

## INDIA AND CHINA – A GLIMPSE FROM THEIR DOORSTEPS

Nowadays much literature is flowing around giving a wake-up call to our nation's policy makers. If a normalized comparison is drawn between India and China many facts, some of them quite alarming, appear, which have to be taken up seriously. The authors have succinctly grouped them under homogenous heads and tried to present a picture which will help as a finger post for further policy decisions. Most of the data is taken from the comparative table which appears at the end of this article. This table has been adapted from "A Statistical Outline of India 2009-10". The relevant points of the comparative table have been stated in the footnote.

**Quality and Quantity of Manpower** – It is a significant resource for every nation. Indians have made their mark in software services, whereas China in manufacturing. But comparative data for 2010-11 gives us a worrying figure. Labour force as a percentage of population is 39.46 for India and 58.58 for China<sup>1</sup>. This edge on the amount of labour force has led to an economy of scale in labour cost in manufacturing. Annual Labour cost in manufacturing for China is \$ 883 when it is \$ 1192 for India<sup>2</sup>. The talk about India's birth rate being higher and that it will overtake China has to be taken with a pinch of salt as infant mortality rate for India is 52/1000 compared to 18/1000 for China<sup>3</sup>. Number of Researchers in R&D is also too less for India i.e 137 per million compared to 1071 per million for China<sup>4</sup>. 37.2 % of the Indian population is below poverty line when it is only 2.8 % in China<sup>5</sup>. On the Human Development Index<sup>6</sup> front too India has slipped down from a percentile rank of 71.3 in 1970 to 74.44 in 2007, whereas China has moved up from a percentile rank of 55.65 to 51.11 during the same period<sup>7</sup>. In 2010, on labour market efficiency count China is ranked 38<sup>th</sup> among 139 countries when India occupies the 98<sup>th</sup> position<sup>8</sup>. The Gini co-efficient, which measures the inequality of income between the top 20% income earners and the least 20% income earners, is better for India than China, depicting lesser income inequality among the Indian population<sup>9</sup>.

**Agriculture, Industry and Services** – In any economy, domestically speaking, a prospering **agricultural sector** has the largest rippling effect in transferring prosperity to the entire population. Although it takes some time before the effects are manifest. In the last two five year plans the Government of India has rightly identified agriculture as the thrust sector. Compared to China the following picture emerges. Agricultural land as percentage of total is slightly more for India (61%) than China (60%)<sup>10</sup>. Irrigated land

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<sup>1</sup> Point number 7 - Comparative Table (CT).

<sup>2</sup> Point number 70 - CT

<sup>3</sup> 5 - CT

<sup>4</sup> 46 - CT

<sup>5</sup> 83 - CT

<sup>6</sup> Human Development Index is a composite index prepared by the United Nations Development Programme on a scale of 0-1, measured by three components longevity, knowledge and income, each measured by several parameters. Rankings are in descending order for 179 countries in 2007 and 114 countries in 1970.

<sup>7</sup> 109 – CT. Percentile calculation has been done by the researchers.

<sup>8</sup> 111 - CT

<sup>9</sup> 86 - CT

<sup>10</sup> 28 - CT

as a percentage of crop land is little less for India (32.9%) than China (35.6%)<sup>11</sup>. In spite of this, value added per agricultural worker for India (392 \$) is positively comparable to that of China (407 \$)<sup>12</sup> when viewed against the large fertilizer consumption per hectare in China (328 kgs) vis-a-vis India (121.3 kgs)<sup>13</sup>. Index of agriculture production per capita (base 1999 = 100) has touched 105 for India against 126 for China depicting an efficient agricultural sector for the latter<sup>14</sup>.

**Industrial productivity** is dependent on savings being channelized to manufacturing sector in an effective and efficient manner resulting in adequate capital formation. At the very outset gross domestic savings as a percentage of GDP for India is 38% compared to 54% for China<sup>15</sup>. Out of this modest savings a major amount is blocked in speculative activities on the stock market resulting in limited value addition. Industry value added for India is 29% of GDP against 49% of GDP for China portraying an efficient manufacturing sector in China<sup>16</sup>. But, surprisingly, capital formation as percentage of GDP for India at 40%, is again a close competitor to China's 44%<sup>17</sup>. Moreover, all industrial activity comes at a cost to environment. India's withdrawal of fresh water has been 645 billion cubic meters against China's 630<sup>18</sup> which can be taken either way. On the one hand, It means India is consuming more natural resources. On the other hand it also points to less polluting processes in Indian factories. Emission of organic water pollutants in thousand kgs per day for India is only 1519.8 as compared to China's 6088 thousand kgs / day<sup>19</sup>. Lastly, carbon dioxide emissions per capita had been 1.3 metric tonnes for India compared to 4.3 in China<sup>20</sup>.

In the **services sector** India has an edge over China In terms of share of services in GDP and balance of trade . India's share of trade in GDP is 53% and China's is 40%. Balance of Trade in services is +19 billion \$ for India and – 11.6 billion \$ for China.

**Infrastructure and Growth** - India's energy costs are higher than China as denoted by PPP cost in \$/kg which is 4.7 for India and 3.2 for China. Normally figures for electricity consumption per capita is cited as an indicator for development. True, but if consumption is further bifurcated into consumption for personal use and consumption for industrial production a clear picture emerges. Electricity consumption for Industrial production is desirable and excess consumption for personal use leads to an attitude of luxury and apathy. Energy consumption for India is 542 kwh / capita and China is 2332 kwh / capita. Out of the total energy consumption in India household consumption accounts for fifty percent whereas in China it is forty percent<sup>21</sup>. It implies that a greater portion of Electricity consumption is utilized for

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<sup>11</sup> 29 - CT

<sup>12</sup> 30 - CT

<sup>13</sup> 25 - CT

<sup>14</sup> 19 - CT

<sup>15</sup> 13 - CT

<sup>16</sup> 15 - CT

<sup>17</sup> 14 - CT

<sup>18</sup> 33 - CT

<sup>19</sup> 34 - CT

<sup>20</sup> 35 - CT

<sup>21</sup> "Discussion Paper of the United Nations Department of Economic and Social Affairs" by Oleg Dzioubinski and Ralph Chipman, April 1999.

industrial purpose in China. Rail route in kms is 63,327 for India and 60,809 for China<sup>22</sup>. Given the bigger geographical land area which is nearly 96 lakhs sq. kms compared to India's which is around 33 lakhs, The railway network for India is more far reaching than China's. It also implies better use of electricity as rail transport is more energy efficient than road transport.

**Growth story** - China's socialist market economy started in 1978 and it clogged a double digit growth rate in the very next decade (decadal growth rate for 1980-90 for China is 10.2%), whereas India's market liberalization of 1991 still hasn't seen the face of double digit growth rate<sup>23</sup>. Moreover, economic growth has been a costly story for India. Money for Indian corporates has been at a higher cost than China. Lending rates by commercial banks for India are hovering around 13.3 % when they are averaged around 5.3% for China<sup>24</sup>. Interest rate spread for Chinese lenders is only 3.1 % when it is 4.6 % for India<sup>25</sup>. Domestic credit by Banking sector is higher in China as revealed in percentage of domestic credit by banking sector to GDP which is 126% in China and 71.6 % in India<sup>26</sup>. As Indian financial markets become more competitive and wide spread the interest rate spread will close down to the Chinese spread. But still India will have to tackle its inflation more actively which in consumer services was at an average of 4.8% for India and 2.2 % for China in 2008<sup>27</sup>.

**Capital markets** - in India are more active than China. Of the vast economy of China only 1700 companies are listed when in India whose economy is comparatively lower has 4946 companies<sup>28</sup>. The coefficient of standard deviation which compares volatility in stock indices for stock exchanges in the two countries is 40.87 for Hong Kong's stock exchange and 60.06 for SENSEX<sup>29</sup>. This implies more volatility on the Indian bourses. Between 1991 and 2010 sensex has risen 13.6% and Hangsen (Hong Kong stock exchange) has risen 9.2%<sup>30</sup>. This, when viewed with GDP growth which is more robust for China (10.3% , India 6.95%)<sup>31</sup>, implies more speculation on the Indian bourses.

**External debt** - as a percentage of GDP is high for India at 19% compared to 8.74% for China<sup>32</sup>. As a consequence debt-service ratio for India is 8.7% and for China it is only 2.0%<sup>33</sup>. Between 1990 and 2007 debt burden for India has risen @ 10.27 % over a larger base figure of 1990 when China has risen 9.8% over a lower base figure for 1990<sup>34</sup>. Again when viewed in the context of GDP growth, Indian economy has grown slowly that too debt ridden when China has grown at a faster rate with lower debts. Comparing yuan and rupee the former has remained steady and gained value in the international

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<sup>22</sup> 38 - CT

<sup>23</sup> 87-91 - CT

<sup>24</sup> 55 - CT

<sup>25</sup> 54 - CT

<sup>26</sup> 53 - CT

<sup>27</sup> 52 - CT

<sup>28</sup> 59 - CT

<sup>29</sup> 125 - CT

<sup>30</sup> Table 314, page 282, Statistical outline of India, 2009-10, Tata Services Ltd.

<sup>31</sup> 90&91 - CT

<sup>32</sup> 8 divided by 64 - CT

<sup>33</sup> 65 - CT

<sup>34</sup> 66 - CT

markets over the past twenty years and the latter has been very volatile and lost its value drastically over the same period<sup>35</sup>.

India's spending on education as percentage of GDP is more than China's which has given positive results in a more educated manpower for the country. Globally speaking a clear picture that is emerging is that these two countries are poised to regaining their past glory and taking their rightful place on the world stage. It is equally clear that China is ahead of us in this pursuit. 2000 years ago these great civilizations together commanded almost 52% of the world economy. India 29% and China 23%.<sup>36</sup>

The group of seven (G7) – the US, Japan, Germany, Britain, France, Canada and Italy is effectively the world's economy steering committee. Since 2001, it's membership has become badly skewed, with proposals from many quarters for including the BRIC countries in this grouping.<sup>37</sup>

Experts predict that if conventionally measured GDP figures are to be believed, China will quickly overtake France and Britain, followed by Germany before 2010, Japan in about 2016, US around 2041. In this race India is trailing China closely.<sup>38</sup>

Although there is much circularity in the growth story of both these developing economies, that much of foreign capital is stimulating production in the factories of these countries which in turn cater to those very markets from where the capital has originated. China is using this principle in Africa. Some 700 Chinese companies already operate across the African continent. Angola which exports 25% of its oil output to China has benefitted from \$2 billion loans from Beijing, which is being used to fund Chinese built railways, roads, schools, hospitals and lay a fibre-optic network.<sup>39</sup>

Instead of involving oneself in empty rhetoric of political and economic philosophies of democratic socialism versus socialistic capitalism, it is important to study the deep characteristics of universal human nature which steers economies from one successful milestone to the next. Both India and China gradually replaced their bloated, bankrupt and inefficient public sector with vibrant and accountable form of enterprises (public or semi public) and reaped the benefits. Wherever there is Indolence, apathy, sloth and tardiness be it the public or the private sector it will be driven out by healthy competition of the market economy.

On the other hand, greed, avarice, selfishness of cowboy capitalism will also start casting its shadow very soon in today's networked economy.

The above figures have been adapted from the exhaustive table appearing below.

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<sup>35</sup> 50 - CT

<sup>36</sup> David Smith, *The Dragon and the Elephant, China India and the new world order*, Profile Books London, South East Asia Edition 2007. Pg 13-14.

<sup>37</sup> Ibid, pg 98.

<sup>38</sup> Dominic Wilson and Roopa Purushothaman, *A study by Goldman Sachs "Dreaming with BRIC's; The Path to 2050"*

<sup>39</sup> David Smith, Op. cit. p 126.

## COMPARATIVE TABLE FOR 2009-10<sup>40</sup>

		Unit	India	China	Remarks
<b>A</b>	<b>Demography</b>				
1	Population	(Mn)	1140	1326	
2	Urban Population	% to total	30	43	
3	Birth rate	Per 1000	23	12	India's higher birth rate forecasts it will overtake China in popn
4	Death rate	Per 1000	7	7	
5	Infant mortality rate	Per 1000 live births	52	18	High infant mortality will retard popn growth
6	Life expectancy	years	64	73	
7	Labour force	Mn.	449.9	776.9	
<b>B</b>	<b>National Income</b>				
8	GDP	\$-Bn	1217.5	4326.2	
9	Share in GDP	%			
9.1	Agriculture	%	18.0	11.0	
9.2	Industry	%	29.0	49.0	
9.3	Mining	%	16.0	34.0	
9.4	Services	%	53.0	40.0	
10	GNI	\$-Bn	1215.5	3899.3	
11	Per capita GNI	\$	1017.0	2940.0	
12	Per capita PPP	\$	2960.0	6020.0	
13	Gr. Domestic Savings	% to GDP	38.0	54.0	
14	Gr. Domestic Capital Formation	% to GDP	40.0	44.0	
<b>C</b>	<b>Industry</b>				
15	Industry value added	% of GDP	29.0	49.0	
16	Value added in Mfg.	\$-Bn	170.0	1488.0	
17	Textiles and clothing	% of mfg.	9.0	2.0	Our treaty with Bangladesh will hamper the textile industry
18	Chemicals	% of mfg.	16.0	12.0	
<b>D</b>	<b>Agriculture</b>				
19	Per capita index of agriculture production (1999=100)		105.0	126.0	
20	Production - Rice	Mn-tonnes(Share)	148.3(23.8)	193.4(31.1)	
21	Wheat	Mn-tonnes	78.6	112.5	

<sup>40</sup> Table no. 294, Page no. 260, "Statistical Outline of India, 2009-10, Tata Services Ltd.".

22	Sugar Cane	Mn-tonnes	348.2	124.9	
23	Tea	Mn-tonnes	0.81	1.3	
24	Fruits	Mn-tonnes	7.3	2.1	
25	Fertiliser consumption per hectare of arable land	kgs	121.3	327.9	Less fertilizer consumption implies more organic farming
26	Cultivated land (Arable & permanent crops)	% Of total land	51.63	16.13	India is a predominantly agri based country compared to China
27	Non cultivated land – other land	% of total land	48.37	83.87	
28	Agricultural land as % of total		61	60	
29	Irrigated land as % of cropland		32.9	35.6	
30	Value added per agricultural worker	2003-05 in constant 2000 \$	392	407	In spite of less fertilizer usage value added per worker is comparable denoting better value for output.
31	Forest area as % of total land area		20.6	21.6	
32	Annual deforestation	2000-05 % change	nil	-2.2	
33	Annual per capita withdrawal of fresh water 2007	Bn cubic meters	645.8	630.3	
34	Emission of organic water pollutants 2005	000 kgs/day	1519.8	6088.7	
35	Carbon dioxide emissions per capita 2005	Metric tonnes	1.3	4.3	
<b>E</b>	<b>Infrastructure and communications</b>				
36	Electricity production	Bn-Kwh	803.4	3279.2	
37	Electricity consumption per capita	Kwh	542.0	2332.0	
38	Rail route	kms	63,327.0	60,809.0	Rail network is far better in india
39	Air passengers carried	'ooo	49,878.0	191,001.0	
40	Motor vehicles	Per 1000	12.0	32.0	
41	TV sets	% of household	46.0	89.0	

42	Telephone main lines	Per 1000	30.0	260.0	
43	Cellular mobile subscribers	Per 1000	300.0	480.0	
44	Personal computers	Per 1000	33.0	57.0	
45	Internet users	Per 1000	45.0	225.0	
46	Researchers in R&D	Per Mn	137.0	1071.0	A grave sign as researchers are too less in proportion
47	R & D Expenditure	% of GDP	0.8	1.5	
<b>F</b>	<b>External Sector and Exchange rate</b>				
48	Forex Reserves	\$-Bn	257.0	1966.0	
49	Exchange rate	Rs/Yuan per \$	48.3	6.8	Yuan is nearly fixed. Rupee is floating
50	Exchange rate history 2007-11 ( 5 yrs )	summary	Min 39.21/Max 51.79	Min 6.37 /Max 7.89	Rupee highly volatile and losing ground. Yuan relatively very stable and gaining ground
51	Change in %	1995-09	-30.9	+23.0	
<b>G</b>	<b>Inflation, Banking and Capital Market</b>				
52	Inflation Consumer services	Avg. % 2008	4.8	2.2	India's growth is coupled with inflation
53	Domestic credit by Banking sector	% of GDP	71.6	126.2	
54	Interest rate spread	%	4.6	3.1	Money is costly for borrowers
55	Commercial Bank lending rates	%	13.3	5.3	Money is costly for borrowers
56	Total Insurance density	\$	54.4	121.1	
57	Total Insurance penetration	% of GDP	5.2	3.4	
58	FDI Inflows	\$-Bn	34.6	95.0	
59	Listed domestic companies	No.	4946	1700	Stock market more active in india
60	Trends in Stock Indices	1991 2010	1,909 19,696	4,275 23,093	Sensex has risen @ 13.6% and Hangseng has risen @ 9.2% denoting more volatility and speculation on the bourses
61	Inflation rate	2006	5.8	1.5	India's growth is coupled with inflation.
	Change in CPI %	2008	8.4	5.9	
62	Avg annual rate of Inflation 2000-08	%	4.6	4.3	
63	Market capitalisation	\$-Bn	1227.0	5011.0	

<b>H External Debt</b>					
64	Total Debt outstanding	\$-Bn	230.6	378.2	Compared to GDP India is more indebted than China
65	Debt Service ratio	%	8.7	2.0	As borrowing is costly for india
66	Total Debt Service \$-Mn	1990	8,187	7,057	India's growth during the period is ..... coupled with growth in debt @ 10.27% whereas China has grown @ coupled with growth in debt @ 9.8%. India has grown at a slower pace and that too debt ridden, China has grown faster with lower absolute debt plus lower growth in debt.
		2007	39,141	31,590	
67	Debt service ratio %	1990	31.9	11.7	Debt service ratio for China has reduced more drastically than india.
		2007	13.7	2.2	
<b>I Social Sector Indicators</b>					
68	Gross enrolment ratio in primary schools	%	113.0	112.0	
69	Adult literacy	%	63.0	94.0	
70	Labour cost per worker in manf.	\$ per year	1192.0	883.0	Labour cost is high for India
71	Education expenditure	% of GDP	3.2	-	Probably it is less for China
72	Physicians	Per 1000	0.6	1.5	
73	Health expenditure	% of GDP	4.1	4.3	
74	Health expenditure per capita	\$	40.0	108.0	
75	Contraceptive prevalence rate	%	56.0	85.0	
<b>J Indicators of media penetration</b>					
76	Per 1000 persons	Daily newspapers	71	74	
77		Radios	120	339	
78	Households with television	%	46	89	
79	Telephone lines	Per 1000	4	28	
80	Per 100 persons	Mobile phones	21	42	
81		PC's	3	6	
82		Internet	7.2	16.1	



<b>K Poverty</b>					
83	Population below poverty line	%	37.2	2.8	
84	Share of income / Consumption (1995-2005)	Richest 20%	45	48	
85		Poorest 20%	8	6	
86	Gini Coefficient UN RP 20%	0-1	0.056	0.122	Higher income inequality in China
<b>L Decadal GDP growth rate</b>					
87	1960-70	Annual avg grwth in GDP %	3.4	5.2	China's socialist market economy started in 1978. It has clogged double digit growth rate in the very next decade. India's started in 1991. Still it has not been able to touch double digit growth rate?
88	1970-80	"	3.6	5.8	
89	1980-90	"	5.8	10.2	
90	1991-00	"	6.0	10.3	
91	2000-08	"	7.9	10.4	
<b>M Science &amp; Technology</b>					
92	Patent application filed	2007	24,505	2,45,161	
93	Royalty and licence fees payments	\$-Mn	949	8,192	
94	Hi-tech exports as % of manf. exports	%	5	30	
95	R&D Expenditure as % of GDP	In 2006	0.69	1.42	
<b>N Commercial Energy</b>					
96	Total Mn metric tonnes	1990	319.9	863.2	* India's energy costs are higher than China's as denoted by PPP cost in \$/kg.
97		2006	565.8	1,878.7	
98	Avg. annual growth rate	1999-06(%)	3.5	4.4	
99	Per capita	Kgs(2006)	510	1433	
100	PPP*	\$/kg	4.7	3.2	
<b>O Tourist traffic</b>					
101	Number of tourists (Mn)	1995	2.1	20.0	Rate of growth (CAGR) in the number of tourists for India is 7.67% and for China is 8.7% and for in tourist income is India – 12.5%;China – 13.8%. Even though the base is higher for China still it has managed to grow at a higher rate.
102		2007	5.1	54.7	
103	Foreign exchange earnings from tourism (\$-Bn)	1995	2.6	8.7	
		2007	10.7	41.1	
<b>P Foreign Exchange</b>					

<b>Reserves</b>					
104	Reserves \$-Bn	1999	32.6	157.4	
		2008	257.4	1966.0	
105	% Share in world total	1999	0.8	3.8	
		2008	3.5	27.0	
106	Import cover(mnth)	2008	8.9	11.0	
107	Foreign Direct Investment Inflows	\$-Bn (2008)	41.6	108.3	Outflows/inflows for India 42% and China is 48%
108	FDI outflows	"	17.7	52.2	
<b>Q</b>	<b>Human Development Index (0-1)</b>				
109	2007	HDI Value	0.612	0.772	India has slipped down from a percentile rank of (82/1.15 = 71.3) in 1970 to (134/1.8 = 74.44) whereas China has moved up from a percentile rank of (64/1.15 = 55.65 ) to (92/1.8 = 51.11)
		Rank out of 179	134	92	
	1970	HDI Value	0.254	0.372	
		Rank out of 114	82	64	
<b>R</b>	<b>Indices of world competitiveness</b>				
110	Overall growth competitiveness ranking (out of 139 countries)	2010-11	51	27	On all counts China's ranking is way ahead of India except in financial sophistication. But if financial sophistication leads to more speculative markets and heightened volatility (sensex coeff of var is 60.06 and hangseng is 40.08 ) in the stock markets then it is better that financial markets become less sophisticated. India has more listed companies (4946),but lesser market capitalization ( 1227 Bn-\$)whereas China has less number of listed companies but quite higher market cap.( 5011 Bn-\$)
111	Labour market efficiency	"	92	38	
112	Financial market sophistication	"	17	57	
113	Technological readiness	"	86	78	
114	Market size	"	4	2	
115	Business sophistication	"	44	41	
116	Innovation	"	39	26	
117	Infrastructure	"	86	50	
<b>S</b>	<b>Growth Forecasts</b>				
118		2009	5.7	9.1	
119		2010	9.7	10.5	
120		2011	8.4	9.6	
<b>T</b>	<b>International Trade</b>				
121	Merchandise	\$-Bn	177.5(1.1)	1428.3(8.9)	Merchandise trade balance is

	Exports (% Share in the World)				negative for India and positive for China
122	Merchandise Imports (% share in the world)	"	293.4 (1.8)	1132.5(6.9)	
123	Services Exports (% share in the world)	\$-Bn	102.6 (2.7)	146.4(3.9)	Services trade balance is positive for India and negative for China
124	Services imports (% share in the world)	"	83.6(2.4)	158.0(4.5)	
125	Co-eff. Of std. dev	1991-2010	Sensex – 60.06	Hangsen – 40.87	