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China and India enter global markets:

Comparing economic development and future prospects

14 September 2009

Introduction

One of the most significant development stories of the last twenty years has been the substantial economic transition in China and India resulting in impressive growth. While building their manufacturing and service prowess, both countries are also expanding R&D and innovation capacity. With both China and India joining global markets after years of isolation, they cannot but compete with each other to sell in export markets and attract foreign direct investment, in addition to adding competitive pressure for other economies. For these reasons, developments in India and China have attracted much international attention from academics, policy makers and journalists.

Understanding the nature of development in China and India is the subject of a new body of research. This paper will review this literature on comparing China and India in terms of the successes so far, the nature of reforms and institutions, as well as the overall social contexts of these processes. This exercise provides a way to document the areas of consensus or disagreement in order to identify research questions for future work.¹

Throughout the paper I will develop several arguments. The first is that both countries have accomplished a great deal as a result of the reforms that they have undertaken. In terms of comparisons of statistics, China is further ahead than India. However, when institutions and the social and political contexts are taken into account, these statistical differences lessen in importance. Second, despite the similarities in reforms to create markets in both countries, India's path has been more market oriented while China's has been more government directed. And third, to a large extent China's better performance in terms of growth, exports and foreign direct investment (FDI) can be attributed to timing and location. China began its reforms earlier than India and at a time when private capital flows were beginning to surge globally. China was also able to take advantage of the East Asian production process that was poised to move manufacturing to lower cost locations. The effect of a ten year difference in start times for reforms in India and China will most likely fade as the decades advance, and production locations tend to move as global business conditions change. Hence, while these advantages have been substantial for China, they are temporary.

The paper is organized as follows. The first section discusses the progress that China and India have made as a result of their reforms, and the range of interpretations for their success. The second section reviews recent research that addresses explanations of whether, and why, China has progressed

further and faster than India. The final section suggests several research directions in light of the issues raised and the future challenges China and India face.

Measuring Economic Progress

Major economic transitions have occurred in both China and India over the last three decades, with China beginning serious reforms approximately a decade earlier than India. Both countries moved from autarkic, planned economic systems to more liberalized, open economies. The phases and significance of these reforms have been documented in many fine studies.²

In terms of where China and India stand today, by purchasing power parity measures China is the second largest economy in the world and India is the fourth. Together they are home to over 2.4 billion people, which is 40 percent of the world's population. (See table 1.) Despite their size, they are some of the fastest growing economies in the world. Their average output per person is still low, of course, because of their large populations and late starts in terms of rapid growth. India's GDP per capita in 2008 was just over \$1,000 and China's was about \$2,700.

Table 1: Selected Economic Indicators, China & India

(about here)

Importance of Trade

A core aspect of both countries' reform process has been to increase their integration with global markets after long periods of import substitution and self-reliance policies. Looking at the relative importance of exports and imports in total output, China's trade shares have clearly grown over time in correspondence with its increasing engagement in the global economy (table 1). Taking averages over the decades, the percent of China's total trade (exports plus imports) in GDP rose from a low of 9.5 percent in the 1970s to over 51 percent in the 2000s. Based on China's size in terms of population and GDP, its trade share is large by historical and country comparison standards. In addition, China's share of exports is larger than its share of imports, which, as has been noted by many commentators, seems unusual for a large, fast growing economy where a trade deficit with net capital inflows would be more the norm.

India's trade shares have also increased substantially since reforms began. The total trade share was only 11 percent in the 1970s, rising to over 30 percent in the 2000s. This substantial increase in the total trade share was due to almost balanced increases in the export and import shares. By these

measures, India has become more open than the U.S., Japan or Brazil, and far more open than these countries at lower levels of development, but less open than China.

One of the differences between China and India that underlies these trade patterns is the share of exports being generated by foreign firms. In China, foreign firms have played an increasing role in generating exports over time and now contribute over 50 percent. While globally foreign investment has become more export oriented (Asian Development Bank 2004, Farrell et al. 2004), it is important to note that this has happened in China despite the large domestic market that China has to offer.

In addition, while China has been able to take advantage of global production networks and move up the value-added chain to some extent, much of China's trade has remained largely processing or assembly trade. Changes in the global economic environment have allowed more flexibility and options for supply chain management and production specialization. Arguably China's re-entry into the international economy coincided with these changes to its advantage. Many companies moved some of their production to China from other parts of the world either to augment existing capacity or to gain cost or other location advantages. One study reported that three-quarters of the exports sold by the top 200 companies in China were generated by export processing (Chen 2005). Domestic companies in general continue to produce mostly low-value goods and lack efficiency, brand names, and marketing experience. Services in China also continue to be dominated by the public sector and as yet are not internationally competitive (Kowalski 2008).

Therefore, one interpretation of both the size and the type of trade patterns in China today is that they reflect weaknesses in policies (Huang 2003, 2008). China's large share of trade may point to barriers to increasing value-added production and constraints on domestic companies' ability to grow in scale and sophistication. Further, the phenomenon of "round-tripping," where Chinese domestic capital flows out to Hong Kong and then re-enters ostensibly as foreign investment, is another indication that policies are creating unusual incentives that drive this behavior. Finally, the high reliance on exports for growth is a detriment when global demand declines such as during the 2008-2009 global financial crisis.

India, on the other hand, does not exhibit unusual trade patterns. While India still has somewhat higher trade protection than China and other Asian nations, its changing trade composition has reflected the corresponding liberalization as it has been implemented. Srinivasan and Tendulkar (2003) summarize India's trade trends as leading to increasing competition and innovation, with resulting shifts of domestic resources into higher productivity areas. As a result of liberalization and global trends in outsourcing, India has also been able to promote service exports. India has a higher world share of commercial services exports than of manufactured exports (Kowalski 2008). The flip side of this success is that some analysts believe India's lower manufactured exports are due to infrastructure constraints and other restrictions within the domestic economy (Kalirajan and Singh 2008). Further, the export-orientation of commercial services with little emphasis on serving the Indian market may reflect the public dominance and non-competitiveness of this sector within India.

Not surprisingly, both India's and China's trade structure has mirrored the changes in their structures of production. As agriculture as a share of GDP has fallen in both countries, industry has risen in China while services has increased in India (Kowalski 2008, p.9). China's share of industry has increased to 49 percent, while India's share of services of over 52 percent (table 1). The question for India is whether growth in an economy can productively be led by services, as this has not been the norm historically. However, increasingly services complement manufacturing and are the source of much value added. Therefore, India might be in a better position to exploit this opportunity than China.

By a number of measures then, China appears to be an exception in terms of its degree of openness relative to its size, while India appears to be more neutral in balancing domestic and foreign reforms even though the process is not as far along as China's. Trends in China have also exacerbated global trade imbalances, especially with low-cost manufactured products and especially with the U.S. These imbalances have been supported by a fixed exchange rate that may be undervalued by a substantial amount despite about a 25 percent appreciation since mid 2005. India has a de facto dollar pegged currency and rising foreign exchange reserves (Patnaik 2003), but this situation appears to be stable and has not caused unusual scrutiny to date. These observations are not intended to suggest that India has liberalized its external sector sufficiently, as many analysts argue persuasively that this is not the case (Kowalski 2008), but rather that India would be well served to continue reforms but not slant policy to over emphasize exports and foreign investment.

Trade Complementarities or Competition

Looking at the labor endowments of these two large economies, combined with their similar economic system transitions, one might expect that they would compete with each other in global markets selling similar products. In addition, they both have increased their exports of manufactured goods and their demand for primary products (Lemoine and Unal-Kesenci 2008, p.28). Recent studies, however, suggest that China and India may be diverging from each other in terms of comparative advantage. In either case, policy makers in other countries around the world are worried that these two economies will be able to out-compete them in export markets on a whole range of products from low wage, low skilled sectors all the way to capital goods and higher technology, higher skilled products. This scenario seemingly leaves natural resources and agricultural products to the rest of the developing world, and perhaps declining high technology exports from the developed world.

While competition has increased with the entrance of China and India into global markets, the two economies in fact have very different markets and export structures. China's top export markets are the EU, US and Japan. India's top market is the EU but its share has fallen as other market destinations have grown, especially China. In terms of overall exports, India's share of services in total exports is much higher than China's. China's largest exports are final manufactured goods. And only one category—clothing—appears in the leading export sectors for manufacturing of both economies (Qureshi and Wan 2008, table 2, p.6). Overall the majority of India's exports is services and

intermediate manufactured goods, while China's is finished manufactured goods. Dimaranan et al. (2007) point out that this is largely due to China's role as the assembly point in some global production networks. India is beginning to build connections to such networks but this is far less developed than in China (Yusuf et al. 2007).

Adapting the Global Trade Analysis Project methodology to China and India, Dimaranan et al. (2007) analyze the possible effects of China's and India's growth and trade on other countries out to 2020. Their results show that rising trade benefits China and India the most, but also benefits other countries and hurts only a few under certain circumstances. The benefits of variety and quality of exports generally outweigh the negative aspects of falling terms of trade effects. The two countries put additional pressure on countries to keep up, certainly, but the net results may overall be positive. For example, as competition increases in the high-tech sectors as China and India move into these areas, this could create opportunities for other countries to take up the slack in labor intensive goods.

Qureshi and Wan (2008) also analyze who China and India might affect as they increase their trade. They find that China's main competitors are Hong Kong, Malaysia, South Korea and Thailand in Asia, and Mexico in Latin America. India competes in the US and EU with Turkey, and in the EU and Japan with Sri Lanka, Morocco and Pakistan. Neither China nor India competes much with African countries. Both China and India still rely on clothing and other low tech exports and, and they compete some in medium tech industries in the US, EU and Asian markets. Recently, however, other major export categories have emerged and these have much less overlap, lowering the competition between the two. One of the suggestions from this analysis is that the overlap in terms of both countries vying to sell similar products in the same markets is surprisingly low and falling.

In summary, based on the combination of product-service mix in exports and differing destinations of exports, the conclusions of current research are much more positive than negative in terms of how China's and India's continuing integration into global markets are likely to affect other countries.

Bilateral Trade

What about trade between China and India specifically? In terms of total bilateral trade, trade flows between the two economies have increased since 1991, with more rapid trade integration beginning around 2000 (Figure 1). Total trade between the two countries was \$264 million in 1991. In 2008, trade reached \$55 billion, with growth picking up substantially beginning in 2003. When Chinese premier Wen Jiabao visited India in April, 2005, he set a goal of \$30 billion in bilateral trade by 2010. Clearly they are already well beyond that.

Formal analyses suggest that bilateral trade could grow with substantial benefits on both sides in the long run (Bhattacharya and Bhattacharyay 2007, Wu and Zhou 2006). One of the reasons that trade has room to expand is that there are areas of complementarity. While both countries have

been shown to have a revealed comparative advantage in some similar manufactured goods, the majority of India's exports to China are intermediate industrial goods and primary products (especially iron ore), and China sells an increasing amount of transport equipment to India (Wu and Zhou 2006).

Figure 1:
(about here)

The two countries have been discussing the possibility of signing a free trade agreement. An early agreement was signed in 1984 that provided for Most Favored Nation Status, border trade was reopened in 1992, and in 1994 an agreement was signed to avoid double taxation. The new agreement would open trade even more, as India currently has higher tariffs than China. Although India currently enjoys a bilateral trade surplus with China, some industrialists in India are worried that opening its markets to China might lead to a flood of products. In the background there also are strategic concerns ranging from the border issue to China's foray into India's backyard with its development assistance to Pakistan, Thailand, Bangladesh and Myanmar. In general, though, the geo-strategic relations between the two countries have improved sufficiently to allow for a blossoming bilateral relationship (Srivastava 2006).

The Domestic Market Factor

The potential for future growth in the Indian and Chinese domestic markets has not gone unnoticed, and a new consumer-orientation is emerging in both economies. The middle class may be as large as 250 million in China, defined as earning \$1,000 per year or more (Orr 2004) and at least as large in India (Das 2001, p.287), and demand for consumer goods is rising for households across the class spectrum along with incomes. The McKinsey Global Institute estimates that by 2025, China's middle class will reach 612 million people and India's will reach 583 million people (McKinsey 2006 and 2007). These new consumers tend to be young, especially in India due to its younger demographics. In China, the so-called "S" generation is largely represented by single-child offspring who have been the primary beneficiaries of material progress and therefore have been brought up in a consumer-oriented culture (Li 1998).

In both countries access to consumer loans and to consumer goods at newly built malls and other outlets has increased substantially, albeit from a small base. Both societies de-emphasized non-essential consumer goods and services for decades, and consumer loans were unheard of. In sharp contrast to the past, over 400 malls have been built in China since the late 1990s, and five of them rank in the top ten largest in the world (Barboza 2005). Mortgages for homes are increasingly available and

the willingness and ability to purchase automobiles is complementing a growing consumer culture. In India, big box retail stores such as Big Bazaar have become very popular.

However, from a macroeconomic perspective, growing consumerism is taking off in India but has been thwarted in China. Using data from the Asia Development Bank, Lemoine and Unal-Kesenci (2007, p.45) point out that much of East Asia has lower than average consumption shares. They attribute this partly to policies implemented as a result of the 1997 Asia crisis, which required a response to precipitous falls in exports.

Table 1 provides the average domestic savings and household consumption as a percent of GDP for India and China based on World Bank data. In India, rising saving rates have corresponded with a fall in household consumption, but these shares are substantially higher than China's. In India, in the 1970s household consumption as a percent of GDP was 73 percent compared with 60 percent in the current decade. In China, households' consumption as a share of GDP was lower than India's for all the decades. More unusual, however, is that household consumption in China has fallen during the reform period and by the current decade averaged 40 percent of GDP, falling to a low of 33 percent near the end of the decade (World Bank Indicators).

One factor accounting for the low consumption in China is that households feel they must save a high proportion of their incomes for education, healthcare and retirement (Qi and Prime, 2009). In China's current transition phase, new options and financial instruments for health insurance and pensions have not yet matured, while the old system of government security has ended. Hence the full risk and financial burden for these important social concerns falls to households. Savings in China climbed from 30 percent in the 1970s to over 50 percent in the current decade. Another aspect of this phenomenon is that labor's share of GDP in China is low and may be falling. In essence, workers are not benefiting proportionately from the rapid growth in output that is occurring in China. Huang (2008) argues that the lack of correlation between rising GDP and people's welfare, as well as growing inequalities generally, have been exacerbated by policies implemented in the 1990s.

Both economies have much work to do to overcome other constraints that hinder domestic market development such as infrastructure, regulation, land ownership and financial markets. India, however, seems to have a more normal structure of consumption and savings than China, which matches India's more balanced role of the external sector as well. Some analysts argue that India would benefit from higher savings rates to support higher growth rates. Another approach would be to promote consumption as the driver of growth, which will attract the needed savings and investment. India is already attracting foreign investment and was ranked as the second best destination for FDI in 2008 (UNCTAD 2008). The bottom line, however, is that over reliance on exports for future growth will most likely not be a winning strategy for either economy.

Interpreting China's and India's Divergent Paths

Despite many similarities in China's and India's development paths followed by reforms with similar goals, empirical data comparisons of development indicators for China and India show that China is ahead of India in almost every category. In a data intensive study, Chai and Roy (2006) take a comprehensive look at the two economies by macro sectors.³ The authors lay out the initial conditions in both economies in the beginning of the 1950s, the economic systems that were built under the import substitution years, and then the strategies taken once reforms were begun in the 1980s. They argue that both India and China wanted growth with equity beginning in the 1950s, and that both pushed self-sufficiency, planning and government administration of resource allocation. Neither country was very successful. Both economies became inefficient and corrupt, and while growth was higher in China, the results were not substantially more impressive.

Then, after deep reforms in both countries, Chai and Roy conclude that in almost all categories, China has come out ahead.⁴ Overall the authors feel it is unlikely that India will catch up. The reasons for China's relatively better results are not clear; however, the authors suggest that India's political system is standing in the way of change. In contrast, Mukherji (2006) emphasizes China's decade long head start with reforms and opening, as well as political factors, as explanations of performance differences. He argues that India needed to respond to popular pressure for redistribution and other populist policies, which has meant rapid growth as experienced in the East Asian economies and China was not possible or necessarily desirable in India (ibid. pp.72-73).

Production Function Variables that lead to growth

Many studies have attempted to explain the better overall economic performance that is so thoroughly documented by Chai and Roy (2006). For example, using standard sources of growth analyses, which look closely at what supply-side factors are behind growth and productivity, Bosworth and Collins (2008) show that China's faster industrial growth is tied to more openness in terms of lower trade barriers and more foreign investment, and that the industrial sector in China is much larger than its counterparts. This study also finds that in India the service sector is larger than in most countries at a similar development stage. Nonetheless, services in China have actually grown faster than in India. In addition, labor productivity in each sector of China has grown much more than in India. China's output per worker was below India's in all three sectors, namely industry, agriculture and services, and by 2004 was ahead in all and especially in industry. Most importantly, Bosworth and Collins find that total factor productivity growth in China has been high, and did not deteriorate with the high levels of capital investment experienced in that country.⁵

Meredith (2007) points to three specific factors for China's relative success. The first is the order of reforms in that China chose to begin in the rural areas while India focused on business systems. This meant that rural people in China benefited from change right away, while some of the poor in India have yet to see much improvement. Second, China began reforms with a better educated population across the board. Literacy rates were high, including both males and females. China's education system

has fallen backwards in this regard, but India has still to catch up to China's starting point. And third, China's higher savings rate has funded more investment, which is one of the key factors underlying the faster growth rate. On the political comparison, she argues that while it is easier for China than India to push through reform policies, it is more likely that China's relatively rigid political system will face major turmoil than India's participatory government, and China's extensive bureaucracy has trouble implementing policy in a unified way (ibid., pp.154-56).

Some analysts focus on China's higher savings and investment to explain the growth differentials (Fan and Felipe 2006, Herd and Dougherty 2007, Swamy 2006), which includes higher FDI (Das 2006). However, the dual nature of FDI and consequently of trade—export platform or directed towards sales in the domestic market—has caused some to reevaluate the role of FDI in China's recent development. Huang (2003) presents a systematic institutional analysis arguing that China's domestic companies were kept at a disadvantage because of policies to foster foreign investment. Others discuss demographics, especially for projections of future growth in the two countries (Tyers, Golley and Bain, 2006). The "demographic dividend" refers to the fact that India's population is much younger than China's, which will create a productive workforce in the years ahead, while China's aging labor force will create labor shortages and a social burden for that economy. Looking at two sectors specifically, software services in India and manufacturing electronic components in China, Gregory et al. (2009) examine a gamut of factors to explain the differential performance. In the end, one key factor they found was that China protected services but not manufacturing, while India did the reverse (ibid., p.220). This simple aspect created many of the conditions that allowed success in one place and not in the other.

Why companies invest more in China

Embedded in this line of research that asks why China seems to have done better than India is the question of why China has attracted more foreign direct investment (FDI) than India. The numbers are striking. Cumulative FDI between 1995 and 2008 was only \$131 billion in India as compared with \$880 billion in China. In 2008, India's best year, FDI inflows reached \$41 billion as compared with China's \$147 billion (Economist Intelligence Unit, 2009). There are major differences in how these data are reported in the two countries (Khanna 2007, pp.157-58; Swamy 2006). However, once adjustments have been made, China still has attracted more foreign investment, and certainly more FDI, as portfolio investment is much more important in India (Swamy 2008, p. 87).

The business press tends to emphasize the more advanced infrastructure and industrial development in China that helps foreign investment despite the democratic strengths of the Indian political system (Walker 2006). Some see the political system as a deterrent. Henley (2004) emphasizes the interest groups within India that slow or prevent liberalization, as well as the public deficits that keep government from funding infrastructure and other pro-development projects. Both aspects result in a more business friendly attitude towards foreign investment in China than in India. In

addition, local governments in China responded to incentives to promote FDI, including direct mandates to show that they had attracted FDI, as well as opportunities to reap the tax revenues that would be generated from these companies (Henley 2004, Khanna 2007, p.156).

Detailed data analysis is problematic in a comparative country framework, as the number of data points tends to be small if one is analyzing annual economic trends. However, Wei (2005) uses OECD data across countries and over time on home country outward investment in China and India. This approach also avoids the data discrepancy issues since the FDI definitions are the same and are reported by the home countries. Based on 1987 to 2000 FDI flows for 15 countries, the Wei study finds that both countries benefit from their large domestic markets (measured as the ratio of real home country GDP to real host country's GDP), but that China's relatively larger market overwhelms some of India's other advantages. Interestingly, India benefits from relatively lower labor costs, as well as lower country risk, while China benefits from more advanced trade ties with the OECD countries. As Wei's study only covers OECD countries, which do not make up the majority of FDI inflow in either India or China, he acknowledges that the results are only a part of the story.

Overall the vast differences in FDI flows remain a puzzle. Infrastructure development tends to be endogenous, meaning that once there is demand for investment the infrastructure will follow (Huang 2008, p.268). Neither country has a great business environment for multinationals, as both are struggling with inefficient economic and company organizations combined with partially reformed legal, labor and investment policies. Corruption and bureaucracy abound. If anything, India has the more conducive business environment for private firms. Capital markets in China are far less developed than in India (Khanna, 2007, pp.91-105). Tellingly, foreign companies in China targeting domestic market opportunities rather than using China as an export platform seek out very specific geographical areas within China where the business environment is more reasonable (Du et al., 2008).

The Role of Institutions

A second line of argument found in recent research is that the better development numbers for China, while impressive, overlook the progress and strength of institutions, and here India tends to do better. Khanna (2007), in his recent book on entrepreneurs in both countries, argues that each country has its strengths--strengths that complement each other and thus create heretofore unnoticed opportunities. Huang (2008, 2006) and Huang and Khanna (2003) have argued that for a host of reasons India has a business environment that fosters entrepreneurship, while China's strengths tend to be the result of foreign rather than domestic companies. Rule of law, democratic processes, and a financial system that supports domestic enterprise growth—all of which are stronger in India— may be critical in the long-run.

In his study comparing company access to financial credit in both countries, Huang (2006) uses firm based survey data to investigate how the financial systems serve the capitalist class in each country. Huang finds that in the case of bank lending to small, private companies, India's system outperforms

China's. Huang presents a puzzle that while China's banking system lends approximately twice as much as India's, 80 percent of Chinese firms in the survey reported moderate to major obstacles in borrowing funds as compared with 52 percent of the Indian firms. Further, the perceived reason for the funding constraint in China was a lack of funds. Using regressions to control for firm characteristics, Huang finds that small firms have been the most affected by these constraints in China, whereas firm size is not significant in the case of India. The overall conclusion of this study is that China's financial sector has a constraining policy bias against small, private firms, which is one of the legacies of the former planned economy.

Based on this research, Huang questions studies that have put China ahead of India in terms of progress toward reforms and in terms of the degree of market orientation. He concludes that India is working to improve an underdeveloped banking system with weaknesses such as performing proper risk assessments, but that China has a biased banking sector due to policy preferences. One implication of these results is that India is likely to make more progress in its financial and banking reforms than China.

In line with Huang, Haley and Haley (2006) argue that while both economies have weak financial intermediation that hurts companies, China's successful companies typically rely on large amounts of state provided capital. Indian companies do not have this luxury, and as a result, successful companies in India tend to be in industries where capital constraints are less important such as in information technology. A further implication of the two approaches is that Indian companies function under more market pressure than Chinese companies, while Chinese companies are challenged to cooperate with government initiatives. In terms of returns on investment and returns on equity, Chinese companies do better than Indian companies in consumer durables, telecommunications, textiles and garments, while Indian companies do better in software, pharmaceuticals, biotech, capital goods and materials.

The authors' overall assessment is that Indian companies on average out-perform Chinese companies. India has produced a substantial number of world-class companies such as Infosys and Wipro while China has not. They argue that India certainly has work to do to enhance its business environment, such as improving infrastructure and energy. However, China's challenges are more onerous in that a retreat of government dominance in business is required for progress, and this will take major political and institutional change.

In general analysts conclude that India's banking sector is stronger than China's, but that the large size of India's public deficits is a serious constraint on public investment and government performance generally. Swamy (2006a, 2006b) argues that if a crisis is to occur in India, it will be a failure of government finance, while China is facing a possible banking crisis. Saez (2004) argues that neither banking system is in great shape, but that India has a better chance of reforming successfully, which will be essential to sustained development. Saez emphasizes the positive contribution from the greater and increasing role of private banks in India. In China the non-performing loan situation is much worse than in India, and therefore much harder to eliminate through simply subjecting state banks to market discipline, which is China's preferred route to reform. He also suggests that because China's system is driven from the top by central government decision-makers in a system with a high share of

state ownership, reforms toward good corporate governance and central bank independence will be diluted given the incentives for the state to maintain control and ensure that state enterprises also survive (Saez 2001, Saez and Yang 2001). Aziz (2008) also finds that while financial distortions continue to exist in both countries, they have fallen more in India due to the reforms.

The other aspect of financial institutions that is important in both countries is the relationship between the national and local governments in public finance. Martinez-Vazquez and Rider (2006) emphasize that neither country has decentralized sufficiently to give the proper amount of authority and resources to lower government levels. It is at these levels that critical social services such as health and education are delivered, as well as where national policies such as environmental protection must be implemented. The reasons for China's and India's poor local fiscal performance are different, but the end results are similar.

Finally, one of the key requirements for "good" institutions is the existence and functionality of a legal system. China does not have much of one (Gamble 2002), but what about India? The British left a legal tradition which is the basis for today's system with few changes (Burke et al., 2006). While far from ideal, the legal system in India is considered an asset by most analysts. Others consider the existence of India's legal structure as absolutely essential for the country's development success (Nobrega and Sinha 2008, pp.74-78).

Evaluating the Interpretations

Certainly having lots of savings to invest, and being able to attract foreign companies to augment domestic investment and as well as create advantages in exporting, are all factors that have added to China's faster growth rate as compared with India's. So far, the production function variables explain China's growth results better than the institutional factors. However, China may be in a race with itself to sustain the growth rates it has achieved in the past. The following three considerations tell another story.

First, as the discussion on developing domestic markets emphasized, China has over-saved. This tendency is similar to the planned period under Mao, and under both periods high savings supported relatively high growth. With market reforms, however, Chinese companies need customers for their products. Foreign customers have been increasingly important as buyers of Chinese made goods, as opposed to domestic customers. Reversing this trend would help immensely with future growth, but so far finding the right incentives has been elusive. In addition, while policy in China has been growth oriented, and successfully so, the next round of challenges will be to deal with externalities, social welfare and inequities. These challenges will require better governance and new institutions.

Second, looking at reasons for China's relative success in a broader, global context, the most important factor is perhaps the fact that China was in the right place at the right time. A few studies mention this factor but do not focus on it per se (e.g., Saran and Guo, 2005, p.137). Just when China

began to open to international markets, the East Asian development process was far advanced with companies seeking lower costs. Hong Kong, Taiwan, South Korea and Japan are located on China's doorstep. In a short time period, low-end manufacturing production moved to China, especially southern China. Well over half of China's FDI has gone into manufacturing, while in India power and telecom have dominated with minimal manufacturing FDI (Henley, 2004). Some studies have identified overseas Chinese as an important source of FDI into China (Gao, 2003) whereas this is lacking in India (Lall, 2001). This factor is consistent with East Asian companies taking advantage of new opportunities within China, as many overseas Chinese live in these countries. The character of China's exports—that over 50 percent of China's exports originate with foreign invested enterprises and that the value-added of these exports tended to start low and rise—shows how China has fit into Asian production networks (Sung, 2007, Lemoine and Unal-Kesenci, 2004).

There has to date been nothing comparable with India. Over half of the FDI in India is funneled via Mauritius (Wei 2005), but this is for tax purposes rather than for economic reasons. India began opening to global markets only in 1991. By then China had a decade of experience with how to best open its economy with minimal political and economic backlash. This put China in a good position to absorb the rising private capital flows that occurred during the 1990s. With improving production quality and expanding clusters of capabilities with supporting services, China became an agglomeration of manufacturing that then encouraged others to follow. And once international purchasers became used to buying from China, there has been a tendency for this practice to continue (Eckaus 2008).

Hence, third, in addition to over-saving, China's location and timing has led to an over emphasis on exports. The global financial crisis with its collapse of demand in the developed world provided a wake-up call regarding the location of future demand. However, China's main response beyond a standard stimulus package aimed at infrastructure was to try to re-invigorate exports through tax and other incentives. The opportunity to focus domestically may have passed.

India, of course, has its own challenges, many of which are well documented in the studies discussed here. But the solid growth with an entrepreneurial basis that has emerged from reforms and the maturing of India's political processes are a powerful combination to deal with the country's weaknesses.

Looking to the future

As many of the studies discussed here show, comparisons of the factors that brought China and India to the development levels that they have reached have been covered extensively. Differences in the two economies outweigh the similarities. There is a growing consensus that despite the basic statistical differences, with China most often in the lead, India is its own success story. Some analysts expect India to catch up to China (Nobrega and Sinha 2008, Gylfason 2006, Huang Y.S. 2008, Sheth 2008) and some do not (Chai and Roy 2006, Das 2006, Manor 2006, Smith 2007). Perhaps this is not the important question. Few are suggesting that India will fail to progress in economic and political terms.

The title alone of The Asia Development Bank (2009) report *India: 2039: An Affluent Society in One Generation*, reflects this optimism.⁶ China and India will both progress, but in very different ways. Despite their resilience during the 2008-09 financial crisis (Sharma 2009), there are possible policies or shocks to the economies that could derail their progress. For India, the poor fiscal situation is of most concern; for China, it is the unknowns about how the political system will evolve. For both, resolving energy and environmental issues, and utilizing their potential domestic markets, will be important for future growth. As one author reminds us, having them both succeed is critical as they are home to two fifths of humanity (Mukherji 2008).

Rising trade, investment and tourism have helped to improve understanding between the two nations. While Indians have long been watching China, at least from a distance, successes in India have recently caught the attention of people in China. Rising bilateral trade between China and India, and more knowledge in China about the strength of India's software capabilities, has raised India's profile within China. India's achievements have challenged a common view within China that there is a trade-off between democracy and development, and the notion of India as a poor, desolate country is receding (Huang J.X. 2005, 2006).

Academics in China are beginning to do research on India's economy, although the amount is still low. Table 2 summarizes the major academic journals that published articles dealing with India's economy between 2000 and early 2009.⁷ In the early part of the decade only one article per year was published, but in the second half the numbers increased substantially. Trade issues dominated the topics addressed, although a few articles dealt with development differences, capital flows and the software industry.

Table 2 (about here)

Furthering the Research Agenda

The fact that China and India have very different histories, conditions, economic structures and goals means that they will each need their own resolutions to similar problems. It is possible that solutions found in one place can inform policy in the other. It is more likely, however, that research would be more profitably spent looking closely at each situation independently.

There are some overarching questions, however, that the development experience of these two economies specifically can help us understand. The first question is how state and private firms will

contribute to the next stages of development. While India has always had a substantial private sector, it has also coddled state firms and has not privatized them as fast as China. China, on the other hand, privatized many state firms quickly in the 1990s, but has targeted about 500 firms to remain state-owned to lead China's key industries and growth. Some argue that under President Hu Jintao's leadership, policy has taken an even sharper turn towards state dominance (Scissors 2009). Many aspects of economic theory suggest that the private sector is more dynamic and efficient than state companies. Since innovation is considered essential to sustained growth, one would imagine that state firms will have to behave increasingly like private ones for China to succeed. At this moment it looks as if the private sector will lead India's development and the state sector will lead China's. If true, we have an opportunity to test the results. Firm level analyses will be important to tackle this set of questions. Some of the current work using firm level surveys comparatively in both countries includes Huang and Khanna (2006), Huchet et al. (2007) and Gregory et al. (2009).

The second question is what role services can play as these economies develop. If indeed services can be a leading growth sector, then India's strong IT services industry may create spillovers to other areas of the economy generating employment and growth. Development economists speculate about the possible importance and exploitation of high value services, and the ways in which manufacturing and services can complement each other (Fernandes and Paunov 2008, Reinert 2007). The services provided to run ATM machines and cell phones, for example, are much more sophisticated and profitable than manufacturing the machines or phones themselves. Typically, however, manufacturing has been done in developing countries while the services have been created and provided by companies in more developed countries. The question is what will be required for China and India to begin to capture this higher value added? In addition, since India's manufacturing base is smaller than China's, will manufacturing need to be bolstered as a prerequisite?

The third area for research covers questions relating to the importance and organization of institutions, or the so-called soft infrastructures (Huang 2008) as opposed to infrastructure as typically conceived, such as roads and bridges. As mentioned, many studies suggest that India is ahead of China in building institutions. But improvement would be beneficial to both societies. What institutional characteristics would be best for achieving development and social goals in each economy? How can coalitions of interest groups be formed to achieve these goals? In China, for example, rebalancing the economy from rapid growth to redistribution has been a stated priority of President Hu Jintao. However, changing the embedded incentives and power structures to make that happen has so far not occurred. It may be that major institutional change will be needed in order to solve the energy and environmental challenges as well (Paus et al., 2009). In India, the major challenge of building the "hard" infrastructure may mean overcoming some of the institutional incentives that exist today to find a new balance between the public and private good.

The final area of broad research on China and India suggested by this overview of economic literature is the possible role of clusters and agglomeration in the process of development. It may be that China created its main advantage over India by joining the global production network early on and then expanding their infrastructure and breadth of manufacturing capabilities to take advantage of

economies of scale and agglomeration spillover effects. Once set, changing this path of production to other areas, such as India, may be difficult and costly. Can India join the global production networks on its own terms, for example, as a service provider or as a supplier of intermediate goods? Will China be able to up-grade its manufacturing clusters as its policy makers are pushing to do, or will they be caught in the relatively low value added piece of the chain for a long time? Because of the size of their economies, China and India have a better chance than many countries of replicating the increasing economies of scale and technological change of the today's richer countries (Reinert 2007). As in other areas of comparison, in China the industrial clusters have tended to be created by government in top-down initiatives while in India private entrepreneurs were more important in the formation of industrial clusters in places like Bangalore and Hyderabad (Walcott and Heitzman 2006). What difference will these variations make in terms of the long-run success of the two economies?

In conclusion, one certainty is that global and domestic conditions will change. How each society responds to these changes will be a key factor in their ability to sustain progress, or not. This is applicable to all nations, of course, but the size of India and China put them into a category of their own, where their successes and failures will shape the global condition as well as their own.

References

Asia Development Bank, "Foreign Direct Investments in Developing Asia, The Impact of Foreign Direct Investment," Chapter 3 in *Asian Development Bank Outlook 2004*, 16th Edition, 2004.

<http://www.adb.org/documents/books/ado/2004/part030200.asp>.

Asia Development Bank, "India 2039: An affluent society in one generation," Manila, 2009.

Aziz, Jahangir, "Deconstructing China's and India's Growth: The Role of Financial Policies. Indian Council for Research on International Economic Relations (ICRIER), October 2008. www.icrier.org.

Barboza, David, "China, New Land of Shoppers, Builds Malls on Gigantic Scale," *New York Times*, 25 May 2005, A1, C7.

Bhattacharya, Swapan K. and Biswa N. Bhattacharyay, "Gains and Losses of India-China Trade Cooperation—A Gravity Model Impact Analysis," CESifo Working Paper No. 1970, April 2007, <http://ssrn.com/abstract=985274>.

Bosworth, Barry and Collins, Susan M., "Accounting for Growth: Comparing China and India," *Journal of Economic Perspectives* 22.1, 45-66, 2008.

Burke, Michael E, Cutshaw, Kenneth A., and Krishna, Rahul, "The Legal Systems in India-China: A Comparative Perspective," Special issue China & India, *Indian Journal of Economics & Business*, 147-174, 2006.

Chai, Joseph C. H. and Kartik C. Roy, *Economic Reform in China and India: Development Experience in a Comparative Perspective*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar, 2006.

Chen, Min, "Made in China." *The China Business Review*, May-June, 42-47, 2005.

Chow, Gregory, *China's Economic Transition, 2nd Edition*. Blackwell Publishing, 2007.

Das, Dilip K., *China and India: A Tale of Two Economies*. London: Routledge, 2006.

Das, Gurcharan. *India Unbound*. New York: Alfred A. Knopf, 2001.

Dasgupta, Biplab, *Globalisation: India's Adjustment Experience*. Sage, 2005.

Dimaranan, Betina, Elena Ianchovichina and Will Martin, "Competing with Giants: Who Wins, Who Loses?," in Winters, L. Alan and Shahid Yusuf, eds., *Dancing with Giants: China, India, and the Global Economy*. Institute of Policy Studies and The World Bank, 2007, 67-100.

Du, Julan, Lu, Yi and Tao, Zhigang Tao, "Economic Institutions and FDI Location Choice: Evidence from US Multinationals in China," *Journal of Comparative Economics* **36**: 412-429, 2008.

Eckaus, Richard S., "An Inquiry into the Determinants of the Exports of China and India," *China & World Economy*, **16**, 5: 1-15, 2008.

Economist Intelligence Unit, databases available at www.eiu.com, accessed 2009.

Fan, Emma Xiaoqin and Felipe, Jesus, "The Diverging Patterns of Profitability, Investment and Growth of China and India, 1980-2003," Asian Development Bank, February 2006.

Farrell, Diana, Jaana K. Remes and Heiner Schulz, "The Truth about Foreign Direct Investment in Emerging Markets," *The McKinsey Quarterly*, no.1, 2004, www.mckinseyquarterly.com.

Fernandes, Ana M. and Paunov, Caroline, "Foreign Direct Investment in Services and Manufacturing Productivity Growth: Evidence for Chile," World Bank Policy Research Working Paper Series, 2008. Available at SSRN: <http://ssrn.com/abstract=1276667>.

Friedman, Edward and Gilley, Bruce, eds., *Asia's Giants: Comparing China and India*. Palgrave Macmillan, 2008.

Gamble, William B., *Investing in China: Legal, Financial and Regulatory Risk*. Westport, CT: Quorum Books, 2002.

Gao, T. "Ethnic Chinese networks and international investment: evidence from inward FDI in China," *Journal of Asian Studies* **14**, 4:611-629, 2003.

Gregory, Neil, Nollen, Stanley D., and Tenev, Stoyan, *New Industries from New Places: The Emergence of the Hardware and Software Industries in China and India*. Stanford University Press and the World Bank, 2009.

Gulati, A. and Fan, Shengen, eds., *The Dragon and the Elephant: Agricultural and Rural Reforms in China and India*. The International Food Policy Research Institute, Baltimore: The Johns Hopkins University Press, 2007.

Gylfason, Thorvaldur, "How do India and China Grow?," *Challenge*, January-February, 74-89, 2006.

Haley, Usha C.V. and Haley, George T., "The Indian Elephant and the Chinese Dragon: Differing Development Strategies of India and China and Effects on Business Environments," Special issue on India and China, *Indian Journal of Economics & Business*, 131-46, 2006.

Henley, John S., "Chasing the Dragon: Accounting for the Under-performance of India by comparison with China in attracting foreign direct investment," *Journal of International Development*, **16**: 1039-1052, 2004.

Herd, Richard and Dougherty, Sean, "Growth Prospects in China and India Compared," *The European Journal of Comparative Economics* **4**, 1:65-89, 2007.

Heston, Alan, *What Can Be Learned About the Economies of China and India from Purchasing Power Comparisons?* ICRIER Working Paper No. 229, Indian Council for Research on International Economic Relations (ICRIER), December 2008. www.icrier.org.

Huang, Jinxin, "China Rethinks India," in Friedman, Edward and Gilley, Bruce, eds., *Asia's Giants: Comparing China and India*. Palgrave Macmillan, 2008, 211-226.

Huang, Jinxin, "A New Chinese Discourse on India." *Journal of Contemporary China*, **14**, 45: 631-641, 2005.

Huang, Yasheng, *Capitalism with Chinese Characteristics: Entrepreneurship and the State*. Cambridge: Cambridge University Press, 2008.

Huang, Yasheng, "Assessing financing constraints for domestic private firms in China and India: Evidence from the WBES survey," Special issue on India and China, *Indian Journal of Economics & Business*, 69-92, 2006a.

Huang, Yasheng, "What China could learn from India's slow and quiet rise," *Financial Times*, January 24, 2006b.

Huang, Yasheng, *Selling China: Foreign Direct Investment During the Reform Era*. Cambridge: Cambridge University Press, 2003.

Huang, Y.S. and Khanna, T., "Indigenous versus Foreign Business Models," in Friedman, Edward and Gilley, Bruce, eds., *Asia's Giants: Comparing China and India*. Palgrave Macmillan, 2008, 161-179.

Huang, Y.S. and Khanna, T., "Can India Overtake China?," *Foreign Policy*, July/August 2003.

International Monetary Fund, *Direction of Trade Statistics Yearbooks*, multiple years.

Huchet, Jean-Francois, Xavier Richet and Joel Ruet. eds., *Globalization in China, India and Russia : Emergence of National Groups and Global Strategies of Firms*. New Delhi, Academic Foundation, 2007.

International Monetary Fund, *Direction of Trade Statistics*, various years.

Kalirajan, Kaliappa and Singh, Kanhaiya, "A Comparative Analysis of China's and India's Recent Export Performances," *Asian Economic Papers* 7.1:1-28, 2008.

Kelly, David A., Rajan Ramkishan S., and Goh, Gillian H. L., *Managing Globalization: Lessons from China and India*. World Scientific, 2006.

Kennedy, Robert, "India in 1996." Harvard Business School Case, 9-798-065. Boston: Harvard Business School Publishing, 2002.

Kennedy, Robert E. and Marquis, Katherine, "China: To Get Rich is Glorious," HBS 9-707-022, 2007.

Khanna, Tarun, *Billions of Entrepreneurs: How China and India are Reshaping Their Futures—and Yours*. Boston: Harvard Business School Press, 2007.

Klein, Lawrence R. "China and India: Two Asian Economic Giants, Two Different Systems," *Applied Econometrics and International Development* 4, 1:7-19, 2004.

Kowalski, Przemyslaw, "China and India: A Tale of Two Trade Integration Approaches," ICRIER Working Paper No. 221, Indian Council for Research on International Economic Relations (ICRIER), August 2008.
www.icrier.org.

Lall, M. C. *India's Missed Opportunity: India's Relationship with the Non Resident Indians*. Ashgate, 2001.

Lardy, Nicholas R., *China's Unfinished Economic Revolution*. Washington, D.C.: Brookings Institution Press, 1998.

Lardy, Nicholas R., *Integrating China into the Global Economy*. Washington, D.C.: Brookings Institution Press, 2002.

Lemoine, Françoise and Unal-Kesenci, Deniz, "Rise of China and India in international trade: From Textiles to New Technology," *China & World Economy* **16**, 5:16-34, 2008.

Lemoine, Françoise and Unal-Kesenci, Deniz, "China and India in international trade: from laggards to leaders?," CEPII Working Paper No. 2007-19, November 2007.

Lemoine, Françoise and Unal-Kesenci, Deniz, "Assembly Trade and Technology Transfer: The Case of China," *World Development* **32**, 5:829-850, 2004.

Li, Conghua, *China: The Consumer Revolution*. John Wiley & Sons (Asia), 1998.

Manor, James, "India's Reforms Strengths," in **Friedman, Edward and Gilley, Bruce, eds.**, *Asia's Giants: Comparing China and India*. Palgrave Macmillan, 2008, 97-119.

Martiniz-Vazquez, Jorge and Rider, Mark, "Fiscal Decentralization and Economic Growth: A Comparative Study of China and India," Special Issue China and India, *Indian Journal of Economics & Business*, 47-67, 2006.

McKinsey Global Institute, *The 'Bird of Gold': The Rise of India's Consumer Market*, May 2007.

McKinsey Global Institute, *From 'Made in China' to 'Sold in China': The Rise of the Chinese Urban Consumer*, November 2006.

Meredith, Robyn, *The Elephant and the Dragon: The Rise of India and China and What it Means for All of Us*. New York: W. W. Norton & Co., 2007.

Mukheri, Joydeep, "The Causes of Differential Development: Beyond Regime Dichotomies," in Friedman, Edward and Gilley, Bruce, eds., *Asia's Giants: Comparing China and India*. Palgrave Macmillan, 2008, 55-76.

Nagel, Stuart S., ed. *India's Development and Public Policy*. Ashgate, 2000.

Naughton, Barry, *The Chinese Economy: Transitions and Growth*. MIT Press, 2007.

Nobrega, William and Sinha, Ashish, *Riding the Indian Tiger: Understanding India-The World's Fastest Growing Market*. John Wiley & Sons, Inc., 2008.

Orr, Gordon R., "Encouraging Consumer Spending in China." *The McKinsey Quarterly*, online, www.mckinseyquarterly.com; originally published in the *Financial Times*, 15 December 2004.

Panagariya, Arvind, *India: The Emerging Giant*. Oxford University Press, 2008.

Park, Jong H., "The Two Giants of Asia: Trade and Development in China and India." *Journal of Development Studies* **18**, 1:64-81, 2002.

Patnaik, Ila, "India's Policy Stance on Reserves and the Currency." Working Paper No. 108. Indian Council for Research on International Economic Relations, September 2003.

Paus, Eva, Prime, Penelope B., Western, Jon, eds., *Global Giant: Is China Changing the Rules of the Game?* Palgrave Macmillian, 2009.

Perdikis, Nicholas, ed., *The Indian Economy: Contemporary Issues.* Ashgate, 2000.

Prime, Penelope B. and Kulkarni, Kishore G, eds. *Economic Development in India and China: New Perspectives on Progress and Change.* New Delhi: Serials Publications, 2007.

Qi, Li and. and Prime, Penelope B., "Market Reforms and Consumption Puzzles in China," *China Economic Review* **20**,3, 388-401, 2009.

Qureshi, Mahvash Saeed and Guanghua Wan, "Trade Expansion of China and India: Threat or Opportunity," Research Paper No.2008/08, United Nations University, World Institute for Development, February 2008.

Reinert, Erik S., *How Rich Countries Got Rich and Why Poor Countries Stay Poor.* New York: PublicAffairs, 2007.

Rosen, George, *Contrasting Styles of Industrial Reform: China and India in the 1980s.* University of Chicago, 1992.

Saez, Lawrence, "Banking Reforms in India and China," *International Journal of Finance and Economics* **6**, 3: 235-244, 2001.

Saez, Lawrence, *Banking Reform in India and China.* Palgrave Macmillian, 2004.

Saez, Lawrence and Yang, Joy, "The Deregulation of State-Owned Enterprises in India and China," *Comparative Economic Studies* **XLIII**:3, 69-97, 2001.

Saran, Anshu and Guo, Chiquan, "Competing in the global marketplace: The case of India and China," Indiana University of Kelley School of Business, *Business Horizons* **48**: 135-142, 2005.

Scissors, Derick, “Deng Undone: The Costs of Halting Market Reforms in China,” *Foreign Affairs*, May-June, 2009.

Sharma, Shalendra D., “Dealing with the Contagion: China and India in the Aftermath of the Subprime Meltdown,” *China & World Economy* **17**, 2:1-14, 2009.

Sheth, Jagdish N., *Chindia Rising: How China and India Will Benefit Your Business*. Atlanta: Incore Publishing, Inc., 2008.

Smith, David, *The Dragon and the Elephant: China, India and the New World Order*. London: Profile Books, 2007.

Srinivasan, T.N. and Suresh D. Tendulkar, *Reintegrating India with the World Economy*. Washington, D.C.: Institute for International Economics, 2003.

Srivastava, Anupam, “The Strategic Context of India’s Economic Engagement with China,” Special Issue China & India, *Indian Journal of Economics & Business*, 209-228, 2006.

Steinbock, Dan, “Toward the Innovation Frontier: The Rise of Chinese and Indian Innovators—Insights from Innovative Output, in Prime, Penelope B. and Kulkarni, Kishore G, eds. *Economic Development in India and China: New Perspectives on Progress and Change*. New Delhi: Serials Publications, 2007, 17-40.

Sung, Yun-Wing, “Made in China: From World Sweatshop to a Global Manufacturing Center,” *Asian Economic Papers* **6**, 3: 43-72, 2007.

Swamy, Subramanian, “Chasing China: Can India Bridge the Gap?,” in Friedman, Edward and Gilley, Bruce, eds., *Asia’s Giants: Comparing China and India*. Palgrave Macmillan, 2008, 77-95.

Swamy, Subramanian, “Financial System Constraints in China and India: A Comparative Perspective,” Special Issue China & India, *Indian Journal of Economics & Business*, 110-28, 2006a.

Swamy, Subramanian, *Financial Architecture and Economic Development in China and India*. Konark Publishers Pvt Ltd, 2006b.

Tidrick, Gene and Dubey, Vinod, "The Large Economies: A Comparison of China and India, Handbook of Comparative Economic Policies, volume 4, 529-552. Greenwood Press, 1994.

Tyers, Rod, Golley, Jane, and Bain, Iain, "Projected Economic Growth in China and India: The Role of Demographic Change," The Australian National University Working Papers in Economics and Econometrics No.477, November 2006.

Tseng, Wanda S. and Cowen, David G., eds, *Indian's and China's Recent Experience with Reform and Growth*. Palgrave Macmillan, 2006.

UNCTAD, *World Investment Prospects Survey 2008-2010*. New York: United Nations, 2008.

Vietor, Richard H.K. and Thompson, Emily J., "India on the Move," Harvard Business Case 9-703-050, 2007.

Walcott, Susan M. and Heitzman, James, "High Technology Clusters in India and China: Divergent Paths," Special Issue India & China, *Indian Journal of Economics & Business*, 113-146, 2006.

Walker, M., "India Touts Its Democracy in Bid to Lure Investors Away from China. *The Wall Street Journal*, January 20, 2006, A2.

Wang, T. and Cowen, D., eds., *India's and China's Recent Experience with Growth*. Palgrave Macmillan for the International Monetary Fund, New York, 2005.

Wei, Wenhui, "China and India: Any difference in their FDI performances," *Journal of Asian Economics* **16**: 719-736, 2005.

Winters, L. Alan and Shahid Yusuf, eds., *Dancing with Giants: China, India, and the Global Economy.* Institute of Policy Studies and The World Bank, 2007.

World Bank, *World Development Indicators,* www.worldbank.org.

Wu, Jinglian, *Understanding and Interpreting Chinese Economic Reform.* Thomson South-Western, 2005.

Wu, Yanrui and Zhangyue Zhou, "Changing Bilateral trade between China and India," *Journal of Asian Economics* **17**, 509-518, 2006.

Yusuf, Shahid, Kaoru Nabeshima and Dwight H. Perkins, "China and India Reshape Global Industrial Geography," in Winters, L. Alan and Shahid Yusuf, eds., *Dancing with Giants: China, India, and the Global Economy.* Institute of Policy Studies and The World Bank, 2007, 35-66.

Endnotes

¹ This is not meant to be a comprehensive review of the literature on India and China. I draw primarily on recent comparative economic research supplemented by work on done on India or China alone when those results add helpful insights. There is by now a vast body of work that covers China and India individually that cannot be adequately surveyed here.

² For India: Das 2001, Kennedy 2002, Veitor and Thompson 2007, Srinivasan and Tendulkar 2003, Perdakis 2000, Nagel 2000; Dasgupta 2005, Panagariya 2008; For China: Kennedy and Marquis 2007, Naughton 2007, Lardy 1998, 2002, Chow 2007, Wu 2005; Comparatively: Rosen 1992, Tseng and Cowen 2005, Prime and Kulkarni 2006, Gulati and Fan 2007, Chai and Roy 2006, Friedman and Gilley 2006, Meredith 2007, Park 2002, Wang and Cowen 2005, Klein 2004, Kelly et al. 2006, Tidrick and Dubey 1994, Das 2006.

³ For a review of the Chai and Roy (2006) study, see Prime (2007).

⁴ Finding comparable data is always a challenge. Chai and Roy (2006) discuss some data issues throughout their book, but this is a weak aspect of the study. See Heston (2008) for a discussion of GDP comparisons using purchasing power measures, and Swamy (2006b) for data comparisons across numerous measures.

⁵ Results from other productivity studies on Chinese sectors and companies are not so positive (e.g., Huang Y.S. 2008, p.240; Fan and Felipe 2006; Swamy 2006b).

⁶ For a summary of this report see Wolf (2009).

⁷ Articles that dealt directly with India, or comparisons between China and India, were counted, while articles that included India among a set of countries were not. Some of the journals are covered by an electronic data base called *Infobank: China content provider* (www.infobank.cn) and other journals were searched manually. Only journals that published at least one article are listed in table 4. All of the journals included are published in Chinese.