

Import Intensity of Exports In India

4.72 In view of the changing contours of Indian trade over the years, especially since the 1990s, one pertinent question is the effect of imports on India's exports - more specifically how much of imports get translated into exports. Import intensity of exports can simply be defined as the degree of value addition of an imported item that subsequently gets exported. In the Indian context, gems and jewellery is a typical example of such export product having high import intensity. Another way of defining import intensity of exports is to identify those exports which are heavily dependent on imported inputs. These imported inputs may belong to the same sector or a different sector altogether. Imports may not only have a direct impact on exports through the import content but may also have an indirect effect in augmenting exports through other indirect spillover channels. Thus, a broader definition of import intensity of exports incorporates not only the direct quantum of imports that is channelled to exports but also the indirect effects of imported products that augment exports.

4.73 Due to difficulties in identifying a one-to-one correspondence between the items imported and those exported, various methodologies have been used to arrive at estimates of import intensities of exports. One approach is to measure the Net Foreign

Exchange Inflow Rate (NFIR) which is the ratio of net exports (*i.e.* exports of an industry minus imported raw material of that industry) to total exports of a specific industry (Mani, 1991 and Sathe, 1997). Another approach pertinent to India is the analysis of import licenses issued to registered exporters under different export promotion schemes (EXIM Bank, 1991). The results of most of these studies indicate that import intensity of Indian industry has declined over a period of time indicating growing value addition (Table 4.40).

4.74 Based on the ITC (HS) commodity classification, a select set of items could be identified that are mainly imported for export purposes, such as 'gems and jewellery', 'chemicals and allied products' and 'textile yarn, fabrics, made-ups', *etc.* A comparison of corresponding finished products that are exported by value-adding these import items show a high import intensity in 'gems and jewellery' and 'chemicals and allied products'. The extent of such import intensity, however, appears to be declining for both the items since the early 1990s (Table 4.41).

4.75 The eight Special Economic Zones (SEZs) of India contribute about 4 per cent of India's exports. Industries in these SEZs, however, have a high import intensity. The average import intensity for the industries in these zones during the 1990s has been

Table 4.40: Import Licenses under Export Promotion Schemes

(Rupees crore)

Year	Value of Import Licenses	Share of Import Licenses in total exports (in per cent)	Share of Import Licenses in total imports (in per cent)	Value of Import Licenses as a percentage of export obligations
1	2	3	4	5
1990-91	12,979	39.9	30.0	42.6
1991-92	14,643	33.2	30.6	34.5
1992-93	18,232	34.0	28.8	38.5
1993-94	19,292	27.7	26.4	43.1
1994-95	27,017	32.7	30.0	51.2
1995-96	31,325	29.5	25.5	45.7
1996-97	35,025	29.5	25.2	54.0
1997-98	31,642	24.3	20.5	47.0
1998-99	34,741	24.9	19.5	33.1
1999-2000	36,376	22.8	16.9	28.2
2000-01	49,461	24.3	21.4	33.6
2001-02	58,515	28.0	23.9	35.9
2002-03	58,217	22.8	19.6	24.7

Note : 1. Import licenses are for DES (Duty Exemption Scheme), DRS (Duty Remission Scheme), DFRC (Duty Free Remission Scheme), DEPB (Duty Exemption Passbook Scheme), Advance License, Intermediate License, Physical Export, Deemed Export, Release Order, Special Imprest License, Diamond Gem & Jewellery Export Promotion, and EPCG (Export Promotion Capital Good Scheme).

2. From 1997-98, in case of DEPB, value refers to duty credit.

Source : Ministry of Commerce and Industry, Government of India.

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Table 4.41: Import Intensity of Select Export Commodities

	1990-91	1999-2000	2001-02	2002-03 P
1	2	3	4	5
Imports of Export Related Items (US \$ million)				
Pearls, Precious and Semi-Precious Stones	2,083.1	5,436.0	4,622.6	6,054.0
Organic and Inorganic Chemicals	1,275.6	2,866.3	2,799.6	2,965.6
Textile Yarn, Fabrics, Made-ups, etc.	246.7	538.4	747.5	956.1
Exports of the above items (US \$ million)				
Gems and Jewellery	2,924.1	7,502.3	7,306.3	8,853.5
Chemicals and related Products	1,715.2	4,692.4	6,051.8	7,030.6
Textiles and Readymade Garments, <i>of which,</i>	3,775.9	8,953.8	9,474.9	10,310.4
Readymade Garments	2,236.1	4,765.1	5,006.6	5,373.5
Textile Yarn, Fabrics, Made-ups, etc.,	1,539.8	4,188.7	4,468.3	4,936.9
Import Intensity (in per cent)				
Gems and Jewellery	71.2	72.5	63.3	68.4
Chemicals and Allied Products	74.4	61.1	46.3	42.2
Textile Yarn, Fabrics, Made-ups, etc.*	11.0	11.3	14.9	17.8

* Imports of ready-made garments as a percentage of exports of textile yarn, fabrics, made-ups etc. are taken.

P Provisional.

Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

over 50 per cent. Even in this case, import intensity of exports has fallen over the years (Table 4.42).

4.76 In addition to the analyses of import intensity of exports, it is also useful to examine the link between imports and overall industrial production (Box IV.4). Furthermore, analysis of import elasticity of output⁸ suggests that imports have grown at a much faster rate with respect to GDP for India in the

1990s as compared to the 1980s which is consistent with the liberalisation of trade policy during the 1990s and with the experience of some of the other emerging market economies (Table 4.43).

4.77 Summing up, there have been compositional shifts in the structure of India's imports towards higher technology intensive and export oriented products during the 1990s. The position of major gainers and

Table 4.42: Imports and Exports by SEZs/EPZs during the 1990s

(Rupees crore)

Year	Imports by SEZs/EPZs	Share of SEZ/EPZ Imports in Total Imports (in per cent)	Exports from SEZs/EPZs	Share of SEZ/EPZ Exports in Total Exports (in per cent)	Percentage of SEZ/EPZ Import to SEZ/EPZ Exports
1	2	3	4	5	6
1990-91	640.4	1.5	986.7	3.0	64.9
1991-92	753.1	1.6	1,192.8	2.7	63.1
1992-93	942.7	1.5	1,376.3	2.6	68.5
1993-94	1,346.3	1.8	1,959.9	2.8	68.7
1994-95	1,812.6	2.0	2,653.1	3.2	68.3
1995-96	2,268.6	1.8	3,235.6	3.0	70.1
1996-97	2,514.0	1.8	4,338.9	3.7	57.9
1997-98	2,661.9	1.7	4,817.9	3.7	55.3
1998-99	2,120.3	1.2	5,252.5	3.8	40.4
1999-2000	3,079.7	1.4	6,707.9	4.2	45.9
2000-01	3,669.4	1.6	8,552.3	4.2	42.9
2001-02	3,984.7	1.6	9,189.6	4.4	43.4
2002-03	5,708.2	1.9	10,053.4	3.9	56.8

Note: EPZs: Export Processing Zones.

Source: Ministry of Commerce and Industry, Government of India.

⁸ Measured in terms of change in the ratio of average growth in merchandise imports (in current dollar) and average growth in GDP (in current dollar).

Box IV.4

Relationship between Imports and Industrial Growth

Imports, especially those of capital goods, are often taken as a leading indicator for industrial production and to gauge the near-term investment climate in the economy. A sizeable portion of imports gets channelled as inputs for industrial production. A definite relationship between imports and industrial production, however, may be difficult to establish as the imported commodities could be either complements or substitutes to domestic industry. As a result, empirical test of these relations remain largely country-specific. In the Indian case, non-oil imports, thus far, have been mostly in the form of capital goods, raw materials, and intermediate goods, which complement industrial production.

A number of studies have attempted to establish the link between imports and industrial growth in the Indian context. Although some studies suggesting that imports would have a negative effect on the industrialisation process in India have turned out to be contentious, a number of recent analyses show a positive relation between industry-related imports and industrial growth (Nambiar, Mungekar and Tadas, 1999; Neogi and Ghosh, 1998; Singh and Ghosh, 1988).

In order to investigate the relationship between imports and industrial production in the Indian context since

liberalisation, a study was undertaken using quarterly import data (aggregated from the monthly data of the DGCI&S) and quarterly GDP at current prices for industries. For this purpose, a set of 33 import items (mainly capital goods, intermediaries and POL) out of a total of 68 items based on ITC (HS) classification as provided by the DGCI&S were identified and quarterly figures of these 'select imports' were analysed with respect to quarterly data on 'industry' sector gross domestic product at current prices for the period April 1996-March 2003. This analysis was further disaggregated to quarterly 'manufacturing' sector output under 'industries'. After correcting for non-stationarity of the data series and selecting the appropriate lag using standard information criteria, Granger test was undertaken to ascertain the direction of causality. After verifying the direction, ordinary least square estimation was performed to estimate the system in an unrestricted vector autoregression (VAR) framework. The results obtained from the above exercise show that (i) imports have a unidirectional impact on industrial output, (ii) both total imports and the 'select imports' positively affect industrial output as also manufacturing output with an approximate lag of four quarters.

losers in terms of imports since 1990-91 provides a mirror reflection of the changing growth pattern of the economy. The industries that have shown the least import propensity since the 1990s were the medium to low technology labour intensive products where Indian industry itself has acquired comparative advantage. The analysis reveals that the import intensity of India's exports appears to be steadily declining. Moreover, the relationship between imports

and industrial production reveals that imports are one of the leading indicators of industrial output.

4.78 In this context, it is interesting to note that despite significant liberalisation of imports - reduction in tariffs, phasing out of QRs and allowing official bullion imports - the country's current account deficit has remained modest during the 1990s. Furthermore, the overall balance of payments has been in surplus in recent years and the country's foreign exchange reserves in terms of import cover have improved significantly from around 2.5 months at end-March 1991 to over 14 months of import cover by end-December 2003. Thus, in contrast to fears expressed at the time of the economy's opening up, import liberalisation policies, in conjunction with overall structural reforms, have considerably strengthened the country's external sector since 1990-91.

Table 4.43: Import Elasticity of Output

Country	1980-90	1991-2000
1	2	3
Argentina	-1.6	2.8
Brazil	-0.3	2.1
China	2.1	0.8
India	0.7	1.6
Indonesia	1.5	-9.9
Korea	0.8	1.8
Malaysia	1.6	1.5
Mexico	9.1	2.9
Philippines	1.4	2.1
Taiwan Province of China	1.1	1.0
Thailand	1.4	2.7

Source: Trade and Development Report, UNCTAD, 2003.

V. INDIA'S TRADE: SELECT ISSUES

4.79 In this section, a set of issues pertinent to India's trade that are of policy relevance are analysed. First, an empirical evaluation of the determinants of exports and imports and the extent of the pass-through of exchange rate on the prices

of tradables is attempted. Second, the effects of the movement in exchange rate and import prices on domestic prices are estimated. Third, issues relating to terms of trade movements for India over the last three decades are briefly examined. Next, the relationship between foreign investment and trade in India is investigated. Finally, we focus on the magnitude and evolving importance of East Asia and China in India's trade dynamics.

Determinants of Exports and Imports and Exchange Rate Pass Through

4.80 Following the above discussion on changes in the volume and composition of exports as well as imports, an empirical evaluation of determinants of India's merchandise trade would be useful in providing further insights. Growth at home and abroad along with changes in domestic and foreign prices and exchange rate are believed, *a priori*, to be the key factors that have an effect on a country's trade. In particular, the degree of pass-through of exchange rate movements to export and import prices is crucial, especially, in the context of shift to flexible exchange rate regimes. In this regard, it is imperative to have empirical estimates of relevant elasticities. Since trade is subject to twin influences of demand and supply factors, the estimation of relevant parameters through a single equation framework presents problem of identification, resulting in simultaneity bias. In order to overcome this difficulty, simultaneous equations of demand and supply functions for exports and imports are estimated using the methodology pioneered by Goldstein and Khan (1978) which was emulated in several studies for different countries (Hussain and Thirlwall, 1984 for

Sudan; Patra and Pattanaik, 1994, and Ranjan, 1995 for India).

Export Demand

4.81 The volume of merchandise exports is assumed to respond to growth in world GDP, prices of exports facing the foreign buyer and world export prices. In the demand function for exports, it is expected that world GDP will have a positive sign. Indian export price is expected to have a negative sign indicating that if the price of Indian exports rise, demand for India's exports would switch to other competitors. World export prices is expected to have a positive sign indicating that if the world export prices rise, the incentive for production for exports increases. In the present empirical exercise (results reported in the footnote below), the long run elasticity of demand for India's exports with respect to growth in world GDP turns out to be around 1.54 confirming that with the growth in world trade, the pull factor operating on India's exports is sizeable. The signs of price of exports facing the foreign buyer and world export prices were as expected and statistically significant.⁹

Export Supply

4.82 The supply of exports is postulated to be a function of supply price of exports and domestic wholesale price index.¹⁰ The hypothesis underlying the export supply function is that as export prices increase relative to domestic price, production for exports becomes more profitable, which leads to more supply. When the supply function of exports is inverted to be expressed as export price function¹¹, it is expected that the export prices

⁹ The estimated export demand function is as follows:

$$\begin{aligned} \ln \text{REXPT} &= 2.18 + 0.50 \ln \text{REXPT}\{-1\} - 0.72 \ln \text{DEXPRICE} + 0.49 \ln \text{WEXPRICE} + 0.77 \ln \text{WGDP} + 0.15 \text{DUM94} \\ &\quad (2.81)^{***} \quad (5.69)^{***} \quad (-3.78)^{***} \quad (2.87)^{***} \quad (3.64)^{***} \quad (3.17)^{***} \\ \bar{R}^2 &= 0.99 \quad h = 1.47 \quad \text{SEE} = 0.06 \end{aligned}$$

where REXPT = Export volume (exports in rupee terms deflated by export prices)
 DEXPRICE = Domestic export price (index of unit value of exports deflated by a nominal exchange rate index)
 WGDP = World GDP
 WEXPRICE = World export price (unit value index in US dollar terms)
 DUM94 = Dummy for policy changes since 1993-94

¹⁰ $\ln \text{REXPT}^s = \ln a_0 + a_1 \ln (\text{EXPRICE} / \text{WPI})$

where REXPT^s = Quantity of exports supplied (same as REXPT)
 EXPRICE = Supply price of exports (unit value index in rupee terms)
 WPI = Domestic wholesale price equation

The figures in bracket indicate t-values. *, **, *** indicates statistical significance of the variable at 10 per cent, 5 per cent and 1 per cent level of significance, respectively.

¹¹ $\ln \text{EXPRICE} = \ln b_0 + b_1 \ln \text{REXPT}^s + b_2 \ln \text{WPI}$
 where $b_0 = -a_0 / a_1$, $b_1 = 1 / a_1$, $b_2 = -1$.

should have a positive relationship with all the independent variables. In the estimated equation, the signs of the variables were as expected and all the coefficients were significant.¹² The elasticities of export prices to changes in domestic prices turns out to be about 0.9.

Import Demand

4.83 The import demand function is specified in a traditional form. The volume of imports is determined by domestic activity variable and relative import prices. The price variable reflects domestic demand responses to changes in import prices as well as the degree of substitutability between domestic production and imports. In a broad sense, just as the activity variable represents internal influences, the price variable reflects the gamut of external factors that account for variation in import demand (Ranjan and Patra, 1992). In the estimated import demand function, the volume of imports appears to respond favourably with the growth in GDP.¹³ The elasticity of demand for imports with respect to domestic activity variable is 1.45 while the price elasticity of import demand is 0.74.

Import Prices

4.84 Given the assumption of small economy and the fact that the prices at which the imports take place in India are largely determined abroad, import prices are hypothesised to depend on world export prices and global output to a large extent. In the estimated

equation, it is seen that the growth in world GDP has a significant impact on Indian import prices with elasticity at 2.49. The results also support the hypothesis that the price of Indian imports depend on world export prices.¹⁴

Exchange Rate Pass-Through

4.85 The empirical estimates of the elasticities relating to demand for and supply of exports and imports can be used to arrive at the degree of pass-through of export and import prices as a result of exchange rate changes. The size of the pass-through coefficients throws light on the responsiveness of exports and imports to exchange rate changes. For instance, depreciation of exchange rate opens up two possibilities to the exporter - either to fully absorb the benefit thereof in terms of profits or to pass on the same to the rest of the world by way of lowering export prices in foreign currency for gaining competitive advantage. The degree of pass-through of exchange rate movements on prices of exports and imports depends on the extent to which the exchange rate movement is transmitted to export prices denominated in foreign currency and import prices denominated in the domestic currency. The degree of pass-through is said to be complete when export prices and import prices rise or fall to the full extent of exchange rate changes. The more the export prices in foreign currency fall as a result of depreciation in exchange rate, the higher is the degree of export pass-through making exports more competitive in the international

$$^{12} \text{Ln EXPRICE} = -3.30 + 0.30 \text{Ln REXPT} + 0.90 \text{Ln WPI}$$

$$(-3.93)^{***} \quad (2.25)^{**} \quad (7.93)^{***}$$

$$\bar{R}^2 = 0.99 \quad \text{DW} = 1.27 \quad \text{SEE} = 0.10$$

$$^{13} \text{Ln RIMP} = -6.19 - 0.74 \text{Ln RPM} + 1.45 \text{Ln GDPFC} + 0.15 \text{Ln OILPRICE} + 0.21 \text{DUM94}$$

$$(-6.44)^{***} \quad (-6.73)^{***} \quad (21.71)^{***} \quad (4.86)^{***} \quad (3.62)^{***}$$

$$\bar{R}^2 = 0.99 \quad \text{DW} = 1.80 \quad \text{SEE} = 0.08$$

where, RIMP = Real imports (imports in rupees deflated by unit value index of import prices)
 RPM = Relative import prices (ratio of import prices (IMPRICE) to domestic wholesale prices (WPI))
 GDPFC = Gross domestic product at factor cost
 OILPRICE = Crude Oil Prices (US \$ per barrel)

$$^{14} \text{Ln IMPRICE} = -5.87 - 0.49 \text{Ln RIMP} + 0.56 \text{Ln WEXPRICE} + 2.49 \text{Ln WGDP} - 0.18 \text{DUM73} + 0.31 \text{DUM92}$$

$$(-8.12)^{***} \quad (-3.69)^{***} \quad (5.54)^{***} \quad (5.68)^{***} \quad (-2.49)^{**} \quad (4.81)^{***}$$

$$\bar{R}^2 = 0.99 \quad \text{DW} = 1.28 \quad \text{SEE} = 0.09$$

where, IMPRICE = Import Prices (Unit value index of imports)
 WEXPRICE = World export prices
 WGDP = World GDP; DUM73: Dummy variables to capture first oil price shock;
 DUM92 = Dummy variable to capture rise in crude oil price during gulf war.

market. Similarly, the higher the import prices in domestic currency as a result of a depreciation in exchange rates, the higher is the degree of import pass-through, rendering imports costlier. In such a situation, exports with relatively higher import content would suffer a loss in competitiveness. The degree of exchange rate pass-through¹⁵ with respect to exports was found to be 0.82. A depreciation of 10 per cent in exchange rate of the rupee is expected to cause the dollar price of total export to fall by 8.2 per cent, while export prices in rupee terms will rise by 1.8 per cent. Similar studies for earlier periods suggest the degree of exchange rate pass-through in the range of 0.40 to 0.65. The sign of import pass-through was perverse (negative) as in similar empirical estimates (Thirlwall 1984, Patra and Pattanaik, 1994).

4.86 Given the estimated size of pass-through, it is apparent that sharp movements in exchange rate may have effects on trade. In the fiercely competitive trading environment where countries seek to expand market shares aggressively by paring down margins, even a small change in exchange rates can develop into significant and persistent real effects (Mohan, 2003). The impact of greater exchange rate volatility has been significantly different for reserve currency countries and for developing countries. For the former, mature and well-developed financial markets have absorbed the risks associated with large exchange rate fluctuations with negligible spillover on to real activity. Consequently, the central bank does not have to take care of these risks through its monetary policy operations. On the other hand, for the majority of developing countries, which are labour-intensive exporters, exchange rate volatility has had significant employment, output and distributional consequences, which can be large and persistent. All this has made the operation of monetary policy more difficult and complicated.

Pass-Through of Import Prices to Domestic Inflation

4.87 In the context of an economy which is getting progressively more open to trade, the movements in exchange rates and import prices are important factors influencing domestic inflation. Hence, the speed and size of pass-through coefficients of exchange rates and import prices to domestic

inflation are of great relevance. In the context of India, data for the period 1971-2002 were examined¹⁶ to determine the degree of pass-through from import prices to domestic inflation (all variables taken as log differences). The coefficient for the unit value index was highly significant for both wholesale price index and GDP deflator while the coefficient of the exchange rate turned out to be insignificant in varying degrees. The coefficients indicate that a unit change in the unit value index of imports leads to 0.22 unit of change in WPI and 0.12 unit of change in the GDP deflator.

Terms of Trade

4.88 As discussed earlier, in the emerging open economy framework, the changes in relative prices of exportables *vis-à-vis* importables of an economy (commonly referred to as the terms of trade) have been a subject of constant attention. In the Indian context, a number of studies have been undertaken to analyse the movements of terms of trade. An exercise for the period 1970-71 to 2001-02 shows that there has been a secular upward movement in terms of trade (in all the three measures: gross, net and income) during this period. The terms of trade "pessimism" has, therefore, not been validated in the Indian context. There has also been some apprehension regarding higher volatility of terms of trade following the opening up of the Indian economy. An analysis of India's terms of trade during the 1990s reveals that its volatility has come down significantly since 1992-93 as compared to the period between 1970-71 to 1989-90 (a period when the economy was relatively inward looking) (Table 4.44).

Table 4.44: India's Terms of Trade

Period		(1978-79=100)		
		Gross	Net	Income
1	2	3	4	5
1970-71 to 1989-90	Mean	126.9	111.1	114.6
	CV	19.6	17.3	34.9
1990-91 to 2001-02	Mean	134.6	134.7	510.9
	CV	10.1	9.6	33.3

Note : CV: Co-efficient of Variation

Source: Economic Survey, Government of India, 2002-03.

¹⁵ The degree of export pass through is measured as: $k = 1 / (1 - e_d/e_s)$, where e_d and e_s are price elasticities of demand and supply of exports, respectively. Value of k varies between zero and unity. Exchange rate pass-through of imports, on the other hand, is calculated as $n = 1 / (1 - m_s/m_d)$, where m_s and m_d are price elasticities of supply and demand of imports, respectively.

¹⁶ A simple linear model was estimated by ordinary least square regression with the wholesale price index (WPI) and GDP deflator (GDPD) as the dependent variables. The explanatory variables were the unit value index of imports in foreign currency and the exchange rate expressed as rupees per US dollar.

Table 4.45: Export Intensity of Foreign Investment Companies during the 1990s

(Per cent)

Items	Average			
	1990-91 to 2001-02	1990-91 to 1996-97	1997-98 to 2001-02	2001-02
1	2	3	4	5
Engineering	7.5	7.5	7.8	NA
Chemicals/Chemical Products	8.7	7.6	10.4	11.4
Tea Plantations	19.1	19.5	18.4	21.6
Trading/Whole Sale and Retail Trade	11.4	12.8	9.4	13.1
All Textiles	35.1	33.8	44.4	NA
Rubber/Plastic Products	8.7	8.4	9.1	10.7
Food Products and Beverages	12.4	NA	12.4	11.6
Machinery and Machine Tools	11.5	NA	11.5	13.7
Electrical Machinery and Apparatus	6.8	NA	6.8	10.3
Motor Vehicles and Other Transport Equipments	7.7	NA	7.7	7.6
Computer and Related Activities	14.3	NA	14.3	12.2
Total	8.9	8.2	10.0	11.2

NA: Not Available.

Note : Exports referred to in this table pertain to foreign currency earnings through exports only.

Source : "Finances of Foreign Direct Investment Companies", RBI Bulletin, Various Issues.

Foreign Investment and Trade

4.89 The liberalisation in trade and foreign direct investments (FDI) have brought to the fore their relationship in general and their contribution to growth in particular. FDI could be export promoting, import substituting or import enhancing depending upon various demand and supply factors in the global economy. In order to judge this impact, it may be important not just to look at the direct magnitude of trade orientation of FDI but also factor in various indirect effects such as technological advancement, dynamic effects (such as skill up-gradation), linkages (both forward and backward with local firms) and spillover and other related externalities (wherein foreign firms cannot capture all the productivity and efficiency benefit they bring to a host country) and reorientation of demand pattern. In the Indian context, although the export intensity (*i.e.*, exports as a percentage of the value of total production) of foreign investment companies has shown a marginal increase during the 1990s, the average intensity during the period 1990-91 to 2001-02 has been low. Among the industries, 'textiles', 'tea plantations' and 'computers and related activities' had the highest share of exports earnings in foreign currency to the

value of total production during the 1990s (Table 4.45).

4.90 Import intensity of these foreign investment companies during the 1990s has been, on an average, marginally higher than their export intensity. The average import intensity of these companies, however, remained almost the same since 1990-91. Foreign investment in industries relating to engineering (especially 'electrical machinery and apparatus' and 'machinery and machine tools') and trading (wholesale and retail) have the highest net import intensity (*i.e.* after netting export intensity from import intensity) (Table 4.46).

4.91 In India, FDI has been, therefore, much less important in driving India's export growth, except in information technology. As noted in the Medium Term Export Strategy 2002-2007, there is, however, immense scope for trade linked FDI in India particularly in services sector. The technological advances that have increased tradability have also opened up possibilities for export-oriented FDI in some services particularly in respect of functions undertaken typically in-house (*e.g.*, data processing, accounting).

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Table 4.46: Import Intensity of Foreign Investment Companies during the 1990s

(Per cent)

Items	Average			
	1990-91 to 2001-02	1990-91 to 1996-97	1997-98 to 2001-02	2001-02
1	2	3	4	5
Engineering	11.5	11.4	11.9	NA
Chemicals / chemical products	11.0	10.2	12.1	9.5
Tea plantations	0.7	0.7	0.7	0.5
Trading / whole sale and retail trade	11.6	5.9	19.7	22.8
All textiles	13.6	13.6	13.7	NA
Rubber/plastic products	10.8	9.9	12.1	12.7
Food products and Beverages	3.4	NA	3.4	4.0
Machinery and Machine tools	13.1	NA	13.1	12.0
Electrical machinery and apparatus	11.6	NA	11.6	12.4
Motor vehicles & other transport equipments	10.4	NA	10.4	10.6
Computer and related activities	3.6	NA	3.6	2.6
Total	10.7	10.6	10.7	9.7

NA: Not Available.

Note : Imports referred to in this table pertain to foreign currency payments through imports only.

Source : "Finances of Foreign Direct Investment Companies", RBI Bulletin, Various Issues.

India's Trade With East Asia and China

4.92 As part of India's overall trade strategy, trade with East Asian countries was specifically focused to cater to the rising demand from this region. As a result, during the 1990s, the average growth of

India's trade with East Asia far exceeded its overall trade growth. East Asia's share in India's trade has increased sharply during this period. The share of India in East Asia's trade, however, continues to remain very low (Table 4.47).

Table 4.47: Pattern of Trade in India and East Asia

1	2	1971-80	1981-90	1991-96	1997-2002
		3	4	5	6
Average Growth Rate (US \$ terms)					
India's Total Trade*	Exports	14.5	9.7	10.8	7.7
	Imports	21.7	7.2	8.6	10.1
India's Trade with East Asia	Exports	23.1	20.0	25.5	11.6
	Imports	83.7	11.9	22.4	19.5
East Asia's Total Trade	Exports	27.1	9.9	16.5	4.0
	Imports	31.1	11.5	16.1	7.1
World Trade	Exports	21.4	6.4	8.0	3.2
	Imports	21.2	6.4	7.7	3.8
Average Share (Per cent)					
East Asia in India's Trade	Exports	3.9	5.5	8.8	10.4
	Imports	3.0	8.7	9.2	18.1
India in East Asia's Trade	Exports	0.5	1.2	0.6	1.6
	Imports	0.6	0.4	0.4	0.5
East Asia in World Trade	Exports	4.1	6.2	9.8	9.9
	Imports	3.9	6.6	11.1	13.8
India in World Trade	Exports	0.6	0.5	0.6	0.7
	Imports	0.6	0.8	0.6	0.8

* Figures in this table may not tally with those provided in earlier tables as (i) they are compiled from different sources and (ii) pertain to calendar year.

Note : East Asian countries referred to in this table include Singapore, Malaysia, Korea, Thailand, Indonesia and China.

Source : Direction of Trade Statistics, IMF, Various Issues.

Table 4.48: India's Trade with Select Asian Countries

(US \$ million)

Country	1997-98		1998-99		1999-00		2000-01		2001-02		2002-03	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1	2	3	4	5	6	7	8	9	10	11	12	13
China	718.0	1,119.3	427.2	1,096.7	539.0	1,287.8	831.3	1,502.2	952.0	2,036.4	1,961.1	2,782.5
Indonesia	437.3	731.6	185.3	829.1	325.6	958.8	399.8	910.2	533.7	1,036.8	825.9	1,380.5
Korea	467.6	1,001.8	307.9	1,394.4	476.6	1,273.3	450.8	893.8	471.4	1,141.4	644.7	1,523.8
Malaysia	489.9	1,178.9	321.7	1,608.4	447.1	2,024.0	608.2	1,176.8	773.7	1,133.5	746.8	1,465.0
Singapore	779.7	1,197.9	517.5	1,384.2	672.7	1,534.4	877.1	1,463.9	972.3	1,304.1	1,422.6	1,433.5
Thailand	344.0	233.3	321.0	273.1	449.6	327.8	530.1	337.9	633.1	423.1	710.8	378.6
Total	3,236.5	5,462.8	2,080.6	6,585.9	2,910.6	7,406.1	3,697.3	6,284.8	4,336.2	7,075.3	6,311.9	8,963.9

Source: Directorate General of Commercial Intelligence and Statistics, Government of India.

4.93 The most notable source of expansion in India's trade in the last few years was with respect to China and Singapore (Table 4.48). The surge in India's trade to East Asian countries has mainly emanated from product specialisation and natural comparative advantage of the respective countries.

While the major items of exports from India to East Asia have been 'engineering goods', 'chemicals and related products', 'petroleum, crude and products', 'gems and jewellery' and 'iron ore', import items from these countries were mainly 'electronic goods' and 'edible oil' (Table 4.49).

Table 4.49: Share of India's Exports/Imports of Major Commodities to/from East Asian Countries

(Per cent)

Commodity	1994-95	1996-97	1998-99	2000-01	2002-03P
1	2	3	4	5	6
Exports					
Engineering goods	23.1	22.2	19.3	24.4	23.4
Chemicals & related products	15.3	11.8	18.0	19.2	14.6
Petroleum, crude & products	0.0	0.0	0.0	0.2	8.6
Gems & jewellery	10.3	7.9	9.0	8.8	8.1
Iron ore	4.7	3.8	4.9	4.1	7.2
Cotton yarn, fabrics, madeups etc.	7.4	7.1	9.3	8.4	5.1
Marine products	4.4	3.8	5.0	5.2	3.1
Other ores & minerals	2.4	2.6	2.9	2.7	2.5
Rice	0.3	0.1	1.2	0.3	2.4
Manmade yarn, fabrics, madeups	2.5	1.5	1.2	1.6	1.8
Share of Exports to East Asian Countries in India's Total Exports	8.8	11.0	6.3	8.3	12.1
Imports					
Electronic goods	8.4	10.0	12.5	23.7	25.3
Vegetable oils (edible)	4.6	14.2	17.7	14.1	13.7
Chemicals, organic & inorganic	10.5	11.7	8.1	8.6	8.5
Textile yarn, fabrics, madeup articles	4.3	3.6	3.0	4.2	5.4
Machinery excl. electric & electronic	4.9	5.9	4.4	5.7	5.3
Transport equipments	3.1	3.0	2.5	1.0	3.8
Coal, coke & briquettes etc.	2.2	2.9	2.8	5.5	3.2
Electric machinery excl. electronic	1.1	1.3	1.5	2.5	2.2
Artificial resins, plastic material etc.	5.7	4.9	3.5	2.3	2.1
Metalliferous ores & metal scrap	2.4	1.5	2.2	1.4	2.0
Share of Imports from East Asian Countries in India's Total Imports	11.4	11.6	15.5	12.4	14.6

P : Provisional

Note : East Asian countries referred to in this table include Singapore, Malaysia, Korea, Thailand, Indonesia and China.

Source : Directorate General of Commercial Intelligence and Statistics, Government of India.

VI. WORLD TRADE ORGANISATION: RECENT DEVELOPMENTS

4.94 In the aftermath of the Fifth Ministerial Conference of the World Trade Organisation (WTO) held in Cancun, the issues relating to multilateral co-operation especially among the developing countries have assumed greater significance. Established in 1995, the WTO, with 148 members including India, is an international organisation dealing with the global rules of trade between nations. The overall agenda of the WTO could be broadly categorised under eleven heads *viz.*, (i) agriculture, (ii) services, (iii) market access for non-agricultural products (or industrial tariff negotiations), (iv) intellectual property (TRIPS), (v) "Singapore issues"¹⁷, (vi) trade rules, (vii) dispute settlement, (viii) trade and environment, (ix) trade, debt and finance, (x) trade and technology transfer and (xi) electronic commerce. The major issues of discussion on various aspects of the agenda in recent period along with India's views on each of them is outlined in Annex IV.1.

4.95 On the eve of the Conference, agreement was reached on some aspects of TRIPS and public health issue. However, a number of deadlines were missed including modalities for agriculture and non-agricultural market access negotiations, reform of the Dispute Settlement understanding and recommendations on special and differential treatment. The Ministerial Conference was unable to reach consensus on some of the outstanding issues, including reduction of agricultural subsidies and "Singapore issues". There was a clear divergence of views on both the above issues mainly led by a new block of developing countries- G22¹⁸, on the one hand, and the developed country group mainly consisting of EU, US and Japan, on the other. No consensus could be reached on the phasing out of subsidies on agriculture by developed countries. The decision of both the USA and the EU to continue agricultural subsidies also cast doubts on their commitments to effectively address the subsidy issue relating to agriculture. The US-EU framework of freeing farm trade presented in August 2003 involved

some reform. The plan, being less ambitious than the Doha Declaration, was, however, unacceptable to the G-22 member governments. Moreover, with the developing countries remaining united in their opposition to the inclusion of "Singapore issues", no major breakthrough could be undertaken in this regard. The negotiation process has, however, not been officially abandoned. The diplomats pledged to continue the process with a renewed sense of urgency in Geneva.

4.96 Reflecting on the latest developments, although some commentators posed questions on the very structure of the WTO and its process of negotiations after Cancun, it may be noted that all the previous trade rounds took far longer to finish than planned (*e.g.* the Uruguay round took eight years to complete rather than the originally mandated three years). The Cancun Ministerial was mainly of stocktaking nature and therefore, its failure should technically result only in the lengthening of the negotiating period rather than abandonment of the whole mechanism.

Regional Trading Agreements

4.97 The global trading system has seen a sharp increase in regional trade agreements (RTAs) over the past decade or so (Box IV.5). As on May 2003, over 265 RTAs had been notified to the WTO.¹⁹ About 90 per cent of the RTAs are in the form of free trade arrangements (FTAs) and only 10 per cent are customs unions. While the rapid growth of RTAs began in the 1990s, these arrangements acquired momentum since the 1980s mainly driven by the Western European countries and the United States. More recently, Asian countries including Japan, have also departed from exclusive reliance on MFN-based trade. The collapse of the COMECON²⁰ (the preferential arrangement involving the old Soviet Union and European Union) further spurred the formation of RTAs in the 1990s. According to the WTO, the share of world merchandise trade that operates under RTA is likely to go up further in the near term (Table 4.50).

¹⁷ Singapore issues relate to: (i) Trade and Investment; (ii) Trade and Competition Policy; (iii) Transparency in Government Procurement; and (iv) Trade Facilitation.

¹⁸ Argentina, Bolivia, Brazil, Chile, China, Colombia, Costa Rica, Cuba, Ecuador, Egypt, Guatemala, India, Indonesia, Mexico, Nigeria, Pakistan, Paraguay, Peru, Philippines, South Africa, Thailand and Venezuela.

¹⁹ The WTO has allowed member countries to conclude custom unions and free-trade areas, as an exception to the fundamental principle of non-discrimination set out in the MFN Clause of GATT's Article 1.

²⁰ COMECON : The Council for Mutual Economic Co-operation.

Table 4.50: Preferential Trade Share of Intra RTAs Trade in Merchandise Imports of Major Regions

Economy	(Per cent)	
	2000	2005
1	2	3
Western Europe	64.7	67.0
Transition Economies	61.6	61.6
North America (incl. Mexico)	41.4	51.6
Africa	37.2	43.6
Middle East	19.2	38.1
Latin America (excl. Mexico)	18.3	63.6
Asia	5.6	16.2
World	43.2	51.2

Note : Estimates are calculated on the basis of the 113 agreements covering trade in goods notified to the WTO and in force as of July 2000, using trade data for 1999.

Source : World Trade Report, WTO, 2003.

VII. MEDIUM TERM TRADE STRATEGY

4.98 The Tenth Five Year Plan (2002-03 to 2006-07) recognises that higher growth cannot take place without tapping the opportunities offered by the global economy in terms of markets, investment and technologies along with improvement in efficiency and absorbing excess capacity available in the economy. An important pre-condition for establishing a more open economy is to create an expanding production base of tradable goods and services, which will not only withstand external competition, but also provide the surplus necessary to ensure sufficient export earnings for meeting the import needs of the country. Another pre-condition is to create

an environment under which the export market becomes increasingly more attractive, so that there is both a shift from selling in the domestic market to exports and developing capacities to specifically target such export opportunities. Re-orientation of the incentive structure towards investment in tradable goods and services and away from non-tradables combined with improvement in relative profitability of exports *vis-à-vis* domestic sales would lead to higher production for exports.

4.99 The Tenth Five Year Plan projects a growth rate of 12.4 per cent in India's exports. The road map for the achievement of this export growth in the medium term is delineated in the Medium Term Export Strategy (MTES). It aims at augmenting the country's share in world trade to one per cent by 2006-07 from the current share of 0.7 per cent which implies doubling exports from the present level. The MTES incorporates product and market identification for exports as well as focus on sector-wise micro and macro strategies for identifying potential sectors based on the assessment of the changing global trade scenario and real and revealed comparative advantages. The strategy makes an opportunity assessment after examining the import basket of major importing economies of the world and identifying potential items of exports in which India is competitive *vis-à-vis* some of the major exporting countries of these products at present. Concurrently, the Export-Import (EXIM) Policy for 2002-07 has emphasised export market diversification with special focus on unexploited regions like sub-Saharan Africa

Box IV.5

Regional Trade Agreements (RTAs)

There are broadly two types of Regional Trading Arrangements (RTAs): Free Trading Arrangements (FTAs) and Customs Unions. The WTO defines FTAs as "agreements among two or more parties in which reciprocal preferences (whether or not reaching complete free trade) are exchanged to cover a large spectrum of the parties' trade in goods". Customs Unions, on the other hand, are RTAs "with a common external tariff in addition to the exchange of trade preferences".

Until the early 1950s the general opinion was that formation of a RTA was necessarily trade liberalising that would lead to freer trade and greater economic efficiency. This was challenged by Viner (1950) and Meade (1955). They pointed out that a RTA had two kinds of effects: 'trade creation' and 'trade diversion'. While trade creation took place when a country's domestic production was replaced by lower cost imports from a partner country, trade diversion occurred when low cost imports from the rest of the world (outside the RTA) were replaced by higher cost imports from partner countries because of tariff preferences. Thus, RTAs would

be welfare-enhancing only when its trade creation effects outweighed its trade diversion effects. The conditions under which this would occur depend on several factors *e.g.*, the divergence of factor endowments and economic structures among the trading partners, product lists, phasing and rules of origin.

At present, India is a member of SAARC Preferential Trading Agreement (SAPTA), Indian Ocean Rim Association for Regional Co-operation and the BIMST-EC (Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Co-operation). Moreover, it is a signatory to a number of bilateral trading agreements, the latest being that with Thailand in October 2003. A Framework Agreement for comprehensive economic cooperation was also signed between India and ASEAN during October 2003. It is recognised that since ASEAN countries are much more open than India, there is merit in India's joining such groups. At the same time, India's attempt to be a part of more RTAs should not be at the expense of its endeavour of multilateral trade liberalisation under WTO auspices.

and the CIS. It also stressed on a farm-to-port approach for exports of agricultural products, special thrust on cottage sectors and handicrafts and beefed up Assistance to States for Infrastructural Development for Exports (ASIDE).

4.100 As regards imports, while proposing an indicative target of 8 per cent GDP growth for the period 2002-07 and an investment rate of 32.3 per cent by the year 2006-07, the Tenth Five Year Plan document states that the behaviour of aggregate import demand in the country is expected to be strongly driven by domestic growth rates. For improving the imports, the projection is made on the basis of two possible scenarios. The first scenario is with the average total tariff rate assumed at the East Asian level of 15 per cent in the terminal year of the Plan while the second scenario is with the indicative target, as announced by the Government, which yields an average duty rate of 18 per cent in the terminal year. In the first scenario, annual import growth during the Plan period works out to 18.0 per cent with an elasticity of 2.3 resulting in a negative trade balance equivalent to 6.0 per cent of GDP. As regards the second scenario, the growth of imports is lower at 16.3 per cent annually during the Plan period with an elasticity of 2.0, thereby resulting in a trade deficit of 5.2 per cent of GDP.

4.101 The Report of the Task Force on Indirect Taxes, 2002 (Chairman: Vijay Kelkar) has laid down a broad approach to customs tariff reforms in India. It envisages a zero duty for essential items, 10 per cent duty for raw materials, inputs and intermediate goods and 20 per cent for final goods by 2004-05. Following introduction of States' Value Added Tax (VAT), these duties are proposed to be further reduced to 5 per cent for basic raw materials, 8 per cent for intermediate goods, 10 per cent for finished goods and 20 per cent for consumer durables by 2006-07. However, in order to reap efficiency gains from further opening up of the economy, systemic changes in customs procedures and trade facilitation based on modern best practices which rely on self compliance, risk analysis and management and supported by periodic post audit of records may be necessary.

VIII. CONCLUDING OBSERVATIONS

4.102 The economic reform process introduced in the beginning of the 1990s with the focus on liberalisation has enabled increased integration of the Indian economy with the rest of the world. The growth rate of India's trade is increasingly dependent on exogenous factors such as world trade growth (especially those of the trading

partners), international price changes and developments in the competitor countries. Cross currency exchange rates as well as dollar-rupee exchange rate movements also get reflected in the performance of India's trade. Although the level and dispersion of India's tariff have considerably come down since the early 1990s, it remains among the highest as compared to emerging market economies. It is increasingly being realised that the desirable structure of tariff rates should comply with the basic principles of simplicity, transparency, stability and international best practices. As noted in the Tenth Plan document, the most effective means of encouraging outward orientation is to lower tariffs on imports so that the anti-export bias, both in policies and mind-sets get corrected. Further, it may be noted that as the duty rates fall, the need for refunds *etc.*, will commensurately decline thereby bringing down the transaction cost.

4.103 It has been observed that in contrast to the structural and compositional shifts in world trade towards higher technology intensive products, the commodity structure of India's exports remained largely unchanged until the mid-1990s. Although, of late, India's exports have shown a steady trend towards higher technology content, India's specialisation in exports lies in manufactures based on labour and natural resources essentially involving low technology. Given the exports structure of India, the potential for further growth of manufactured goods, especially to the developed markets remains high. However, given the general trend of movement of terms of trade towards higher technology intensive products, it may be imperative for India to move up the technology ladder.

4.104 As reflected in international experience, rising shares of investment and manufacturing value-added in an economy's total output are associated with a rising share of manufacturing exports in total exports and GDP. In more open economies, manufacturing value-added exports have outpaced manufacturing value-added by a large margin. In India, the investment rate and manufacturing sector share in GDP have shown a somewhat similar trend. Although there has been an occasional spurt, in general, there has been a decline in both the investment rate as also the manufacturing sector share in GDP in the recent period. As a result, the gap between the relative share of manufacturing in India's GDP and merchandise exports has shown a marked divergence since 1997-98. However, there are signs of pick-up in manufacturing exports since 2002-03. Higher overall investment rate may help in augmenting these exports further. At the same time, the policy of reservation for SSIs has denied successful



small scale units to expand and achieve economies of scale and upgrade technology. This in turn has affected export growth, manufacturing production and employment generation.

4.105 The labour cost of producing a unit of manufacturing exports in India is one of the lowest among the developing countries. Moreover, labour productivity in the 1990s has grown faster than that in the 1980s. While the preliminary evidence on total factor productivity growth at the macro-level remains somewhat inconclusive, at the sectoral level, there is growing evidence of improved productivity for the exporting sectors *vis-à-vis* the non-exporting ones. The linkages between trade and foreign investment in India indicate that FDI has been much less important in driving India's export growth, except in information technology. FDI in Indian manufacturing has been and still remains largely domestic market-seeking.

4.106 A noteworthy fact is that despite significant liberalisation of imports during the 1990s, the overall balance of payments has been in surplus for most of the years with the country's foreign exchange reserves crossing US \$ 100 billion mark. Thus, in contrast to fears expressed at the time of the opening up of the economy, import liberalisation policies, in conjunction with other external sector and overall structural reforms have, in fact, strengthened the country's external sector since 1990-91. The implication is that continued reduction in import tariffs will help in inducing greater efficiency and competitiveness in the economy, while reducing avoidable transaction costs in trade. Looking ahead, the singular challenge facing the Indian economy is to enhance its productivity and competitiveness in an increasingly integrated global environment which would be crucial in assuring sustained growth in exports of goods and services.

