

PORT RESTRUCTURING IN A GLOBAL ECONOMY: AN INDIAN PERSPECTIVE¹

By

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ABSTRACT

In 1991-92, India embarked on an ambitious economic reform programme aimed at transforming its inward looking, centrally planned economy into a market-driven economic system based on export-led growth. Since then, economic performance and international competitiveness have improved markedly. The country's external trade, currently in excess of 250 million tons of cargo (exports and imports), is projected to nearly double by the year 2001. This confronts the port sector, on average already operating beyond capacity, with the significant challenge to sustain this growth in a seamless, cost effective and efficient way. Undoubtedly, this paramount pre-condition to Indian economic development will require significant effort towards port modernisation and coordinated port development. Currently, Indian ports are characterised by the existence of obsolete and poorly maintained equipment, hierarchical and bureaucratic management structures, excessive labour and, in general, an institutional framework that is considerably in variance with the Government's overall economic objectives. In the current 5-year plan, the Government of India has earmarked significant resources to port development which, however, fall short of requirements. Greater participation of the private sector is thus sought together with the accompanying institutional reforms. The latter should clearly define the "parameters" of port restructuring in a way that makes port investment in India an attractive business alternative to both national and international capital. (JEL: 121, 615, 731).

INTRODUCTION: A HISTORICAL PERSPECTIVE ON INDIAN DEVELOPMENT

At the time research on this paper started, India was grandiosely celebrating its 50-year independence anniversary from British rule in 15 August 1947. Unquestionably, the country's progress and economic and social evolution during this period cannot go unnoticed. Especially since the 1991 reforms, the country has achieved a steady rate of growth, expected to consolidate around 7%; it has managed to check inflation and foreign debt at affordable levels; it claims dynamic industrial and export sectors and, although still at its initial stages of economic transformation, it has managed to attract respectable levels of foreign direct investment. The country's key economic indicators appear in Table 1.

¹Haralambides, H.E. and Behrens, R. (2000) 'Port Restructuring in a Global Economy: An Indian Perspective'. *International Journal of Transport Economics*, Vol. XXVII, No 1, 19-39.

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Table 1 INDIA'S KEY ECONOMIC INDICATORS

	1993-94	1994-95	1995-96
GNP (bln. IRP)	7195	8433	9678
Average Exchange Rate (IRP/USD)	30.49	31.4	33.45
GNP (bln. USD)	236	269	289
GNP Growth (IRP basis, %)	16.2	17.2	14.8
GNP Growth (USD basis, %)	5.3	13.8	7.7
Population (millions)	898	915.9	925
Income per Capita (USD)	262.8	293.2	312.8
Wholesale Price Inflation (%)	10.8	10.2	4.4
External Debt (bln. USD)	92.7	99	92.2
Reserves (bln. USD, excluding gold)	15.1	20.8	17
Foreign Investment (mil. USD)	4,110	4,895	3,973

Source: Economic Survey, 1996-97

However, depending on how one is interpreting statistics, the country appears to be poorer now, in comparison to its Asian neighbours, than it was 50 years ago (Table 2). A first indicative, albeit unqualified, comparison with the Peoples Republic of China demonstrates that both gross domestic investment and exports per unit of output (GDP) in India are half those of China (24.8 and 11.9 respectively, compared to 43.1 and 24.9).

Table 2 INDIA'S COMPARATIVE ECONOMIC PERFORMANCE (1960-1990)

	GDP Growth (%)	Industrial Output Growth (%)
India	4	6
Pakistan	5	8
Indonesia	6	9
Thailand	7	9
Taiwan	8	12
S. Korea	9	10

Source IBRD

A long period of colonial rule had left an impoverished country with more than half of its population illiterate and living below poverty line. Jawaharlal Nehru, the independent country's first prime minister, took office with the mission to "...end poverty and ignorance and disease and inequality of opportunity..." and to restore India to its pre-industrial revolution eminence as one of the world's great economic powers and major manufacturers. The means to achieve this was a policy of rapid industrialisation based on central planning, public investment, subsidies and import tariffs that were the highest in the world and, until recently, the government's main source of income. Import substitution, and the protection this afforded to domestic industry, was a policy deeply rooted, at that time, in Indian belief that export-led growth strategies were nothing but a colonial contrivance to dump British manufactures on the country and thus deprive it of valuable capital necessary for its industrialisation.

In the closed economies of the post-world war II period, central planning was able to demonstrate reasonable success, adopted by such anti-Soviet countries as South Korea and Taiwan, many times under the blessing of the World Bank. It enabled India to sustain a yearly growth of 4% (Table 2) –the Hindu rate of growth as it came to be known- that was much higher than that of its ex-colonial master; a growth rate that made many western economists hail India as a country that had nothing to learn from the free-marketeers of the west.

India's Soviet type "5-year plan" central planning was based on a strict licensing system of production, prices and employment. Without the benefit of present day computers and advances in mathematical programming, the State would thus determine what should be produced, how and by whom in an effort to rationalise scarce economic resources according to national priorities, avoid wasteful duplication of activity, and control –through price policy- income distribution and the inequitable accumulation of wealth.

Nehru's preoccupation with rapid industrialisation obscured his vision as to the importance of agriculture and the development of human capital. Neglect of agriculture, combined with severe droughts, had often led to mass starvation despite the substantial food aid from America that, incidentally, was at the time seen by many as a humiliating development on top of India's military defeat by China in 1962. It was Nehru's daughter, Indira Gandhi, that reversed the neglect of agriculture, successfully introducing the green revolution that conquered mass starvation and made the country self-sufficient in food. Mass starvation was conquered not only through increases in farm productivity but more importantly through better distribution, stockpiling of adequate grain reserves and provision of the necessary distress-relief infrastructure.

Apart from higher education that has been consistently rated among the highest in the world, investment in elementary and secondary education was never considered as of strategic importance in India's development. Even at present, and despite a number of prestigious reports to the contrary, the educational record of India is being described by Amartya Sen, perhaps India's most accomplished economist, as abysmal.³ As a result, 50 years after its independence, one in two Indians are still illiterate. This is the real stumbling block in India's future development and not the often alleged scarcity or disinterest of private capital. As the current Asian crisis has amply demonstrated, "injections" of capital alone are not sufficient to guarantee sustainable economic development unless stable institutions are in place –developed through a long process involving education and democratic governance - able to assimilate technological innovation and seamlessly diffuse it in the economy in the form of productive capacity, output and welfare.

The massive nationalisations of the Gandhi period, public investment and industrial subsidies eventually took their toll on India amidst the relentless demands of the global economy. Financed by a borrowing spree, internal and external, public spending had grown explosively while subsidies grew from 8.2% of GDP in 1977-78 to almost 15% in 1987-88. As a result, the general budget and trade deficits reached unsustainable levels, foreign debt quadrupled in the 1980s and the country was at the brink of a liquidity crisis when the reformist government of Narasimha Rao took office in 1991.⁴

The economic reforms of 1991-92 started to dismantle the licensing system, giving more leeway to the private sector. Licenses for the importation of capital goods and

³ Amartya Sen and Jean Dreze "*Economic Development and Social Opportunity*" Oxford University Press, 1996.

⁴ *The Economist*, August 16th 1997.

goods used as inputs to production were largely removed while the weighted average tariff was brought down from 87% to 27%. Similarly, the maximum tariff was reduced from 400% (the highest in the world) to 50%. Apart from their favourable effect on production costs, the reduction in tariffs exposed Indian products to world competition and, in addition, by squeezing domestic margins, it forced Indian producers to re-orient their production with emphasis on exports.

At the same time, the Rupee was devaluated and made convertible for trade, government borrowing was curtailed, financial services partly liberalised and the taxation system simplified. An economic shake-up such as this had its long-awaited impact on the inflow of Foreign Direct Investment (FDI) that in 1995 exceeded 2 billion USD (5.6% of worldwide FDI) from a meagre 150 million in 1991 (0.9 %). Energy and telecommunications have been the two most favoured sectors (Table 3). However, in the same year (1995), China managed to attract more than 20 times that amount in foreign investment (approximately 40 billion USD), a fact which demonstrates that, somehow, India has not as yet been able to fully tap the vast international financial resources awaiting for attractive investment opportunities mainly in the country's lagging infrastructure.

Table 3 SECTORAL FDI (1991-1996)

Sector	Approved FDI (mil. ECU)	Share in Total FDI (%)
Telecommunications	4,718.1	24.9
Power Supply	2,008.5	10.6
Refinery	1,800.1	9.5
Services	1,326.4	7.0
Automobiles and Transportation	1,250.6	6.6
Food Processing	1,250.6	6.6
Metallurgical Industries	1,212.7	6.4
Chemicals	1,155.8	6.1
Electronic, Software & Electrical Equipment	1,023.2	5.4
Hotels and Tourism	473.7	2.5
Industrial and other Machinery	454.8	2.4
Textiles	397.9	2.1
Others	1,875.9	9.9
Total	18,948	100

Source: Economic Survey 1996/97

The 1991 reforms and the opening of the Indian economy has led to a booming external trade sector with both exports and imports growing at an average annual rate exceeding 20%. However, the country's rapid industrialisation and its consequent reliance on mineral oil products and capital goods –two categories that account for more than 50% of total Indian imports- have resulted in a persistent trade balance deficit that in 1995/96 reached the alarming, for Indian magnitudes, level of 5 billion dollars (Table 4).

Table 4 INDIA'S TRADE BALANCE (Billion IRP)

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Exports	325.53	440.42	533.51	695.47	823.38	1063.5
Imports	431.93	478.51	629.23	728.06	887.05	1226.8
Trade Balance	-106.4	-38.09	-95.72	-32.59	-63.67	-163.3

Source: Ministry of Commerce

To tackle this problem, the government has introduced a number of export promotion packages including free of income tax export profits; royalty payments and commissions on export sales; exemptions from customs duties of imported goods intended for use as inputs in the export sector and special incentives to export-oriented enterprises within export processing zones. These and other export promotion incentives, however, still entail cumbersome administrative procedures and a multitude of licenses, permissions and exemptions that necessitate continuous and close contact with government authorities.

In addition, apart from major exporters that are in a position to deal directly with overseas carriers, the thousands of smaller exporters, thinly scattered in the vast expanse of the country, have not been able to achieve efficient consolidation of cargo, an activity that is often in the hands of a small number of oligopolistically organised agents and freight forwarders. Equally, India has not, so far, been able to effectively penetrate foreign markets with its products, something that, at this stage of economic development, would require a concerted effort perhaps along the rather successful lines of the Chinese Foreign Trade Corporations. With the envisaged further liberalisation of shipping and transport arrangements, however, export promotion could partly become the responsibility of foreign carriers, following the successful example of Latin America where carriers, having positioned themselves well ahead of current demand, have been instrumental in the promotion of the region's trade.

THE INDIAN PORT SECTOR: A STUMBLING BLOCK TO DEVELOPMENT?

India's coastline of approximately 6,000 km enfolds 192 ports. Of these, Calcutta, Paradip, Visakhapatnam, Chennai (Madras), Tuticorin, Cochin, New Mangalore, Mormugao, Mumbai (Bombay), JNPT and Kandla are categorized as Major Ports, accounting for 92% of the country's total port traffic. Six of them are located in the west coast of India, handling trade mainly with Europe, America, Africa and the Middle East, and 5 are east coast ports, involved in trade mainly with Asia and the Pacific (Figure 1). Major ports fall under the direct jurisdiction of the Ministry of Surface Transport (MoST) and are governed by the 1963 Major Ports Trust Act (MPTA). Port Trusts are administered by a Board of Trustees of wide representation comprising members from government, labour and industry. The Board is appointed by the government for a period of two years and it is entrusted with the day-to-day management of the port and the operation of many of its services. The Chairman of the Board, often the Chairman also of the Dock Labour Board (DLB), is usually a member of the Indian Administrative Service (IAS).

An additional 181 minor and intermediate ports are governed by the Indian Ports Act (IPA) of 1908 and come under the jurisdiction of the different State governments. The difference between minor and intermediate ports lies only in their throughput, the dividing line being 150,000 tons. In general, both minor and intermediate ports are known as "minor" ports and their cargo turnover accounts for approximately 8% of total seaborne trade. This mainly consists of fertilisers, fertiliser raw materials, foodgrains,

salt, building materials, iron ores and other ores. In 1990-91, minor ports handled 10.44 million tons; this throughput increased to 18.56 million tons in 1994-95, exceeding 24 million tons in 1995-96.

With the thrust towards economic reform in India and the capacity limitations of major ports (see below), State governments are increasingly paying more attention to the development of their minor ports, whenever possible through private capital. The States of Gujarat, Maharashtra and Andhra Pradesh, for example, have launched active campaigns to attract investors and real estate developers to their ports, often combining industrial site development projects with port investment and vice versa. In addition, Gujarat and Maharashtra have established Maritime Boards to administer the various minor ports in their territory. Undoubtedly, these developments will pose a significant challenge to the central government as soon as the development of minor ports exceeds their, so far, limited local scope and assumes strategic dimensions for India's trade.

Developments in Port Throughput

The cargo handled by the country's major ports has seen a steady rise of roughly 2 million tons a year, from a meagre 20 million tons in 1950 to 81 million tons in 1980. Since then, port traffic has been rising at an accelerating rate to reach 215 million tons in 1995-96. Current growth projections more than double this last figure by the year 2001. Visakhapatnam, Madras, Bombay and Kandla alone handled more than 60% of total traffic in 1995-96. The turnover of the major ports for the last two financial years for which data is available appears in Table 5.

Table 5 THROUGHPUT OF MAJOR PORTS

	1994-1995 (x1000 tons)	1995-1996 (x1000 tons)	Growth (%)	Market Share (%)
Calcutta/Haldia	20,535	21,515	4.8	10.0
Paradip	10,121	11,259	4.5	5.2
Visakhapatnam	30,029	32,817	11.2	15.3
Madras	29,463	30,720	4.3	14.3
Tuticorin	8,040	9,286	15.5	4.3
Cochin	8,631	11,491	33.1	5.3
New Mangalore	8,005	8,884	11.0	4.1
Mormugao	18,881	18,095	-4.2	8.4
Bombay	32,047	34,048	6.2	15.8
JNPT	5,008	6,873	37.2	3.2
Kandla	26,502	30,338	14.5	14.1
TOTAL	197,262	215,326	9.2	100.0

Source: Indian Ports Association, Major Ports of India 1995-96

The relative share of the different major ports has changed significantly since independence. In 1950, Bombay and Calcutta were by far the most important ports, together handling more than 70% of the country's port traffic. Over the years, however, west coast ports improved their position at the cost of east coast ones, with the exception of Visakhapatnam. Although starting from a low base, Jawaharlal Nehru, India's most modern port, inaugurated in 1989, is showing the most remarkable growth (37.2%), followed by Cochin (33.1%) and Kandla (14.5%).

Apart from JNPT, all major ports handle significant volumes of liquid cargo, with the predominance of Bombay and Kandla which together handle more than half of the country's POL (Petroleum Oil Liquids) trade, currently at 89 million tons (1995-96).

Other important ports for liquid cargo operations are Calcutta/Haldia (12.8%), Madras (11.5%) and Cochin (11%). The majority of POL and other liquid bulk is carried by Indian ships (54%) mainly due to the government's cargo guarantees in favour of national shipping.

Dry bulk cargo movements consist mainly of iron ore and coal. The first is India's major export (34 million tons in 1995-96) bought by Japan, S. Korea, China and the EU. Coal, the main input of electricity generation, is both imported and exported in large quantities (33.7 million tons in 1995-96) and it is the major product shipped under cabotage arrangements. Visakhapatnam, Madras and Mormugao are the principal dry bulk ports handling both commodities. Table 6 presents the throughput of major ports by type of cargo for the year 1995-96.

Table 6 PORT THROUGHPUT BY TYPE OF CARGO

	Liquid Cargo	Dry Bulk	General Cargo	
			Conventional	Containerised
Calcutta/Haldia	11,426	6,380	1,844	1,864
Paradip	1,653	8,678	924	-
Visakhapatnam	8,178	16,375	3,137	94
Madras	10,232	14,540	1,921	2,308
Tuticorin	891	6,391	1,246	758
Cochin	9,823	563	321	784
New Mangalore	1,310	6,896	678	1
Mormugao	1,288	15,694	223	19
Bombay	20,853	907	5,173	6,748
JNPT	140	2,610	54	4,069
Kandla	23,168	3,269	1,726	961
TOTAL	88,962	82,303	17,247	17,606

Source: Indian Ports Association, Major Ports of India 1995-96

Containerisation

The most important container ports of the country are Bombay, JNPT and Madras, handling amongst them three quarters of total containerised cargo. As can be seen in Table 6, the containerization rate of general cargo in India is still rather low (51% compared to 34% in 1991-92), with exports of textiles, clothing and engineering products having substantial potential for further containerisation (Table 7). According to the World Bank, the containerisation rate in other Asian countries is estimated at: Colombo (55%); Kaohsiung (47%); Brisbane (78%); Kelang (75%) and Freemantle (75%).⁵ These numbers, however, conceal the fact that, as a result of the country's rapid industrialisation in the period 1991-1996, the actual number of containers handled by Indian ports has more than doubled in this period, currently standing at 1.5 million TEUs. It is worth noting here that, as a result of the country's external trade characteristics, the number of import containers is larger than that of export containers. A better containerisation rate of Indian exports would thus also help reduce the inbound/outbound container movement imbalance, thus reducing significantly overall transport costs.

⁵ *India Port Sector Strategy Report*. World Bank, March 1995.

Table 7 CONTAINERISATION POTENTIAL OF INDIA'S EXTERNAL TRADE

Category	Share in Exports (%)	Potential Containerisation (%)	Category	Share in Imports (%)	Potential Containerisation (%)
Gems & Jewelry	19.3	(air) 0	Capital Goods	24.9	75
Textiles	12.4	100	Oil (products)	17.6	0
Engineering Prod.	11.8	100	Gems & Jewelry	12.2	(air) 0
Clothing	11.8	100	Chemicals	10.2	25
Chemicals	8.1	25	Iron & Steel	6.3	10
Others	36.6	80	Others	28.8	60
Total	100.0	67.3	Total	100	39.1

Source: World in Figures, The Economist 1994

Since its inception in the 1980s, containerisation in India has faced considerable constraints in terms of port congestion and damages to cargo. As a consequence, the government has pursued a policy of developing a number of Inland Container Depots (ICD) and Container Freight Stations (CFS) in order to facilitate modal interchange and the consolidation and distribution of cargo, as well as to remove cumbersome customs procedures from the waterfront. In parallel, Indian Railways opted for the establishment of a separate body responsible for the management of the infrastructure necessary for the transportation of containers. The Container Corporation of India Ltd. (Concor) was thus established in 1988, to promote containerisation and to boost India's domestic and external trade and commerce by organising multimodal logistics support. Concor is responsible for the establishment and operation of ICDs and CFSs, currently running 40 facilities. The major problem of the Organisation is a shortage of rolling-stock. It has received a loan of 94 million USD from the World Bank to be invested in 1,725 wagons. Later this should be followed by an additional investment of another 1,500 wagons. The rising number of ICDs and CFSs has expanded considerably the hinterland of such ports as Bombay and JNPT. The greater accessibility of these two ports has resulted in a shift of cargo previously handled through Kandla.

Table 8 DEDICATED BLOCK TRAIN SERVICES BY CONCOR

ORIGIN	DESTINATION	FREQUENCY (days per week)
Delhi	Bombay	7
Delhi	JNPT	7
Delhi	Madras	2
Ludhiana	Bombay/JNPT	4
Hyderabad	Bombay/JNPT	1
Ahmedabad	Bombay/JNPT	2
Bangalore	Madras	3
Coimbatore	Cochin	3

Source: Container Corporation of India Ltd., 1997

Maritime Traffic and the Merchant Shipping Act of 1958

Under the Merchant Shipping Act of 1958, foreign flag vessels cannot engage in the coastal trade of India except under license granted by the Director General for Shipping. The Government of India has partially relaxed the cabotage law for liner vessels, in view of the fact that Indian liners do not have sufficient feeder capacity, and also in

order to encourage foreign shipping lines to bring the main-line vessels to Indian ports. This partial relaxation is applicable to foreign main-line and feeder vessels only for the purpose of aggregating containers at Indian ports. Thus, foreign vessels can carry export containers from an Indian port of origin to the Indian port of aggregation provided such containers are to be shipped directly to the port of destination without any further transshipment *en route*. Similarly, import containers can be shipped by a foreign vessel from the port of aggregation to an Indian port of destination only if the import containers have reached the Indian port of aggregation from the foreign port of origin without any transshipment *en route*.

In 1995-96, more than 12,200 cargo vessels called at major Indian ports, 80% of which carrying bulk and conventional general cargo and 20% being container vessels or vessels mainly carrying containers (Table 9). Bulk and general cargo vessel calls concentrate on Mumbai (18.1%), Calcutta/Haldia (13.5%), Kandla (12.6%) and Madras (12.5%), while the 2,510 container vessel calls in the same year were reported from Mumbai (30.4%), JNPT (15.5%) and Madras (15.2%). To a limited extent, Mumbai and JNPT also served direct containership calls but, as also evidenced from the large differences in average and maximum size of containerships calling at Indian ports (Table 9), the country still relies heavily on feeder, mainly from the hubs of Singapore, Colombo and Dubai.

Table 9 VESSEL TRAFFIC IN MAJOR PORTS (1995/96)

Port	Total No of Cargo Vessels	Bulk and G/C Vessels	Containerships		
			No. of Vessels	Avg. dwt (1,000)	Max. dwt (1,000)
Calcutta/Haldia	1,600	1,312	288	6.9	20
Paradip	523	523	-	-	-
Visakhapatnam	1,310	1,270	40	8.8	20
Madras	1,598	1,217	381	9.9	40
Tuticorin	939	758	181	5.8	20
Cochin	749	484	265	8.5	30
New Mangalore	505	505	-	-	-
Mormugao	707	609	98	7.9	20
Mumbai	2,515	1,752	763	14.7	50
JNPT	462	74	388	N/A	N/A
Kandla	1,305	1,199	106	10.6	30
Total	12,213	9,703	2,510		

Source: Indian Ports Association, Major Ports of India 1995-96

PORT PRIVATIZATION IN INDIA: A CASE OF RESERVED OPTIMISM?

As already mentioned above, the 9th five-year plan working group has estimated the traffic through major ports to grow to 430 million tons by the year 2001. The completion of the port projects that started in the 8th five-year plan is expected to raise the present port capacity of 217 million tons to 252. This would still leave a capacity shortage of 174 million tons that will have to be created through projects in the 9th five-year plan. The plan envisages IRP 175 billion (US\$ 5 billion) worth of projects in the port sector in the following 5 years. Of these, public sector investment will amount to

IRP 105 billion (US\$ 3 billion), while the remaining 2 billion dollars will have to be found through private sector participation. However, assuming full implementation and execution of all planned projects, there will still remain a capacity gap of 65 million tons that will also have to be met by private sector investments. It thus becomes evident that, mainly due to lack of capital resources and other pressing national priorities, the government of India has taken a very conservative approach to port development, merely adjusting capacity to demand, while it is well established that economies of scale and capital indivisibility in the port sector require capacity to be planned well ahead of demand, if minimum cost operations are to be achieved.⁶ As a result, Indian ports are currently faced with severe capacity limitations, particularly in coal and container terminals (Table 10), leading to long turnaround times of ships and cargo (Table 11) and increased unpredictability of port performance. This situation has discouraged costly main-line vessels from calling at Indian ports and it constitutes a major bottleneck to the country's further trade expansion.

Table 10 CAPACITY UTILISATION IN MAJOR PORTS
(1994-95, million tons)

Commodity	Cargo Handled	Port Capacity	Capacity Util.(%)
POL	82.18	78.0	105
Iron Ore	34.91	41.5	84
Fertilisers & Raw Materials	8.46	7.90	107
Coal	30.1	8.00	376
Foodgrains	0.86	N/A	N/A
Containers	15.13	9.00	168
Other Cargoes	25.57	29.6	86
Total	197.21	174	113

Source: Indian Shipping

Table 11 MAJOR PORTS: PORT PERFORMANCE INDICATORS

	1984-85	1988-89	1991-92	1993-94	1995-96
Pre-berthing time (days)	3.6	2.8	1.4	1.8	3.3
Turnaround time (days)	11.9	8.9	6.5	6.9	8.3
Output per ship/berth/day ^a	2,314	3,549	4,668	3,963	N/A
Output per ship/berth/day ^b	N/A	1,310	1,430	1,571	N/A
Output per ship/berth/day ^c	N/A	600	623	660	N/A
Idle time at berth (%)	39	40	42.3	42.8	N/A

NOTES (a) in tons, all ships and types of cargo; (b) in tons, containerised cargo; (c) in tons, break-bulk general cargo.

Source: IBRD

The port capacity figures of Table 10 are calculated on the basis of the existing physical assets and the working and management practices in ports. Labour productivity standards in India are set rather low, especially in the case of containerised cargo where they are often still based on the general cargo handling norms of the past. Often, payment of "speed money" to port labour by carriers has resulted in the doubling of productivity, and the same result has been achieved by the leasing out of berths to

⁶ These capacity gaps assume the current management styles and port organisational structures to remain unaltered in the future. This is an unsustainable assumption given the Government's intentions.

shipping lines.⁷ It thus becomes clear that labour and management restructuring in Indian ports –e.g. through the introduction of EDI, the streamlining of customs procedures, the adoption of planned maintenance schemes and an improved interface among all players in the “port community” can be factors equally important to the need for physical expansion of port infrastructure.⁸

So far, Indian ports have followed the “service” or “comprehensive” port model whereby all operations, services and facilities are provided by the port authority. With the exception of JNPT, stevedoring operations are conducted by private licensed companies on equipment and facilities supplied by the port authority. The government has stated its intention to transform the existing service ports into “landlord” ones whereby the port authority will only be responsible for regulatory functions and infrastructure, the latter to be leased out to private companies for a certain period of time. According to the Parliamentary Standing Committee, the goals of privatisation are the introduction of new management styles; new technologies; increased efficiency and productivity; the elimination of bureaucratic barriers; and greater customer satisfaction. The new role envisaged for port authorities will enable them to assume more responsibility in investment decisions and accountability for port performance. The commercialisation of Port Trusts may thus be necessary for such a role while, in the future, the government might also consider the corporatisation of major ports. To put meat on the bone of its intentions, the government has raised the investment limit for which sanction is not required from IRP 2.5 million to 150 million.

In its 1996 *Infrastructure Report*, the MoST recommended the adoption of privatisation schemes based on the Build-Operate-Transfer (BOT) approach, probably along the lines of the rather successful example of the Philippines. Thus, recently issued BOT project proposals for the development of new berths/terminals envisage a maximum contract duration of 30 years including the construction period. Upon expiry of the lease/license period, the assets have to be transferred back to the port without costs.

The qualification process for private sector participation is based on open competitive tendering. The relevant feasibility study will be carried out by the port itself, with costs to be recovered from the successful bidder. The latter has to provide separate technical and financial offers including the up-front fee for the lease/license; royalties per ton of cargo handled; guarantees on minimum cargo volume; the lease/rent per unit area; and other financial parameters depending on the scope of the project. The main criterion for the selection of the successful bidder is the Net Present Value of the investment. Finally, in an effort to safeguard fair competition and check the abuse of monopoly power, the 1997 amendment to the MPTA has stipulated that port tariffs are to continue being set centrally by a statutory regulatory agency, the so-called Tariff Authority for Major Ports (TAMP).

In the same year (1996), in an attempt to clarify and modify the legal and administrative framework of ports, MoST issued its Guidelines to be followed by major port trusts. The Guidelines invite private sector interest in the leasing of existing or construction of new port assets such as container terminals; bulk, break-bulk, multipurpose and specialised berths; warehousing, CFSs, storage facilities and tank farms; cranes, handling equipment and floating craft; dedicated power plants; dry-docking and ship-repair facilities; and dedicated cargo-handling facilities for port-based industries.

⁷ This was the case in Bombay where one berth is leased out to X-Press line.

⁸ The European Commission has recently put forward a Technical Assistance Facility targeting these aspects of Indian ports.

Although a number of privatisation contracts have been –and still are- under consideration, the only one that has actually commenced, albeit still under the final approval of various ministries, is the BOT contract awarded to P&O Australia for the development of a new container terminal at JNPT.

As a result of greater flexibility in decision-making and commitment of State governments to public/private partnerships, the process of privatisation has reached a more advanced stage in the case of minor ports. In Gujarat, the Gujarat Maritime Board aims at developing ten additional “green sites”, six of which as joint-ventures and four to be built and operated exclusively by private companies. Pipavav port is the first public/private joint-venture operated by the Gujarat Pipavav Port Ltd.

Similar developments are witnessed in the State of Maharashtra. P&O has been awarded the BOT contract to develop the port of Vadhavan. At its final stage, the port will consist of 29 berths able to handle up to 250 million tons of cargo per year. The Mumbai-based Shahi Shipping Company, in a joint-venture with the UK Kier Group, is to develop the port of Dighi in a facility able to handle 4 million tons of liquid cargo per year. In both cases, the State of Maharashtra will hold no more than 11% of the equity of the port developing and operating company.

CONCLUSIONS: PORTS IN AN ECONOMIC POLICY PERSPECTIVE

The paper has hopefully demonstrated that the Indian port sector is in dire need of operational restructuring and foreign capital inflow if it is not going to stifle the country's trade and economic development. A number of reasons have, at times, been put forward by prospective investors to justify their, so far, lukewarm interest. Among them, ambiguous privatisation guidelines, government sanctioning, never-ending questions and requests for additional information by the authorities, overlapping jurisdictions, unreasonable delays and similar bureaucratic hindrances score the highest. However, it is believed here that these are just the symptoms of a more serious consideration India has to come to terms with: given the poor state of the country's infrastructure and the latter's importance to economic development, the shadow price of foreign investment should be seen by the government as substantially higher than the commercial return required by the private sector. This is not only due to the multiplicative effects that such investment has on the rest of the economy but also to the important role played by the transfer of technology and know-how. Realisation of this fact would allow India to be in a position to offer foreign investors terms of privatisation at least as attractive as they could secure in alternative investments outside the country, while herself would benefit from the knock-on multiplicative impacts of foreign investment.

An exemplary manifestation of India's licensing system is reflected in its Major Ports Trust Act (MPTA). The Act entails tariff controls, aimed at limiting the abuse of monopoly power in an industry that, even in today's competitive environment, has traditionally been described as a “natural monopoly”, and investment sanctioning, aimed at avoiding wasteful duplication of scarce resources and at integrating the port sector as a crucial element in the country's overall economic planning. To many, rigidities such as these are not squarely compatible with the rules of the “global game” that India committed itself to play in 1991. The Act has thus often been criticised as the main stumbling block to the introduction of successful port privatisation in India.

However, this rather shortsighted view on public policy needs further qualification if it is ever going to instill its ramifications in Indian conventional wisdom. Price control –

let alone collusion- is also exercised by many of the otherwise most liberal ports of Western Europe and North America not through government sanctioning but as a result of intense regional port competition that does not allow the full cost recovery of port investments much of which is financed by public money. Investment planning is also carefully exercised in these countries not in order to avoid wastage of the, there plentiful, resources but as a result of alternative demands on land use, urban planning, environmental pressure and an increasing realisation of the fact that intensified regional port competition, combined with automated labour-saving cargo handling systems, reduces the direct added-value of port activities, while the benefits of port investments and their impacts can be easily dissipated from the country in question to the final consignor/consignee. This issue causes considerable concern to governments contemplating the continuation of public funding of port projects, as it deprives them of the basic *rationale* of doing so, namely, that the port provides a service of general economic interest.⁹ Notwithstanding one's philosophical inclinations or the compelling necessities of modern economic life, one thing is becoming abundantly clear to all, interestingly enough even among port consultants and interested investors: in today's economic realities, ports as well as the development of infrastructure in general are at considerable variance with Adam Smith's pin-maker.

⁹ see for example the heated discussion on the desirability of the second Maasvlakte in Rotterdam.

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