An Analysis of India's Exports during the 1990s

This paper has two broad objectives: First, identify a set of factors that appear to be responsible for a significant decline in India's export growth during the post-reform era, and second, an examination of the possible impediments for high export growth in a sustained manner. The decline in Indian exports during 1996-97 was due mainly to a fall in the growth rate of export volumes. This analysis brings out the nature of demand-side factors, as against supply-side bottlenecks, that have constricted the growth of exports. However, easing of supply-side constraints too would have aided the revival of export growth.

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I Introduction

With the outbreak of hostilities in the west Asia in 1990, and the consequent spiralling oil prices, there was a tremendous pressure on India's foreign exchange reserves, aggravating an already weak balance of payments situation. Following this, the country was plunged into a deep economic crisis. The rate of inflation shot up. Foreign exchange reserves declined to only three weeks' worth of imports – about US $ 1 billion at the end of the financial year (FY) 1990-91. To tide over the crisis, India entered into a stand-by arrangement – together with a supplementary loan – with the International Monetary Fund (IMF). Following IMF conditionalities, various reform measures were undertaken to raise the growth rate in a sustained way. However, six years after the reforms were introduced, the desired achievements remained elusive in many sectors, including exports. India began its reform of the external sector in July 1991 by devaluing its currency by almost 19 per cent. This was followed by an explicit dual exchange rate regime in March 1992, where exporters received the free market rate. Finally, the exchange rate was unified in March 1993 with the public announcement that the exchange rate is left to be determined by market forces. As a result of various reforms, the growth rate of exports in US dollars shot up from –1.1 per cent in 1991-92 to 20.2 per cent in 1993-94, and further to 20.7 per cent in 1995-96. However, there was a huge turnaround in the growth rate in 1996-97. It declined from 20.7 per cent to 5.3 per cent in 1996-97 (Table 1). The decline began in July 1996, when the growth rate fell from 14.9 per cent in June of that year to 2.7 per cent in July 1996, and 3.6 per cent in August (*Economic Survey*, 1996-97:91). The growth rate touched negative figures during November and December 1996. The growth rate fell again to only 1.5 per cent in 1997-98. All the major export items, such as engineering goods, cotton yarn, fabrics and made-ups, chemical and allied products, rice, coffee, processed fruits and marine products which performed well between 1993-94 and 1995-96, witnessed a significant drop in export growth rates during 1996-97 and 1997-98.

One very important dimension of this phenomenon must be highlighted here. The growth rate of real exports (measured by the unit volume index) declined sharply from 31.05 per cent in 1995-96 to only 7.29 per cent in 1996-97 (*Reports on Currency and Finance*, Vol II, 1997-98, p 255). The average dollar price of exportables declined by 8.75 per cent in 1995-96 and by 1.8 per cent in 1996-97 (growth in rupee unit value index minus exchange rate depreciation). Therefore, the fall in exports (in US dollars) in 1996-97 was entirely caused by a sharp drop in the growth rate of export volume.

This paper has two broad objectives: first, identify the factors that are responsible for a significant turnaround in India's export growth, and second, an examination of the possible impediments for high export growth in a sustained manner. Exports are influenced through many channels, as explained in Chart. These channels can be classified broadly into two groups. A set of demand-side factors that can lead to a sudden turnaround in growth, and supply bottlenecks that prevent a quick revival and also act as a hindrance for maintaining high growth for a long period.

I Demand Constraints

Price Competitiveness

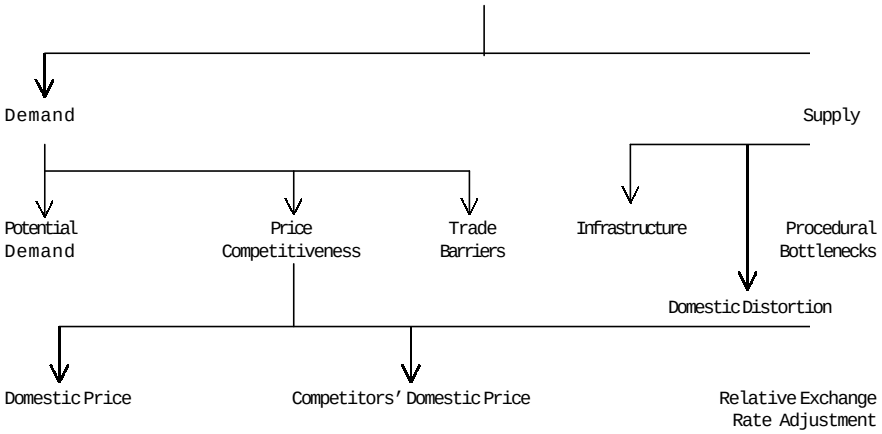
India's export profile (consisting mostly of low-technology products) is quite similar to that of south-east Asian nations. Also, going by the export share in the world market, India does not vary much from other Asian nations. This becomes evident from Table 2. Therefore, we included major south-east Asian nations in our sample to compare changes in India's external competitiveness. We examine two sources of external competitiveness in Table 3, namely, domestic inflation and nominal depreciation. Table 3 brings out

Table 1: Percentage Change in Major Exports
(US $)

		1995-96	1996-97	1997-98
I	Agriculture and allied	44.7	12.0	-6.6
	Tea	12.7	-16.6	38.6
	Coffee	34.0	-10.6	8.6
	Cereals	264.3	-25.4	-19.9
	Oil meals	22.6	40.2	-7.0
	Marine products	-10.3	11.7	2.8
I	Manufactured goods	16.5	2.7	4.7
	Leather and manufactures	8.1	-8.0	-11.6
	Leather footwear	6.2	-42.2	-19.6
	Gems and jewellery	17.2	-9.9	7.6
	Machinery and instruments	13.9	27.4	9.8
	Transport equipments	19.9	4.7	-13.4
	Electronic goods	63.0	16.9	-10.7
	Cotton yarn, fabrics, etc	15.4	21.2	4.2
	Readymade garments	12.0	2.1	0.6
II	Grand total	20.7	5.3	1.5

Source: *Economic Survey*, 1996-97, 1997-98, Ministry of Finance, Government of India.

Chart: Major Factors Affecting Indian Exports



an important finding: India's poor export performance during first three quarters of 1996-97 was not triggered by a fall in Indian competitiveness vis-a-vis other south-east Asian nations (our numbers here refer to calendar years). However, the situation changed considerably during 1997 (i e, the last quarter of 1996-97 and the first three-quarters of 1997-98). With the start of the south-east Asian currency crisis, many countries in this region were forced to devalue their currencies substantially. Consequently, the dollar price of exportables registered negative growth rates in these countries. India lost its competitiveness to these countries despite maintaining a low inflation rate (Table 3). Thus changes in price competitiveness do not appear to be an important determinant of the downturn in our exports growth that began in July 1996, but it certainly became an important determinant in explaining our slack export demand during 1997. This is further corroborated by the fact that the decline in the unit value index in dollars during 1997 was much sharper in other Asian countries.

Potential Demand

Value of total import into industrial countries, which are India's major trading partners, decelerated in 1996 (Table 4). The growth rate of total imports by industrial economies declined from 18.2 per cent in 1995 to only 3.7 per cent in 1996 and to 2.5 per cent in 1997. In particular, imports by Japan and Germany declined sharply. This is surprising, as there was a rise in real per capita GDP of industrial nations in 1996 (Table 5). However, this puzzle is solved looking at the growth rate of industrialised countries' real imports. The decline in *real* imports (measured by import volume) is not so prominent in Table 4. Volume of imports grew faster in the US and UK in 1996-97 and 1997-98. Growth in the volume of imports by industrial countries declined temporarily in 1996 but shot up again in 1997. The sharp fall in international prices of manufactured products (for the second consecutive year in 1997) is believed to be the cause of slowdown in the growth rate of *nominal* world trade. Nevertheless, it is clear from Table 4 that the decline in India's volume of exports cannot be attributed to the lack of *potential* demand, as opposed to the *actual* demand for Indian products in industrial countries.

Trade Barriers

Non-tariff barriers (NTBs) are another important factor due to which a country's export potential can remain underutilised. There are many types of NTBs that can hinder exports. The major types of NTBs are as follows (Box 1):

As tariff increase is not permissible, many countries are now imposing NTBs (permissible under the WTO framework) to protect their domestic economy [Rodrik 1997:53]. During the pre-liberalisation period, given India's tiny share in world trade and relatively small role of trade in national income (27 per cent of GDP in 1996 versus a world average of 45 per cent), NTBs were not important. But after liberalisation, with India becoming more outward-oriented, the effect of NTBs will gain significance.

Box 1: Major Types of Non-Tariff Barriers

Barriers	Major Instruments	
Non-Tariff	Antidumping procedures	
	Countervailing procedures	
	Safeguards	
	Special levies	
	Sanitary and phytosanitary sanctions	
	Import licensing	
	Variable levies	
	Global quotas	
	Bilateral quotas	
	Seasonal quotas	Quantitative restrictions
	Export subsidies	
	Rules of origin	
	Tariff quota	
	Voluntary export restrain	
	Investment barriers	
	Government procurement	
	Local content requirements	

If we consider the NTBs in the US, EU and Japan for the major export items from India with a percentage share of over 1 per cent in 1997-98 and 1998-99, of the 27 items, four items are subjected to NTBs in the US. These are items falling under the HSTC code 52 (cotton facing quota restrictions), code 23 (residues and waste from the food industry prepared using animal fodder also facing quota restrictions), code 84 (nuclear reactors, boilers, machinery and mechanical appliances and parts thereof facing import licensing problems) and code 08 (edible fruits and nuts, peel or citrus fruit or melons subjected to seasonal high tariff rates).[1]

Like in the US, Indian exports also faced major problems in the Japanese and the European markets. While Japan has imposed NTBs on Indian products mainly by way of tariff quotas, sanitary and phytosanitary sanctions and import licences, those for the EU are mainly import licence, environmental protection and bilateral quota.

Among India's major exports, the main sectors facing NTBs are the agricultural sector (including cereals, coffee, tea, spices, edible fruits and nuts, residues and waste from food industry), fish and related items, chemicals including pharmaceuticals, footwear, tanning items and some engineering items such as iron and steel and related items and vehicles. We discuss below major types of NTBs that obstruct Indian exports.

Antidumping procedures: Antidumping duties are product-specific or source-specific, imposed on dumped import causing harm to domestic industries.[2] The rationale behind imposing antidumping duties is to prevent 'predatory' pricing.[3] Unfortunately, most developed nations now use it as a tool merely to protect their domestic industries. For example, during the first 30 years of GATT, only one antidumping measure was termed illegal. Through the early 1960s, the GATT member-countries undertook less than a dozen antidumping actions per year, while the frequency across GATT member-countries now is about 298 antidumping actions per year.

Among the NTBs affecting Indian exports, antidumping duties are prominent.

Table 6 details antidumping actions initiated against Indian exporters till now.

Interestingly, the maximum number of antidumping cases on our exports have been initiated by India's two largest trading partners, namely, the US and the European Union. Indian exporters do not have effective representation abroad to counter the charges initiated against them. Lack of adequate funds prevents them from fighting out their cases abroad.

Countervailing procedures: The rationale behind using countervailing duties is to discount the effect of any subsidies given on exports. Often it becomes possible to sell products at a lower price if governments subsidise the production process. To mitigate the effect of such subsidies, a country under the WTO framework can impose countervailing duties to counteract the effect of such foreign subsidies. Unfortunately, like antidumping duties, these are now used more as protectionist measures rather than for serving their original purpose.

Major Indian exports like steel and chemicals have come under the incidence of countervailing duties. In recent times, antibiotics and stainless steel bright bars exports have been affected. In October and November 1998, countervailing duties were imposed on antibiotics (4.6 per cent-14.6 per cent) and steel bright bars (14.4 per cent-25.5 per cent) by the EU. Countervailing duties were earlier imposed by the US on cast iron metal (5.53 per cent) and sulphonic acid (41.3 per cent) exports from India.

Quota: The main difference between quota and tariff is that the latter is commodity-based and non-discriminatory in application. The most affected item here is textiles. In a static sense, our textile exports seldom become binding due to quota imposition. This is because there always exist possibilities to 'carry forward' or 'carry over', respective quotas. If any exporter foresees an increase in demand for his product, he can use some portion of his next year quotas (carry forward), or underutilised quotas of the previous year (carry over). But in a dynamic sense, quotas can become binding, if overutilisation during the previous year leaves lesser number of quotas available for this year. Table 7 portrays the level of quota utilisation for Indian apparel exports.

During the 1995 round of the WTO Agreement, the Agreement on Textiles and Clothing (ATC) replaced the Multifibre Arrangement (MFA).[4] The ATC provides a blueprint for the removal of restrictions

Table 2: Share in Total Export

Commodities	India	Malaysia	Thailand	Korea	Indonesia	China
Gold, silverware and jewellery	2.84	2.27	4.46	1.57	1.60	6.68
Cotton fabrics, woven	3.40	.638	1.28	2.47	1.54	16.45
Woven man-made fibres/fabric	.821	.819	1.97	20.26	3.64	7.64
Other woven textile fabric	2.46	NA	.196	4.14	.045	10.83
Men's non-knit outwear	.87	.71	3.16	1.93	2.59	18.4
Women's non-knit outwear	5.12	.50	2.81	2.19	2.19	15.6
Leather	3.35	NA	1.82	10.32	.297	2.35
Leather manufactures	6.89	NA	3.79	5.00	1.06	9.00
Alcohol, phenols, etc	.420	2.19	.195	.696	.717	1.65
Automatic data processing equipment	.071	1.76	2.32	3.19	.137	1.85
Textile, leather machinery	.221	.135	.172	3.13	.024	1.70
Paper mill machinery	.040	.088	.097	.680	.067	.318
Cycles, motorised, non-motorised	1.66	.873	2.62	1.18	1.64	5.84
Electrical machinery	.138	.926	.970	7.21	.502	3.15
Transistors, valves	.040	7.37	1.64	10.79	.080	.721
Coffee and substitute	2.39	NA	1.27	NA	4.11	NA
Organic and inorganic compounds	.993	NA	.072	.777	.022	2.61

Source: International Trade Statistics Year Book, 1995, United Nations.

Table 3 : Movements in External Competitiveness

	China	India	Indonesia	Korea	Malaysia	Singapore	Thailand
Inflation (CPI)							
1995	17.1	10	9.5	4.5	3.4	1.7	5.8
1996	8.3	9.2	7.9	4.9	3.5	1.4	5.9
1997	2.8	6.5	6.6	4.5	4	2	5.6
Exchange rate (percentage change)							
1995	-3.1	3.4	4.1	-4.0	-4.6	-7.2	-0.9
1996	-0.4	9.3	4.2	4.3	0.5	-0.5	1.7
1997	-0.3	2.5	24.2	18.3	11.8	5.3	23.8
External competitiveness							
(inflation – percentage change in the nominal exchange rate. Minus sign indicates rise in competitiveness)							
1995	20.2	6.6	5.4	8.5	8.0	8.9	6.7
1996	8.7	-0.1	3.7	0.6	3.0	1.9	4.2
1997	3.1	4.0	-17.6	-13.8	-7.8	-3.3	-18.2
Export unit value (dollars) (percentage change)							
1997 Q1		-1.8*	-15.8	-22.9	NA	-3.5	-2.7
1997 Q2			-12.9	-17.0	NA	-4.4	-2.1
1997 Q3			-23.9	-19.7	NA	-7.3	-4.0

Note: * This number pertains to April 1996 to March 1997.
Sources: International Financial Statistics, November 1998, IMF; *Asian Development Outlook*, 1998, ADB; *World Economic Outlook*, October 1998, IMF.

Table 4: Imports (US $) of India's Major Trading Partners
(Percentage change)

	1994	1995	1996	1997	1998
US	14.2 (12.2)	11.8 (8.8)	6.6 (9.2)	9.4 (13.9)	6.5
UK	10.5 (5.5)	16.2 (4.2)	8.4 (8.4)	8.9 (9.2)	1.6
Germany	11.4 (7.7)	20.5 (7.3)	-1.2 (2.9)	-2.9 (8.1)	3.7
Japan	13.9 (8.9)	22.0 (14.2)	4.0 (11.5)	-3.0 (-0.2)	-18.6
Industrial countries	13.4 (9.3)	18.2 (8.2)	3.7 (6.2)	2.5 (9.3)	2.0
Developing countries	13.8 (7.9)	21.7 (12.3)	7.0 (9.1)	5.4 (10.7)	-6.0

Note: Data for 1998 are for three quarters for Japan and Germany, remaining countries are for two quarters. Figures inside parentheses indicate growth in import volume.
Source: International Financial Statistics, December 1998, and *World Economic Outlook*, October 1998, IMF.

Table 5: Growth in Real GDP of Major Industrial Nations

Country	1991	1992	1993	1994	1995	1996	1997
Italy	1.1	0.6	-1.2	2.2	2.9	0.7	1.5
UK	-2.0	-0.5	2.1	4.3	2.7	2.2	3.4
France	0.8	1.2	-1.3	2.8	2.1	1.6	2.3
US	-0.9	2.7	2.3	3.5	2.3	3.4	3.9
Germany	5.0	2.2	-1.2	2.7	1.2	1.3	2.2
Major industrial nations	0.7	1.8	1.0	2.8	2.1	2.8	2.9
Memorandum item:							
Growth in Real Per Capita GDP							
Major industrial nations	NA	1.1	0.4	2.2	1.5	1.9	2.3

Source: World Economic Outlook, October 1998, IMF.

on textile imports by developed nations. Spread over a period of 10 years, the process involves four distinct phases. By 2005, quotas will come to an end, implying that the importing (buyer) countries can no longer discriminate between any exporting (seller) countries. As a result, there will be greater market access for exporters from India. That is the long-term benefit. However, in the short run there will be little or no gain for Indian apparel exports. As far as Indian apparel exports are concerned, they have for long faced major entry blockade to the US and European Union market. The US has already announced an integration programme for all the three stages. More than 90 per cent of the restraints on Indian exports to the US would remain till January 1, 2005. Similarly, although the European Union announced the first two stages of its integration programme, there were very few products of interest to India. It is very unlikely that the EU would integrate any more products during the entire phase-out period. Therefore, the integration programme is of little relevance to India (except a few products) and practically all the existing restraints on India's exports of clothing are set to continue till 2005.

Exports of some other Indian products have also been hurt by quantitative restrictions. For example, exports of soya products to Thailand come under quantitative restrictions. Indian agricultural exports, like rice, wheat, barley and other processed rice and wheat products, are badly affected due to quantitative restrictions imposed by South Korea and Japan. Indian meat exports come under quota regulations in Malaysia and Canada. Until recently, Indian rubber exports to Sri Lanka also came under quantitative restrictions, although the issue has now been resolved with the signing of the free trade pact with Sri Lanka.

Sanitary and Phytosanitary measures: An important ramification of neo-protectionism comes through sanitary and phytosanitary sanctions. These are standards set by any nation to safeguard the health of its consumers. Many Indian exportables are now facing blockade by such health or environment-related sanctions (Box 2). Interestingly, many countries are setting their health standards at a level higher than that prescribed internationally. For example, in case of tobacco exports, the internationally permissible level of DDT residue is four parts per million (ppm), while Japan and US had set their permissible level at less than 1ppm – the idea is again to block tobacco exports

Table 6: Status Report on Anti-Dumping Cases Against India

Serial No	File No	Product	Investigating Country	Date of Initiation	Present Status
1	NA	Carbon steel plates	US	March 8, 1999	A petition was filed on behalf of US steel industry; SAIL the main exporters of these products, was taken as defence; imposed antidumping duty of 72.49 per cent of the landed price
2	14/02/98-TPD	Elastic rubber tape	US	September 8, 1998	The case has been finally withdrawn
3	12/12/97-TPD	Mushrooms	US	February 2, 1998	Questionnaires sent to Indian companies like Agro Dutch Foods, Ponds (India), Alpine Bio-tech
4	10/6/97-TPD	Stainless steel bright bars	EC	August 30, 1997	Questionnaires sent to manufacturers, or exporters by EC.
5	10/3/97-TPD	Amoxycillin and Ampicillin	South Africa	October 4, 1996	Anti-dumping duty ranging from 8.3 per cent to 12.5 per cent imposed with effect from April 11, 1997
6	10/1/97-TDP	Potassium Permanganate	EC	April 26, 1997	EU has imposed a condition of minimum import price, of ecu 1,475 per tonne, on import from India.
7	10/13/94-TPD	Polyfelin sacks and bags	EC	April 1995	Definitive duty ranging from 0 to 3.6 per cent imposed on indian exporters with effect from October 10, 1997
8	10/5/95-TPD	Stainless steel Fasteners	EC	December 3, 1996	Definitive duty ranging from 47.9 per cent to 133.5 per cent imposed on Indian exporters with effect from September 4, 1997
9	14/10/93-TPD	Cotton-type bed linen	EC	September 13, 1996	After terminating the earlier case on July 9, 1996 a fresh case was initiated. Definitive anti-dumping duty ranging from 2.7 per cent to 24.7 per cent imposed on Indian exporters with effect from June 16, 1997.
10	10/8/95-TPD	Unbleached cotton fabrics	EC	July 11, 1997	It is reported that provisional antidumping duty ranging from 2.9 per cent to 16.9 per cent is being imposed against various exporters from India.
11	10/4/96-TPD	Synthetic fibre ropes	EC	July 1, 1997	Provisional anti-dumping duty at the rate of 53 per cent imposed against export by Garwaare Wall Ropes and 82 per cent against other exporters.
12	10/2/97-TPD	Hot-rolled coil and plate	Indonesia	December 19, 1996	Provisional duty ranging from 26 per cent to 38 per cent imposed on indian exporters with effect from April 22, 1997.
13	10/4/97-TPD	Cycle tyres	Brazil	April 1996	Final duty ranging from 38.6 per cent to 145.56 per cent imposed on Indian exporters with effect from September 29, 1997.
14	1/2/0/94-TPD	Single-speed free wheel	Brazil	January 17, 1994	Final duty varying from 7 per cent to 93 per cent imposed with effect from January 1, 1995 as domestic production of this item in Brazil has dropped significantly, on request from CGI, India, the government of Brazil has waived anti-dumping duty on Indian exports but has announced minimum price for each supply separately from India.
15	10/1/94-TPD	Stainless steel bars	US	December 30, 1993	Final duty ranging from 3.87 per cent to 21.2 per cent levied on Indian exporters on December 30, 1994. The case is under administrative review of the department of commerce, US.
16	14/3/93-TPD	Stainless steel fanges	US	December 31, 1992	Final duty ranging from 18.56 per cent to 210 per cent was imposed on December 28, 1993. Subsequently during the review in 1996, duty on M/s Akai Impex, India was reduced to 2.56 per cent.
17	NA	Synthetic fibre of polyester	EC	November 1990	Antidumping duty of 7.2 per cent imposed in January 1993. Duty is due to expire in January 1998 unless it is reviewed before that date. The present status is being ascertained from EOI, Brussels.
18	NA	Stainless steel round wire	US	March 1998	
19	NA	Elastic rubber tape	US	August 1998	
20	NA	Reserved mushroom	US	January 1998	

Source: Minstry of Commerce (2000).

originating from countries like India.

Other barriers: In this section we list some other important forms of NTBs affecting Indian exports.

(1) Import licensing: This is an administrative procedure requiring submission of an application to the relevant administrative body as a prior condition for importing any commodity. Its uses are now less than in the past. Complex procedures of import licensing, however, do affect Indian exports. For example, the construction sector in Japan has an extensive licencsing requirement. Similarly, Chinese licensing requirements encompass a large proportion (almost 50 per cent) of its total imports by value.

(2) Intellectual Property Rights (IPR): These are rights given to creators to prevent others from using their inventions, designs or other creations. Unfortunately, many countries lack strict IPR regulations. A weak IPR regime abroad by failing to provide proper safeguards against piracy can affect our exports. For example, Indian software exports to Singapore are not taking off because of rampant illegal copying.

(3) Rules of origin: This criterion is used to identify the origin of the product. Many developed nations are now using this criterion to shun exports from developing nations. For example, the US introduced this rule for textile exports. The new rule limits the flexibility of any Indian exporter willing to export finished garments from regions outside India.

(4) Service barriers: Service barriers are hurting the movement of Indian software professionals. There are two kinds of software services, namely, onsite services and offshore services. The problem arises in the case of the former, when professionals have to move out and provide services at the places of their clients. Indian software professionals are facing entry barriers, albeit in a different form, when they go to the US.

Although it seems there are reasons behind banning Indian exports, a closer look reveals that in some cases such measures are taken to prevent exports from developing countries. For example, poor fishermen of India cannot afford to catch shrimps through turtle-excluding devices. Therefore, any clause requiring catching shrimps using a turtle-excluding device is bound to harm Indian exports. India, however, won the case when it contested in the WTO dispute settlement body regarding its illogical imposition.

Consider now the shrimp exports to the EU. The amount of benzoic acid used as an additive in shrimps exports from places outside the EU is fixed at 0.2 per cent against 0.6 per cent on shrimps exports originating from within Europe. EU has also placed restrictions on nut exports from India on the ground that it contains aflatoxin – a carcinogenic element – although the amount of aflatoxin present is very small (0.00002 gram per kg of nuts). With this level, there are chances of one in every 7,500 nuts being contaminated with aflatoxin. With an estimated annual consumption of three lakh tonnes of nuts, an EU citizen runs the risk of eating a nut contaminated with aflatoxin at an interval of 27.4 years.[5] The frequency is thus extremely low and there is no justification in imposing a ban on nuts originating from India.

Germany, although it places restrictions on benzoic acid as a dye, allows the usage of busan 30, another dyeing agent and close substitute for benzoic acid. It is important to note that Germany is one of the major producers of busan 30. Similarly, when Germany wanted to buy more tea from non-traditional African producers under the expanded aid programme, sanitary and phytosanitary sanctions were imposed on Indian tea.

To sum up, developed nations as well as some developing nations are slowly changing to an era of neo-protectionism. They are successful in restricting imports from developing nations through various forms of NTBs. On their part, developing nations should try to do away with asymmetric information among the concerned agents. For example, many exporters are unaware of the quality requirements necessary for their exports. A significant number of NTBs can be avoided by apprising Indian exporters of quality requirements. Similarly, it is necessary to take the help of WTO to sort out disputes arising from various trade barriers, such as anti-dumping duties.

We now present a comprehensive list of the commodities and the origins of cor-

Box 2: Sanitary and Phytosanitary Measures

Year	Imposing Nation	Indian Exports	Reasons Cited for Prohibiting Entry
1995	Germany	Tea	Pesticide residue
1995	US	Fresh or frozen shrimps	Filth, decomposition and presence of salmonella.
1996	US	Fruits and vegetables	Does not conform to health standards set by the US.
1997	US	Shrimps	Caught with turtle-excluding devices
1996	EU	Cooked shrimps	Usage of benzoic acid as an additive.
1989	EU	Milk	Usage of milk hormone.
1999	EU	Groundnuts	Presence of aflatoxin (a carcinogenic element)
1983	UAE and Saudi Arabia	Buffalo meat	Presence of cattle plague (rinderpest)

Source: Government of India (1997).

Box 3: Origin and Impact of Major Non-Tariff Barriers

Indian Exports	Types of Restrictions	Imposing Country
Textiles and apparel	Quota	EU, US, Canada
Soya products	Quota	Thailand
Rice, wheat, barley	Quota	Japan, South Korea, Malaysia
Cast iron, sulphonic acid	Countervailing procedures	US
Steel bright bars	Countervailing procedures	EU
Steel, cast iron	Import licensing	Japan, China, Malaysia
Indian 'ghagras', rayon scarves,	Inflammability criteria	US
Tea	Sanitary and phytosanitary measures	Germany
Cooked shrimps, milk, groundnuts, fruits and vegetables	Sanitary and phytosanitary measures	EU
Leather	Sanitary and phytosanitary measures	Germany
Buffalo meat	Sanitary and phytosanitary measures	UAE and Saudi Arabia
Stainless steel bright bars, potassium permanganate, polyfelin sacks and bags, stainless steel fasteners, cotton bed linen, unbleached cotton fabrics, synthetic fibre ropes, synthetic fibre of polyester	Antidumping procedures	EU
Stainless steel round wire, elastic rubber tape, preserved mushroom, stainless steel fanges,	Antidumping procedures	US
Amoxycillin and Ampicillin	Antidumping procedures	South Africa
Cycle tyres, speed wheel	Antidumping procedures	Brazil
Hot-rolled coil and plate	Antidumping procedures	Indonesia
Gems and jewellery	Service barriers	Japan
Computer software professionals	Service barriers	US

Source: Government of India (1996a, 1997).

responding NTBs, which are adversely hurting the exports of these commodities (Box 3). Needless to mention, other factors such as infrastructural bottlenecks, procedural problems and exchange rate adjustments, are equally important in explaining their export behaviour. Table 8 clearly reveals that various non-tariff barriers have affected Indian exports adversely.

II
Supply Constraints

Procedural Bottlenecks: India, unlike most other developing countries (for example, Sri Lanka), does not have simple rules and procedures to assist its exporters. Licence raj, a word disliked by all exporters and entrepreneurs still continues to worry Indian exporters. A maze of government orders, regulations, rules and procedures have certainly played an important role in slowing down the growth rate of Indian exports by raising the cost of production.

Table 7: Indian Apparel Quota Utilisation

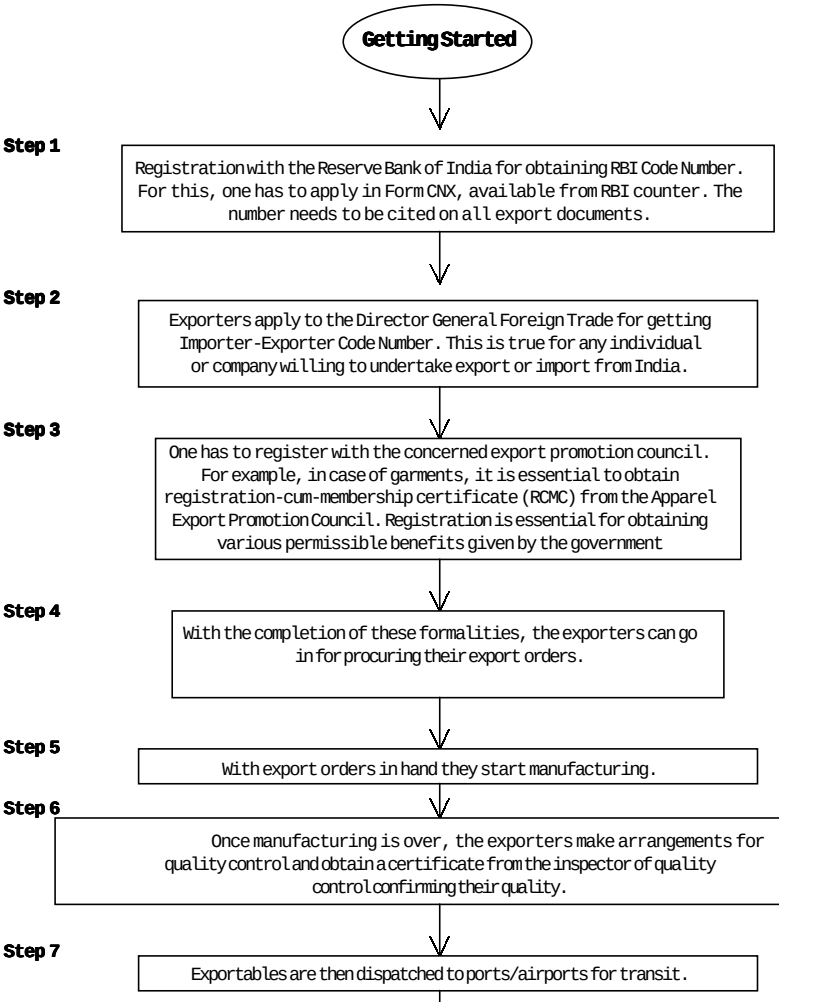
Country	Year	Quota Level	Shipment Passed (Over Quota Level)	Quota Utilisation (Per Cent)
US	1995	271799	264610	97.36
	1996	289837	308668	106.50
	1997	301808	316920	105.01
EU	1995	272515	295238	108.34
	1996	285710	313398	109.69
	1997	299602	312141	104.19
Canada	1995	33865	39122	115.52
	1996	36219	39313	108.54
	1997	32602	34930	107.14

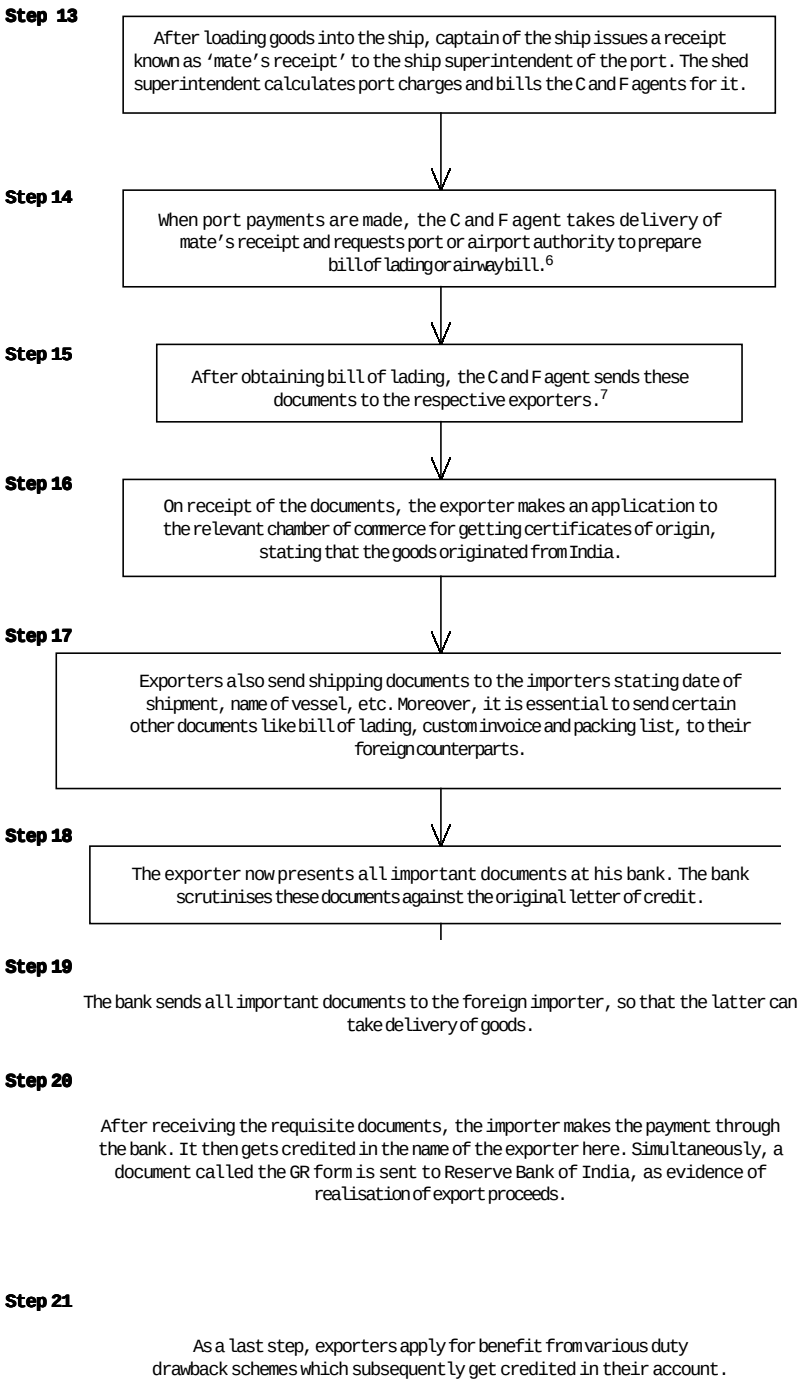
Note: The units are in pieces and quota utilisation could be greater than 100 per cent due to carryforward or carryover.
Source: *Handbook of Export Statistics, 1998,* Apparel Export Promotion Council, New Delhi.

Table 8: Changes in Export Growth ($) Due to Imposition of Non-Tariff Barriers

Commodities and Countries	1994-95	1995-96	1996-97	1997-98
Leather				
Germany	12.76	9.66	-8.59	16.40
Iron ore				
Indonesia	-37.67	54.17	-1.25	-90.70
Ready-made garments				
US	51.94	5.58	11.60	-0.70
Cotton yarn, fabrics, made-ups				
US	32.95	23.65	37.25	-9.25
Chemicals				
EU	32.20	21.49	8.09	26.07
South Africa	269.88	64.77	50.51	-14.32
Marine products				
EU	10.11	14.56	-19.86	-49.98
US	44.95	-31.98	10.98	16.89

Note: EU consists of six countries, namely, Italy, Germany, France, United Kingdom, Spain and Belgium. Most of the NTBs were imposed during 1996 and 1997 (see Box 1 and Table 9).
Source: *Reports on Currency and Finance*, Vol.II, 1998-99, Reserve Bank of India.





An exporter has to fill a large number of forms (100 to 300) besides documenting hundreds of other legal and procedural clearances. A study undertaken by Nair and Kaul (1996) on Indian garment exports highlighted this issue. The procedures schematically represented below can be taken as representative for all other Indian exports [Nair and Kaul 1996].

However, in reality, an exporter faces more barriers than those documented above. Right from the stage of obtaining the RBI Code till obtaining benefits of duty drawback, exporter's lot is one of delay, harassment and paying bribes at every step. For example, one has to pay bribes for getting code numbers and benefits from various export promotion schemes, like the export promotion capital goods (EPCG) scheme,[8] advance licence scheme,[9] duty drawback scheme[10] and export-oriented unit (EOU) certification.

Domestic distortions: Domestic distortions prevent firms from attaining globally competitive economies of scale and therefore discourage them to produce quality items. Primarily, there are two types of distortions: those in the product markets, and distortions in the factor markets. In India, distortions in domestic product markets arise mainly because of monopoly sellers and production externality. Likewise, distortions in factor markets arise due to the presence of trade unions and rigid labour and land laws.

Product Market Distortions

(1) Monopoly sellers: In the case of monopoly, the price exceeds marginal cost leading to sub-optimal levels of production and consumption. For example, in India, in most cases antidumping duties are imposed following petitions from producers who are monopolists. Irrational imposition of antidumping duties allows these monopolists to sell products at a higher price. Indian exports suffer as some of these products are used as intermediate inputs for their production. Antidumping duties on isobutyl benzene (used for manufacturing Ibuprofen), 3,4,5 trimethoxy benzaldehyde (for manufacturing Trimethoprim) and acrylonitrile butadiene rubber (used in tyre manufacturing) are imposed following petitions from Vinati Agro, Alpha Drug India and Gujarat Apar (all are monopolists), respectively. Needless to say, Ibuprofen, Trimethoprim and tyres are major Indian exports.

(2) Production externality: When there are instances of production externality, private production levels exceed or fall short from the socially optimal ones. Production externality can occur because of government decision to promote growth in certain sectors at the expense of others. For example, considering the textile industry in India, the government always favours growth of the handloom sector against the mill sector. The industrial licensing policy reserves production of certain outputs such as cotton fibre and fibre with limited inter-fibre flexibility, for small-scale units. There is also a policy bias against synthetic and man-made fibres relative to cotton fibres and this continues in the form of higher excise duties on synthetic and man-made yarn. The excise duty on cotton yarn in 1997-98 was 5.75 per cent against 20.7 per cent on blended yarn and 34.5 per cent on

polypropylene filament yarn [World Bank 1997]. Production externality arises because of such distortions in domestic policies and tariff regime. Again, Indian tariff rates are still high despite their rationalisation from a high of 350 per cent (maximum tariff) during 1990-91 to 52 per cent at present. Table 9 enumerates this. Many Indian exportables with high import contents are likely to suffer because of high tariffs.

Factor Market Distortions

Factor market distortions occur when prices of various inputs are higher than their respective marginal products. This results in their sub-optimal usage.

(1) Trade unions: Due to presence of trade unions, wages in labour markets are higher than the corresponding marginal products. In the presence of surplus labour higher wages result in underemployment equilibrium.

(2) Labour laws: Distortions arising out of rigid labour laws affect exports either by raising their cost or by reducing their production below the socially optimal one. Rigid labour laws create distortion in the labour market [Mookherjee 1995]. Besides creating difficulties in implementing productivity-linked incentive schemes (both in public and private sector factories), labour laws prevent re-deployment and retrenchment of surplus labour.

(3) Land laws: Urban Land (Ceiling and Regulation) Act (ULCRA) of 1976 creates distortion in the land market. It acts as a constraint in the process of industrial restructuring by preventing firms from trading off their excess land to augment their production capacities [Anant et al 1992].

Infrastructural Bottleneck[11]: A recent survey by the World Economic Forum, Geneva, places India in the 50th position (out of a total sample of 53 countries), when competitiveness is measured in terms of overall infrastructure development.[12] Perhaps this explain why, despite having a better industrial base and possessing more prerequisites for industrial growth than South Korea, Malaysia, Thailand and Indonesia during the 1960s, India now figures well below them in terms of export growth. India's two important export centres – Tirupur in the south and Moradabad in the north – clearly reflects the sorry state of Indian infrastructure. Tirupur, from where the world's largest garment brands are sourced, till recently did not have a sustainable water supply system. Roads are pathetic and this was the first town where exporters built a bridge connecting two roads (thereby reducing the distance from the main town by 15 km), since the state government refused to part with the necessary finance. The situation is not very different in Moradabad, the country's largest brassware production centre, which lacks proper roads, telecommunications and rail link facilities. Table 10 points out the recent development of the Indian infrastructure sector.

Poor Infrastructural Facility in India

Ports: Indian ports are overutilised. Major ports such as Chennai, Mumbai, Tuticorin and Visakhapatnam, have consistently handled more cargo than their capacity. As a result, they are less efficient than other Asian ports like Singapore, Hong Kong and Colombo. For example, in Singapore, the average ship turnaround (ASTA) for a container ship is only 6-8 hours compared with an average of six days in India. Cargo ships from Indian ports, therefore, become cost inefficient, having a high detention cost of around US $ 15,000-20,000 per day. According to an estimate by the World Bank, container delays at Indian ports cost about $ 70 million per year. Port capacities are also not increasing. There has been no increase in capacity pertaining to fertilisers, POL, coal and iron ore berths between March 1992 and March 1997. The binding nature of port capacities increases both free on board (fob) and cost insurance and freight (cif) prices of our exports, as exporters have to bear detention cost in terms of paying for warehouse facilities, higher insurance charges and others.

Airports: Indian airports are ill-equipped to handle any cargo. Non-availability of jumbo x-ray machines makes it compulsory to open up all containers for inspection. Perishable commodities often rot in the absence of quarantine facilities. Moreover, clearing of export cargoes takes 8-21 days.

Roads: Indian national highways account for only 1.7 per cent of the road length, but carry around 40 per cent of the total traffic. Between 1951 and 1994, average annual growth of road length has been 8-10 per cent. On the other hand, the total number of vehicles has grown 80-fold from 0.3 million to 25.3 million. About 17 per cent of the national highway system is single lane. As a result, commercial vehicles in India run only 200-250 km on average per day compared with 500-600 km per day in developed nations. At present, India loses around Rs 250 billion per annum due to bad roads.

Power: The growth rate of India's power generating capacity is gradually decreasing. During the 1980s, the power-generating capacity increased on average by 8.4

Table 9 : Simple Average Tariffs and Maximum Duty Rates for India and Other Countries

Country	Year	Simple Average Tariff		Maximum Duty Rate	
		Manu-factured	Primary	Manu-factured	Primary
India	1997	31.3	25.7	260	260
China	1997	17.8	17.8	121.6	121.6
Malaysia	1997	12.2	4.1	289.8	467.1
Japan	1997	4.8	9.1	50.9	50.9
Indonesia	1996	13.5	12.3	100	121.6
Korea	1996	8.2	21.2	495.8	458.2
Thailand	1996	NA	NA	200	100
Brazil	1997	12.6	8.7	63	46
Chile	1997	10.9	11.0	NA	NA
US	1996	6.0	5.8	48	350
EU	1997	5.6	10.4	26.4	103

Source: UNCTAD TRAINS Database

Table 10: Growth Rates of Core and Infrastructure Sector

Sectors	1993-94	1994-95	1995-96	1996-97
Infrastructure sectors				
Electricity generation	7.5	8.1	8.4	3.8
(a) Hydel	0.7	17.5	-12.2	-5.5
(b) Thermal	9.5	5.6	14.8	6.1
Coal production	3.3	3.2	6.4	5.7
Saleable steel	6.2	8.3	8.9	1.6
Crude oil	0.3	19.3	9.1	-6.5
Refinery throughput	1.5	4.1	3.9	7.2
Cement	5.7	9.9	6.6	8.6
Overall	5.0	9.1	7.9	2.6
Other infrastructure sectors				
Railway	2.5	1.7	7.0	4.7
Cargo handled	7.6	10.0	9.1	5.6
Telecommunications				
New telephone connections	44.0	23.3	17.5	27.1

Note: The figures indicates percentage growth over previous year.

Source: *Indian Economic Survey 1998-99*, Ministry of Finance, Government of India.

Table 11: Competitiveness in Electronic Commerce

Country	Per Capita Investment in Telecom (in US $)	Number of Internet Hosts per Million Inhabitants	Computers Per Thousand Inhabitants
India	2.7	3.2	1.5
Indonesia	10.6	45.7	4.5
Phillippines	11.6	47.7	8.8
Thailand	7.3	155.5	1.68
South Korea	97.4	1442.1	130.5
Malaysia	88.2	1.23	43.2
China	10.6	16.2	3.0

Source: *The Global Competitiveness Report*, 1998, World Economic Forum, Geneva.

per cent per annum. However, between 1990-91 and 1994-95, it declined to 5 per cent, before touching a low of 3 per cent during 1995-96.

Telecommunications: India's position in the world is at number 14, going by the absolute number of telephone lines [GoI 1996b]. Currently, it enjoys the services of more than 10 million telephone lines. However, regarding penetration of telephone lines, India's position is far behind other developing countries. Tele-density in India is only 1.3 (as on March 1996), compared with 14.7 in Malaysia, 8.1 in Brazil, 4.7 in Thailand and 2.3 in China. Today, tele-densities in Delhi and Mumbai are approximately 10 per 100 (all-India figure 1 per 100) compared with 48 in Singapore and 52 in Hong Kong, respectively. Telephone service in India is price-inefficient, as the price per call is high because of low penetration of telephone lines. In an era when electronic commerce[13] is fast emerging as a new channel of international business, poor telephone networks and lack of computers and Internet facilities is going to harm Indian exporters immensely. Table 11 depicts Indian competitiveness vis-a-vis other south-east Asian countries in terms of electronic commerce.

A serious shortcoming for India in global electronic commerce is the weak infrastructure facility. India is way down the ladder (Table 11) in terms of carrying out investment in telecommunications, availability of computers and Internet facilities, compared with south-east Asian nations. Indian exporters are, therefore, unable to make use of increasing business opportunities through electronic means. For example, between 1996 and 1997, the sales of Amazon.com – the first online (Internet) bookstore -increased by a factor of 9.25, from US $ 16 million to US $ 148 million, reflecting the immense business prospects of electronic commerce. Auto-by-Tel, a web-based automotive marketplace, processed a total of 3,45,000 purchase requests for autos through its Web site in 1996, making a business of US $ 1.8 billion.[14] What prevents Indian exporters similarly from doing business is our weak electronic infrastructure.

IV
Conclusion

The turnaround in Indian exports during 1996-97 was primarily led by a decline in the growth rate of our *export volume*. Our analysis in the previous sections clearly brings out the nature of demand-side factors, as opposed to the supply-side bottlenecks, which cannot be eliminated in a short time. However, the removal of supply bottlenecks is necessary to maintain a high export growth in a sustained way.

We do not have sufficient evidence to attribute the decline in the growth rate of our export *volume* to a decline in potential demand. However, actual demand was definitely constrained by a sharp decline in India's competitiveness due to nominal depreciation in many south-east Asian countries. As discussed above, the imposition of various forms of non-tariff barriers by developed countries during 1996-97 also led to a sharp drop in the demand for Indian exportables.

Supply-side factors, (such as, procedural delays, poor infrastructure) are extremely important for maintaining a high export growth in a sustained way, but these bottlenecks cannot explain a sharp drop in export growth in 1996-97. Nevertheless, the revival of export growth would have been easier if supply constraints are eliminated. EPW

Notes

[The paper was presented at the seminar 'Industrialisation in a Reforming Economy: A Quantitative Assessment', organised by the Centre for Development Economics, Delhi School of Economics, Delhi.]

1 See preliminary report on NTB (November 1999, p 3), economic division, Ministry of Commerce.

2 In the present WTO agreement, antidumping duty is defined as "measures against imports of product at an export price below its normal value (usually price of the product in the domestic market of the exporting country), if such dumped imports cause injury to the domestic industry in the territory of the import competing party" (Article VI of GATT). For detail analysis see Banik (1998).

3 Such pricing refers to the practice of selling a product far below its cost of production, with the intention of driving the competitors out of the market. However, once the low price charged by incumbents starts to serve as an entry barrier, in the long run foreign producers raise the prices to make up some of their early losses.

4 A framework for bilateral agreements or unilateral actions establishing quotas limiting import into countries, whose domestic industries were facing tremendous damage from massive rise in imports.

5 Report submitted to the Ministry of Commerce and Indian Commission to the European Union, Brussels, by the Indian Oil Seeds and Produce Exporters Association, Mumbai, 1998.

6 Bill of lading is a document issued by the shipping authority acknowledging receipt of goods for shipment.

7 Documents contain commercial invoice attested by customs, export promotion copy of shipping bill, drawback copy of shipping bill, full set of clean on board bill of lading along with non-negotiable copies, original contract order and custom invoice copy.

8 The export promotion capital goods scheme facilitates import of capital goods, both new and old, at a concessional rate of customs duty of 15 per cent.

9 Indian government has established under the duty exemption scheme a licensing system for duty-free imports of raw materials, components, consumables, parts, accessories, packing materials and computer software required for direct use in manufacture of products to be exported.

10 This entails drawback of duty, such as antidumping and countervailing, paid in the process of importing inputs used for producing exports.

11 This section draws heavily on *The India Infrastructure Report* [GoI 1996b], prepared by the expert group on commercialisation of infrastructure projects set up by the Department of Economic Affairs, Ministry of Finance, under the chairmanship of Rakesh Mohan.

12 See *The Global Competitiveness Report*, 1998, World Economic Forum, Geneva.

13 Electronic commerce refers to commercial transactions involving both organisations and individuals, based upon processing and transmission of digitised data, including text, sound and visual images. The broad definition includes commercial transactions through credit cards, telephone purchases and electronic money transfer. The narrow definition focuses on Internet (computer) based commerce.

14 Source: *Emerging Digital Technologies* (1998).

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