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## **RIS** Discussion Papers

**Emergence of China and India in the  
New Millennium: Will it Facilitate  
Market Access for  
LDCs and Developing Countries?**

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## Emergence of China and India in the New Millennium: Will it Facilitate Market Access for LDCs and Developing Countries?

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**Abstract:** China and India have emerged as highly dynamic economies in recent years. In the Asian region their growth and economic expansion has generated its own complementarities. The paper has empirically shown that surge in the exports of these two countries have significantly contributed to their overall economic growth. Towards this end, both the countries have relied on LDCs and developing countries for their imports and on markets of industrialised economies for exports. The import dependence of India and China is mostly on the industrial intermediate sector, which is critical for their exports. It is advantageous for LDCs and developing countries to closely tie up with these growing economies to get in to their fast expanding markets, but the process is not automatic. Developing countries, particularly LDCs, have to adopt long term strategies to concretise their economic relationship with these two countries to secure persistent market access. Supply and technology constraints in LDCs and other countries may be addressed explicitly, and relevance of these two countries as suppliers of FDI and technology is examined. India and China have made steady progress in frontier technologies such as ICT and biotechnology, and they may provide easy access to these technologies to LDCs and other developing countries.

### I. Introduction

The growth in resilient economy of Asia led by China and increasingly shared by India is a process attracting huge international attention. Chinese exports of mass production items have caused serious concern; and some studies have predicted that this might contribute to recession in the US.<sup>1</sup> In

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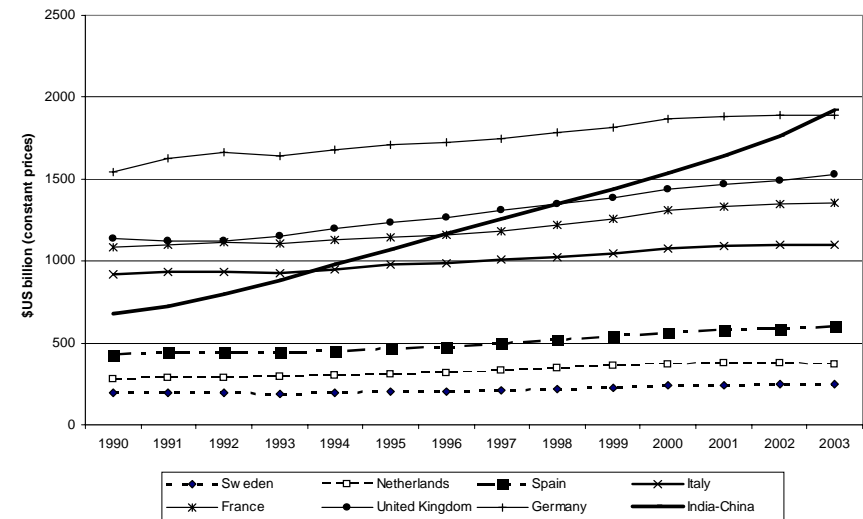
contrast to this negative perspective, the focus in the Asian region has been on the opportunities for economic and financial integration and the possible strategies to tap them<sup>2</sup>. The expansion of these two economies may be compared with the growth of economies in the European Union. It may be noted that integration of the European Union has immensely benefited Member countries, and some of the slow growing economies have gained strength from the regional arrangement.

The rapid growth of China and India offers great opportunities to other developing countries. Both countries have significantly liberalised their trade regimes in recent years, providing access to developing countries including to the least developed economies (LDCs). As these two countries have increased their exports, their requirements for intermediate imports have also risen significantly. There are also efforts to expand investments in innovation and to involve other countries in the production of high technology goods. In this paper some of these issues are being analyzed. Section II presents broad macro-economic facts about China and India while section III presents their trade relations and complementarities with other developing countries. Innovation and technology related issues are discussed in section IV. The Conclusions are drawn in the last section.

## II. Emergence of Sino-Indian Economy: Basic Parameters

China's growth surge started in the late 1970s and India's in the early 1990s. In the early 1990s, the combined size of the Indian and Chinese economies was US\$ 681 billion in constant international dollar terms in 1990.<sup>3</sup> The collective size of their economies was larger than combined size of some of the smaller economies of Europe such as Iceland, Luxemburg, Portugal, Finland, Greece, Denmark, Austria and Belgium. Due to rapid growth, the combined size of China and India in 2003 was relatively larger, and comparable with combined economy of the aforesaid countries as well as Sweden, Netherlands and Spain. In fact, the size of the two economies in 2003 was larger than any single economy in the world other than the US. By comparison with larger EU economies, the combined size of China and India economy was larger than Spain but smaller than that of Italy in 1990 (Figure 1). By 2003, it had surpassed the sizes of all large economies of the EU such as Italy, France, the UK, and Germany.

**Figure 1: China, India and the larger EU economies**



The Chinese economy is two and half times larger than that of India and is growing more rapidly. During the period 2001-03, Chinese economy rose at the rate of 8.4 per cent per annum whereas India expanded at the rate of 6 per cent. In both cases, rapid growth has been sustained for a number of years and has occurred in a stable environment, with low rates of inflation. Relatively speaking the Chinese economy is much more integrated with the global economy than India. During the period 2001-03, the proportion of the traded sector in GDP was 56.5 per cent for China and 29.6 per cent for India.

Savings and investment ratios in China have shown a much more impressive increase than in India – almost double during the same period. However, the efficiency with which these savings have been utilized has been far higher in India, and much investment appears to have been wasted in China. During the period 2001-03, the average total savings ratio of China (including FDI) was 53 per cent of GDP and the economy grew at an average rate of 8.4 per cent per annum. By contrast, India grew at a rate of 6.0 per cent during the same period with the corresponding savings rate (including FDI) of just 22.4 per cent.

With sustained economic reforms, the credibility of the economies has improved, resulting in significant inflows of FDI, which has contributed further to savings ratios of both the countries.

### III. Trade Complementarities with Developing Countries and LDCs

#### Trade aggregates

During the last two decades, industrialisation in China and India was mostly spurred by the external sector. With deeper levels of economic liberalisation, industrial sectors are thrown open to competition with domestic as well as foreign firms. The export of mass-produced manufactures has led to the efficiency-enhancing restructuring of industries in both economies. With the surge in the demand in both export and domestic markets, industries at home have gradually streamlined their import requirements. As a result, China and India have restructured their sources of imports and exports over a period of time. In general, they have used developed countries' market for their export destination whereas their dependence has gone up for imports from other developing countries (see below).

However, there have been differences between China and India. Between 1985-94 and 1995-2004, the share of Chinese exports going to developed economies has risen from 40 per cent to 54.7 per cent, whereas that of India has declined from 59.5 per cent to 52.4 per cent (Table 1). It is important to note that average decadal growth rates of Indian exports to developing countries have increased from 12.2 per cent during 1985-94 to 16.5 per cent during 1995-2004, whereas similar rates for developed countries have declined from 13.6 per cent to 8.9 per cent during the corresponding periods. Though China has maintained a higher export rate with developed countries as compared to developing countries during both the decades, the broad trends in export growth rates have been similar to that of India.

Both China and India have shown their increased import dependence on developing countries by switching their sources of imports from developed to developing countries (Table 1). Between the periods 1985-94 and 1995-2004, the share of India's imports from developed countries declined from 56.4 per cent to 43.1 per cent, whereas it increased from 42.1 per cent to

**Table 1: Trends in Sino-India's Trade with Major Trade Destinations**

Destination	India						China					
	Share		Growth		Share		Growth		Share		Growth	
	1985-94	1995-04	1985-94	1995-04	1985-94	1995-04	1985-94	1995-04	1985-94	1995-04	1985-94	1995-04
Exports	100.0	100.0	11.6	12.4	100.0	100.0	100.0	100.0	100.0	100.0	17.4	18.6
World	59.5	52.4	13.6	8.9	40.0	54.7	20.2	19.6	17.6	17.6	20.2	19.6
Industrialised Countries	38.6	45.8	12.2	16.5	58.4	45.0	16.4	17.6	17.6	16.4	16.4	17.6
Developing Countries	2.2	4.8	29.5	20.9	1.8	1.7	22.1	25.2	25.2	1.7	22.1	25.2
Africa	14.5	23.1	21.0	16.6	46.3	34.9	19.7	16.1	16.1	34.9	19.7	16.1
Asia	12.5	3.9	61.9	9.5	5.3	3.1	13.1	25.7	25.7	3.1	13.1	25.7
Europe	8.8	12.0	12.4	18.4	3.9	2.8	4.5	21.0	21.0	2.8	4.5	21.0
Middle East	0.6	2.0	40.3	21.7	1.2	2.6	25.7	23.1	23.1	2.6	25.7	23.1
Western Hemisphere	100.0	100.0	6.3	15.3	100.0	100.0	17.6	18.4	18.4	100.0	17.6	18.4
Imports	56.4	43.1	6.6	11.3	56.2	48.3	15.8	14.0	14.0	56.2	15.8	14.0
World	42.1	43.3	8.0	14.1	41.4	48.1	22.4	21.9	21.9	41.4	22.4	21.9
Industrialized Countries	3.7	6.3	16.6	15.3	0.6	1.6	15.1	39.7	39.7	0.6	15.1	39.7
Developing Countries	10.7	18.3	12.6	21.0	30.8	37.2	26.4	21.4	21.4	30.8	26.4	21.4
Africa	6.7	2.7	9.7	15.9	6.3	3.8	18.4	15.0	15.0	6.3	18.4	15.0
Asia	18.8	14.5	10.0	10.1	1.0	2.9	26.3	37.8	37.8	1.0	26.3	37.8
Europe	2.1	1.6	11.6	12.1	2.8	2.6	15.8	28.4	28.4	2.8	15.8	28.4
Middle East												
Western Hemisphere												

Source: Direction of Trade, IMF, 2005, CD-ROM.

Note: developing countries columns do not add up to 100 since transitional economies are excluded.

43.3 per cent with developing countries during the same periods. The situation is clearer in the case of China than India.

The trade of both China and India is heavily concentrated in the Asian region. Almost half of China's exports were destined to developing Asia during the period 1985-94, and the dominance of developing Asia continued during 1995-2004. India's export performance is similar to that of China, and India's export share with the region increased by one and half times between the two periods. Both countries have shown similar kind of responses in regard to imports. Developing Asia continued to be the most attractive source for China's imports, increasing from 30 per cent during 1985-94 to 37 per cent during the period 1995-2004. Similarly India's import from developing Asia saw a near a two-fold increase between the periods 1985-94 and 1995-2004. The share of China's and India's imports have also increased for other developing regions such as Africa and the Middle East.

Surge in trade of these two countries in Asia is partly because of their presence in the continent and also because of trade liberalization under multilateral and regional agreements, particularly the latter.<sup>4</sup> A number of new regional trading arrangements have been established, including regional and bilateral trading arrangements (for example, BIMSTEC, India-Singapore Comprehensive Economic Cooperation (CEC), India-Thailand CEC, India-Sri Lanka CEC, India-ASEAN FTA, China-ASEAN FTA, China-Japan FTA, China-Singapore FTA) to complement pre-existing agreements (for example., ASEAN, SAARC and the Bangkok Agreement. These developments have contributed to increased trade with other regional economies.<sup>5</sup> There are strong initiatives to form Asian Economic Community, which would further consolidate the economic strength of both the countries.<sup>6</sup>

### Disaggregating trade flows

The rapid growth and large size of China and India, allied to growing trade liberalisation, has provided a substantial market for other developing economies. Considered by product-classification and the type of exporting economy, the imports of China and India are

**Table 2: Market Access in India and China in 2002**

Section	Description	Import of China			Import of India				
		D/ed	D/ing	LDCs	Trans	D/ed	D/ing	LDCs	Trans
I	Live Animals and Animal Products	0.76	0.78	0.54	5.38	0.08	0.08	0.46	0.04
II	Vegetable Products	0.68	2.07	0.52	0.26	1.33	2.14	35.25	2.32
III	Animal or Vegetable Fats & Oils	0.15	0.89	0.09	0.00	0.03	8.39	3.44	0.06
IV	Prepared Foodstuff, Beverages, etc.	0.48	0.89	0.13	0.33	0.21	0.57	1.63	0.05
V	Mineral Products	3.17	10.28	86.58	14.87	4.92	8.41	6.21	5.07
VI	Products of Chemicals	9.16	8.15	0.41	12.42	9.12	13.47	19.90	19.03
VII	Plastics & Articles thereof	4.89	8.73	0.33	3.15	2.65	2.98	1.59	4.69
VIII	Raw Hides & Skins, Leather, etc.	0.95	1.46	0.55	0.36	0.46	0.43	1.56	0.41
IX	Wood & Articles of Wood	0.64	1.32	8.04	9.31	0.14	1.22	8.51	0.09
X	Pulp of wood or of other Fibres	2.27	2.69	0.00	4.39	2.22	1.96	2.17	8.53
XI	Textile & Textile Articles	4.66	6.36	1.26	0.50	2.09	4.83	10.30	1.52
XII	Footwear, Headgear and Umbrella	0.06	0.19	0.01	0.01	0.06	0.08	0.10	0.02
XIII	Articles of Stone, Plaster, Cement	0.93	0.61	0.01	0.06	0.58	0.53	0.01	0.56
XIV	Natural or cultured pearls, Jewellery	0.66	0.38	0.09	0.19	36.38	15.59	2.21	3.15
XV	Base Metals & Articles of Base Metal	9.04	7.94	1.39	26.94	6.01	4.79	5.59	31.05
XVI	Machinery & Mechanical Appliances	47.53	39.90	0.03	10.32	23.03	25.59	0.36	11.90
XVII	Vehicles, Aircraft and Vessels	6.61	2.11	0.00	9.61	4.16	4.68	0.36	6.34
XVIII	Optical, Photograph & Cinematography	6.17	4.54	0.02	0.30	3.99	2.70	0.01	1.37
XIX	Arms and Ammunition	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.08
XX	Miscellaneous Manufactured Articles	0.44	0.33	0.02	0.07	0.30	0.54	0.20	0.06
XXI	Works of Art Collectors' Pieces	0.74	0.38	0.00	1.52	2.25	1.03	0.11	3.65
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Source:** PCTAS-1998/02, UNCTAD, ITC, World Bank And WTO, Geneva. Note: D/ed - Developed Countries, D/ing - Developing Countries, LDCs - Least Developed Countries, and Trans - Transitional Countries. The country grouping is formed on the basis of UN Statistical division.

diversified (Table 2). The share of imports sourced from LDCs by these two countries is much lower than other three broad country-groups (developed, developing and transitional economies), and is sectorally concentrated. In contrast, developing countries and transitional countries have strong presence in several sectors, and in some sectors (particularly primary products), both China and India are heavily dependent on imports from LDCs. Minerals imports constituted 87 per cent of the total in 2002. India also imported substantial amount of vegetable products from LDCs in the same year. Wood products, textiles, natural gems, base metals, and some machinery items, and although this data is not sufficiently disaggregated, it is evident that China imports significant quantities of semi-manufactured intermediate products from its east Asian neighbours (see below and Lall and Abaladejo, 2003). If both countries continue to deepen trade liberalization, a large market can be opened up in diversified sectors. It is important to note that the sectors important to developing countries are not the same for LDCs, and therefore, developing countries are not competing with LDCs in same sectors for gaining market access in Chinese and Indian markets.

According to the OECD forecast, global share of Chinese exports is likely to increase from the current level of 6 per cent in 2005 to 10 per cent in 2015.<sup>7</sup> India's exports has reached US\$ 80 billion in 2004-05 and expected to reach US\$ 150 billion or more by 2009-10.<sup>8</sup> Many of these exports are dependent on imports. In assessing this we have used PCTAS<sup>9</sup> bilateral data at the 6-digit HS level, and concorded them with 5-digit end-use product classification.

The structure of imports differs significantly across country groupings as shown in Table 4. So far as LDCs are concerned, both the countries have provided a market for industrial supplies and materials, and consumer goods. India has substantial imports of agricultural raw materials from LDCs. However, the bulk of imports of from LDCs have been of industrial intermediates, often subsequently processed for export to third country markets; this is especially the case for China's exports of manufactures (Lall and Albaladejo, 2003).. India's import is concentrated in agro-raw materials for textiles and chemicals, unfinished metals associated with durable

**Table 3: Market Access in India and China for the End-use Products: 1998-2002**

End Use Code	Description	India						China							
		Growth (%)			Share <sup>1</sup> (%)			Growth (%)			Share <sup>1</sup> (%)				
		D/ing	Tran	D/ing	LDCs	Tran	D/ing	LDCs	Tran	D/ing	LDCs	Tran	D/ing	LDCs	Tran
0	Foods, feeds, and beverages	0.27	13.24	-7.92	10.88	38.42	2.15	14.37	35.34	24.65	4.37	0.97	5.97		
00	Agricultural	0.10	14.82	-8.16	10.71	38.08	2.12	11.43	16.69	7.44	3.64	0.49	0.24		
01	Non-agricultural products	19.03	-18.11	0.00	0.17	0.33	0.03	41.25	86.91	25.78	0.73	0.48	5.73		
1	Industrial supplies and materials	-8.19	15.31	3.63	46.58	52.25	71.02	18.20	69.41	44.35	46.12	98.78	72.78		
10	Fuels and lubricants	-21.8	256.77	15.05	4.31	1.61	2.35	36.55	80.77	195.35	8.68	85.86	12.81		
11	Paper and paper base stocks	-0.05	8.15	3.49	2.15	5.88	6.90	8.70	80.24	36.92	2.74	4.86	4.79		
12	Agri. product, textile sup. & chem.	2.88	17.54	-3.90	20.52	30.97	21.16	12.94	14.89	18.75	21.90	2.69	15.30		
13	Selected build materials, excl. metal	13.31	8.32	148.04	0.77	4.49	0.14	10.16	13.11	234.81	1.36	3.17	8.79		
14	Unfinished metal products associated with durable gds	6.96	19.94	7.67	15.23	5.15	31.21	32.56	34.50	29.23	7.43	1.13	27.58		
15	Finished metal products associated with durable gds	2.66	21.34	-5.78	1.05	1.02	2.27	11.89	304.30	195.22	1.74	0.82	2.34		
16	Nonmetallic products associated with durable goods	7.15	2.54	43.33	2.56	3.13	6.98	17.75	-8.82	79.55	2.26	0.27	1.16		
2	Capital goods, except automotive	25.81	288.25	20.84	28.32	1.42	15.63	48.68	11.29	16.45	42.94	0.03	13.62		
20	Electric generating, & electric equip.	20.90	149.24	30.37	2.77	0.21	2.06	30.90	0.00	98.75	5.61	0.00	2.98		
21	Non-elect. machinery.	21.91	236.34	36.89	20.18	0.87	12.89	53.17	9.49	10.13	34.44	0.03	6.00		

(in per cent)

End Use Code	Description	India						China					
		Growth (%)			Share <sup>1</sup> (%)			Growth (%)			Share <sup>1</sup> (%)		
		D/ing	Tran	LDCs	D/ing	Tran	LDCs	D/ing	Tran	LDCs	D/ing	Tran	LDCs
22	Transport. equipment. & spacecraft, excl. auto	55.20	0.00	-17.81	5.38	0.34	0.69	44.02	0.00	9.73	2.89	0.00	4.64
3	Capital gds, excl. non-automotive	21.01	95.18	395.40	0.76	0.04	4.05	52.13	0.00	62.04	0.95	0.00	0.89
30	Automotive vehicles, parts & engines	21.01	95.18	395.40	0.76	0.04	4.05	52.13	0.00	62.04	0.95	0.00	0.89
4	Consumer goods	36.74	26.24	50.95	12.61	7.86	6.35	14.88	-10.44	-3.15	5.35	0.22	1.08
40	Non-durables, manufactures-excl. rugs	16.69	27.12	33.34	2.40	5.50	3.30	9.48	-15.73	-10.52	1.62	0.05	0.59
41	Durables, manufactures, excl. automotive	29.58	247.86	89.40	4.84	0.35	2.64	16.30	61.80	24.14	3.41	0.08	0.42
42	Cons. durable & non-durable-manufactures	67.58	18.08	77.89	5.37	2.00	0.42	45.01	-14.97	302.32	0.32	0.09	0.07
5	Other Goods	67.97	52.16	70.90	0.85	0.02	0.79	1.15	0.00	184.93	0.27	0.00	5.66
50	Imports, N.E.S.	67.97	52.16	70.90	0.85	0.02	0.79	1.15	0.00	184.93	0.27	0.00	5.66
	Total	0.07	15.67	7.80	100.00	100.00	100.00	27.13	67.74	38.09	100.00	100.00	100.00

Data Source: PCTAS-1998/02, UNCTAD, ITC, World Bank And WTO, Geneva.Note: Ding - Developing Countries, LDCs - Least Developed Countries, and Trans - Transitional Countries. The country grouping is formed on the basis of UN Statistical division.<sup>1</sup> Share figures for 2002.

**Table 4: R&D spending in major Economies as % of GDP**

	1998	2003
Sweden	3.62*	4.27**
Finland	2.88	3.51
Germany	2.31	2.50*
France	2.17	2.19
Austria	1.78	2.19
EU	1.82	1.93
UK	1.81	1.87***
Italy	1.07	1.16***
US		2.76
Japan		3.12
China		1.93+
India		1.56++

Note \*Estimate; \*\*2001 figure; \*\*\*2002 figure; + Estimate for 2010; ++ Estimate for 2007.

Source: *Financial Times*, July 19, 2005. Planning Commission (2004).

goods and non-metal associated with durable goods. The share of LDCs' exports of consumer goods to India is larger than that of China. In most of these segments, the growth rates of imports from LDCs was very rapid between 1998 and 2002. Imports from developing countries have been more diversified than the LDCs. Between 88-95 per cent is concentrated in three broad end-use sectors - industrial supplies and materials, capital goods (except automotive) and consumer goods. As noted earlier, industrial intermediate constitutes the maximum share in the total imports of both the countries. Unlike the case of trade with LDCs, there could be some possibility of clash of interests between developing countries and LDCs to gain market access in industrial supplies and materials.

#### IV. Innovation and Transfer of Technology

The discussion in the previous section throws light on the potential impact of China and India on developing countries and LDCs through the trade conduit. But with a focus on the future it is also likely that the rise of innovative capabilities in China and India will be of growing importance. This is especially likely to be relevant to poverty-related concerns in the



case of innovation in the agricultural sector where biotechnology and other knowledge intensive technological advances are being made, and in pharmaceuticals. In both China and India in previous generations the state has played a major role in the generation of knowledge-intensive innovation; in the current period, the private sector has grown in importance.

In India, there are more than 150 international companies undertaking R&D. In 2005 the revenues from product development and R&D services stood at US \$3 billion (US \$2.3 billion in 2004).<sup>10</sup> This rise in R&D contrasts with the dynamic in many developed economies (such as the EU<sup>11</sup>, where there are concerns about declining R&D expenditure in general and the private sector in particular. R&D investment across the EU on an average is 2.2 per cent of GDP (Table 2). The corresponding figures for the US and Japan are 2.76 and 3.12 per cent respectively. In the case of China, the R&D ratio is likely to be 1.93 per cent by 2010 and for India 1.56 per cent by 2007. An EU Report expresses concern about India and China - "China is within five years likely to devote at least the same share of its wealth to research as the EU" (*Financial Times*, July 19, 2005)

In the case of China, a detailed roadmap for a pre-eminent position in world knowledge economy was drawn by the Chinese Academy of Sciences in 1998.<sup>12</sup> According to this, China would strive to become one of the ten major economies in terms of knowledge innovation, patent competitiveness, and science and technology. This objective is being pursued in three phases. In the starting phase (1998-2001), eight knowledge innovation bases were established. In the second period (2001-05) a full fledged implementation will be staged in some 80 institutes, forming an innovative national research innovation system. The period last period between 2006 to 2010 is envisaged as an enhancement phase, seeing the materialisation of the projects general goals, and greatly enhanced innovation capability. The new International Science and Technology Cooperation (ISTC) approach that emphasizes shifting from passive to active stance and initiating cooperation projects also suggests closely linking up with other developing countries. During the period 1991 -2004, China signed 48 MoUs with various countries on science and technology.<sup>13</sup>

India has also enhanced the focus on new technology and their possible convergences, for instance, promoting bioinformatics in a major way basing on the ICT success. This may give a major boost to the manufacturing and service sectors. India and China are encouraging FDI for advance areas in the frontier technologies such as biomedical sector, where there is a need for a combination of manufacturing and service providing abilities. Eli Lilly & Company, the \$11 billion US pharmacy TNC, is planning to appoint an Asia-specific global team to look at research and development opportunities in China and India. The company, which has put India on its global R&D map as a very important location for its global strategies, has plans to license potential research products in biopharmaceuticals and vaccines, in addition to conducting clinical research in India for new products and sourcing bulk drugs from the country.<sup>14</sup> Similarly, Mirco Labs of Bangalore (India) has entered into a marketing and production alliance with LG Life Sciences of Korea of a drug for ophthalmologic surgeries which is produced with the help of recombinant technology.<sup>15</sup>

India and China, it seems, have great faith in the Chinese proverb, "if you want one year of prosperity, grow grain. If you want prosperity for ten years grow trees and if you want prosperity of 100 years grow manpower",<sup>16</sup> and this has been reflected in their links with each other and with other developing economies. There are several joint ventures coming up between Indian computer institutes and Chinese universities for training students in English language and computer science. For instance Central South Forestry University in Hunnan Province and a Bangalore based institute DSI Computer Centre have signed an MoU to this effect. DSI has also signed a similar agreement with Wuhan University located in Hubei Province.<sup>17</sup> China has taken specific initiatives to establish ties with other countries to strengthen the science and technology linkages. So far, educational agreements have been signed between China and more than 40 Asian and African countries, including Japan, North Korea, South Korea, Mongolia, Vietnam, Singapore, Malaysia, Thailand, India, Pakistan, Iran, Israel, Saudi Arabia, Yemen, Egypt, South Africa, and Kenya. They are undertaking mutual visits of delegations; exchanges of students and scholars, inter-institutional collaborations, exchange of teaching materials and cooperation in language teaching.

India is beginning to provide assistance to other developing countries in addressing their agriculture related problems. Vietnam, the global leader in the production and export of pepper, has sought India's assistance for combating diseases that have begun to attack pepper vines. Being a late entrant in pepper production, Vietnam lacks expertise and knowledge in combating diseases and needs to be equipped with scientific farming methods.<sup>18</sup> India also helped in establishing one of the leading rice research institutes in Vietnam, a tea research institute in Colombo, biotechnology research institute in Indonesia and a tropical plant disease institute in Zimbabwe.

## V. Conclusion

The combined size of the Sino-Indian economy is large and expanding. There is considerable scope for growing economies in the developing world and LDCs to benefit from the continued process of trade expansion in these two countries. Given the risk of a slowdown in the global economy, China and India have an interest in sustained growth in the developing world in general, and in Asia in particular. There are particular opportunities with regard to the least developed economies. The LDCs are producers of a few industrial intermediate inputs, which are commonly used by these two countries. Very often supply barrier and lack of quality in exportable items have constrained the export prospects in various potential markets. If these issues are addressed, there is scope for significant exports to both China and India. Second, most of these countries do not compete directly with China and India in global markets, and thus there is scope for close cooperation in multilateral negotiations. Third, China and India may be useful in improving the structural impediments being faced by the LDCs in various areas related to agricultural and industrial production. This may be achieved by access to technology, foreign direct investment, and technical assistance.

## Endnotes

- <sup>1</sup> Palley, 2004.
- <sup>2</sup> Kumar, Nagesh, 2004.
- <sup>3</sup> World Bank, 2005.
- <sup>4</sup> For details about Indian gains from South Asia, see Mohanty (2003, 2005a) and for recent developments in the RTA, see RIS (2004).
- <sup>5</sup> Mohanty (2005b).

- <sup>6</sup> Kumar, 2004.
- <sup>7</sup> OECD, 2005.
- <sup>8</sup> RIS, 2005.
- <sup>9</sup> UNCTAD et al, 2005
- <sup>10</sup> knowledge@wharton.upenn.edu
- <sup>11</sup> *Financial Times*, July 19, 2005.
- <sup>12</sup> *China Science and Technology Newsletter*, No. 384, November 10, 2004
- <sup>13</sup> *China Science and Technology Newsletter*, May 2004.
- <sup>14</sup> *Business Standard*, August 22, 2005.
- <sup>15</sup> *Business Standard*, August 24, 2005.
- <sup>16</sup> Quoted in the *Economist* July 30th 2005.
- <sup>17</sup> *Economic Times*, August 8, 2005
- <sup>18</sup> *The Financial Express*, August 29, 2005.

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