which the regional deficit is processed.''*[28]

Thus, the empirical evidence seems to underscore that China's interdependence with the global economy is deep but still asymmetric (in favour of the United States, Japan and the core in general) and that the ''regionalisation'' trend is so far linked with ''globalisation'' (i.e. consumer demand from the United States, the EU and Japan driving Asian exports).

How much of Chinese surpluses actually translate into power and influence as realists conceive it?

Having the theoretical capability to crash the US dollar *cannot* constitute credible leverage when that scenario would simply destroy the value of Chinese credit. That the Chinese have been reinvesting their hard earned surpluses into financing US debt has not only perpetuated the asymmetry in US–China economic relations but also the reserve currency status of the US dollar. More recent data from the post-crisis phase suggests that China has increased its holdings of US Treasury debt. As the world's single largest creditor for the US government, China is not undermining US primacy but actually sustaining it!

Furthermore, China is unable to effectively use its reserves to buy productive assets in the core regions. This is because the United States, the EU and Japan will not allow China to leverage its creditor status to accumulate real high-technology assets in their economies.[29] The core will also resist any attempt by China to buy back MNCs investments in the Chinese mainland. Thus, China is compelled to diversify its reserves on the margins – by buying European government debt, investing in Western financial institutions, locking up oil reserves and commodities.

Over the longer term, whether such asymmetric interdependence gradually evolves – as more advanced economies such as the United States and Japan move higher value and more high-technology manufacturing processes and R&D to mainland China – into autonomous Chinese industrial capabilities or simply subcontracted manufacturing enclaves for MNCs on the eastern seaboard remains unclear for now. Such a trend is likely to be shaped more by the Chinese political economy and broader geopolitical variables (including the evolving nature of US–China relations) than economic logic. Moreover, the global economic crisis has reduced the salience of further offshoring given the persistent unemployment in the core regions. Nevertheless, it seems reasonable to assume that Chinese industrial capabilities cannot reach OECD levels under its present development model that has yet to demonstrate true indigenous innovation.

Finally, China's demographic dividend is nearing its closing stages, which would introduce an obvious structural constraint to future Chinese growth. Slower economic growth is likely to be matched by a dramatic ageing of the population. People above the age of 65 now represent 13.3% of the total, up from 10.3% in 2000 (see Figure 24). In the same period, those under the age of 14 declined from 23% to 17%.[30] This structural demographic shift could produce a middle-income trap for China. A declining share of surplus labour will push up wages and reduce

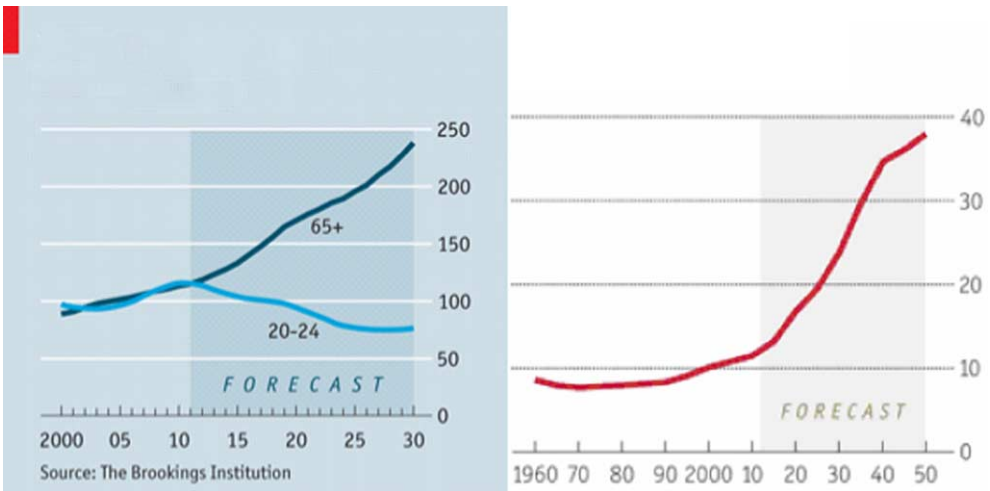

Fig 24. China's population by age group, in millions (left); Population aged over 65 as a percentage of the labour force (right).
Source: "The Most Surprising Demographic Crisis," *The Economist*, May 5, 2011.

saving rates, and, if China's model is unable to move up the value-chain to increase productivity that will maintain high growth rates to compensate for the eroded competitiveness in labour-intensive activities, Beijing will be saddled with an ageing population, rising healthcare and pension costs and a "middle-technology trap" that keeps it dependent on the core regions. The global economic crisis, contrary to popular perceptions, has actually made China's transition more precarious.

Conclusion

Both economies seem to have exhausted their post-reform ammunition, and, the global economic crisis has exposed the vulnerabilities and fault lines in both economies. In sum, the window of time to rebalance has shortened for both economies which can no longer presume to ride the pre-crisis globalisation tiger and attain power and wealth.

India needs to make the transition to a manufacturing society that can leverage its favourable demographic trends. This in turn requires massive long-term investment oriented in human capital along with policies that rejuvenate the country side and agrarian sector.

China needs to scale down its model of under-absorption – where production exceeds consumption – by diverting resources away from export-oriented production to social investment in human capital, that would allow China not only to correct the imbalances that have stifled consumption but also give it the opportunity to move up the value chain to counteract the declining competitiveness in low-skill labour-intensive industries that have sustained China's growth so far.

Until the global crisis, China's political economy incentives were to integrate into the Western trading system and leverage globalisation to raise China's growth rates. This process of integration into core supply chains also deepened China's dependence on the US dollar, which was truly exposed when the crisis struck. The crisis has produced a flux in China's political economy. There is an underlying tension between the ''Chimericans'' who, given their massive investments, are trying to sustain the old order and the complex interdependence with the core developed economies, and, more regional and internally focused economic elites who are searching for new growth markets, which are mostly in Asia itself and trying to rebalance the domestic Chinese economy. And, until the Chinese leadership is willing to rein in the provinces and the fixed asset investment-intensive philosophy that drives Chinese economic policies, rebalancing the Chinese economic system will remain a formidable goal.

In India's case, it should, however, be noted that even as its real economy is *relatively* less exposed to global consumer demand, India's exposure in international financial markets is high. Capital inflows over the past eight years have played a significant role in enabling the Indian state to draw upon domestic savings to sustain high structural deficits, while simultaneously enabling India Inc. to leverage external capital. Since India is a capital scarce economy – for the state to finance its socio-economic programmes including declared objectives on expanding social and physical infrastructure (education, healthcare and physical capacity like roads, power, ports, etc.) without crowding out private sector investment a dependence on international capital flows would continue to be strong. In addition, India's dependence on industrial equipment and machine tools as well as consumer electronics is also very high with imports from China accounting for a rising share of this deficit. India recorded an overall merchandise trade deficit of over $115 billion in 2009. India, similar to China, is also likely to have among the highest share of imported oil as a percentage of total consumption by 2012 (90%) and imported thermal coal (70

million tons in 2011) suggesting India's import dependence extends from industrial to natural resources. In sum, the assertion that India is largely insulated from the global economy and is growing in a self-sustainable dynamic is empirically untrue.

Both economies would probably love to exchange some of their structural problems. China yearns for a services driven economy that can absorb the migrant workforce that will face manufacturing job losses in the coming decade as real wages increase. India would lap up any labour-intensive manufacturing industries that can buttress the massive labour re-allocation away from the underproductive countryside that awaits India's transition.

Notes

1. ''Manufacturing Exports Fell by 18% between 2000–2009, as Projects Exports Picked up by 25% in the Period,'' Assocham Press Release, July 20, 2009, http://www.assocham.org/prels/shownews.php?id=2092.
2. K. Kochhar et al., ''India's Pattern of Development: What Happened, What Follows,'' IMF Working Papers, 2005.
3. India's education budget more than doubled in the last five years increasing from Rs. 152,847 crores in FY 2004–2005 to Rs. 372,813 crores in FY 2009–2010. An estimated 45% (figures for FY 2008–2009) of education expenditures are now dedicated to elementary education. The Government of India's (GOI) primary vehicle for the delivering elementary education is the Sarva Shiksha Abhiyaan (SSA) (a centrally sponsored scheme that has been in operation since 2001). Reflecting the overall trend of increased investment, the SSA budget too has increased significantly in the last few years from Rs.7156 crores in 2005–2006 to Rs.15,000 crores in 2010–2011. It is, however, still unclear whether this increased budgetary support from Delhi is affecting outcomes on the ground.
4. Kochhar et al., ''India's Pattern of Development: What Happened, What Follows.''
5. Nirvikar Singh, ''The Ten Sectors that Need a Boost,'' *Financial Express*, December 12, 2006.
6. T. N. Srinivasan, ''Comments on From 'Hindu Growth' to Productivity Surge: The Mystery of the Indian Growth Transition,'' *IMF Staff Papers*, 52, no. 2, (2005).
7. In the United States alone, during 2004–2009, 90 Indian companies made 127 greenfield investments worth $5.5 billion, and created 16,576 jobs. During the same period, 239 Indian companies made 372 acquisitions in the United States, and the total value of 267 (of the 372) acquisitions was $21 billion. The bulk of mergers and acquisitions investments by India Inc. in the United States were ironically in manufacturing and other industrial sectors

(manufacturing, biotech, chemicals and pharmaceuticals, automotive, and telecommunications) rather than in services for which India is well known.

8. James Lamont, ''Indian Groups Double Overseas Investments,'' *Financial Times*, June 23, 2011.
9. To be sure, to the extent that a portion of this FDI is also focused on securing long-term access to natural resources (such as iron and coal mines in Australia and Africa or oil reserves in West Asia) that would ultimately fuel India's industrial development is certainly an advantage.
10. ''India Inc. Eyes More FDI in Manufacturing,'' *Economic Times*, January 2, 2009.
11. Mohan Guruswamy and Zorawar Daulet Singh, *Chasing the Dragon: Will India catch up with China?*, (Delhi: Pearson Education, 2009), p. 31.
12. Shekhar Aiyar and Ashoka Mody, ''How Big is India's Demographic Dividend? Evidence from the States,'' IMF, April 5, 2011.
13. This is only underscored by the fact that a large portion of the demographic surge is projected to occur in what have traditionally been relatively laggard states. The share of four BIMARU states – Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh – of India's population is projected to rise from 41% in 2001 to 48% in 2051. Sixty per cent of India's population increment will be concentrated in these four states, which have among the lowest human development indicators in the global periphery.
14. ''India Lags behind the Emerging Economies in Quality Education: ASSOCHAM,'' press release December 15, 2008. http://www.assocham.org/prels/printnews.php?id=1815. The study was carried out on the basis of 20 parameters relating to primary, secondary, tertiary education and higher education and demography.
15. ''India Stands Out among BRIC Nations, Slips on Innovation Second Year in a Row'', *Economic Times*, July 4, 2011.
16. Pallavi Aiyar, ''Agriculture: Where India and China Stand,'' *The Hindu*, September 3, 2007.
17. Only one-seventh of the population is covered by basic health insurance. The basic pension scheme covers only 16% of the working-age population who are mainly in the public sector. This is sharp contrast to pre-reform China where education and health services were publicly funded and thus precluded households from keep a high share of their disposable income as a precautionary saving.
18. Overall, it is estimated that 60–70% of Chinese reserves are held in US dollar assets led by Treasury bonds.
19. Henny Sender and Jamil Anderlini, ''China Land Price Fall Threatens Local Finances,'' *Financial Times*, June 1, 2011.
20. One of the factors that constrains Beijing's hand is that land revenues are enabling provinces to maintain some of their debt servicing requirements. Restrictions will increase fiscal deficits

and increase the burden on the banking system to absorb provincial defaults. The buck will ultimately stop at Beijing's door, who would be compelled to recapitalise the banking system and confront the social consequence of a slowdown in growth rates. This cycle has already played out once in the late 1990s Asian Financial Crisis.

21. Jamil Anderlini, ''Evictions Spark Wave of Violence in China,'' *Financial Times*, June 2, 2011.
22. Peter Marsh, ''China Noses ahead as Top Goods Producer,'' *Financial Times*, March 13, 2011.
23. Mona Haddad, ''Trade Integration in East Asia: The Role of China and Production Networks,'' World Bank Policy Research Working Paper No. 4160, March 1, 2007.
24. Round-tripping is the process where capital created in the mainland is recycled back via Hong Kong under the guise of foreign investment. The primary driver for round-tripping was the incentive of local capital to return disguised as foreign investment to avail of the preferential tax incentives, greater access to bank loans, and superior protection of property rights accorded to the foreign-invested enterprises.
25. Market Intelligence Center, 2010.
26. Yuqing Xing and Neal Detert, ''How the iPhone Widens the United States Trade Deficit with the People's Republic of China,'' ADBI Working Paper Series (No. 257), December 2010.
27. Because conventional trade statistics only record the last point of transaction, and do not measure the imported element that is embedded in China's exports, one gets the impression that China's trading prowess is an autonomous phenomenon – like Germany or Japan. Only a value-added approach will reveal China's technological advancement.
28. Shaun Breslin, *China and the Global Political Economy* (New York: Palgrave Macmillan, 2007), pp. 129, 146.
29. China's $3 trillion of reserves, theoretically, are large enough to buy the 10 largest US corporations or the 15 largest European companies or the entire Japanese corporate sector via the Nikkei 225.
30. ''China's Population: The Most Surprising Demographic Crisis,'' *The Economist*, May 5, 2011.