

Nexus of the Asian Giants: Japan vs. China and India?



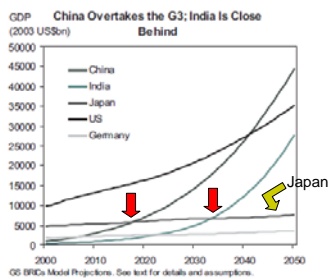
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Keio University, July 21, 2007

Why China and India ?

- Goldman Sachs Report in 2003
- FTA/EPA Developments in East Asia → East Asian Economic Community
- India's policy change
- Leadership in Asia

GS Projections



Macro Observations (2005, %)

	Population	GDP(nominal)	GDP(PPP)	Exports	FDI total	Foreign reserves
India	17.0	1.6	5.9	0.8	0.4	3.3
China	20.5	4.0	13.2	6.5	2.8	15.9
USA	4.6	28.7	20.9	8.9	16.5	2.0
Japan	2.0	11.4	6.9	6.2	1.1	21.6
EU15	6.1	30.0	19.2	37.7	42.6	8.2
Asian NIEs	1.3	3.1	3.5	9.6	8.0	21.0
ASEAN10	8.6	1.9	4.3	6.0	3.6	7.4
ROW	39.9	19.3	26.1	24.3	25.0	20.6
World	100.0	100.0	100.0	100.0	100.0	100.0

Source: IMF, World Bank

Still Tiny in terms of per capita Income

Ranking	Country	GDP per capita	SI India	SI China
1	Luxembur	58,852	21.5	12.5
2	Ireland	35,650	13.1	7.5
3	Norway	35,586	13.0	7.5
4	USA	35,484	13.0	7.5
10	Australia	27,993	10.3	5.9
13	Japan	26,419	9.7	5.6
14	Germany	26,220	9.6	5.5
15	France	26,146	9.6	5.5
49	Malaysia	8,986	3.3	1.9
50	Russia	8,719	3.2	1.8
55	Brazil	7,359	2.7	1.6
84	China	4,726	1.7	→ 1.0
104	Vanuatu	2,781	1.0	0.6
105	India	2,731	→ 1.0	0.6

Source: World Bank, *World Development Indicators*

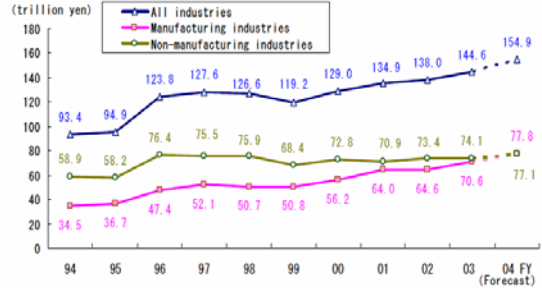
Our Analysis

Japan's Recent Trade and FDI Development
Japan vs. India and China

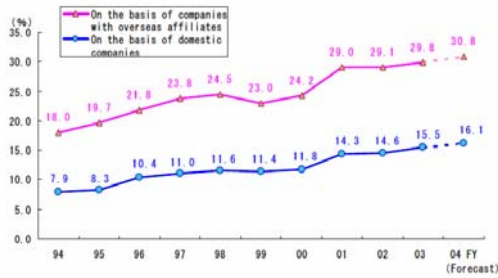
- Trade
- Foreign Direct Investment
- New development model
- IT
- Concluding observations

Japan's Trade and FDI

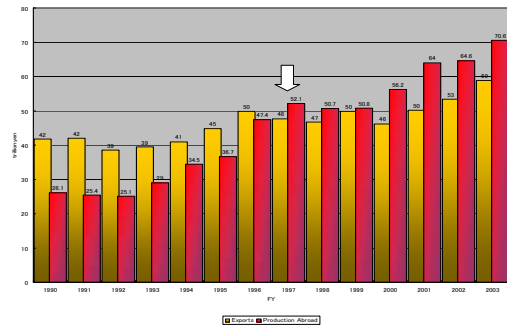
Size of Production Abroad (GDP of Japan=500 tri. Yen)



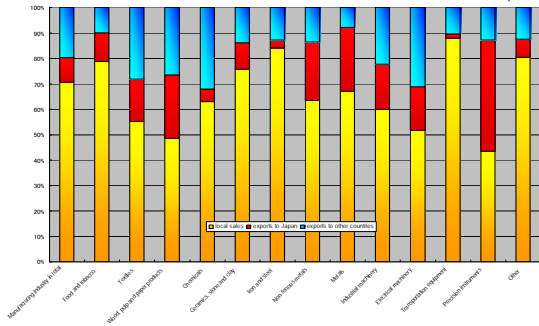
Ratio of Production Abroad



Reversal of Exports and Production Abroad in 1997



Destination of Production Abroad



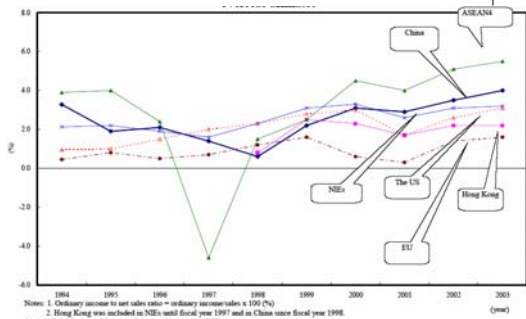
Japanese Companies operating in East Asia (2003)

	East Asia	China	Korea	Taiwan	Hong	Singapore
Electrical equipment	1,980	640	65	107	71	69
Transportation equipment	1,007	224	37	53	3	6
Chemicals	1,503	481	77	95	23	77
Machinery	942	378	67	61	17	31
Others	10,315	3,141	337	572	999	888
Total	15,747	4,864	583	888	1,113	1,071

	ASEAN	Thailand	Malaysia	Philippines	Indonesia	Vietnam
Electrical equipment	514	141	163	78	103	29
Transportation equipment	342	157	40	45	81	19
Chemicals	375	143	80	31	98	23
Machinery	194	107	30	14	33	10
Others	2,189	884	524	278	381	122
Total	3,614	1,432	837	446	696	203

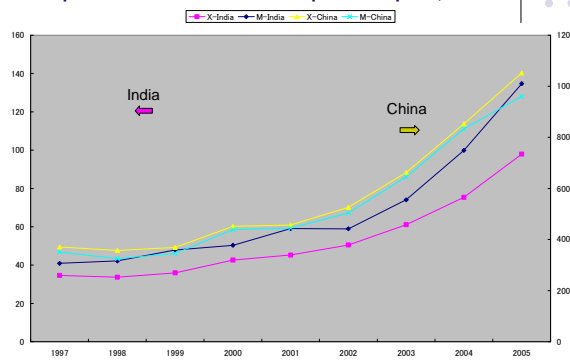
Source: KAIGAI SINSHUTSU KIGYO SORAN 2004 (Toyo Keizai), CHUGOKU SINSHUTSU KIGYO ICHIRAN, 2003-2004 (Sosohsha).

Profit Ratio of Japanese FDI



Trade

Comparison of India and China : Exports & Imports, bil. US\$



Trade Intensities and Relations

Trade Intensity: 2005

	USA	Japan	Brazil	China	India	Russia	World
USA	0.00	1.37	2.33	0.74	0.92	0.35	1.00
Japan	1.46	0.00	0.63	2.24	0.62	0.60	1.00
Brazil	1.23	0.65	0.00	0.75	1.00	1.97	1.00
China	1.28	2.10	0.63	2.81	1.16	1.04	1.00
India	1.07	0.54	1.38	1.25	0.00	0.58	1.00
Russia	0.20	0.35	0.35	0.64	1.01	0.00	1.00
World	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exports: 2005 million US\$

	USA	Japan	Brazil	China	India	Russia	World
USA	55,410	15,346	58,261	7,958	3,942	904,257	
Japan	136,002	2,713	116,146	3,524	4,459	594,887	
Brazil	22,742	3,476	7,722	1,137	2,917	118,469	
China	211,058	99,377	4,830	258,598	11,742	13,716	
India	16,363	2,376	982	10,713	705	97,918	
Russia	7,475	3,768	606	13,398	2,314	239,277	
World	1,616,940	464,311	75,422	902,311	99,468	129,548	

Source: IMF Direction of Trade

Role of Singapore and Thailand

Trade Intensities of Singapore and Thailand vs China and India

	China	India
Singapore	2.29	2.96
Thailand	1.59	1.44

Exports, million US\$

	China	India	World
Singapore	41,322	5,896	207,338
Thailand	15,228	1,520	110,174
Japan	116,146	3,524	594,887
World	902,311	99,468	10,348,500

Source: IMF, Direction of Trades

Trade Shares

Share in World Exports

	1980	1985	1990	1995	2000	2005
Japan	6.2%	5.9%	6.1%	5.8%	5.3%	4.5%
China	2.2%	3.6%	3.9%	6.3%	6.2%	8.7%
India	0.6%	0.9%	0.7%	0.7%	0.7%	1.0%

Share in World Imports

	1980	1985	1990	1995	2000	2005
Japan	6.5%	9.6%	8.8%	9.3%	7.8%	6.1%
China	1.9%	2.8%	4.0%	5.7%	7.0%	10.1%
India	0.4%	0.6%	0.6%	0.7%	0.7%	1.0%

Intra Industry Trade

- China-World 0.66
 - China-Japan 0.52
 - India-World 0.52
 - India-Japan 0.17
- IIT=0 means vertical trade
 - IIT=1 means horizontal trade

IIT

- IIT leads to economic development
- HS 2 digit level
- China → high IIT in important industries
- India → no IIT

High IIT Industries with Japan

		Exports	Imports	Trade Share	IIT
China					
H1-85	Electrical, electronic equipment	14,185,861,963	29,827,220,705	23.9%	0.6446
H1-84	Nuclear reactors, boilers, machinery, etc	13,851,704,363	21,562,548,699	19.2%	0.7823
H1-90	Optical, photo, technical, medical, etc appar	3,938,117,073	8,702,228,692	6.9%	0.6231
India					
H1-84	Nuclear reactors, boilers, machinery, etc	72,068,754	1,191,424,237	19.2%	0.1141
H1-89	Ships, boats and other floating structures	63,196	534,004,801	8.1%	0.0002
H1-71	Pearls, precious stones, metals, coins, etc	488,605,659	15,268,325	7.7%	0.0606
H1-85	Electrical, electronic equipment	35,056,085	444,761,492	7.3%	0.1461
H1-26	Ores, slag and ash	411,368,044	1,070,644	6.3%	0.0052
H1-29	Organic chemicals	108,707,014	223,707,935	5.1%	0.6540

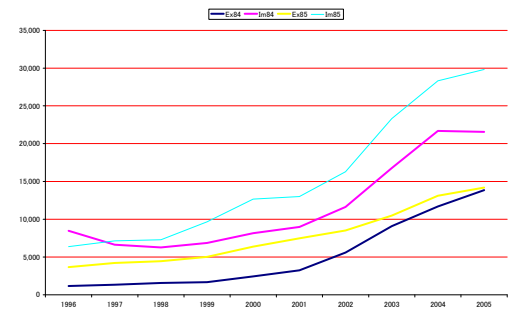
Top 20 Exports: India and China 2005

China	India	China	India	
84730	29,899,552,180	291000	Petroleum residuum	
84730	28,352,126,879	379	110239	Diamonds (jewellery) worked but not mounted or set
84760	24,696,853,808	3,276	800111	Iron ore, concentrates, not iron pyrites unagglomerated
85200	23,691,632,626	3,176	711319	Jewellery and parts of precious metal except silver
85290	17,125,265,091	2,376	242000	Organic compounds, nes
85413	11,951,983,346	1,676	300490	Medicaments nes, in dosage
901300	11,048,583,297	1,576	100530	Rice, semi-milled or wholly milled
84710	9,189,656,461	1,276	1081010	T-shirts, singlets and other vests, of cotton, knit
85180	7,480,702,033	1,076	231490	Fat (solid) (lard, coated with zinc, weight >400mm, ne
85199	6,411,456,860	0,876	899999	Commodities not specified according to kind
869000	6,207,886,513	0,876	232600	Women's, girls blouses & shirts, of cotton, not knit
85240	5,829,185,028	0,876	330613	Shrimps and prawns, frozen
852812	5,629,919,725	0,876	820492	Furnishing articles nes, of cotton, not knit, crocheted
853400	5,338,041,546	0,776	870299	Motor vehicle parts nes
850440	5,280,169,418	0,776	820200	Mens, boys shirts, of cotton, not knit
840399	5,082,804,825	0,776	760111	Copper cathodes and sections of cathodes unworked
852000	4,424,662,748	0,676	100100	Cotton, not carded or combed
610300	4,414,288,999	0,676	200452	Women's, girls skirts, of cotton, not knit
840999	4,201,990,604	0,676	860132	Cashew nuts, shelled (if
950410	3,888,966,084	0,576	020030	Bovine cuts bonedless, frozen
847800	3,869,816,677	0,576	842790	Made up articles (textile) nes, textile dress patterns
270112	3,818,585,172	0,576	380810	Insecticides, packaged for retail sale
610910	3,803,074,474	0,576	870322	Automobiles, spark ignition engine of 1000-1500 cc
420212	3,788,770,123	0,576	300243	Polystyrene
	262,123,345,627	21,876		
	781,663,607,171	100,000		103,405,167,142

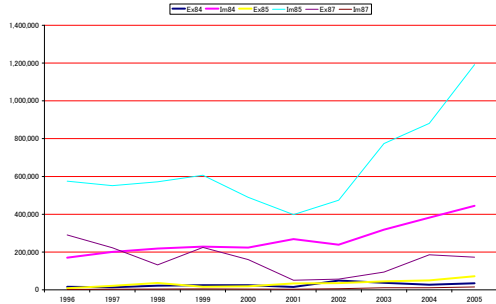
Top 20 Imports: India and China 2005

China	India	China	India	
85413	56,903,343,488	8,976	270900	Petroleum oils from bituminous minerals, crude
270900	47,722,764,303	7,276	102011	Diamonds (jewellery) unworked or simply sawn, clse
901380	27,878,967,339	4,276	710813	Gold, semi-manufactured forms, non-monetary
854230	17,427,468,708	2,676	270500	Petroleum residuum
852900	16,240,174,486	2,676	710812	Gold in unwrought forms non-monetary
290111	15,954,914,099	2,476	860200	Fixed wing aircraft, unladen weight >3,000-15,000 kg
847300	15,681,705,191	2,476	852520	Transm-receive apparatus for radio, TV, etc
847100	11,419,311,176	1,776	270119	Coal except anthracite or bituminous, not agglomerated
271000	10,425,542,919	1,676	710229	Diamonds (jewellery) worked but not mounted or set
120100	9,778,317,407	1,176	899999	Commodities not specified according to kind
854240	6,681,205,437	1,076	847300	Parts and accessories of data processing equipment
850400	6,076,721,971	1,076	280200	Copper ores and concentrates
849899	6,665,669,607	1,076	280320	Phosphoric acid and polyphosphoric acids
850240	6,036,254,350	0,976	271119	Bauxites, liquefied
291736	5,214,887,230	0,876	720448	Ferrous waste or scrap, nes
740311	4,312,026,244	0,776	150710	Soya-bean oil crude, whether or not degummed
260300	3,720,781,027	0,676	151020	Potassium chloride, in packs >10 kg
290301	3,528,377,364	0,676	151010	Palm oil, crude
850290	3,191,112,993	0,576	280120	Tankers
740400	3,179,867,592	0,576	271111	Natural gas, liquefied
850290	3,160,766,294	0,576	720890	Hair rolled lins, width >400mm, nes
390210	3,015,609,615	0,576	852491	Recorded media for cd-rom
290202	2,886,946,412	0,476	690330	Recorded media for cassette
901390	2,837,632,401	0,476	860330	Aircraft parts nes
850780	2,776,075,607	0,476	860100	Crigo vessels other than tanker or refrigerated
281820	2,464,749,926	0,476	870899	Motor vehicle parts nes
	295,124,462,743	44,476		
	669,962,769,119	100,000		189,749,965,603

Trade of HS84&85: China



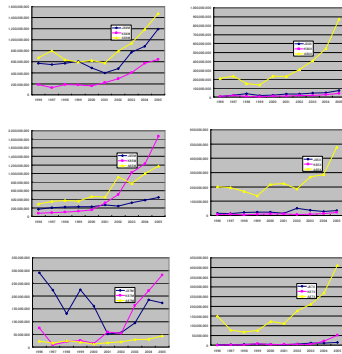
Trade of HS84&85&87: India



Major Players for India, 2005

	HS84 Exports	HS85 Exports	HS87 Exports	HS84 Imports	HS85 Imports	HS87 Imports
China	127,594	3.0%	51,187	1.8%	12,518	0.4%
China, Hong Kong SA	17,562	0.4%	178,336	6.4%	2,404	0.1%
Indonesia	45,515	1.1%	20,224	0.7%	18,755	0.6%
Japan	72,069	1.7%	35,056	1.3%	15,305	0.5%
Malaysia	55,557	1.3%	49,205	1.8%	109,350	3.3%
Philippines	19,348	0.5%	9,754	0.4%	15,873	0.5%
Rep. of Korea	40,517	1.0%	21,800	0.8%	51,412	1.6%
Singapore	152,417	3.8%	163,258	5.9%	37,178	1.1%
Thailand	54,630	1.3%	16,220	0.6%	48,866	1.5%
USA	872,770	20.8%	477,495	17.2%	411,832	12.5%
World	4,293,641	100.0%	2,773,184	100.0%	3,325,857	100.0%
TD countries	34.7%		36.8%		21.9%	
US+T	6.6%		7.7%		3.1%	

Major Players in HS84, 85&87 in India



Export Prices: Japan, Korea, USA

	Japan	Korea	USA
HS-84 Nuclear reactors, boilers, machinery, etc	0.8940	1.4155	0.9577
HS-85 Electrical, electronic equipment	0.9413	0.9710	0.6318
HS-87 Vehicles other than railway, tramway	1.3893	0.8758	2.5410

Source: Calculated based upon UN-Comtrade Data of HS 6 digit classification

Singapore and Thailand Connection

Rep. Country	Partner	HS Code	Exports	Imports	BT	Trade Share
Singapore	World	H1-85	86,093,277	68,915,428	0.889	36%
Singapore	World	H1-84	46,034,726	35,174,554	0.866	19%
Singapore	World	H1-27	28,013,239	35,565,877	0.811	15%
Singapore	World	H1-29	12,669,772	4,183,454	0.496	4%
Singapore	World	H1-60	6,029,490	6,861,128	0.860	3%
Singapore	Japan	H1-85	5,759,148	7,654,655	0.859	42%
Singapore	Japan	H1-84	2,445,095	4,327,052	0.722	21%
Singapore	Japan	H1-87	58,394	1,434,605	0.078	5%
Singapore	Japan	H1-90	421,811	1,045,149	0.575	5%
Singapore	Japan	H1-27	1,164,098	76,089	0.123	4%
Singapore	India	H1-84	1,910,225	133,715	0.131	21%
Singapore	India	H1-27	744,814	1,082,053	0.815	18%
Singapore	India	H1-71	22,758	1,788,695	0.025	16%
Singapore	India	H1-85	1,088,109	100,407	0.169	12%
Singapore	India	H1-29	482,379	137,517	0.444	6%
Thailand	World	H1-85	20,673,441	23,402,888	0.938	19%
Thailand	World	H1-84	19,345,488	17,020,108	0.836	16%
Thailand	World	H1-27	4,768,027	20,542,851	0.371	11%
Thailand	World	H1-87	8,152,289	4,035,743	0.662	5%
Thailand	World	H1-39	5,951,314	4,238,680	0.829	4%
Thailand	Japan	H1-85	4,086,224	6,688,906	0.758	26%
Thailand	Japan	H1-84	2,251,907	5,388,903	0.592	19%
Thailand	Japan	H1-72	42,325	3,210,249	0.038	9%
Thailand	Japan	H1-87	418,718	2,525,796	0.284	7%
Thailand	Japan	H1-39	526,780	1,429,678	0.539	5%
Thailand	India	H1-71	40,271	343,977	0.210	14%
Thailand	India	H1-84	220,145	72,442	0.453	12%
Thailand	India	H1-27	173,189	121,741	0.826	11%
Thailand	India	H1-39	225,489	19,130	0.154	9%
Thailand	India	H1-85	214,869	26,309	0.224	9%

Source: UN-Comtrade

Foreign Direct Investment

Foreign Direct Investment

	India		China		India		China		India		China	
	number	value	number	value	number	value	number	value	number	value	number	value
food	3	18	266	1,287	2%	1%	6%	5%	1%	1%	5%	4%
textile	14	33	1,360	2,344	9%	2%	32%	9%	7%	1%	26%	7%
wood/pulp	0	0	73	355	0%	0%	2%	1%	0%	0%	1%	1%
chemical	12	323	300	1,054	8%	15%	7%	8%	6%	12%	6%	6%
iron, non-ferrous	18	55	336	2,167	12%	2%	8%	9%	9%	2%	6%	7%
machinery	11	123	357	3,118	7%	6%	8%	12%	5%	4%	7%	9%
electricity	28	253	591	5,958	19%	11%	14%	24%	14%	9%	11%	18%
transportation machinery	41	1,053	343	4,791	27%	47%	8%	10%	20%	38%	7%	14%
others	24	357	630	3,258	16%	16%	15%	13%	12%	13%	12%	10%
manufacturing	151	2,216	4,256	23,211	100%	100%	100%	100%	74%	79%	82%	76%
agriculture/forestry	1	2	21	37	2%	1%	2%	1%	0%	0%	0%	0%
fishery	4	7	32	68	8%	2%	4%	1%	2%	0%	1%	0%
mining	3	38	18	60	6%	10%	2%	1%	1%	1%	0%	0%
construction	0	3	55	606	0%	1%	6%	9%	0%	0%	1%	2%
commerce	17	86	236	1,093	35%	23%	26%	24%	8%	3%	5%	5%
finance/insurance	7	102	24	645	15%	27%	3%	9%	3%	4%	0%	2%
services	14	125	335	2,643	29%	33%	37%	37%	7%	4%	6%	8%
transportation machinery	2	10	89	295	4%	3%	10%	4%	1%	0%	2%	1%
real estate	0	0	86	1,022	0%	0%	10%	14%	0%	0%	2%	3%
others	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	0%
non-manufacturing	48	373	896	7,070	100%	100%	100%	100%	24%	13%	17%	21%
branch	5	213	48	969	5	213	48	969	2%	8%	1%	3%
Total	204	2,802	5,200	33,270	204	2,802	5,200	33,270	100%	100%	100%	100%

FDI

- Japan's FDI to India is 4% of China in numbers.
- Japan's FDI to India is 8% of China in value.
- Growth rate of FDI is higher in India than in China.

Objectives

- China → production and distribution network
- India → local market

Objectives of Japanese FDI to India: 2005

Objectives	All Industries	Chemistry	Machinery	Automobile parts	Leisure	Iron	Electronics	Transportation	Others
Good	39%	65%	35%	30%	32%	23%	34%	40%	0%
Fair	6%	8%	7%	0%	16%	26%	3%	1%	9%
Bad	14%	5%	19%	18%	10%	26%	3%	8%	27%
Securing resources	7%	52%	0%	0%	42%	0%	0%	0%	0%
cheap labor	18%	20%	28%	16%	39%	28%	24%	1%	11%
local government policy	19%	20%	25%	0%	35%	36%	26%	32%	4%
production network	38%	40%	30%	51%	36%	5%	35%	32%	53%
distribution network	9%	3%	21%	0%	3%	5%	18%	15%	2%
local market	89%	47%	38%	60%	10%	36%	36%	56%	56%
exports to the third market	5%	0%	3%	3%	0%	1%	1%	11%	27%
imports back to Japan	3%	2%	10%	2%	3%	0%	0%	0%	4%
following other companies	13%	1%	12%	26%	0%	3%	3%	33%	0%
financial and exchange rate hedge	1%	0%	0%	0%	3%	0%	2%	0%	0%
royalty and information gathering	9%	8%	10%	6%	19%	0%	5%	16%	0%
development and planning for products to export	2%	12%	0%	0%	0%	0%	0%	0%	0%
new business	2%	2%	2%	2%	0%	3%	2%	3%	0%
enhancing regional headquarter capacity	2%	0%	0%	3%	0%	0%	1%	0%	0%
trade frictions	1%	0%	0%	0%	0%	0%	1%	1%	0%
others	3%	2%	0%	1%	10%	0%	0%	0%	0%
Number of Firms	992	88	89	289	31	31	137	78	45

Objectives of Japanese FDI to China

Objectives	1987-1994		1995-2006		India ratio
	Yes	ratio	Yes	ratio	
Securing resources	3	1.9%	54	3.0%	0
cheap labor	57	36.8%	793	44.7%	24
local government policy	81	52.3%	182	10.3%	26
production network	50	32.3%	1,018	57.4%	35
distribution network	34	21.9%	141	7.9%	18
local market	48	31.0%	929	52.3%	64
exports to the third market	8	5.2%	286	16.1%	1
imports back to Japan	43	27.7%	535	30.1%	0
following other companies	12	7.7%	58	3.3%	3
financial and exchange rate hedge	0	0.0%	12	0.7%	2
royalty and information gathering	14	9.0%	87	4.9%	5
development and planning for products to exports	0	0.0%	39	2.2%	0
new business	7	4.5%	37	2.1%	2
enhancing regional headquarter capacity	0	0.0%	3	0.2%	1
trade frictions	2	1.3%	22	1.2%	1
others	4	2.6%	1	0.1%	0
total response companies	155	100.0%	1,775	100.0%	
total companies sent questionnaires	299	51.8%	4,960	35.8%	

Size

- India > China
- Large Firms committed in India

Some Stories

- Toyota
1984 DCM International, Joint Venture, Truck called Dyna, 1994 Withdraw
1997 Toyota Kirloska Motor, Kijarn, 1999 Production started, 100,000 units, Toyota Way
Toyota's Priority Experiments: a) production & distribution, b) Toyota techno park, help FDI of supporting Japanese companies, c) youngest project team (30s and 40s)
10% market share till 2010.
- Suzuki
1982 Suzuki joint venture with Maruti Udyok, Maruti800 best seller, sold 5 mil. Units till April 2005.
Sold 480,000 units(46%) while Toyota's share 5%.
May 2005, new model Swift, 2007 new factory of 250,000 unit capacity

Some Stories (2)

- SONY
invested in India in 1994 while LG 1997
TV LG 26%, Sony < 5%
washing machine, refrigerator LG > 20%
Why LG so strong? a) HQ's fast decision and strong support, b) large scale FDI, c) huge advertisement, d) target being lower middle, low pricing
July 2004 Sony stopped production in India, decided to export from Thailand, targeting the rich

Who are the Japanese investors? (2006, Mil.RS)

Rankings	Local Company Name	Industry	Parent Company	FDI
1	Toyota Kirloskar Motor Pvt.Ltd.	automobile/parts	Toyota	7,000
2	MCC PTA India Corp.Pvt.Ltd.	chemical/medicine	Mitsubishi Chemical	6,100
3	Yamaha Motor India Pvt.Ltd.	automobile/parts	Yamaha Motors	5,300
4	PPN Power Generating Co.,Ltd.	electricity/gas	Marubeni	4,900
5	Honda Sael Cars India Ltd.	automobile/parts	Honda	3,600
6	Toyota Kirloskar Auto Parts Pvt.Ltd.	automobile/parts	Toyota	3,300
7	Honda Motorcycle & Scooter India(Pvt.)Ltd.	automobile/parts	Honda	3,000
8	Kirloskar Toyota Textile Machinery Ltd.	machinery	Toyota Automatic Loom	2,400
9	DENSO HARYANA PVT.LTD.	automobile/parts	Denso	2,000
10	Maruti Udyog Ltd.	automobile/parts	Suzuki	1,400
11	YKK India Pvt.Ltd.	others	YKK	1,400
12	Cholamandalam MS General Insurance Co.	insurance	Mitsui Marine Insurance	1,400
13	L&T-Komatsu Ltd.	machinery	Komatsu	1,200
14	Panasonic India Pvt.Ltd.	electric/electronics	Matsushita	1,100
15	Matsushita Air-Conditioning India Pvt.Ltd.	electric/electronics	Matsushita	1,000
16	IFFCO-TOKIO General Insurance Co.,Ltd.	insurance	Millea Holdings	1,000
17	Telco Construction Equipment Co.,Ltd.	machinery	Hitachi Construction Machine	1,000
18	Yokogawa India Ltd.	electric/electronics	Yokokawa Electronics	875
19	ASB International Pvt.Ltd.	machinery	Nissei SSB Machinery	760
20	Suzuki Power Train India Ltd.	automobile/parts	Suzuki	700
21	Suzuki Motorcycle India Pvt.Ltd.	automobile/parts	Suzuki	700
22	Matsushita Washing Machine India Pvt.Ltd.	electric/electronics	Matsushita	600
23	Araco Automotive India Pvt.Ltd.	automobile/parts	Toyota Spinning and Weaving	586
24	NHK Spring India Ltd.	automobile/parts	Nippatsu	555
25	Panasonic AVC Networks India Co.,Ltd.	electric/electronics	Matsushita	500

Source: Own calculation based on RIEB database

IT Developments

IT Industry

USD billion	FY 2004	FY 2005	FY 2006	FY 2007E
IT Services	10.4	13.5	17.8	23.7
-Exports	7.3	10.0	13.3	18.1
-Domestic	3.1	3.5	4.5	5.6
ITES-BPO	3.4	5.2	7.2	9.5
-Exports	3.1	4.6	6.3	8.3
-Domestic	0.3	0.6	0.9	1.2
Engineering Services and R&D, Software Production	2.9	3.9	5.3	6.5
-Exports	2.5	3.1	4.0	4.9
-Domestic	0.4	0.8	1.3	1.6
Total Software and Services Revenues	16.7	22.6	30.3	39.7
Of which, exports are	12.9	17.7	23.6	31.3
Hardware	5.0	5.9	7.0	8.2
Total IT Industry (including Hardware)	21.6	28.4	37.4	47.8

NASSCOM [National Association of Software and Service Companies](#)

*IT Enabled Services- Business Process Outsourcing

Balance of Payments: 2005, mil. US\$

Items	India*	US	Japan	China
export of goods, trade statistics	59,338	905,978	558,696	344,229
services: cre	23,397	376,788	110,210	74,404
transportation: cre	3,062	63,175	35,752	15,427
travel: cre	3,897	102,014	12,430	23,296
communication services: cre	1,066	5,033	395	485
construction services: cre	284	4,139	7,224	2,593
insurance services: cre	409	6,831	873	549
financial services: cre	392	29,281	5,044	145
computer and info services: cre	11,366	6,039	1,126	1,840
royalties and license fees: cre	25	57,410	17,655	157
other business services: cre	2,601	73,038	27,279	23,283
personal, cultural and rec: cre	0	7,060	97	134
government services: nrc: cre	305	22,768	2,334	495

* 2003
Source: IMF, Balance of Payments Statistics

Prospects of IT for 2004 and 2010

- Size (US billion\$) 17.2 → 60.2
- Share in GDP 2 → 7
- Share in total exports
14 → 31



Global Market for IT

	FY03	FY04	FY05	FY06
Americas	69.1%	69.4%	68.3%	67.2%
Europe	22.2%	22.6%	23.1%	25.1%
Rest of the World	8.7%	8.0%	8.6%	7.7%

NASSCOM



Why US?

- Indian population in US → 2 million
- 300,000 Indian Americans work in Silicon Valley, accounting for more than 15% of start-up
- Employment by US IT companies in India
IBM(38,500) Accenture(16,000), HP (18,000), Oracle India (8,600), Microsoft (3,500), Intel (3,000)



Human Capital Development

	Undergraduate	Graduate	Total
China	47,654	17,262	64,916
India	108	256	364
Bangladesh	129	799	928
Sri Lanka	213	245	458
Nepal	124	238	362
Total	69,480	31,282	100,762



Concluding Observations



Can Japan dance?

- Complementary in hardware and software
- More human capital investment
- Mega manufacturers make their way to explore a huge potential market
- Region wide networking (Singapore/Thailand)
- Japan can and should dance with Chindia



Thank you!

