UNITED NATIONS UNIVERSITY
UNU-WIDER
World Institute for Development Economics Research

Research Paper No. 2008/37

Development Path of China and India and the Challenges for their Sustainable Growth

Yuefen Li[1] and Bin Zhang[2]

April 2008

Abstract

The segmentation of global manufacturing and services provided China and subsequently India with a golden opportunity to make full use of their absolute advantage—low cost yet educated labour—to integrate into the world economy within a comparatively shorter period of time than some earlier industrialisers. Though international trade functioned as a vent of surplus in view of the narrowness of their domestic markets at the beginning of their economic catch-up, the label of export-led model may not reflect the real picture as imports underwent dramatic increases during their respective growth periods, in particular for China. Foreign direct investment has played a pivotal role in their economic growth and has major presence in international trade and investment in leading sectors of both countries, giving rise to certain special features and weak links for their economic expansion and sustainability of fast …/

Keywords: China, India, development

JEL classification: F14, F15, D20, O1

[1]United Nations Conference on Trade and Development, Geneva; [2]Chinese Academy of Social Sciences, Beijing.

This study has been prepared within the UNU-WIDER project on the Southern Engines of Global Growth.

UNU-WIDER acknowledges the financial contributions to the research programme by the governments of Denmark (Royal Ministry of Foreign Affairs), Finland (Ministry for Foreign Affairs), Norway (Royal Ministry of Foreign Affairs), Sweden (Swedish International Development Cooperation Agency—Sida) and the United Kingdom (Department for International Development).

ISSN 1810-2611 ISBN 978-92-9230-085-2

economic growth. To maintain more broad-based, fast and balanced growth, it seems that both countries have to redress sectoral imbalances, encourage technology upgrading and cope with future changes in demographic profiles which constituted a trigger to fast economic growth at the time of their respective economic reform.

Acknowledgements

The opinions expressed are those of the authors and do not necessarily reflect the views of UNCTAD and CASS. The authors are grateful to Shigehisa Kasahara, Juan Pizarrio and Michael Geiger for their statistical inputs related to Japan and the Republic of Korea, and to anonymous referees for their comments and helpful suggestions.

UNU World Institute for Development Economics Research (UNU-WIDER)
Katajanokanlaituri 6 B, 00160 Helsinki, Finland

Typescript prepared by Lorraine Telfer-Taivainen at UNU-WIDER

1 Introduction

The outstanding economic growth of China since the 1980s and India since the late 1990s has been the subject of countless analyses. Compared with earlier industrialization, these two populous countries began their 'catch-up process' from low starting points.[1] In terms of per capita GDP (PPP-adjusted), China in 2006 reached the level comparable with Japan in the mid 1960s and Korea in the mid 1980s. Meanwhile, India reached the same level as Japan in the mid 1950s and Korea in the mid 1970s. However, as China and India together account for two-fifths of the world population, their achievements have had global repercussions on trade, economic growth and poverty reduction. Being the third largest importer and exporter, China has already been exerting considerable influence on world prices of commodities and manufactured goods.

A partial answer to the question of sustainability may be derived from a comparison of the current experiences of China and India with those of Japan and the Republic of Korea some decades ago when they began their catching up processes.

The paper is divided into four sections. Following this introduction, Section 2 examines the special characteristics of China and India during their fast growth episodes, in particular how the engines of growth came into being and propelled fast GDP growth. Section 3 looks into the down sides, structural imbalances and problems that China and India have had to address in order to maintain sustained, fast economic growth. Section 4 summarises the major findings.

2 Specific features of fast growth in China and India

2.1 Manufacturing and tradable services as their respective main engines of economic growth

When China and India started their pro-market economic reforms, the world economy was undergoing a major structural change. Technology advances, particularly in information and communication technologies (ICT), have drastically changed the structure of global production and trade. International production became segmented or modularised. Vertical specialization allows various production activities to be carried out in different countries. The economic downturn in the late 1990s and the burst of the IT bubble further promoted companies to enhance capital mobility in order to materialise cost cutting. While labour was still the least internationally mobile factor of production, capital and intermediary products flowed to where labour was abundant and cheap. The segmentation of global manufacturing and services provided China, and subsequently India, with a golden opportunity to make full use of their absolute advantage—a low cost yet educated labour force, and to integrate into the world economy.

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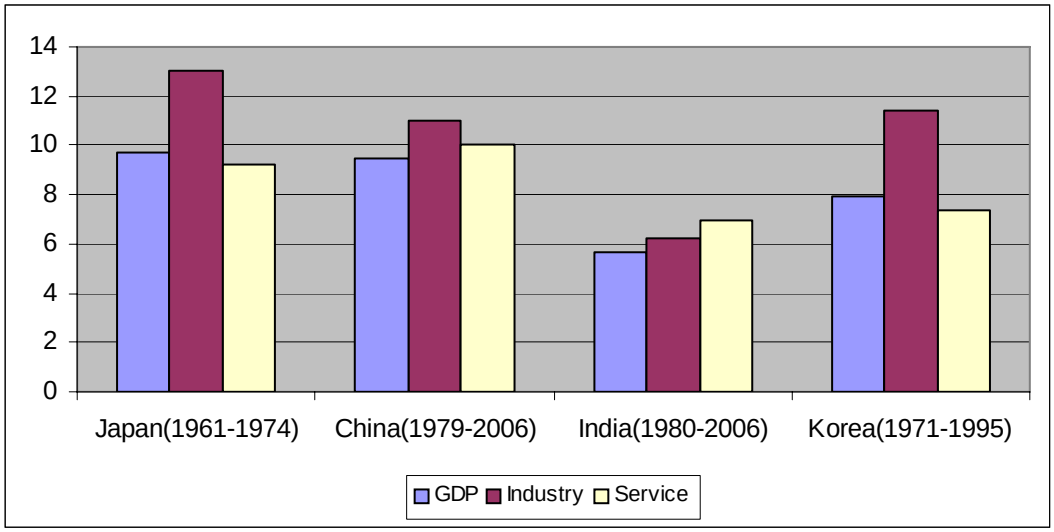
1 Loosely defined as a period of sustained rapid growth in per capita real income. A doubling of the growth rate of developed countries, 2.4 per cent per annum over the last 35 years, is considered as 'rapid' while 20-25 years is deemed as 'sustained' (Kolodko 2002; Wan 2004).

According to Kaldor (1967), manufacturing is an engine of economic growth as industrial goods have a higher income elasticity of demand, particularly in world markets. Indeed, GDP growth in earlier industrialisers was largely driven by manufacturing. After all, the growth potential of labour productivity in manufacturing is much higher than that in the agriculture or service sectors. Thus, an expansion in manufacturing is more likely to lead to a dynamic profit-investment nexus and faster growth of GDP. This is consistent with the Verdoorn's law, which states that growth in industrial productivity and industrial output are positively correlated (Verdoorn 1949, 1980).

For a large and populous country like China, manufacturing also has a significant impact on employment, as it requires intermediary products, capital goods, infrastructure and services for its expansion. Its development is, thus, essential for providing jobs for millions of underemployed urban and rural people. The emphasis on manufacturing was an important element of the development strategy for Japan and the Republic of Korea, who did not have other options: neither of them is well endowed with natural resources. Both have to, at least at the beginning of the catch-up period, mass manufacture to interact with the world extensively to get what they do not possess and make best use of their scarce resources. The spill over of manufacturing output and exports seems inherently more significant than that of primary products or services. Their experiences have demonstrated once again that, during the catch-up period, productivity improvement in manufacturing is usually faster than that in the total economy, and the value added in manufacturing usually grows more rapidly than GDP. This might explain partially why India has not been growing as fast as China.

Figure 1 shows the average growth rates of value added in different sectors during the takeoff period.[2] It is clear that the growth rate in manufacturing is higher than those in

Figure 1: Average growth rate of GDP, value added in industry and services in the fast growth periods



Source: Authors' calculation based on World Development Indicators

2 Fast growth period for China is identified as from 1979 to the present and India from 1980 to the present, while for Japan from 1961 to 1974 and for the Republic of Korea from 1971 to 1995.

service and GDP for Japan, China and the Republic of Korea. For India, the growth rates are almost identical for manufacturing and for the whole economy. All four countries except India have pursued active industrial policy to boost target industries through trade and investment. Clearly, these highlight the importance of industrial policies in determining the position of manufacturing in the international division of labour and its competitiveness in the world market.

Development of services in the leading economies normally began in earnest when they reached industrial maturity and growth in manufacturing started to slow down. However, India's development path is unique. From 1981 to 2006, the service sector contributed 55.3 per cent while industry contributed 25.6 per cent to GDP growth.[3] Globalization of tradable service is an important reason for this phenomenon. Since the later half of the 1990s, cheaper communications and advances in computer technology have transformed many service products from non-tradable to tradable. With the help of cross border trade, more work can be performed remotely, e.g., software coding, offshore call centres, filing tax returns, processing insurance claims, updating annual audits, preparing presentations and the like. As with globalization of manufacturing, more and more companies are moving sophisticated activities to cheaper locations overseas. With its pool of low cost, educated, English-speaking labour, India, in imitation of what China did with manufactured goods, has grabbed the opportunity and inserted itself in the service supply chain. As a result, the service sector has experienced extraordinary growth. The information technology, software, and business-process-outsourcing sectors are at the high end of its productivity spectrum. Communication and banking rank first and second in terms of increase of investment as well as productivity growth, which are closely related to rapid growth of international trade and FDI inflow. In 2006, services accounted for 50.4 per cent of GDP. It is noted, however, that the expansion in the service sector, largely private sector driven, could not have happened without deregulation and other domestic reforms. Compared with external demand changes, supply side improvements are more important in initiating and maintaining the service boom.

India's service sector during the past two decades has exhibited maverick performance. Its six to eight per cent growth is not particularly strong when compared with the growth rates of the service sector in China during the same period or in Japan during its catch-up period (10 and 9.2 per cent respectively). The service dominated GDP growth in India is due to the smaller contribution of industry to GDP, rather than extraordinary growth in the service sector. Should there have been a positive relationship between industry and service, the service sector in India might have grown even faster.

2.2 Demographic changes as a trigger for economic growth

Fast growth of leading sectors is normally triggered by greater factor inputs, e.g. capital and labour. So long as investment is sufficient to keep the ratio of capital to labour constant, a larger labour force with constant productivity means more outputs and higher per capita income. Under this circumstance, a greater working age population means faster expansion of manufacturing. When blessed with technological advances,

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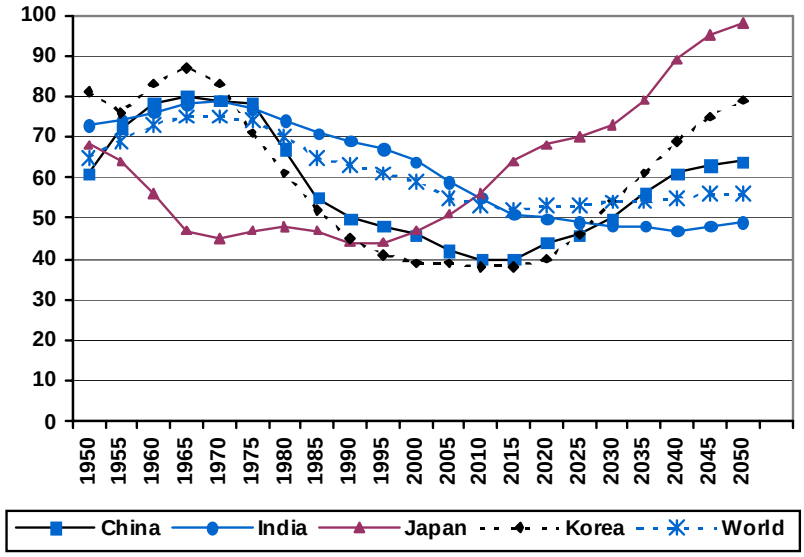
3 The source of data in this paper is based on the World Development Indicators unless indicated otherwise.

economic growth would accelerate further (Johnson 2004). In fact, fast economic growth in China and India, as was the case for Japan and the Republic of Korea, has coincided with the decline of the 'age dependency ratio'. Japan's fast economic growth was accompanied by a sharp decline in its dependency ratio from 68 per cent in 1950 to 45 per cent in 1970 (Figure 2). Korea experienced a rapid decrease in the ratio from 87 per cent in 1965 to 41 per cent in 1995. For China, the fall was from 78 per cent in 1975 to 46 per cent in 2000 and for India from 77 per cent in 1975 to 64 per cent in 2000. It is interesting to note that after an extensive literature review, Mason (2003) concludes that 'changing demographics accounted for about one-third of East Asia's economic miracle'.

Japan, the Republic of Korea and China not only had more human capital but it was also of higher quality than many other countries. Their literacy rates are much higher too at a similar stage of development. During the early years of their rapid growth, the literacy rate was 64 per cent (91 per cent in 2003) in China, and was 41 per cent (62 per cent in 2001) in India. However, in 1980 the percentage of the population with a tertiary qualification was 5.3 per cent in India and 1.7 per cent in China, although the percentage of young people entering higher education institutions is higher in China than in India. In addition, the use of English as a primary language for higher education and research represents an apparent advantage for India. These are among the important reasons underlying India's knowledge sector boom.

It is important to emphasise that favourable domestic conditions, as discussed above, are dormant forces that do not automatically result in fast growth. Policy changes such as those taken by China and India, particularly relating to labour and private sector development, are necessary to maximise the rewards of demographic changes and to reduce negative impacts. An increase in the working population, if not accompanied by more job opportunities, will turn 'the window of opportunity' into a burden and a source of social instability.

Figure 2: Age dependency ratio of the world, China, India, Japan and Korea, 1950-2050



Source: United Nations Population Division (UNPD), World Population Prospects

2.3 The important role of international trade: not necessarily export-led, definitely FDI-stimulated

Trade plays an important role in the catch-up process, especially for countries starting from low levels of growth. Low per capita income at the early stages of development means that domestic demand is limited and thus must be compensated by exports (known as the 'vent for surplus') in order to gain economies of scale and enhanced productivity, and ultimately competitiveness in the world market. For China, though the large surplus of labour and FDI inflow have contributed to the sea change in its industrial structure, neither could help drive growth without foreign trade. This was particularly true before 1990. Trade expands demand together with investment and consumption and facilitates the formation of a profit-investment nexus and capital accumulation. Like Japan and the Republic of Korea, China has pursued a trade expansion policy in manufacturing products, despite being positioned at the lower end of the international supply chain and producing predominantly labour-intensive goods. India, in contrast with the other three countries, has focused on trade in services that accounts for about one third of its total exports. However, the share in service exports is not large enough to have a substantial impact on the aggregate trade share. According to WTO data, India's combined market share in the world for its exports of goods and services was just 1.3 per cent in 2006.

When examining the growth paths of these countries, much attention has focused on their exports, not imports. In reality, imports underwent dramatic increases during their respective growth periods for Japan, the Republic of Korea, China and India, along with exports. Even after becoming successful exporting economies, their imports remain significant. Over their respective 20 years of rapid development, India achieved 10.1 per cent and China 12.2 per cent annual growth in imports. More recently, from 2002 to 2006, the share of imports in GDP rocketed from 23 per cent to 33 per cent in China, and from 15 per cent to 23 per cent in India. India's growing import demand has been widely reported in the international press recently, signalling the coming of age of fast economic growth. With the expansion of imports, increase in exports is needed to earn sufficient foreign exchange and avoid a current account deficit. However, export capacity cannot be developed in the short term, as it requires human resources, infrastructure, technology and an enabling business environment. It is, therefore, not surprising that these countries occasionally suffered serious trade deficits.

Foreign direct investment has played a pivotal role in the development of China's manufacturing and India's service industries. Likewise, foreign investors are major players in their trade. In China, foreign-funded enterprises account for around 60 per cent of its imports and exports. As for India, foreign investors are responsible for almost half of outsourcing services, although domestic enterprises dominate software exports.

2.4 Investment-led growth and the role of domestic and external financing

Investment is considered to be fundamental for any successful cases of catching up. It simultaneously generates demand and expands productive capacity. Also, it complements other elements of growth, such as technological progress, skills acquisition and institutional deepening.

China, like Japan and the Republic of Korea, could be said to have adopted an investment-led industrial policy. Trade expansion and a sharp increase in investment in physical capital and other production factors have been the major propellers of economic growth. China's investment regime is characterised by a rising trend in the share of investment in GDP. For the past few years or so, China's investment ratio has shot up, exceeding that of Japan and Korea in their heydays. Direct government financing, preferential interest and tax rates and favourable financing were powerful instruments to boost investment. The inflow of FDI further augmented the increase in investment into the targeted industries. The rapid expansion of non-state enterprises has also made the increase in investment more broad-based.

In terms of the investment ratio, India's first and second decades of fast growth lagged behind China's. The yearly growth rates in investment differ considerably between China and India with the latter showing an expansionist trend but still maintaining a wide margin with the former. Between 2004 and 2006, the share of gross fixed capital formation (GFCF) in GDP hovered around 40 per cent for China while that of India was around 25 per cent.

China enjoyed high rates of saving even in the early stage of economic reform, which have been intermediated predominantly through the banking system. The Chinese government has directed huge amounts of bank credit to infrastructure building (Wade 2003) and for supporting SOEs, in particular before its accession to the WTO. Meanwhile, the domestic capital markets (bonds and stocks) remained underdeveloped. In order to prevent savings from leaking out abroad, strict capital control, particularly on outward flows, had been maintained up to a few years back. However, the relatively inefficient and weak financial system has not been able to intermediate effectively the huge domestic savings to productive investment. This may be one of the reasons for China's heavy reliance on FDI.

Table 1: Contribution of household consumption, investment (gross fixed capital formation + changes in inventory), government consumption and net export to GDP growth

1st 10 years	C	I	G	NX	GDP growth
China 1979-89	4.93	3.32	1.37	-0.08	9.55
India 1980-90	3.87	1.3	0.7	-0.12	5.74
Japan 1961-71	4.55	3.88	0.63	-0.05	9.01
Korea 1971-81	4.39	2.45	0.68	-0.21	7.3
2nd 10 years					
China 1989-99	4.44	3.7	1.68	0.18	10
India 1990-2000	3.78	1.19	0.72	-0.04	5.65
Japan 1971-81	2.53	1.31	0.6	0	4.44
Korea 1981-91	4.28	3.27	0.86	0.4	8.8

Source: Authors' calculations based on World Development Indicators and Japanese Bureau of Statistics (Historical & MBS).

For India, whose savings rate is not as high, the government has faced severe challenges in using investment to boost growth. The current savings ratio of India is around 26 per cent. To achieve the growth target of seven to eight per cent in the coming years, the ratio of gross capital formation to GDP should be in the range of 29 to 33 per cent, a ratio similar to those in Japan, the Republic of Korea and China when they achieved the same per capita GDP. A higher ratio would be required if India's average Incremental Capital Output Ratio rises above the average value of 4.12 which prevailed in the last decade. These highlight the need for India to mobilise financial resources.

Foreign direct investment has a more important presence in China than in India. Since the 1990s, with its improved business environment and infrastructure, China has become the globe's factory. Not only efficiency seeking but also market seeking FDI poured into China. According to the Ministry of Commerce of China, 400 out of the *Fortune* 500 TNCs have a strong presence in China. Production sharing with more mature Asian economies also extended to electronics and other manufactured products. According to official data, [4] the share of FFEs in total fixed capital formation increased from 4.2 per cent in 1991 to 10.4 per cent in 2003 and their share in total production output shot up from 5.3 per cent in 1991 to 27.2 per cent in 2003. While FDI is closely correlated to the expansion of manufacturing and trade in China, it is more closely linked to the service trade in India. In addition, both countries are top recipients of remittances in the world, slightly above US$ 20 billion for each in 2004. In the case of India, Diaspora remittances have for years cushioned its trade deficits.

3 Challenges and prospects for sustaining economic growth in China and India

History tells that it takes some sixty years for a society to move from economic takeoff to maturity (Rostow 1960). Low income countries tend to grow faster than mature economies for a long time. Then their growth rate levels off and declines drastically when they approach the technological frontier (Cooper 2005). Since China and India are not yet even halfway through the catching up period and their productivity gaps with leading economies are large, they are expected to enjoy high growth for the next three decades or more provided that no major disruptions or external shocks occur.

In real terms, per capita GDP grew at 8.3 per cent, 7.2 per cent and 6.2 per cent for China, Japan and Korea during their first 20 years of takeoff. India's performance was apparently lacklustre with a growth rate of 3.7 per cent in the 1980s and 90s. The less impressive picture in India is partly due to its high population growth, 2 per cent per year between 1980 and 1999 compared with 1.3 per cent in China between 1979 and 1998. By discounting the differentials in population growth, India's growth would have reached 5.8 per cent vis-à-vis 9.8 per cent for China. From 2000 to 2006, real GDP per capita grew at an average rate of 8.7 per cent in China**.** India improved its performance to 5.4 per cent. Thus, China has the potential to follow Korea's growth path (7.5 per cent throughout the third decade) while India has not yet joined the league. The fact that India's economic reform started a decade later than China's means that it would take India more years before it is able to deploy the full effectiveness of its growth engines.

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4 Ministry of Commerce of China, State Statistical Bureau and China FDI Statistics.

Indeed, China and India have great potential to become even more important global players in coming years. However, both economies have exhibited certain imbalances and constraints that may endanger their growth sustainability. In addition, unlike Japan and Korea, China and India have massive populations with massive needs. To ensure growth momentum, efforts must be made to strengthen the current growth trend and to address existing problems. What follows explores some of the main challenges ahead.

3.1 Sectoral imbalances

The inter-sectoral gaps between agricultural, industry and services are further widening in both countries. China's service sector lags far behind industry, while India's industrial growth has not been able to match the development of services. The contribution of agriculture to GDP in China has been declining more dramatically than in India, reflecting deeper industrialization and faster urbanization. However, the rural sector remains important to both countries, particularly because the majority of their populations are rural. Modernization of the agriculture sector and further urbanization are the answers to low agricultural productivity in China. Modernization should be accompanied by an increase in the welfare of the rural population, as growing affluence among the rural population is an important factor for the expansion of domestic demand for services and industrial goods. For India, the picture is different. It was largely good performance in agriculture and services that spurred fast GDP growth in the past decade. The contribution of agriculture to GDP in India is considerably larger than in China. Since India is more abundant in arable land than China, greater infrastructural investment and accelerated application of advanced technologies to promote agricultural growth should reap better results.

The share of services in China's GDP was around 41 per cent in 2004, much lower than 60 to 70 per cent for developed economies, even lower than the 46 per cent average for low- and middle-income countries. There has been low capital investment in service sector, but over investment in the industrial sector. A gradual transformation towards a knowledge- and service-based economy would contribute to the sustainability of economic growth in China. Since 1998 the service sector has become the only source of new employment, and industry has entered into a period of 'jobless growth'. Had the service sector developed in proportion to the manufacturing sector in the past decades, China's unemployment pressure could have been mitigated.

The imbalance between industry and services can also affect consumption and investment efficiency. The income elasticity of services is high while the elasticity of substitution between products in industry and those in services is very low. With rising income and a relatively underdeveloped service sector, the resultant imbalance will depress domestic consumption and contribute to overcapacity in industry, making investment less efficient. The incremental capital output ratio (ICOR) has exhibited an upward trend since 1992. Consequently, China has to increase its investments to maintain growth, negatively affecting both real income and investment returns. It could be said that today's fast economic growth has been achieved, to some extent, at the expense of long-term sustainability.

The story of India is just the opposite. In comparison with other low-income economies, both the share of industry (25 per cent) and the share of service (more than 50 per cent) are outside the normal range. In the past ten years, the share of industry in GDP has

remained constant while the share of services in GDP rose fast. Can services be the dominant engine of growth for closing India's gap with the leading economies? Probably the answer is no. It is clear that India must develop its manufacturing whose multiplier effect and impact on job creation are significant. For both China and India, there is a need to keep labour-intensive industries viable for employment generation. Only then, can they meet the challenges of their demographic profiles and reduce their pockets of poverty.

3.2 Upgrading technology

By riding the tide of globalization, China and India have used their abundant human resources to their advantage and achieved impressive economic development. However, reliance on segmentation of manufacturing or splintering of services carries the risk of locking in the low end of the production network, which is highly commodified, highly standardised and non-differentiable, with a razor thin margin in many cases. In China, while high-tech products in overall industrial output have gained shares, most are owned by FFEs. China's IT sector (hardware) is a good example. In 2003, China exported IT products and components of about US$128.7 billion, but imported IT components worth US$91.1 billion; 70 per cent of the exports, which gives the impression that China is integrating extensively, but 'shallowly' (Steinfeld 2004). According to a Chinese official source, 90 per cent of high-tech exports in 2003 were processing trade, of which FFEs were responsible for 85.5 per cent.[5] This type of low value added, low return and FDI-dependent model can be vulnerable due to several reasons. First, it requires the importation of tremendous amount of energy and raw materials, which could worsen the terms of trade and lead to wage suppression in order to maintain price competitiveness of exports. Second, a significant amount of China's imports are inputs to final stage processing or assembling. As the largest part of such import is exempted from customs tariffs, the accrued revenue is much less than that from normal trade. Third, it is difficult for domestic enterprises to maintain a healthy profit margin as the lead FFEs that control the core technology and brands get the lion's share of profits. India's service sector faces similar challenges, though less in magnitude. Agrawal and Farrell (2003) show that for every dollar that was previously spent on business processes in the United States and now goes to India, India earns a net benefit of around 33 cents, in the form of government taxes, wages paid by US companies, and revenues earned by Indian vendors of business process services and their suppliers. Fourth, in the case of China, the processing sector is liable to more frequent trade disputes as it relies particularly on price competitiveness and volume. Fifth, environmental degradation has been a constant concern with the processing sector.

Japan and Korea's dualistic road might be a good development strategy, namely allowing small- and medium-sized companies to flourish while paying special attention to the development of technology in cutting edge fields and new high value adding products. The centrepiece of their industrial policy has been to ensure strong technology upgrading through greater absorption and deepening of technologies.

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5 http://zys.mofcom.gov.cn, Ministry of Commerce of China, 'Rapid increase of high-tech exports does not mean industry structural upgrading', 3 December 2004.

Having overtaken Germany in 2003, China's manufacturing output now ranks third in the world behind the USA and Japan. However, patents applied in China's manufacturing sector amounted to only 33 per cent of those in the USA and 25 per cent of those in South Korea.[6] It is clear that China is more a manufacturer than innovator. As more developing countries develop capacity to produce labour intensive manufactured goods, competition is becoming more intense. Terms of trade may worsen further for China and India in the coming years, thus all the more reason for China and India to resort to upgrading technology to maintain their economic growth. Promoting an intellectual elite and using education as a means to pull people out of poverty have been important elements of the cultures of China and India. As a result, both have the potential to further increase their already large supply of quality human resources to devote to technological upgrading. As foreign investors would normally guard and protect their core technology, strong incentives should be put in place to encourage investment in R&D and develop productivity enhancing technologies.

3.3 Wage levels and demographic trends

On the whole, the wage level of informal workers in China and India has failed to keep up with economic or productivity growth. This discourages private consumption, particularly during economic reform, when the social safety net has not been put in place. Wages should not be regarded just as a cost as they also create demand. For instance, remittances from migrant workers in China, estimated at around US$115 million,[7] was an important source of income for many households in rural areas. Thus low wages of migrant workers have a negative impact on the demand for goods in the countryside. This is one major reason for the relatively unexploited rural market in China. When consumption could not boost economic growth to generate enough jobs to maintain social stability, investment was used instead. However, investment-driven growth often brings about overheating in certain sectors, leading to bottlenecks in the economy, e.g. energy shortages. It also leads to skyrocketing demand for certain minerals and construction materials, especially after 2002. The build up of inventories of enterprises would lead to further price cuts. It seems that all parties involved in the process, namely the government, the enterprises and the workers, are all worse off. To redress these problems, the government has been emphasising the importance of balanced economic growth, including greater reliance on consumption and investment efficiency. The current global economic situation does not seem to accommodate investment-led growth of a large economy of China's size. So investment growth at an unsustainably high level should be avoided.

Will the changing demographic profile of China affect its long-term growth? In other words, will the population get older before becoming rich (Eberstadt 2004)? It is true that the Chinese population is ageing. The ratio of the 5-24 age group to the total working population declined from 33 per cent in 1990 to 23 per cent in 2005, and it will keep decreasing in the next few decades. Thus, it is expected that the new labour supply will decrease, leading to higher labour costs. Further, over the next three decades, a 12 per cent increase is anticipated in the group aged over 65, accompanied by a 5 per cent

6 China Daily, 'Manufacturing to continue rapid expansion', 21 March 2005.

7 www.xinhuanet.com, accessed 23 November 2006.

decrease in the group aged under-14. Clearly, the extent to which less spending on school education can offset the increasing cost of taking care of the elderly deserves closer examination. According to Sin (2005), future pension liabilities for China could reach 140 per cent of GDP. India will be in a better position than China as its prime age workers will increase and the share of the working age population is expected to rise until 2045.

4 Summary

The time required for poor and populous countries to integrate themselves into the world economy and catch up with lead economies is inevitably long. The marriage of foreign direct investment with low cost, yet educated, labour in China and India enabled them to shorten the industrialization process. This could not have happened at a time when capital was less mobile or when segmentation of global manufacturing and services had not taken place. Nor could this happen without market-oriented reforms and trade liberalization that improve the incentive mechanism and encourage factor flows to more productive sectors. To emulate China's and India's catch-up experience, developing countries should identify their comparative and absolute advantages and adopt necessary reforms to bring them into full play. By doing so, an investment-profit nexus can emerge to speed up capital accumulation. However, willingness to share economic gains with international players should not prevent developing countries from building up their own institutional and technological capabilities.

A sharp decline in the dependency ratio trigged economic growth in China and India, as was the case for Japan and the Republic of Korea. Manufacturing, which contributed to rapid growth in Japan and the Republic of Korea, has also played the same role in China. The rapid growth of manufacturing and labour productivity, the high investment rate and fast trade expansion constitute a virtuous circle**.** In the case of India, the virtuous circle is apparent in the IT service sector, but is not as profound in manufacturing. International trade served as a vent of surplus. Both imports and exports are important for growth.

To sustain rapid economic growth, China and India must redress a multitude of imbalances and challenges. Though manufacturing and services have been the growth engines of the two countries respectively, it seems lopsided development could constitute a constraint to more broad based growth. China needs to boost the service sector in order to generate jobs and expand domestic demand, while India needs the manufacturing sector to stimulate economic growth. The insertion into the international supply chain carries the risks of locking into low end and labour intensive manufacturing or service provision if relying too much on foreign capital and technology. Thus, technology upgrading is essential for their long-term economic growth. Balancing consumption and savings is also crucial as investment generated demand may lose its effectiveness if domestic consumption is sluggish. To shift fiscal spending towards health, education and social security could reduce precautionary savings. It is therefore important to allow wage levels to keep pace with productivity growth. The declining dependency ratio, particularly in China, appeals for policy initiatives to avoid a scenario of becoming old before getting rich.

References

Agrawal, V. and D. Farrell (2003). 'Who Wins in Offshoring?' *The McKinsey Quarterly, 2003* Special Edition: Global Directions.

Cooper, R. (2005). 'A Half-Century of Development', *Working Paper 118*, Center for International Development at Harvard University: Cambridge MA.

Eberstadt, N. (2004). 'Four Surprises in Global Demography'. *American Enterprise Institute for Public Policy Research*, Washington DC.

Farrell, D., and G. Sacha (2005). 'A Silver Lining in the US Trade Deficit', *The McKinsey Quarterly*, March.

Johnson, R. (2004). 'Economic Policy Implications of World Demographic Change', *Economic Review*, First Quarter, Federal Reserve Bank of Kansas City.

Kaldor, N. (1967). 'Strategic Factors in Economic Development', Ithaca.

Kolodko, G.W. (2002). 'Globalization and Catch-up in Emerging Market Economies', *WIDER Discussion Paper* 2002/51, UNU-WIDER: Helsinki.

Lee, R. and A. Mason (2006). 'What is the Demographic Dividend?', *Finance and Development*, IMF: Washington DC.

Mason, A. (2003). 'Population Change and Economic Development: What have we Learned from the East Asia Experience', *Applied Population and Policy* 1(1): 3-14.

Rostow, W.W. (1960). *The Stages of Economic Growth: A Non-Communist Manifesto*, Cambridge University Press: Cambridge.

Senhadji, A.S. and C. Montenegrao (1999). 'Time Series Analysis of Export Demand Equations: A Cross-Country Analysis', *IMF Staff Papers*, IMF: Washington DC.

Sin, Y. (2005). 'Pension Liabilities and Reform Options for Old Age Insurance', *Working Paper Series on China* 2005-1, World Bank: Washington DC.

Steinfeld, E.S. (2004). 'China's Shallow Integration: Networked Production and the New Challenges for Late Industrialization', *World Development* 32(11): 1971-87.

Thirwall, A.P. (2004). 'The Structure of Production, the Balance of Payments and Growth in Developing Countries', paper prepared for a UNCTAD workshop on the Relationship between Economic Growth, International Specialization, and Structural and Technological Change, 22 November, Geneva.

UNCTAD (2003). *Trade and Development Report 2003*, United Nations Conference on Trade and Development: New York and Geneva.

Verdoorn, P.J. (1949). 'Fattori Che Regolano Lo Sviluppo Della Productivity De Lavoto', *LIndustia*, 1, 3-10.

—— (1980). 'Verdoorn's Law in Retrospect: A Comment', *Economic Journal*, XC, June: 382-5.

Wade, R. (2003). 'Introduction' to the 2003 paperback edition *Creating Capitalism*, Princeton University Press: Princeton.

Wan, H.Y. (2004). *Growth of Total Factor Productivity and the Pace of Catching-Up*, Edward Elgar: Cheltenham.