ECONOMIC GROWTH CENTER

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CENTER DISCUSSION PAPER NO. 830

INDIA'S REFORM OF EXTERNAL SECTOR POLICIES AND FUTURE MULTILATERAL TRADE NEGOTIATIONS

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June 2001

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T.N. Srinivasan

Abstract

I evaluate India's transition from an inward-oriented development strategy to greater participation in the world economy. While tariff rates have decreased significantly over the past decade, India is still one of the more autarkic countries. Despite improvement over the past in export performance, India continues to lag behind its South- and East Asian neighbors. Second, official debt flows have been largely replaced by foreign direct investment (FDI) and portfolio investment in the 1990s. India's ability to attract FDI would be greatly enhanced by further reforms. I argue that India's participation in a future round of multilateral trade negotiations would benefit India. I outline the further reforms most needed: reform of labour and bankruptcy laws, real privatization, and fiscal consolidation. These involve taking on entrenched vested interests, including political parties and governments in states. Enacting them requires political courage and risk taking which in India, as in most societies, are rare.

Keywords: India, Antidumping, Developing Countries, Economic Reform, Export Performance, Foreign Direct Investment, Intellectual Property Rights, Multilateral Trade Negotiations, Quantitative Restrictions, Real Exchange Rate, Tariff and Non-tariff Barriers, World Trade Organization

JEL Classification: F13, F14, F15, F21, F35, H54, K31, O34, O38, O53, P11

India's Reform of External Sector Policies and Future Multilateral Trade Negotiations

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1. Introduction

India had largely been insulated from the world trading system for more than four decades since independence in 1947. Decades of pursuit of an inward-oriented development strategy, rationalized both by a wary, almost hostile, attitude towards foreign trade, technology and investment and by pessimism about export markets, inevitably led to India becoming marginalized in world trade. During the period of phenomenal growth in private capital flows to developing countries since the mid-eighties, India was not one of the favored destinations for private foreign investors. Only with the reforms of 1991, deliberate efforts towards integrating India with the world economy and attracting private capital began.

Prior to the oil shock of 1973, the volume of world exports grew at an annual average rate of about 7.85% per year during 1951-73. India's exports grew at a much slower rate of 2.66% per year and the ratio of exports to GDP declined from 7% in 1951-1952 to around 4 % in the early seventies. The two oil shocks of the seventies, on the one hand, put pressure on balance of payments because of a steep rise in the cost of oil imports. On the other, they induced migration of Indian labour to oil rich Gulf States. The remittances from the migrants helped alleviate the pressure. Nonetheless, the need to raise export earnings resulted in the introduction of several export promotion measures. These, coupled with the depreciation of the rupee when it was pegged to a floating pound sterling which depreciated against other currencies for a period after the collapse of the Bretton Woods system of fixed exchange rates, led to a rise in the rate of growth of Indian exports relative to world exports. During

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1973-86 period of oil shocks and recovery, world exports grew only at 2.7% per year, but Indian exports grew at 4.4% per year. During 1986-1997, world export growth (in volume) recovered to 6% per year, and Indian exports grew even faster at 11.7% per year. India's share in the value of world merchandise exports, which stood at 2.1% in 1951, declined to 0.4% in 1980 and has recovered since to 0.6% in 1999.

India's restrictive external sector regime until the reforms of 1991, and its hesitant attempts from the mid-eighties to break away from insulation from the world economy, have been analyzed by several authors (see Srinivasan and Tendulkar, 2001, for a recent analysis). I will not go over this ground again, except to note that, on the eve of reforms, in 1990-91, the import-weighted average of tariffs for all import stood at 87% (with tariffs on some imports exceeding 300%). Import-weighted average tariffs on consumer goods imports were as high as 164%. In addition, some non-tariff barriers, particularly quantitative restrictions applied to virtually all imports.

During the decades of reforms, import-weighted average tariffs declined to 24.6% by 1996-1997, only to increase to 30.2% by 1999-00, in part because of a surcharge of 10% on tariffs imposed in 1997-98 (World Bank, 2000a, Annex Table 6.6). The surcharge was abolished in the budget for 2001-02. As of the fiscal year 2000-01, there are just four major tariff categories (35%, 25%, 15%, and 5%), although most imports attract tariffs of 25% and 35%. Quantitative restrictions (QRs) on most imports have been abolished as of April 1, 2001. However, while abolishing QRs on agricultural imports, tariffs have been raised to high levels. While it is understandable that the agricultural sector, insulated for a long time from world markets, would need time to adjust to possible competition from imports, raising tariffs to very high levels without at the same time indicating a time schedule for bringing them down to reasonable levels indicates an apparent lack of a firm commitment to further trade liberalization. I will return to this issue below (Section 5).

Until the reforms of 1991, India's attitude towards inflow of foreign capital, particularly foreign direct investment (FDI), was one of suspicion if not outright hostility. Prior to 1991, restrictions on FDI included limiting entry only into specified priority areas, upper limit of 40% on equity participation and requirements of government approval on technology transfer, export obligations as well as phased increases in domestic content of production. With India's signing the Trade Related Investment Measures (TRIMS) agreement, export obligations and domestic content requirements had to be phased out. The 1991 reforms did not significantly liberalize FDI. However, a discretionary mechanism of approval through the Foreign Investment Promotion Board (FPIB) and an automatic approval mechanism (mainly for investment in infrastructure) through the Reserve Bank of India were created. Yet much of the FDI came through the discretionary mechanism. Only in May 2001, the government decided to allow 100% foreign investment in several industrial sectors. Foreign investors no longer are required to sell 26% equity to an Indian partner or the public. Also, limits on FDI in specific sections were raised, from 20% to 49% in banking and 49% to 74% in internet service providers, paging and bandwidth. Even the defense sector, hitherto excluded even to domestic investors, was opened to private investors (domestic and foreign).

India was one of twenty-three original Contracting Parties of the General Agreement on Tariffs and Trade (GATT) in 1947 and is a founding member of the World Trade Organization (WTO). Yet the role played by India in the discussions that led to GATT, and also subsequently in the eight rounds of multilateral trade negotiations, under the auspices of the GATT amply illustrated India's ambivalence towards the importance of trade and greater integration with the world trading system in accelerating development.

The third ministerial meeting of the WTO in Seattle in late 1999, which was supposed to launch the next round of multilateral trade negotiations ended in a fiasco without launching one. The fourth ministerial is to take place in Qatar in November 2001. India has argued that a new round may be premature until the problems encountered in the implementation of

commitments undertaken as part of the Uruguay Round (UR) agreement are resolved and even if a new round is to be launched, the agenda should be confined essentially to concluding the unfinished items of the UR agenda. While there is considerable merit in this position, still India's interests in participating in a new round are equally compelling.

I propose in what follows to discuss the progress in the reform of trade policy (Section 2). Trends in real effective exchange rates (REER) have an impact on export performance, a simple econometric exercise relating REER to export performance is reported in the Appendix. Section 2 also places India's export performance in an Asian perspective. In Section 3, I turn to capital inflows, particularly FDI. Section 4 is devoted to India's interests in any future round of multilateral trade negotiations in the WTO. Section 5 concludes with a discussion of remaining tasks and an assessment of the chances of their being undertaken.

2. Decade of Trade Policy Reforms: Achievements[1]

2.1 Liberalization of Trade and Exchange Rate Policies

The pre-1991 trade and exchange rate regime granted a generally high level of protection and also made-to-measure protection for manufacturing industries favored by the import-substitution strategy. By 1990, imports of 65% of all products (and 90% of manufacturing) were subject to non-tariff barriers (NTBs). As noted earlier, the import weighted average tariff was 87%, with the highest tariff rate reaching as high as 355% (Panagariya 1999). The net result was a bias against exports and agriculture in resource allocation. There was a large dispersion in the incentive structure within manufacturing as well as within agriculture resulting from a chaotic pattern of effective protection. Although QRs were the dominant means for control of imports, tariffs constituted a major revenue-raising device for the central government. Revenue from import tariffs accounted for 3.6% of

1 This and the next section draw extensively from Chapter 4 of Srinivasan and Tendulkar (2001).

GDP in 1990-91, out of a total tax revenue of 9.5% of GDP (World Bank, 2000a, Annex Table 8.5).

The post-1991 reforms in the trade and exchange rate policy regime have been very significant. The current account in the balance of external payments (BOP) is now influenced more by the movements in the exchange rate, rather than changes in the restrictiveness of import quotas. Market forces largely determine the movements in the exchange rate, although the Reserve Bank of India (RBI) intervenes periodically. The list of imports subject to QRs, which covered virtually all imports, was replaced in 1991, by a considerably narrower, but still a long list containing mostly consumer goods. Most of the intermediate and capital goods imports were freed from quantitative restrictions. In 1991-92 the rupee was devalued by 22.8% relative to a basket of currencies, each currency being weighted by India's export to that country. This nominal devaluation resulted in a devaluation of the real effective exchange rate (REER) by 16.3%. Temporary measures to deal with the balance of payments such as foreign exchange licensing, import compression, export-based imports, and dual exchange rate system introduced in the context of the foreign exchange liquidity crisis of 1991 were withdrawn soon thereafter. Since 1993 the rupee has been convertible for current account transactions (i.e., convertibility under Article VIII of IMF).

In a change that is more of symbolic than substantive value, the office of the Chief Controller of Imports and Exports has been abolished. Instead, an office of the Director General of Foreign Trade has been created with the principal mandate to promote exports, rather than control both imports and exports. The announced policy for exports and imports now covers five-year periods as compared to three-year periods as in the late 1980s, and six-month or one-year periods earlier.

With the devaluation of the rupee in 1991-92, most export subsidies were withdrawn. There were several changes in non-tariff barriers on imports. As mentioned above, the QRs

on the imports of most capital goods and intermediate goods were removed.[2] The monopoly of government agencies for canalized imports of 50 odd commodities (except petroleum and agricultural products) was abolished. Domestic content requirements on foreign investors (called phased (indigenous) manufacturing programme) and full or partial purchase and/or price preference in government procurement in favour of indigenous producers were removed. A policy of phased reduction in maximum tariff rate has been combined with a reduction in the average level as well as in dispersion of rates of tariffs. The maximum tariff rate was reduced to 45% in 1997-98 from 355 % in 1990-91. Again, as noted earlier, the import-weighted average tariff for the whole economy came down to 24.6% in 1996-97 from 87% in 1990-91. However, in its commitments under the Uruguay Round agreement, India chose to bind tariffs at much higher rates than those being applied. This allowed the government ample room to raise applied tariffs without violating the bound levels. This freedom has been exercised, so that the average tariff has gradually risen since 1996-97 to 30.2 in 1999-2000. The reversal is particularly large in the case of intermediate goods from, 22.9% in 1996-97 to 31.9% in 1999-2000 (Table 1, lower panel). A similar movement is also apparent in the case of unweighted averages of tariff rates as well as their standard deviation (Table 2, upper panel). The reduction in standard deviation is one-fourth its level in 1990-91 for intermediate and capital goods and one-third in the case of agricultural products. It is least in the case of consumer goods. A downward reduction in standard deviation over the last 10 years is clearly indicative of corresponding reduction in the degree of distortions in resource allocation. There has also been a decline in the number of exemptions (or use-based concessions) on tariff rates. On the export side, considerable pruning of the list of restricted or banned exports has been undertaken besides abolition of taxes on some mineral and

2 However, the virtual ban on imports of consumer goods and quotas on some imports of capital goods and intermediates were retained. In 1994 India signed the agreement that resulted from the Uruguay Round of multilateral trade negotiations. The agreement required the elimination QRs in four years. India attempted to use a balance of payments justification for delaying the elimination and failed. The QRs expired on April 1, 2001.

agricultural exports. Certain restrictions on agricultural exports persisted (until April 1, 2001) such as quotas and stipulation of minimum export prices.

Pursell (1996) has estimated the shares of internationally tradable goods protected by QRs and other non-tariff barriers in total and sectoral tradable GDP. In the pre-reform period (about the end of 1980s), the QR-protected share was as high as 93% in total tradable GDP and it had come down to 66% by May 1995. In manufacturing, the pre-reform share of 90% came down drastically to 36% by May 1996. In agriculture, however, the May 1995 share of 84% happened to be only marginally lower than its pre-reform level of 94%. In other words, agriculture had not been touched significantly by the reforms in non-tariff barriers on imports until the elimination of QRs on April 1, 2001. The persistence of QRs on consumer goods mostly accounted for the (lower than pre-reform but still high in absolute magnitude) QR-protected share in manufacturing.

A more up-to-date set of calculations is available from the World Bank (2000a, Annex Table 6.3). It provides the sectoral shares of imports affected by non-tariff barriers (NTBs). This is a less satisfactory indicator than the QR-protected shares of tradable GDP, because imports are directly affected by the QRs as well as by tariff rates. Two estimates are presented depending on the method of dealing with different types of non-tariff barriers. For each method, the weighted as well as the simple (unweighted) average is presented. Since the direction of change does not differ, we present only one set namely, weighted average where all non-tariff barriers have been assigned an equal weight of 100%. The average weighted share of imports for all the sectors covered in the study and covered by NTBs is estimated to have come down from 95% in the pre-reform year 1988-89 to 62% in 1998-99 and further to 24% in 1999-2000. It came down significantly in all the sectors classified according to activity (primary, secondary), according to industries and according to use-based activities. In 1999-2000, it was still as high as 56% in consumer non-durables but was down to 27% for consumer durables, as low as 16% for basic goods and 14% for capital goods.

The review of India's trade policy by the World Trade Organization (WTO) in 1998 noted that "about 32% of the tariff lines are subject to (QR-based) licensing, which, for most of them, act as import bans" (p. 41). The review also commented on escalation of tariffs on the basis of the extent of processing, that is, lowest tariffs on unprocessed goods (simple average tariff of 25% in 1997-98 covering 12% of the tariff lines), a higher rate on the semi-processed goods (average 35% in 1997-98) and the highest rate on processed goods (average 37% covering 50% of the tariff lines). The escalation ensures higher levels of effective protection in the processed manufacturing sectors than those reflected in the nominal rate.

Table 2 presents the gradual reduction on non-tariff barriers between 1996 and 1999. Of about 1200 tariff lines on the restricted list as on April 1, 1999, about 600 were removed on April 1, 2000 and the remaining were removed on April 1, 2001.

While non-tariff barriers are difficult to compare internationally (available ones are presented in Table 3), the levels of (unweighted) average tariff and the maximum tariff can be treated as crude indicators of openness across countries. A comparison across 13 developing countries for 1994 by Chopra et al. (1995) showed that India had the second highest level of the maximum tariff (65%), next only to Egypt and the highest level of average tariff (55%). The average tariff level ranged between 10 and 15% for 6 out of 13 countries (Korea, Argentina, Chile, Malaysia, Thailand and Brazil). Another comparison across 26 developing countries for the year 1993 has been undertaken by Pursell (1996) for 13 broad product categories. He presents for each product category, the average (unweighted) tariff rate for 26 countries; India's ranking among 26 countries in respect to (a) the post-Uruguay Round (UR) applied rate and (b) the post-UR bound rate.

Four points emerge from Pursell's study. One, India's actually applied rate ranks highest or second highest for all the thirteen product categories among 26 developing countries. Two, India's average tariff rate in absolute terms is more than twice as high as the average of actually applied rates by the 26 developing countries for all the product categories.

Three, the post-UR bound rate negotiated by India is invariably higher, and for some products much higher, than the average of the post-UR bound rates by the 26 developing countries. Four, for all the product categories put together, the average applied tariff rate of 51.6% for India is not only the highest but also nearly three times as high as the average level of 19.2% for 26 developing countries. A more recent international comparison at the economy-wide level for the year 1998 has been undertaken by the World Bank (2000a, p. 70) for large countries with population over 20 million. It shows that India has the second highest average tariff rate next only to Argentina and higher than Asian and Latin American large countries. The conclusion is inescapable that, despite radical changes in the trade policy reforms compared to the pre-1991 situation, India has remained one of the most autarkic developing countries.

2.2 Outcomes of Reforms

2.2.1 Merchandise Imports and Exports

It can be seen from Table 4 that there was a healthy growth in the U.S. dollar value of both merchandise exports and imports other than petroleum, oil and lubricants (POL) for three years 1993-94 to 1995-96 before a subsequent slowdown. In assessing the impact of liberalization on the commodity composition, and hence on the structure, of imports and exports customs data (on imports and exports of merchandise) are used, rather than payments data presented in Table 4. It is well known that data from the two sources differ for well-understood reasons.

As noted earlier, the trade policy regime in the 1980s, despite attempts at hesitant deregulation, remained highly restrictive with tight controls on imports as well as exports, but more so on imports than on exports. Table 5 presents a classification of principal imports in two broad categories distinguished in the pre-1991 policy: bulk imports, which were deemed

essential and hence canalized through the state owned procurement agencies, and non-bulk imports which were controlled through various lists such as limited permissible, automatic permissible and open general license. The table gives average imports (in U.S. dollars) for the immediate pre-reform triennium (excluding the crisis year 1990-91) and two post-reform triennia: 1994-96 covering the period of rapid growth in (U.S. dollar) value of imports as well as exports (Table 4) and 1998-2000, being the latest available triennium. We take the pre-reform triennium to represent relatively the most deregulated period of the pre-1991 restrictive trade regime so that changes due to post-1991 liberalization from this triennium would hold with greater force with respect to the earlier period. Taking point-to-point compound annual growth from the mid-year of the pre-reform triennium as the base, the aggregate value of imports increased at 7.4% per year in the first post-reform triennium and 8.5% in the second post-reform triennium. State monopoly through canalization of imports, was abolished after 1991 for most commodities, so that the post-reform triennia ought to reflect the impact of liberalization of state trading in the case of bulk-imports. In the case of non-bulk imports, the post-reform triennia would indicate the combined effect of (a) removal of QRs on most imports except those on consumer goods; and (b) reduction in the dispersion of import tariff rates and lowering of average level as well as maximum level of tariff.

Bulk-imports in Table 5 are classified into three broad categories according to the pre-1991 policy: POL, which constitute almost entirely importable universal energy inputs and are hence indispensable for growth; bulk consumption goods (consisting of agricultural commodities such as cereals, pulses, edible oil and sugar) that were imported to meet shortages arising out of domestic crop failures; and other bulk items (mostly non-competing raw-materials and intermediates such as fertilizer). The share of bulk imports has gone down from 40.5% on the average in the pre-reform triennium to 37% during 1994-96 and has reduced further to 30% during 1998-2000 in incremental imports (column (6) and (7)). The impact of decline in canalization is thus apparent.

The share of non-bulk items in incremental imports goes up unambiguously in both the post-reform triennia. Following the pre-1991 policy, non-bulk imports are classified into three broad categories: capital goods, mainly export-related input items and a residual category "others". In comparison with the pre-reform triennium, the average share of capital goods in incremental imports rose to 29% during the first post-reform triennium. This rise reflects the effect of removal of most QRs on capital goods and a surge of investment. Gross Fixed Capital Formation (at constant 1993-94 prices) rose by 16.1% in 1994-95 and 19.5% in 1995-96 before slowing down in later years to single-digit growth. The slow-down in investment is also reflected in the share of capital goods in incremental imports going down to 17.5% in the latest available triennium. Most of the machine-tools imports competed with domestic production and hence remained under quantitative restrictions even after liberalization. As a consequence, there was very little change in the share of this category of imports. The major impact of technology embodied in capital goods might have come from imports of (non-electrical and non-electronic) mechanical equipment, electronic goods as well as project goods. There was not much rise in the share of mainly export-related imports either on the average or in incremental imports during the post-reform triennia. These were the items where replenishment-import licenses used to be given in the pre-reform period to make available inputs into exports at international prices. The decline in their share especially in the first post-reform triennium when export earnings registered rapid growth (Table 4), seems to indicate that depreciation of the real exchange rate and withdrawal of all export-subsidization combined with trade liberalization encouraged exports in newer areas where import content was lower than in the 1980s.

The third and residual category of imports viz. "others", showed a rising and significant surge in both the post-reform triennia. The major item in this broad category was miscellaneous "others" (II.3.2). This category includes all kinds of consumer goods imports which continued on the banned or restricted lists but were permitted under special import

licenses to exporters as an export incentive measure to offset the adverse impact of quantitative restrictions on imports of consumer goods. The only other category mentioned under the broad head is coal, coke, briquettes etc. (II.3.1) whose share in incremental imports was small, but more than doubled. This reflects the impact of the steep reduction in import duty on this item and the users especially in coastal states finding it cheaper to import better quality coke than buying it from the state monopoly, namely, Coal India Limited.

The effect of trade liberalization on exports, can be seen from Table 6 which provides the commodity composition of selected items of exports (in U.S. dollars) in pre- and post-reform triennia. At the aggregate level, exports rose at a healthy 11.1% per year in the first triennium before slowing down to 9.5% in the later triennium that covered the East-Asian currency crisis. The major share of the rise was accounted for by manufactured products. Within this group, the share of traditional labour intensive exports declined steeply in the case of leather and leather manufactures and to a smaller extent in the case of handicrafts and remained virtually unchanged in the case of ready-made garments. Liberalization in imports, along with exchange rate depreciation, raised the profitability of selling in the international markets. This is reflected in the exports of chemical and allied products in general and that of drugs, pharmaceuticals and finer chemicals in particular as also in textile yarn, fabrics, made-ups etc. and in engineering goods. The share of these three items (II.2, II.3 and II.5) together was 23% on the average during the pre-reform triennium. Their share in incremental exports was 39% in the first and 37% in the second triennium. Of these, exports of engineering goods appear to be the result of increased outsourcing of labour-intensive components by the industrial countries.

Turning to the destination of a few selected exports by principal countries (Table 7), there is an interesting contrast between the exports of ready-made garments whose share in total exports remained unchanged at around 12%, and cotton yarn, fabrics and made-ups etc. whose share rose from eight percent during the pre-reform triennium to 12% in the latest

triennium (Table 6). In the case of both, the share of exports going to industrialized countries with quota restrictions has gone down during the post-reform period. The decline was marginal from a high level of 67% (pre-reform) to 63% (post-reform) for ready-made garments but steeper from a low level of 37% (pre-reform) to 30% (post-reform) in the case of cotton yarn, fabrics and made-ups etc. In other words, the structure of exports by destination was more diversified for exports of made-ups (such as curtains, table linen, sacks and bags, bed-linen etc.) in the 1980s and has become even more so in the 1990s. In the case of exports of engineering goods, the impact of outsourcing appears to be reflected in the rising share of exports to Germany, U.K. and U.S.A. whose combined share rose from 17% in the late 1980s to nearly 29% by the end of the 1990s. In the case of chemicals and allied products, while the share of exports to U.K., Netherlands, Hong-Kong and Italy has been going up, increased diversification is reflected in the rising share of unclassified "other" countries.

Finally, Table 8 presents the changes in the direction of trade. Briefly, the notable features are: (i) a declining share of Eastern Europe in both imports and exports which is expected; (ii) a rising share of East and South East Asian Developing countries again in both imports and exports; (iii) a steadily rising share of U.S.A and European Union in exports and declining share in imports and finally, (iv) a negligible share of neighboring South Asian countries despite locational advantage. In other words, the direction of India's trade reflects greater participation in the trade of the non-SAARC Asian region but unfortunately not with neighboring South Asia.

2.2.2 India's Exports in Asian Perspective

A recent study (Tendulkar (2000)) analyzed Indian export performance in comparison with that of three rapidly growing East Asian economies (China, South Korea and Taiwan), three South East Asian economies (Indonesia, Thailand and Malaysia) and two of India's

South Asian neighbors (Bangladesh and Pakistan). Exports of these countries at 3-digit Standard International Trade Classification (SITC) level were reclassified into five broad categories: (natural) resource-intensive (mainly processed agricultural and mineral products), labour-intensive (light manufactures), scale-intensive (mostly homogenous) products, differentiated products (mostly machinery and transport equipment) and finally, mainly high-tech science based products. These five categories together were taken to constitute extended manufacturing (E-Mfg) products. Table 9 presents international comparisons of incremental exports between the average annual levels for the four pre-reform years (1987-90) and the corresponding levels for four post-reform years (1993-96) and for the broad categories mentioned above.

India's share in world incremental E-Mfg exports was tiny, 0.8% (line 4), compared to 5.8% for China, with shares ranging between 1.3% (Indonesia) and 3.5% (South Korea). In other words, a rapid aggregate export growth (Table 4), while impressive in relation to India's past performance, pales into insignificance in comparison with that of the fast growing countries of Asia, both large ones in terms of population (China and Indonesia) and small ones.

India's performance in traditional labour-intensive products fared relatively better than that in aggregate E-Mfg exports in international comparison i.e. 3.0% of incremental world labour intensive exports (line 6). Even this share was, however, exceeded by much smaller countries like Thailand (3.4%) and Indonesia (4.9%) as well as China (22.2%).

The percentage composition of each country's incremental E-Mfg exports shows that traditional labour-intensive and scale-intensive exports accounted for as high as 80% of India's incremental exports. However, incremental world exports had been increasingly moving into differentiated products and countries such as South Korea, Taiwan and Malaysia had been penetrating this expanding market with Thailand also getting into the select club. Finally, labour-intensive exports with a declining share in incremental world E-Mfg exports

continued to be the mainstay of South Asian countries (India, Bangladesh, Pakistan) as well as China, although China had diversified its expanding exports also into differentiated products.

It is clear that although trade liberalization during the post-1991 period has improved India's export performance, it is still lagging behind other rapidly growing Asian countries. What is worth noting is India's major reliance on traditional labour intensive products, even after more than 40 years of industrialization which started in the mid-1950s, much earlier than in the East and South East Asian countries. India's emphasis on machine building industries serving a heavily protected domestic market resulted in diversified but inefficient, and hence internationally non-competitive, industrialization. On the other hand, the late starting East and South-East Asian economies have managed to diversify their exports into the category of differentiated products dominated by machinery and transport equipment. They thus took advantage of this faster growing and higher technology category of exports to transform their domestic structure of industry and workforce during the process of rapid growth. What distinguishes India from its East and South East Asian neighbors is that although India started the industrialization process earlier, they liberalized their trade and switched from import-substitution to export-orientation earlier than India. As a result, they not only successfully exploited international trade to step up and maintain a higher growth rate, but, as is evident from their rapid recovery from the recent currency crisis, they also developed resilience to cope successfully with international shocks.

2.2.3 Export Shares in Gross Output

When the incentive structure is changed away from import-substitutes and toward exports as a result of trade liberalization, the consequences are reflected in the increased international competitiveness of the domestic production structure. In this section, an attempt is made to capture these consequences through 115 sector input-output flow matrices of the

Indian economy. Four such matrices are available: for 1978-79 when Indian exports started responding to the depreciating exchange rate of the rupee in the mid-1970s; for 1983-84, when real-exchange rate appreciation had set in; for 1989-90, the last of the pre-reform years of the late 1980s when sustained real exchange rate depreciation had given a boost to exports; and finally, for 1993-94 which was the first of the three post-reform boom years. The reform process had been in place only for three years by 1993-94, and as such, it may be too early to assess the impact of reforms on the domestic production structure from data for this year. Nevertheless, since real exchange rate depreciation combined with investment liberalization measures and removal of most quantitative restrictions on imports of intermediate and capital goods ought to have raised the incentive to sell in international markets, the share of exports in output should have gone up. Thus a high and rising share of exports in gross output would be indicative of the increasing importance of international markets in domestic production and a consequence of the changed incentive structure. As the main focus of the above-mentioned policies was on the manufacturing sector, it is appropriate to concentrate on 64 (mostly 3-digit level) manufacturing sectors of the 115 distinguished in the input-output flow matrices.

The top 10 manufacturing export earners are identified in descending order of foreign exchange earnings in the year 1993-94, and in the corresponding export shares (Table 10). The top ten contributed nearly 62% of manufacturing export earnings, of which as much as 39% came from the top three, namely, miscellaneous manufactures (nearly 14% share) which possibly include new exportables not classified elsewhere, other non-metallic mineral products that mostly include gems and jewelry (12.4%), and ready made garments (12%). As many as 7 out of the top 10 reported export shares of gross output exceeding 20%.

For analyzing whether the response of the share of exports in gross output to trade liberalization varied over time as liberalization intensified, the sectors are ranked according to a descending order of export-shares in gross output in 1993-94 and traced their behavior in

the previous three years (1989-90, 1983-84 and 1978-79). There were 10 out of 64 manufacturing sectors for which export shares in gross output exceeded 20% in 1993-94 (Table 11), and for nine more sectors, they ranged between 10% and 20% in 1993-94 (Table 12). In order to assess their importance in exports, their percentage contribution to manufacturing exports in each year is also provided. A comparison with Table 10 shows that a cut-off share of 20% ropes in eight out of the top ten export earners, the exceptions being cotton textiles and miscellaneous food products with a combined share of eight percent in manufacturing exports.

The behavior of sectoral export-shares in gross-output over time can be classified into three broad patterns.

(i) Other non-metallic mineral products (essentially gems and jewelry), ready-made garments and miscellaneous manufactured products all in the labour-intensive category where sectoral export shares exceeded 20% in 1978-79 prior to liberalization. These sectors were internationally competitive even under the earlier restrictive trade policy regime and benefited from trade liberalization over time. Their export shares rose over time they remained major-export earners in all the years.

(ii) Leather footwear, organic heavy chemicals, soaps, cosmetics and glycerin (Table 11) and paints, varnishes, lacquer, industrial machinery, edible oil other than vanaspati (Table 12) are sectors where export shares were low in 1978-79 but rose over time. They did not contribute significantly to manufacturing export-earnings, but are likely major export earners of the future as they have been steadily increasing the share of their export-oriented output and establishing international competitiveness by responding to changes in the policy-induced incentive structure.

(iii) Traditional industries such as carpet weaving, leather and leather products and silk textiles (Table 11), tea and coffee processing, jute, hemp and mesta textiles and miscellaneous textile products as well as some apparently non-traditional industries such as

miscellaneous metal products (Table 12), bicycles and cycle rickshaws and other industrial machinery (Table 12) constitute sectors with fluctuating or declining sectoral export shares over time.

2.2.4 ***Growth in Factory Manufacturing Output and Employment***

The Indian manufacturing sector has over the years developed a dual structure with the organized factory segment having a much higher productivity per worker and a higher wage per worker than the residual, unorganized, predominantly small scale non-factory segment with much lower productivity per worker than the factory segment and much lower average earnings. Labour market rigidity caused by overprotective labour legislation resulted in a very slow absorption of labour in the higher productivity factory segment. According to the quinquennial National Sample Surveys of employment and unemployment, the share of (factory plus non-factory) manufacturing employment in the total workforce increased only marginally in nearly thirty years, from 9.0% in 1972-73 to 11.1% in 1999-2000. The data from the Annual Survey of Industries show that the share of the factory segment in total manufacturing employment has remained virtually constant around as low as 17% over the same period. In other words, as much as 83 % of manufacturing employment is still confined to a lower-productivity unorganized segment after nearly 50 years of industrialization. The restrictive policy regime generated in a diversified but internationally non-competitive and inefficient industrialization that was intensive in scarce capital and foreign exchange and saving on abundant labour.

In the 1980s, when selective deregulation and fiscal expansion resulted in output growth that was higher than that during the pre-1980-81 period, there was a virtual stagnation of employment in the factory segment. The decade of the 1980s was, therefore, described as one of “jobless growth” and concerns were expressed about the declining output elasticity of employment in the factory segment. These concerns were heightened during the post-1991

period when wide ranging liberalization of investment and trade policies was carried out. Interestingly, the post-1991 period was marked by a growth of 2.9% per year in employment in the factory-manufacturing segment in comparison with the "jobless growth" during the decade of the 1980s. The results of a recent study (Tendulkar (2000)) are illuminating in this context.

Table 13 presents the average number of workers in the factory segment for three triennia: the first triennium 1980-81 to 1982-83 (1981-83 for short), the second triennium 1988-89 to 1990-91 (1989-91) of the decade of "jobless growth", and the latest available post-reform triennium 1995-96 to 1997-98 (1996-98) of the 1990s. The averages are given for eighteen 2-digit manufacturing industry groups and in the aggregate (two digit codes 20-38). A comparison between the first and the last triennium of the 1980s shows a net decline in the average number of factory segment workers to the tune of about 52,000. Seven out of eighteen industry groups suffered job losses amounting to 518,000, which were not offset by the job gains in the remaining groups. In contrast, the latest available post-reform triennium 1996-98 marked a net increase of 1.11 million over the pre-reform triennium 1989-91 more than making up for the net losses of the 1980s.

Exponential trend growth rates (percent per year) are given in Table 15 for some of the relevant variables in an effort to sort out the factors behind different employment outcomes during the 1980s and 1990s. A major determinant of derived demand for labour is clearly real output which grew nearly two percent points faster at 9.1% per annum in the 1990s. The second factor is cost to the employer of a worker or more precisely the product-wage of a worker. The real product wage grew nearly two percentage points slower during the 1990s. In other words, the 1990s were different from the 1980s in two respects with regards to favorable impact on employment growth: plus two percentage point annual *rise* in real output and minus two percentage point annual *decline* in labour cost. The total effect of both together is a 2.9 % growth in factory sector employment per annum in the 1990s. A

cross section regression relation across 18 industry groups among these variables showed that, controlling for the adverse impact of growth in product wage, a 1 percent change in real output resulted in 0.8 or 0.9 % change in employment in the decade of "jobless growth" as well as in the 1990s, that is to say, employment growth was equally responsive to real output growth in the 1980s and the 1990s. The results in lines 7 and 8 of Table 14 indicate that every one percentage point rise in product wage tended to neutralize the impact of real manufacturing output growth of equal magnitude in both the 1980s and the 1990s. In comparison with the 1980s, a lower product wage growth and a faster output growth in the 1990s brought about positive employment growth in the higher productivity factory segment of the manufacturing industry.

How do these results square up with reforms of the post-1991 period? All the components of reforms, namely, removal of entry barriers, import tariff reductions, removal of quantitative restrictions on imports of most of the intermediate and capital goods, not only introduced competition – both internal and external – but also contributed toward more efficient allocation of resources by reducing distortions introduced by the earlier policies. The impact is reflected in a higher growth in real manufacturing output and a faster employment growth in the higher productivity factory segment. Major changes in the industrial scene have been noted by perceptive observers: a restructuring of the corporate through mergers, acquisitions, joint ventures, strategic alliances, hiving off of unviable non-core activities and so on. The transition from non-competitive markets in which it was possible to reap large profits from high margins on a low sales volume to competitive markets in which margins were low and hence, sales volume had to be high to reap large profits could have been important as well. However, the initial surge in growth during the immediate pre-reform triennium was constrained by inflexibilities in the labour market, infrastructural bottlenecks and slowing down of the opening up process which led to a slow down in industrial growth in the last three years of the decade.

2.2.5 Trends in Total Factor Productivity (TFP)

Prior to reforms of 1991, given the strait-jacket in which producers were placed through controls on investment, location, technology and input choice, imports of inputs, and foreign investment, and the absence of competitive pressures, it should surprise no one that there was no growth in TFP except in the eighties when the rigors of some of the controls were relaxed. If this hypothesis is correct, one should see a faster growth in TFP from the eighties on. There is some support for this hypothesis: for the *manufacturing sector,* Ahluwalia's(1992) estimates show that TFP *declined* at an annual rate of 0.5% in the two decades prior to 1980 and *increased* at the rate of 2.8% in the decade of the eighties. For the economy as a whole estimates of IMF (2000, pp.10-11) suggest that TFP stagnated throughout the 1960s and till 1974, and increased steadily thereafter reaching an impressive growth of 2.5% in the post-reform year of 1996. Given the well-known methodological and measurement problems associated with estimation of TFP, these estimates are to be treated as no more than indicative.

3. *External Capital Inflows*

Until the eighties the two major sources for external capital for India were bilateral government-to-government foreign aid and borrowing (largely concessional) from international financial institutions. Only in the eighties, when fiscal prudence of the previous three decades gave way to profligacy, the government borrowed from private sources on commercial terms. Among private creditors, non-resident Indians (NRIs) were an important source of deposits in Indian banking system. In 1980-81, out of $18.3 billion of public and publicly guaranteed external debt, only $2 billion was owed to private creditors (World Bank, 1990, Table 4.1). But on the eve of the macroeconomic crisis of 1990-91 that led to the reforms, external debt had nearly quadrupled to $71.1 billion (World Bank, 2000a1, Table A3.1a), of which as much as $23 billion was owed to private creditors. Thus, debt to private

creditors had grown eleven-fold in just 10 years-total NRI deposits, which were negligible in 1980-81, amounted to $14 billion in 1990-91. Short-term debt at $8.5 billion in 1990-91 was more than 2.5 times the level of net foreign exchange reserves at $2.1 billion.

The first two years of reforms ending in 1992-93 saw a severe fiscal contraction and a drastic import compression (gross fiscal deficit of the central government was reduced from 6.6% of GDP in 1990-91 to 4.8% in 1992-93 (Government of India, 2001, Table 2.1) and imports declined by about 20% in 1991-92. There was a sharp reduction in current account deficit, from 3.1% of GDP in 1990-91 to 0.6% in 1991-92. Short-term debt came down to $6.3 billion in 1992-93, and even further to $3.6. billion in 1993-94. In the meantime, net reserves had climbed to $14.5 billion in 1993-94, more than four times the level of short term debt. Although there has been a substantial slippage in fiscal discipline since then and restrictions on imports have also been removed, still the current account deficit has remained modest (at less than 1.1% of GDP in 1999-2001) and debt management has continued to be sound. Short term debt at the end of March 2000, at $4.04 billion, was only 11.5% net of foreign exchange reserves (Government of India, 2001, p.125).

It was noted earlier that prior to 1991 reforms, there were severe restrictions on FDI, and even the reforms did not go far enough in making India an attractive destination for FDI. Nonetheless, compared to a meager annual flow of less than $200 million in the pre-reform era, FDI flows reached a peak of $3.6 billion in 1997-98. Indeed the 1990's saw the emergence of Foreign Direct Investment (FDI) and portfolio investment into India. The World Bank's annual Global Development Finance enables a comparison of different types of long term capital flows received by the developing countries. India's performance in relation to other rapidly growing economies of Asia can be seen from a selective international comparison of different types of long-term capital flows (Tables 16 to 20) for the years 1990 and 1992 to 1999. Apart from India, other developing countries included in the table are

China and Indonesia, (which are large in terms of population), plus Thailand, Malaysia and South Korea, which are much smaller in size.

The composition of long-term capital flows in India has shifted from official debt flows in the immediate post-reform years 1992 and 1993 toward non-debt creating FDI and portfolio investment since 1994 with a fluctuating mix between the two types of private foreign investments. But India's share among developing country portfolio investments has been consistently higher than in FDI (Table18). China provides a contrast in attracting massive FDI not only in absolute terms and in terms of share but also in comparison with portfolio investment (Table 17 and Table 18). South Korea, on the other hand, has relied mainly on private commercial debt flows till the recent currency crisis and to a smaller extent on portfolio investment. China's share of FDI among developing countries has been declining after reaching the peak of nearly 42% in 1993(Table 17). This is possibly due to the emergence of other developing countries competing with China and China's early start in the context. However, although starting later than China, India has also been experiencing a declining share of FDI since the East Asian currency crisis (Table 17). More important, smaller countries such as Thailand have attracted higher FDI than India (Table 17). India's limited success in attracting FDI despite declared intentions in this regard may be attributed to a still large number of 'ifs and buts' in various lists of eligible industries despite declared liberalization, resistance to FDI by domestic industry in competing areas and other constraining factors.

A more disaggregated breakdown of total non-debt-creating inflows of FDI and portfolio investment for the 8-year period from 1992-93 to 1999-00 is presented in Table 20 that relates to policies. It shows that over the eight year period, India managed to attract more volatile portfolio investment to the tune of $ 18.5 billion compared to $ 14.5 billion of FDI or about 55% of non-debt-creating inflows. Besides, two-thirds of the FDI came through the non-transparent discretionary route of Foreign Investment Promotion Board from through

the automatic route opened mostly for investment in infrastructure.

4. India, WTO and a Possible New Round of Multilateral Trade Negotiations

Reminiscent of its resistance to the start of the Uruguay Round of multilateral trade negotiations, on the grounds, among others, that developed countries had not lived up to their commitments in earlier rounds, India has been reluctant to endorse the start of a new round of Multilateral Trade Negotiations (MTN) in the preparatory meetings for the Seattle ministerial of the WTO in late November 1999 that was widely expected to, but failed to, launch the new round.

India's reluctance is understandable. First of all, unlike agreements on earlier rounds of MTN which largely covered commitments on measures at the border such as tariff and quotas, the Uruguay Round (UR) Agreement involved behind the border or domestic policy commitments, many of which required major institutional development as well as the creation of new institutions on the part of developing countries. They undertook several "unprecedented obligations not only to reduce trade barriers, but to implement significant reforms both on trade procedures (e.g. import licensing procedures customs valuation) and on many areas of regulation that establish the basic business environment in the domestic economy (e.g. technical, sanitary and phytosanitary standards, intellectual property law)" (Finger and Schuler 2000, p. 511). For example, "countries that did not have patent or copyright laws were obliged to enact them, to offer remedies for infringements, and educate officials in how to carry them out" (Odell, 2000, p.3). Sylvia Ostry (2000, p. 6) has aptly described the shift from GATT to the WTO system as follows "The degree of intrusiveness into domestic sovereignty bears little resemblance to the shallow integration of the GATT with its focus on border barriers…. The WTO had shifted from the GATT model of *negative* regulation – what governments must not do – to positive regulations, or what governments must do. Under the single undertaking rule, participating countries had to accept all the

multilateral agreements relating to goods and services, and on trade related aspects of intellectual property rights' (TRIPS) understandings on Dispute Settlement and on Trade Policy Review Mechanisms. Thus they had no option to pick and choose among the many agreements for acceptance. In fact, there were only ***four*** plurilateral agreements (on civil aircraft, government procurement, dairy and bovine meat) that did not form part of the single undertaking.

Second, a fairly strong case can be made that the UR agreement was unbalanced: the developing countries undertook many costly commitments and in return, obtained only a few commitments by industrialized countries to phase out GATT inconsistent MFA quotas, and a limited liberalization of GATT inconsistent intervention in agricultural trade. Indeed, on balance there was virtually no liberalization of agricultural trade in the UR agreement. Although subsidies on exports of manufactures (which some developing countries offered to their infant manufactured exports) were made WTO-inconsistent, agricultural export subsidies (which were used mainly by industrial countries, particularly the European Union) were reduced, but not eliminated. It is true that the developing countries were given a longer time to implement their commitments as compared to the developed countries. Yet, as the implementation began, many developing countries found that even the longer implementation periods might not be long enough.

Third, the mandated review of the Uruguay Round agreements on agriculture, TRIPS and Services, already in progress, are likely to occupy negotiators for some time to come. The negotiations on maritime services are yet to start. Also an agreement on the movement of natural persons is yet to be reached.

India and other developing countries have been urging a resolution of implementation issues relating "to various perceived asymmetries and imbalances in existing WTO Agreements and effective operationalisation of various special and differential treatment

provisions for developing countries…[In response] the General Council [of the WTO] decided on 3 May 2000 to hold Special Sessions to discuss various implementation issues and concerns raised by Members…" (Government of India, 2001, p. 117). Subsequent meetings of the General Council on June 20, 2000 and December 15, 2000 have made further progress. The ministers of OECD at their conference in May 2001 "stressed the importance of paying close attention to developing countries' concerns, particularly difficulties in meeting existing WTO obligations" (Financial Times, May 17, 2001, p. 1). At the same time, the US Trade Representative, Mr. Robert Zoellick, pledged "support for a broad-based round that would stimulate developing countries' growth" (ibid., p. 1).

Apparently "the world's biggest powers [the so-called "Quad Group" consisting of the US, EU, Japan and Canada] have agreed to launch a diplomatic effort to coax developing countries into backing the start of a global trade liberalization round this year … however, differences have emerged between the US and EU over the tactics and timing of the Quad initiative … the EU wants industrialized countries to schedule by July a package of concessions [to] developing countries … the centerpiece of the package would be an offer to extend the deadline for putting into effect the WTO agreement on trade related investment measures … although the US accepts that the issue needs to be addressed, it is cautious about offering developing countries a compromise immediately … until it is sure that developing countries are committed to meeting world trading rules" (Financial Times, May 18, 2001, p. 8). It is ironic that the US should be so insistent about prior commitment by developing countries by meeting trading rules when in the past the US and other industrialized countries found ways of evading inconvenient GATT rules! At their insistence trade in textiles and clothing and agriculture were taken out of GATT so that GATT-illegal import quotas and export subsidies could be used. The so called "gray" area measures such as "voluntary export restraints" were invented to circumvent GATT rules. Be that as it may, it is clear that "the pressure mounted by India and other developing countries has succeeded in putting

implementation issues firmly and squarely in the Agenda of the WTO for the first time" (Government of India, 2001, p. 117).

Although there are good reasons for India's reluctance to embrace a new round, there are equally good, nay stronger, reasons as to why India should welcome, and indeed vigorously participate, in a new round. Mattoo and Subramanian (2000) articulate some of these: active engagement in the multilateral trading system though participation would facilitate domestic reform and enhance access for India's exports; it can serve as a commitment to good policies and as a means of securing more firmly market access rights that have already been established; and it can serve as a bulwark against regionalism. In support of the last argument, the two authors cite the trade diversion after the conclusion of the North American Free Trade Agreement (NAFTA): Mexico has gained market share relative to India in the US and Canada in exports of clothing in particular, and manufacturing in general, since the conclusion of NAFTA.

The recently concluded Summit of the Americas in Quebec City, Canada, has endorsed the formation of a hemispheric free trade area extending from the High Arctic in the North to Tierra Fuego in the South. It is a plausible presumption that unless a new round of multilateral negotiations is launched soon, negotiations at regional levels might succeed in dividing the world into overlapping as well as competing trade blocs. As WTO, 2001, p5)) points out "… in the present climate regional integration agreements are more likely to become "inward looking" and to leave aside the liberalization of difficult areas (such as agriculture). Additionally, as preferential agreements begin to encompass "regulatory issues", the risk of regional divergence in approaches to the rule arises, which not only complicates and distorts the situation facing firms and investors, but also increases the difficulty of agreeing--down the road--on multilateral rules…when regionalism is seen as a substitute for multilateralism, it can be a danger to the more vulnerable economies". Whether or not India is among the more vulnerable economies, India has to recognize that if a new round is not

launched soon, regional liberalization will become a serious, though much less desirable, alternative to multilateral liberalization. The facts that the results of preferential regional liberalization in South Asia, through the South Asian Preferential Trade Agreement (SAPTA) have been very disappointing, and no other regional agreements appear to be open for India suggests that India should strongly support the launching of a new round.

While participating in a new round, India and developing countries should try to ensure that items in their interest are included, and those against their interest are excluded from the negotiating agenda. Of course, any agreed agenda will involve tradeoffs. But such tradeoffs should not lead to a serious imbalance between costs and benefits to the developing countries. With this in mind, the following are worth considering in formulating India's (and developing countries') negotiating position.

Market Access: Even after eight rounds of negotiations and reductions of trade barriers, the traditional issue of market access is still relevant. From the perspective of developing countries, tariff peaks and tariff escalation that still limit the access to industrialized country markets have to be addressed. Although the quotas under the Multifibre Arrangement (MFA) hopefully will be phased out by January 1, 2005 as per the Uruguay Round (UR) agreement, tariffs on imports of textiles and apparel are high in industrialized countries. Besides bringing them down, developing countries have to ensure that industrialized countries do not resort to safeguards and Anti Dumping Measures (ADMs) to restrict imports of textiles and apparel, as the EU and the US have tried to do even before the expiry of MFA. Some of the less efficient Asian producers who were benefiting from MFA quota will face increasing competition with their abolition. India is vulnerable in this regard, particularly because the garment industry was reserved for the small-scale sector. Fortunately this restriction was removed in 2000. Any barrier that replaces quotas will hurt India and other Asian exporters if they do not become competitive. Also liberalization of

trade in services through commitments to extend MFN and national treatment to more and more categories of services should be on the agenda.

Agriculture: Although the UR agreement broke new ground by bringing agricultural trade for the first time within the scope of international disciplines and set in motion a process for lowering border protection and trade-distorting domestic support measures, there was no significant liberalization of trade. According to a recent report by OECD (Financial Times, April 11, 2001, p. 11), the UR agreement has had limited impact—subsidies to producers accounted for as much as 40% of farm income in 30 OECD countries, and for more than two thirds in Japan, South Korea, Norway and Switzerland. The EU and Japan continue to resist pressures from the US and consumer groups of countries for a rapid elimination of export subsidies and large cuts in domestic support. What is even more disquieting is that specious arguments for protecting agricultural trade, such as agriculture's multi-functionality, have been brought up. It should be clear that ensuring multi-functionality does not require trade protection but only other non-trade distorting measures targeted at particular functions that are sought to be encouraged. The OECD report concludes that agricultural protection in rich countries is largely responsible for the stagnation at 40% in the share of developing countries in global agricultural trade, while their share in manufactured trade has doubled from 14% to 29% in the last two decades. Although some importers of agricultural products among developing countries might have benefited from the policies of developed countries, for most WTO members lowering farm trade barriers to the prime is not the only concern in future trade negotiations. The EU has linked agricultural trade liberalization to the inclusion of other items such as investment and competition policies in the negotiations agenda. Such a linkage is unwarranted since the prospects of mutually beneficial bargains on other issues are not bright. Since the peace clause that prevented subsidy disputes to be taken to the WTO's DSM is to expire in 2003, and its renewal will be resisted by the US and Cairnes group, it is essential that agricultural trade liberalization gets high priority in any new round. India's

recent action in raising agricultural tariffs while lifting QRs is not helpful in this regard. In fact India should join the Cairnes group in pushing for liberalization of agricultural trade.

TRIPS: It is often argued that in the UR agreement there was a bargain in which developing countries agreed to TRIPS in return for the phase-out of MFA and any attempt to renegotiate TRIPS or to take it out of WTO altogether will unravel the bargain and create disincentives to come to any future agreement because of the possibility it may have to be renegotiated. Neither of these arguments is persuasive. After all, MFA, which is an egregious violation of the original GATT agreement of 1947, is in effect an agreement that renegotiated the application of GATT's fundamental principles of non-discrimination (MFN principle) and the prohibition of the use of quotas. As such, to argue that vacating this egregious violation through the MFA phase-out required a concession by the developing countries in the form of their accepting TRIPS and that asking for renegotiation of TRIPS violates the sanctity of the previous UR agreement, is preposterous. The cost of TRIPS is substantial: Maskus (2000, Table 6.1) estimates a net transfer of rents on intellectual property of the order of $8.3 billion to just four developed countries (US, Germany, France and Italy) from the rest of the world including poor countries. Although the U.S. will almost surely resist reopening TRIPS, some consideration ought to be given to rethinking some of its provisions.

Preferential Trade Agreements: The drive towards preferential trade agreements on a regional basis is continuing. In fact, 194 such agreements have been notified to the WTO as of the beginning of 1999 and 87 of them were notified since 1990. This trend is unfortunate since it undermines the multilateral process and ought to be blunted. The World Bank (2000b) in its Policy Research Report on Trade Blocs seems to contend this by pointing to political benefits (security, greater bargaining power and "lock-in" of domestic reforms) that a country can secure from becoming a member of a Regional Integration Agreement (RIA) and economic benefits from deeper integration through harmonization of standards,

competition and investment rules which add to the traditional benefits from efficiency and scale effects. Although the report offers a catalogue of various benefits from RIAs, particularly those, which have developing (South) and developed (North) countries as members, much of the argument is of an a priori and qualitative nature. After asking the right question, viz. compared to what, among unilateral liberalization, multilateral liberalization and status quo, is an RIA beneficial for a developing country, it does not really answer it, other than saying that joining a North-South RIA is likely to be better than joining a South-South RIA. For example, it does not mention that in preferential trade agreements (e.g. U.S.-Jordan free trade agreement) conditions relating to labor standards or investment or competition policy are included even though there are no multilateral disciplines in those areas. Bhagwati(2001) has succinctly discussed the systemic problems and the risks posed by the multiplication of preferential trade agreements generally(see also Bhagwati and Panagariya (Eds.), 1996) and the specific danger that the U.S.-Jordan free trade agreement poses, because it is viewed as a 'template' for future trade liberalization agreement. The World Bank report does not ask why preferential trading is an essential pre-requisite for reaping benefits of security or “lock-in” or, for that mater, of policies of “deep” integration. The recent problems in MERCOSUR (Economist, March 31, 2001) illustrate that simply forming a customs union is not enough to sustain it when members have differing exchange rate regimes and different objectives in joining the union. Very little, if any, "deep" integration occurred in MECOSUR. It is one thing to argue that security considerations were the foundation of a regional integration agreement such as the EU, but it is an entirely different thing to suggest that without a permanent preferential trading arrangement, a security achieved through RIA will be unsustainable. Again, “lock-in” can be achieved with greater credibility through commitments in multilateral fora than through RIA’s. In any case as MFN tariffs are being whittled down to very low levels preferential tariffs in an RIA confer little benefit.

The report cites, and dismisses as non-serious, my proposal to replace Article XXIV of GATT/WTO with the requirement that any preferences granted to members of an RIA be extended to the rest of the membership of the WTO on an MFN basis within a specified period of time. The report claims that this proposal will effectively ban RIAs. This claim is baseless: what the proposal tries to ensure is that members of RIA continue to enjoy whatever political benefits and benefits of deeper integration they realized in forming an RIA, while giving up regional trade preferences that could potentially hurt the rest of the trading world. I am tempted to return the complement to the authors of the World Bank Report: they are not serious!

Anti-Dumping Measures (ADMs): There is no economic rationale for engaging in dumping, other than perdition, which is very difficult to achieve. As such, allegations of dumping are no more than excuses to engage in protection through selective targeting of exporting countries and even firms. Since the use of non-discriminatory safeguard measures to deal with temporary surges in imports is permitted by WTO, the recourse to ADMs has to be explained only by its relative ease of use, its not requiring compensation to exporters and its discriminatory feature. Unfortunately many developing countries including India have started to use ADMs. It will be in the best interest of the trading system as a whole, and to its developing country members in particular, if ADMs are made WTO-illegal.

Labour and Environmental Standards: The demand for expanding the mandate of the WTO to permit the use of trade policy instruments to enforce labor and environmental standards is unlikely to fade away, although the Bush administration in the US, being less beholden to protectionist labor unions, seems to be less committed to putting labor standards on the negotiating agenda of a future round. Indeed, President Bush (New York Times, April 11, 2001, p.) has expressed a desire to renegotiate the labor rights part of U.S.-Jordan free trade agreement. Still the support for linking market access to enforcement of labor rights is strong among NGOs and student groups in industrialized countries. It is essential

that developing countries and like-minded developed countries remain united in resisting the inclusion of labor standards as an item in the negotiating agenda of a future round, while at the same time being willing to discuss labor and environmental issues in other fora such as the ILO and UNEP.

Competition and Investment Policies: These policies involve sensitive issues of national sovereignty. As yet not enough is known about the trade and welfare impacts of the diversity among countries in such policies and whether harmonization would be beneficial. It is premature to put these on the negotiating agenda of the next round.

Decision Making Processes of the WTO: The WTO, at the end of 2000, was a body of 141 members(with European Communities as a single member). Satisfying the principles of transparency and representation, while ensuring an orderly and efficient decision making process in such a large body whose members have diverse interests and resources is a challenge. Clearly, requiring consensus among all members for any decision, while it bestows bargaining power to otherwise weaker members of the body, could paralyze decision making in a large body. Other means such as requiring an appropriately specified majority (for example, two-thirds of the members, of which the proportion of developing country members exceeds a threshold) could be used to give bargaining power to weaker members. In addition, should NGOs be represented in the decision making bodies of the WTO? An affirmative answer implies that national governments do not adequately represent the views of the private groups in their own countries. The NGOs claim "that national pursuit of environmental, labor and human rights goals are being deflected by economic considerations." While business interests claim "that the government's pursuit of the nation's economic interests is being unduly restrained by concerns about more ephemeral political interests" (Hudec 1999, p. 47). I would argue, following the "liberal" theory of intergovernmental bodies, the difference between a nation's NGOs and its businesses ought to be resolved in the domestic political process. This does not preclude NGOs, or for that

matter businesses, in different nations exchanging information and helping each other in their own domestic political processes. The claim for representation at an international tribunal is in effect an attempt to get around and side step the domestic political process. Granting such a claim could have potentially serious consequences. However, opposing such representation does not deny that the legitimacy of rules, procedures and practices of the WTO as a body created by treaties among governments ultimately rests on whether such treaties are entered into and ratified by a domestic process in each country that is perceived to be legitimate.

5. Conclusion

Until the early 1980s, India's trade policy was geared to subserve the objective of industrialization through import substitution. The rupee was significantly overvalued and in effect there were multiple exchange rates depending on the nature of transactions. However, the implicit subsidization of imports of such overvaluation was more than offset by QRs and high tariffs on imports. On the export side, although various measures were instituted to encourage exports, those were not enough to offset the tax from overvaluation. In addition, there were export controls on some products. On balance, taken together, the exchange rate, export subsidies and export controls penalized exports.

In the early 1980s, there was some relaxation of the rigid controls on foreign trade—in fact, by 1985, there was a conscious attempt to improve the competitiveness of Indian exports, with an emphasis on the liberalization of essential imports of capital goods and intermediate inputs, and the rupee was depreciated as well (see Appendix for an econometric analysis of the relationship between the real effective exchange rate and export performance). However, the overall development strategy was still inward-oriented. Only with the reforms of 1991 did a significant shift away from this strategy towards outward orientation take place. Initially the reform involved a significant devaluation of the rupee, removal of QRs on imports (except for imports of consumer goods and agricultural products), and a reduction of

tariffs across the board. The exchange rate was unified and made convertible on the current account in 1993. Relaxation of restrictions on inflows of foreign capital (FDI and portfolio) led to a surge in inflows (and an appreciation of the rupee) for a while. However, since 1996-97, mean tariffs slowly increased, and the removal of QRs took place in 2000 and 2001, only after India failed in its attempt to defend them on balance of payments grounds, when challenged by the US, before the Dispute Settlement Body of the WTO. In concluding the paper, I will list the remaining tasks that need to be completed in the arena of external sector policies.

Tariff Barriers: As noted earlier, import weighted mean tariffs have slowly increased from 24.6% in 1996-97 to 30.2% in 1999-2000. This level is much higher than those prevailing in China and other East Asian countries. Even after the withdrawal in the budget for 2001-2002 of the surcharge on import duties, there is unlikely to be a significant reduction—in fact it is more likely that there will be an increase in mean tariffs. Although the Finance Minister, in presenting his budget proposals of 2001-02, said "I have already promised that our customs tariff would be brought down to East Asian levels. I will (sic) like to move progressively within three years to reduce the number of rates to the minimum with a peak rate of 20%. The modalities for this will be worked out in time for the next budget" (Finance Minister's Budget Speech, para 141), his budget proposals send entirely different signals. After noting that "all agricultural produce already attract a peak rate of duty of 35% or more," he proposed to "increase the rate of customs duty tea, coffee, copra, coconut and desiccated coconut from the present 35% to 70%." Further, he proposed to raise the duty on various edible vegetable oil imports (except for soybean oil on which the duty would continue to be at the WTO-bound level of 45%) to a range of 75% to 85% from range of 35% to 55%. What is even more disturbing, he assured "the House that in order to safeguard the interests of our farmers we should move swiftly whenever any perceptible threat on account of imports is noticed."

While removing QRs on imports on April 1, 2001, the government has raised several applied tariffs whether they were bound or not. Those already bound were raised from their lower applied to higher bound levels. For example, the Finance Minister raised to total customs duty on second hand cars and other vehicles to a whopping 180%. In the case of agricultural commodities, India, like many other countries, had engaged in "dirty" tarrification in the Uruguay Round by setting very high bounds way above applied levels. Thus raising tariffs to their bounds in effect would virtually shut out any imports.

The Commerce Minister has promised to use all steps available under the WTO rules to protect the economy. These include the use of sanitary and phyto-sanitary (SPS) measures as protectionist measures. Citing that in doing so India would merely follow the lead of developed countries, the Minister has proposed to send a team to Australia and New Zealand to study their use of SPS measures to restrict agro-imports! The Minister further said that the Government would act in case of any large-scale imports reported by the "war room" set up to monitor 300 sensitive tariff lines. The action would include tariff adjustments, levy of anti-dumping and countervailing duties, safeguard actions such as temporary imposition of QRs, and SPS measures ("WTO steps will be invoked: Maran," The Hindu online, April 33, 2001). The former speaker of the Parliament, Mr. Balram Jakhar, has called for the reimposition of QRs ("Retain QRs to save the farmer: Jakhar", The Hindu online, May 13, 2001). The government of the state of Kerala "while agreeing with [Government of India's] proposals to the WTO that the developing countries should be allowed to maintain appropriate levels of tariffs keeping in mind their development needs and the high distortions prevailing in the international markets, the Kerala Government has suggested that there should be freedom to escalate tariffs. It has also agreed to the proposal that the developing countries should be exempted from any obligation to provide a minimum market access" ("Renegotiate with WTO: Kerala Tells Centre," The Hindu on line, May 24, 2001). These are not the signals to send if Indian liberalization is to be credible.

It is true that India's agricultural sector has been insulated from world markets for nearly five decades and self-sufficiency, particularly with respect to food, has been the objective of agricultural policy in general. Clearly producers cannot immediately adjust without incurring significant costs if they lose protection. However, the overall effect of the trade policy regime in India had been one of "disprotection" of agriculture. As such integration of Indian agriculture with world markets and elimination of disprotection arising from protection of industries supplying agricultural inputs should benefit agricultural sector as a whole. But saying this, is not to deny that India is currently producing some agricultural commodities in which it is not internationally competitive and such production has to be phased out. But easing the burden of adjustment through a phased reduction of protection, is not the same as guaranteeing existing protection, and increasing it if international noncompetitiveness increases, as the recent increases in tariffs suggest. This policy is costly.

A fear of losing "food security", if self-sufficiency is abandoned as an objective, is very often raised in policy discussions. One should distinguish "self-sufficiency", that is producing as much food as is consumed, from "self-reliance", that is having adequate resources to acquire food from world markets in case of domestic output shocks. India's focus on "self-sufficiency" is derived from its searing experience of attempted political blackmail by the US in the mid sixties. India then faced a major food shortage following two consecutive years of drought and had not enough foreign exchange resources of its own to import large volumes of foodgrains. India depended on PL-480 imports, and President Lyndon Johnson, unhappy with India's opposition to the Vietnam war, punished India by deciding on a shipment by shipment basis whether India would get food aid under Pl-480. However as long world markets remain open, and a country has resources to buy in such markets, such attempts at political blackmail will not succeed, as illustrated by the failure of the grain embargo of President Carter on the Soviet Union to punish it for its invasion of Afghanistan. With enough resources available, the Soviet Union found willing sellers of grain

in Argentina and Australia. Thus what matters from the perspective of resisting political pressure is "self-reliance" and not "self-sufficiency". Gulati(2000) provides an in depth discussion of trade liberalization and its possible impact on food security in India.

Anti-dumping. According to the IMF (2000, p. 92), India had 65 anti-dumping measures at the end of 1999, up from 43 at the end of 1999. Imports from China were most frequently targeted, with 18 cases at the end of 1999. In May 2001, anti-dumping duties were imposed on imports of phosphoric acid from China, polyester film from South Korea and Indonesia, and ferrocyamide from EU. The actual and threatened use of anti-dumping measures, once again erodes the credibility of liberalization. Since those measures are also invoked by the industrialized countries, particularly by the US, restraints, if not an outright ban, on their use have to be part of the negotiating agenda of any future round of trade negotiation.

Export Processing Zones (EPZs). Long before China successfully created Special Economic Zones (SEZs), India had one in Kandla port on the West Coast of India. More EPZs were added later. Unlike the Chinese, who waived restrictions on FDI labor regulations and other constraints on firms operating in SEZs, and also provided excellent infrastructure facilities, in India, except for access duty free access to inputs, firms operating in EPZs faced many of the same restrictions than firms elsewhere in India. Unlike EPZs in the rest of Asia, Indian EPZs did not attract any FDI. In 1999-2000, EPZs were replaced by free trade zones (FTZs) which are to be treated as external to India's customs territory. Presumably other regulations will also be waived for firms operating in FTZs. It remains to be seen whether FTZs are likely to be any more successful than the EPZs they replaced in attracting FDI. Unless they do so, they are unlikely to contribute a significant expansion of exports.

Capital Account Liberalization. Although given the parlous state of the domestic financial sector, any talk of convertibility of the rupee on capital account is very premature, steps taken thus far such as liberalization of restrictions on FDI (most recently in May 2001),

portfolio investment, broadening of the access of Indian companies to foreign equity markets and the easing of restrictions on commercial borrowing are important from the perspective of eventual capital account convertibility of the rupee. However, the inflow of FDI is hampered more by other constraints than those arising from capital account consideration. IMF (2000, p. 772) reports that according to the consulting firm A. T. Kearney's January 2000, FDI Confidence Index, India's absolute attractiveness as an FDI destination increased compared to the previous survey in June 1999, but it still slipped to the eleventh from sixth on the list of preferred destinations. The latest survey of executives of Global 1000 companies finds that few have India on their list of likely investment destinations over the next one to three years. The vice president of A. T. Kearney is quoted as saying that "When it comes to [FDI], India is at an important cross-roads—investors are generally sanguine abut the country but reluctant to invest because of a perception that it has done less than other emerging markets to reduce fundamental obstacles to investment. Of the executives surveyed, 67% were positive about the country as an investment destination, 61% of those with existing investments said that they were likely to add to those investments. But as high as 71% of companies without existing investment said their likelihood of investing in India was low. Interestingly only 6% of those surveyed corruption as the major obstacle to investment in contrast to bureaucratic hurdles (39%) and slow pace of reforms (28%). Clearly, under these circumstances, there is no prospect in the near future of India attracting as much FDI as Thailand ($6 billion) versus India ($2.4 billion in 1999), let alone match China ($42 billion).

Infrastructure. Perhaps the most serious constraint on growth of exports and aggregate growth is the poor state of India's infrastructure power, transport, ports, telecommunications, etc.). On the one hand, most infrastructural services cannot be imported and as such import liberalization is of little consequence in augmenting their availability. On the other hand, without reliable and affordable infrastructural services, the opportunities opened up by trade liberalization would not be fully utilized. The attempt to attract FDI into

infrastructure, particularly power, has not borne fruit primarily because of the political failure to reform the bankrupt state electricity boards. Without determining who is at fault in the ongoing dispute among ENRON, the Maharashtra and central governments about the power purchase agreement (PPA), one can be reasonably certain that the terms of the PPA would have been different, and the dispute would not have arisen, had the Maharashtra State Electricity Board been a financially viable entity.

Software. India has comparative advantage in labor-intensive services as well as in certain skill-intensive ones such as software. The software industry is one of India's fastest growing industries in the electronics sector. Software exports grew by an impressive 43% per year between 1991–92 and 1996–97 and 68% in 1997–98.

Although India is a significant player in the world software market, there are reasons to believe that India may not realize its vast potential unless major policy changes are made. A report by the McKinsey and Company for the National Association of Software and Service Companies (NASSCOM) highlights this potential. It projects annual revenues of $87 billion, 2.2 million jobs and a market capitalization of $225 billion for the Indian Information Technology (IT) sector by the year 2008. By the same year, the IT sector could account for 35 percent of India's exports, attract 5 billion dollars of Foreign Direct Investment (FDI) per year and contribute more than 7.5% to the growth of GDP.

In contrast to this potential, the actual situation as of 1999 is sobering: India accounts for only half a percent of the world software market. The industry's focus is on proprietary work for foreign organizations, which is only a small part of the world software market. Indian industry has not penetrated into the large off-the-shelf software market. India's cost advantage because its software professionals are inexpensive will be eroded as other players with similar or lower costs enter the market. The benefits from an efficient software industry

are not simply greater export earnings and FDI but the significant gains in the productivity of resource use in the domestic economy.

The single most urgent policy action needed for India to realize the potential of its software industry is to ensure that a vibrant and efficient world class telecommunications infrastructure is in place. Unfortunately a conflict between the Department of Telecommunications (DOT) and the regulatory agency, Telecommunications Regulatory Authority of India (TRAI), as it was initially constituted, hampered progress towards an efficient telecom infrastructure. A national telecom policy was announced in 1999. TRAI was reconstituted in 2000, and its dispute resolution powers are now vested in a new quasi-judicial agency. The conflict of interest arising from DOT being both a policy maker for the industry and also a service producer through its overall control of public sector telecom enterprises is also resolved: DOT as a service producer has been corporatized and separated from its policy making role. There is reason for cautious optimism that an efficient telecom infrastructure will develop in the near future.

In customized software India's recent share is a commanding 16%. In the Silicon Valley of California

> "Almost 3000 of the region's high tech companies are run by Chinese and Indian engineers…Apart from generating annual sales of almost $17 bn last year and providing 58,000 jobs in California's high-tech zone, Asian entrepreneurs have established long-distance business networks especially with Taiwan and India, which offer valuable openings for investment and trade…Chinese and Indian chief executives ran 13 percent of the Silicon Valley technology companies started between 1980 and 1984 and 29 percent of those launched between 1995 and 1998" (*Financial Times*, 3-4 July 1999, p. 3).

While exports of software from a domestic base will continue to grow provided the industry remains competitive, to be able to provide *in situ* services in foreign markets and to keep up with technological developments, it is essential that Indian software technicians have the opportunity to work abroad without necessarily having to migrate permanently. Most of the Indian engineers entered the United States under a special category of non-immigrant visas. In 1999 nearly 55 thousand visas were issued to Indians as compared to 6.7 thousand to Chinese. But there is strong pressure to restrict the number of such visas issued. A liberal agreement (as part of the General Agreement on Services (GATS) of WTO) on movement of natural persons would facilitate such temporary migration.

I have to conclude on a sombre, if not altogether pessimistic, note. Political uncertainties, particularly after the recent state elections, suggest that the reform process (privatization and disinvestment, reforms of labour and bankruptcy laws, fiscal consolidation (including elimination of subsidies, reform of state electricity boards, etc.), is unlikely to gather steam. The bold pronouncements of the Finance Minister on these matters in his budget speech on February 28, 2001 are likely to remain just that. His and the Commerce Minister's statements on tariffs (particularly on agricultural products) are anything but reassuring about the prospects of further liberalization of the external sector.

Appendix:
Export Performance and the Real Effective Exchange Rate

Jessica Seddon and T.N. Srinivasan.

The steady appreciation of the real exchange rate in the 1980s and 1990s appears have to adversely affected India's export performance. External sector policies used to promote import substitution up to the early 1980s contributed to significant overvaluation of the rupee. The steady depreciation from 1985 to 1993, along with liberalizations in the trade and exchange regimes contributed to the growth of India's tradables sector.1

Various econometric studies have found a significant relationship between export performance and the real exchange rate. Joshi and Little (1994)'s estimated structural model, for example, finds that the price elasticity of the supply of exports is about 0.7 in the short run and 1.1 in the long run. Price elasticity of the demand for exports was found to be approximately 1.1 in the short run and about 3 in the long run. They find that real exchange depreciations in the 1970s and the late 1980s were associated with rapid export growth, while slower export growth occurred during periods of appreciation such as the 1960s and 1980s. Srinivasan (1998)'s analysis of India's exports over 1963-94 also finds that real exchange rate appreciation negatively affects export performance. His results also suggest that increases in GDP and in overall world exports have, in part, offset the negative effect of real exchange rate appreciation.

This appendix extends the analysis of the relationship between the real exchange rate and export competitiveness to 1998. It is important to include this later post-reform period in order to discern whether the real exchange rate appreciation since 1993 has had roughly similar effects on India's export performance.2

1 IMF (1998), Ch.3 "Exports and Competitiveness"

2 IMF (1998), Ch. 3 finds that, in contrast to the overvaluation of the rupee under import substitution, the real appreciation of the rupee in recent years appears to reflect movements in economic fundamentals, and higher productivity growth in the tradable goods sector leading to a Balassa-Samuelson effect.

In what follows we re-estimate the relationship between exports and the real exchange rate using a larger dataset that runs from 1960-1998.

We use two measures of export performance: the logs of dollar value of total Indian exports, and India's exports as a share of total world exports. The figures for Indian exports are obtained from various editions of the Indian Ministry of Finance's Economic Survey, while world exports are from Table A of the United Nations' International Trade Statistics Yearbook. According to Joshi and Little, the ratio of the incentive-adjusted exchange rate to the real exchange rate in 1988=.95. We assumed a constant level of export incentives until reforms began in 1991 and then reduced the weighting factor linearly (add .01 each year) until 1995.3 Data on real GDP comes from the Economic Survey 1999-2000 and is the series calculated at factor prices.

The real exchange rate, exports, and real GDP appear to grow at exponential rates and the transformation to logs produces series that follow an approximately linear trend captured by a time trend. These series are not stationary in logs: in keeping with the visual impression of a trend, an augmented Dickey-Fuller test, evaluated at conventional significance levels of 5%, does not reject the null of a unit root in the log GDP, log exchange rates, and log export series. We find little evidence of a cointegrating relationship between log of the real exchange rate and log of total exports or export shares.

We thus present two versions of the original analysis. The first regressions, presented in tables A.1 and A.2, are as in Srinivasan (1998), where the non-stationarity in the original series is addressed by regression on a time trend and lagged values. This appears to be an appropriate specification for the regressions with log of value of exports (in US dollars) as the dependent variable. The error terms are stationary and there is little evidence of

3 Joining these two series is somewhat problematic, as the RER series that Joshi and Little use is weighted using the 10 most important countries in India's exports 1979-1981, while the RBI is weighted using 36 countries using trade statistics over 1975-1991. The two series are not markedly different at the joining point, however, most likely because the exports to the top ten countries are a large proportion of the exports to the 36 countries used in the RBI weighting scheme.

autocorrelation. This method is not as helpful for the regressions using India's share of world exports as the dependent variable: the residuals are mildly serially correlated and we narrowly reject the null hypothesis of a unit root in the residuals.

The second set of regressions, presented in table B.1 and B.2 modify the original regression to account for the non-stationarity by using first differences. The explanatory power of this regression, as in most first-difference regressions, is quite low. However, given the problems with nonstationarity in the original regression, this is our preferred specification for the analysis of the relationship between share of exports and the real effective exchange rate. The coefficients on REER and GDP are of the expected sign, though not statistically significant at conventional levels.

Our results are similar to Srinivasan (1998). The REER is still negatively, though not significantly related to the log of India's export share and coefficients in both the levels and first differences regressions are of similar magnitude to those found in the analysis of 1963-1994 data. The log of real GDP is, as before, positive, statistically significant, and of the same magnitude as in Srinivasan (1998). The relationship between REER and log of total value of exports is stronger: the coefficients are negative, highly statistically significant, and nearly identical to those presented in Srinivasan (1998). The elasticity of export supply to the real exchange rate does not appear to have changed significantly in the 1990s.

Table A.1
Dependent Variable: Log of India's Export Share

Constant	-0.302	-12.436
	(-0.33)	(-5.45)
Log of Real Effective Exchange Rate	-0.128	-0.209
	(-0.67)	(-1.49)
Log of Real GDP		0.971
		(5.55)
Time trend	-0.005	-0.059
	(-0.79)	(-5.48)
Log of lagged export share	0.805	0.381
	(8.98)	(3.81)
Adj-R^2	0.85	0.92

No. of Observations	37	37
Note: t-statistics are in parentheses.		

Table A.2
Dependent Variable: Log of Total Exports

Constant	-0.222	-4.574
	(-0.16)	(-2.18)
Log of Real Effective Exchange Rate	-0.298 .	-0.352
	(-2.46)	(-3.11)
Log of Real GDP	0.200	0.502
	(2.09)	(3.45)
Log of world exports	0.231	0.371
	(4.63)	(5.25)
Time trend		-0.027
		(-2.60)
Log of lagged Indian exports	0.554	0.514
	(6.24)	(6.19)
Adj-R^2	0.996	0.996
No. of Observations	37	37
Note: t-statistics are in parentheses.		

Table B.1
Dependent Variable: Log of India's Export Share (first differences)

Constant	-0.020	-0.050
	(-1.10)	(-2.02)
D Log of Real Effective Exchange Rate	-0.398	-0.414
	(-1.35)	(-1.44)
D Log of Real GDP		0.608
		(1.74)
Adj-R^2	0.02	0.07
No. of Observations	37	37

Note: t-statistics are in parentheses.

Table B.2 Dependent Variable: Log of Total Exports (first differences)	
Constant	-0.019
	(-1.01)
D Log of Real Effective Exchange Rate	-0.292
	(-1.84)
D Log of Real GDP	0.610
	(3.07)
D Log of world exports	0.700
	(6.37)
Adj-R^2	0.52
No. of Observations	37

Note: t-statistics are in parentheses.

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Table 1:
India – Tariff Structure, 1990-99

(standard deviation in brackets)

Mean									
Sector	'90-91	'92-93	'93-94	'94-95	'95-96	'96-97	'97-98	'98-99	'99-00
Whole economy	128 (41)	94 (34)	71 (30)	55 (25)	40.8 (19)	38.6 (19)	34.4 (14.8)	40.2 (15.3)	39.6 (14.0)
Agricultural products	106 (48)	59 (49)	39 (39)	31 (30)	25.1 (24.9)	25.6 (21.1)	24.6 (17.7)	29.6 (18.8)	29.2 (16.6)
Mining	N.A.	N.A.	71 (24)	48 (25)	30 (15.6)	24.8 (11.9)	24.4 (11.9)	29.4 (12.3)	26.6 (12.1)
Consumer goods	142 (33)	92 (42)	76 (36)	59 (33)	45.4 (26)	45.4 (27.1)	39.8 (20.5)	45.9 (20.7)	42.9 (18.9)
Intermediate goods	133 (42)	104 (25)	77 (22)	59 (17)	43.7 (13.5)	38.8 (13.2)	34.7 (10.3)	40.7 (11.1)	41.2 (10.5)
Capital goods	109 (32)	86 (26)	58 (24)	42 (20)	33.1 (12.4)	33.8 (12.2)	29.7 (9.4)	35.3 (10.2)	35.3 (8.2)

(In percent)

Import weighted average									
Sector	'90-91	'92-93	'93-94	'94-95	'95-96	'96-97	'97-98	'98-99	'99-00
Whole economy	87	64	47	33	27.2	24.6	25.4	29.7	30.2
Agricultural products	70	30	25	17	14.9	14.7	14	16.1	17.7
Mining	N.A.	N.A.	33	31	27.6	22	21.9	19.5	17.7
Consumer goods	164	144	33	48	43.1	39	33.8	39.3	32.1
Intermediate goods	117	55	40	31	25	21.9	26.1	31.5	31.9
Capital goods	97	76	50	38	28.7	28.8	24.7	30.1	32.2

Notes: The total customs duty is calculated as the sum of the basic customs duty, a surcharge of 10% on basic customs duty, and the special additional duty. The special additional duty is levied on the value of imports as well as the basic duty value, the surcharge value, and the additional duty value. Figures for 1997-98 include the 3% special duty imposed in September 1997. In 1990-91 and 1992-93 mining is included in intermediates.

Source : World Bank Staff Estimates, the rates are based on the 1997-98, 1998-99, 1999-2000 editions of the Easy Reference Customs Tariff, Academy of Business Studies.

Table 2:
Different types of NTBs imposed on India's imports, 1996-97 to 1998-99

(Number of Tariff lines, 10 digit level)

Panel: A

	As on 1.4.1996		As on 1.4.1997		As on 1.4.1998		As on 1.4.1999	
Type of NTB	No. of lines	Percent Share	No. of lines	Percent Share	No. of lines	Percent Share	No. of lines	Percent Share
Prohibited	59	0.6	59	0.6	59	0.6	59	0.6
Restricted	2984	29.6	2322	22.8	2314	22.7	1183	11.5
Canalised	127	1.2	129	1.3	129	1.3	37	0.4
SIL	765	7.6	1043	10.2	919	9.0	886	8.7
Free	6161	61.0	6649	65.1	6781	66.4	8055	78.8
Total	10096	100.0	10202	100.0	10202	100.0	10220	100.0

Source : DGFT, Ministry of Commerce

Panel B : Status of NTBs Notified to W.T.O under BOP cover

(As on 1.4.1999 at 8 digit level*)

Total number of items notified to WTO	2714
Total number of items in the free list	1298
Restricted items	702
SIL Items	679
Canalised Items	35

* As per harmonised system of India Trade Classification, HS-ITC classification of export and import items

Table 3
International Comparison of Tariff and Non-Tariff Barriers
Manufactured Products

Country	Year	Mean Tariff	S.D.	World Import Weighted Mean Tariff	Year	Tariff lines covered by NTBs
1. India	1990	84.1	39.4	93.6	1990-93	58.9
	1999	34.3	8.0	28.0		
2. Bangladesh	1989	123.2	89.8	125.5		N.A.
	1999	22.4	15.0	18.5		N.A.
3. China	1992	44.9	33.4	46.5	1994	11.3
	1998	17.4	10.8	18.5		
4. Indonesia	1989	27.1	23.3	27.4	1993	2
	1999	11.8	15.3	14.3		
5. S. Korea	1988	18.6	5.1	17.8	1988	N.A.
	1999	7.8	2.4	7.0		
6. Malaysia	1988	17.6	15.6	14.4	1993	2.4
	1997	12	17.2	9.4		
7. Nepal	1998	18.3	15.4	21	1998	0.5
	1999	13.5	11.5	17.8		
8. Pakistan	1990-93	53	21.2	N.A.	1990-93	17.3
9. Philippines	1988	28	14.7	28.8		N.A.
	1999	9.3	7.3	8.5		N.A.
10. Sri Lanka	1990	27.5	24.5	22.2	1993	4
	1997	19.1	12.6	19.8		
11. Taiwan	1989	10.9	6.8	12.2		N.A.
	1996	6.7	5.4	6.5		N.A.
12. Thailand	1989	41.7	23.6	42.4	1990-93	4.2
	1993	47.3	26.2	43.7		

Source : World Bank : *World Development Indicators, 1997, 1999 and 2000.*

Table 4
Selected Indicators of External Sector

S.No	Item/Years	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00
1	Growth of Exports ($ million)	9.23	-1.54	3.76	19.97	18.40	20.75	5.27	4.59	-5.11	13.19
2	Growth of Imports ($ million)	13.45	-19.37	12.73	6.51	22.95	27.99	6.70	6.01	2.18	11.38
	a. of which non-POL	3.40	-21.94	12.04	11.22	29.47	28.26	-0.18	15.52	8.01	2.06
3	Exports/Imports – (Bop %)	66.2	86.7	77.6	84.8	74.8	74.0	69.7	69.7	72.1	69.1
4	Import Cover of FER(No. Of Months)	2.5	5.3	4.9	8.6	8.4	6.0	6.5	6.9	8.2	8.2
5	Growth rate of volume index of total exports	10.98	7.47	6.86	15.52	13.67	31.29	7.16	-6.27	3.37	N.A.
6	Growth rate of volume index of total imports	4.35	4.08	23.68	16.70	24.07	26.08	-0.58	9.81	14.59	N.A.
7	Growth rate of vol. index of imports of machinery and transport equipment	-9.26	-3.63	34.59	25	130.07	-15.2	-13.62	-21.33	1.58	N.A.
8	Short-term Debt/ FER (%)	146.5	76.7	64.5	18.8	16.9	23.2	25.5	17.2	13.5	10.6
9	Debt Service Payments as % of current Receipts	35.3	30.2	27.5	25.6	26.2	24.3	21.2	19.1	18.0	16.0
	As percent of GDP_{MP}										
10	Exports	6.2	6.7	7.1	8.3	8.4	9.2	8.9	8.8	8.2	8.5
11	Imports	9.4	7.7	9.4	9.8	11.2	12.4	12.8	12.6	11.3	12.3
12	Trade Balance	-3.2	-1.0	-2.2	-1.5	-2.8	-3.2	-3.9	-3.8	-3.1	-3.8
13	Invisibles Balance (net)	-0.1	0.6	0.6	1.1	1.8	1.6	2.7	2.4	2.2	2.9
14	Current Account Balance	-3.2	-0.3	-1.7	-0.4	-1.0	-1.7	-1.2	-1.4	-1.0	-0.9
15	External Debt	30.4	37.7	36.6	33.8	30.9	27.1	24.7	24.4	23.5	22.0
16	Debt Service Payments	3.0	3.0	2.9	3.1	3.4	3.4	3.0	2.7	2.6	2.4

Notes :

(i) FER: Foreign Exchange Reserves ; (ii) GDP_{MP}: Gross Domestic Product at current market prices.

Table 5: Average Imports of Selected Principal Commodities Pre- and Post-Reform Triennia

(U.S. $ million)

Ser No.	Commodity	1988-90	1994-96	1998-2000	1994-96 over 1988-90	1998-2000 over 1988-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I	**Bulk Imports**	7814.9 (40.5)	11582.4 (39.2)	15097.5 (34.6)	3767.5 (36.7)	7282.5 (29.8)
I.1	**Petroleum, Oil and Lubricants**	3298.2 (17.1)	6402.4 (21.7)	8348.2 (19.1)	3104.2 (30.3)	5050.0 (20.7)
I.2	**Bulk Consumption Goods**	1000.2 (5.2)	813.5 (2.8)	2100.7 (4.8)	-186.7 (-1.82)	1100.5 (4.5)
I.3	**Other Bulk Items** of which	3516.5 (18.2)	4366.5 (14.8)	4648.5 (10.6)	850.0 (8.3)	1132.0 (4.6)
I.3.1	Fertilisers: crude and mfd Of which	706.5 (3.7)	1187.0 (4.0)	1193.1 (2.7)	480.5 (4.7)	486.6 (2.0)
I.3.1.1	Manufactured Fertiliser	408.7 (2.1)	925.7 (3.1)	911.3 (2.1)	517.0 (5.0)	502.4 (2.1)
I.3.2	Iron & Steel	1235.1 (6.4)	1134.9 (3.8)	1164.5 (2.7)	-100.2 (-1.0)	-70.6 (-0.3)
II	**Non-Bulk Imports** of which	11475.8 (59.5)	17962.9 (60.8)	28977.6 (66.3)	6487.1 (63.3)	17501.8 (71.7)
II.1	**Capital Goods** Of which	5051.6 (26.2)	8070.4 (27.3)	9310.3 (21.3)	3018.8 (29.4)	4258.7 (17.5)
II.1.1	Machine Tools	176.3 (0.9)	246.7 (0.8)	343.0 (0.8)	70.4 (0.7)	166.7 (0.7)
II.1.2	Machinery except Electrical and Electronic	1918.6 (9.9)	2844.7 (9.6)	3142.2 (7.2)	926.1 (9.0)	1223.6 (5.0)
II.1.3	Electronic Goods	N.A.	1297.6 (4.4)	2381.4 (5.5)	-	-
II.1.4	Project Goods	1154.1 (6.0)	1955.9 (6.6)	1770.6 (4.1)	801.8 (7.1)	616.5 (2.5)
II.2	**Mainly Export-Related Items** Of which	3424.9 (17.8)	4653.8 (15.8)	7660.0 (17.5)	1228.9 (12.0)	4235.1 (17.4)
II.2.1	Pearls, Precious and Semi-Precious stones	2101.4 (10.9)	2123.4 (7.2)	4159.5 (9.5)	22.0 (0.2)	2058.1 (8.4)
II.2.2	Organic and inorganic chemicals	1098.7 (5.7)	2024.4 (6.9)	2839.6 (6.5)	925.7 (9.0)	1740.9 (7.1)
II.3	**Others** of which	2999.3 (15.5)	5238.7 (17.7)	11627.3 (26.6)	2239.4 (21.8)	8628.0 (35.4)
II.3.1	Coal, coke, Briquettes, etc.	265.5 (1.4)	700.1 (2.4)	1054.3 (2.4)	434.6 (4.2)	788.8 (3.2)
II.3.2	Miscellaneous "others"	1036.9 (5.4)	2747.3 (8.4)	8222.7 (18.8)	1710.4 (16.7)	7185.8 (29.4)
TOTAL I+II		19290.7 (100.0)	29545.3 (100.0)	43695.1 (100.0)	10254.6 (100.0)	24404.4 (100.0)

Notes: 1. Figures in brackets are percentages of the total (I+II).

2. Triennia: 1988-90: Fiscal years 1987-88 to 1989-90 : pre-reform triennium.
1994-96: Fiscal year 1993-94 to 1995-96: triennium of rapid growth.
1998-2000: Fiscal years 1997-98 to 1999-2000: Latest available triennium.

3. Mid-point to mid-point compound annual growth rates of total exports :
1988-90 to 1994-96 11.12 percent per annum over 6 years.
1988-90 to 1998-2000 9.51 percent per annum over 10 years.

Source: Handbook of Statistics on Indian Economy, Reserve Bank of India, 2000

Table 6: Average Exports of Selected Principal Commodities Pre- and Post-Reform Triennia

(U.S. $ million)

Ser No.	Commodity	1988-90	1994-96	1998-2000	1994-96 over 1988-90	1998-2000 over 1988-90
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I	**PRIMARY PRODUCTS**	3428.7 (24.1)	5795.7 (21.6)	7006.6 (19.9)	2367.0 (18.8)	3577.9 (17.0)
I.1	**Agriculture and Allied Products**	2610.2 (18.4)	4778.5 (17.8)	6052.8 (17.2)	2168.3 (17.3)	3442.6 (16.4)
I.2	**Ores and Mineral**	818.5 (5.8)	1017.2 (3.8)	953.8 (2.7)	198.7 (1.6)	135.3 (0.6)
II	**MANUFACTURED PRODUCTS** of which	10092.3 (71.0)	20187.3 (75.4)	27270.7 (77.3)	10095.0 (80.3)	17178.4 (81.6)
II.1	**Leather and Manufactures**	1062.3 (7.5)	1554.1 (5.8)	1618.6 (4.6)	491.8 (3.9)	556.3 (2.6)
II.2	**Chemicals and Allied Products** Of which	857.2 (6.0)	1930.8 (7.2)	3099.7 (8.8)	1073.6 (8.5)	2242.5 (10.7)
II.2.1	Drugs, Pharma & Fine Chemicals	363.0 (0.3)	819.9 (3.1)	1491.9 (4.2)	456.9 (3.6)	1128.9 (5.4)
II.3	**Engineering Goods**	1583.8 (11.1)	3645.7 (13.6)	4920.8 (13.9)	2061.9 (16.4)	3337.0 (15.9)
II.4	**Readymade Garments**	1597.6 (11.2)	3181.2 (11.9)	4347.7 (12.3)	1583.6 (12.6)	2650.1 (12.6)
II.5	**Textile Yarn, Fabrics, Made-ups, etc.** of which	1123.7 (7.9)	2902.6 (10.8)	4109.2 (11.6)	1778.9 (14.2)	2985.5 (14.2)
II.5.1	Cotton Yarn, Fabrics, Made-ups etc.	861.8 (6.1)	2115.8 (7.9)	3058.4 (8.7)	1254.0 (10.0)	2196.6 (10.4)
II.6	**Handicrafts** of which	3223.8 (22.7)	5408.5 (20.2)	7356.3 (20.8)	2184.7 (17.4)	4132.5 (19.6)
II.6.1	Gems and Jewelry	2742.8 (19.3)	4590.4 (17.1)	6303.6 (17.9)	1847.6 (14.7)	3560.8 (16.9)
III	**PETROLEUM PRODUCTS & OTHERS**	702.9 (4.9)	804.9 (3.0)	997.3 (2.8)	102.0 (0.8)	294.4 (1.4)
TOTAL (I+II+III)		14223.9 (100.0)	26787.9 (100.0)	35274.6 (100.0)	12564.0 (100.0)	21050.7 (100.0)

Notes: 1. Figures in brackets are percentages of the total (I+II+III).

2. Triennia: 1988-90: Fiscal years 1987-88 to 1989-90 : pre-reform triennium.
1994-96: Fiscal year 1993-94 to 1995-96: triennium of rapid growth.
1998-2000: Fiscal years 1997-98 to 1999-2000: Latest available triennium.

3. Mid-point to mid-point compound annual growth rates of total exports :
1988-90 to 1994-96 11.12 percent per annum over 6 years.
1988-90 to 1998-2000 9.51 percent per annum over 10 years.

Source: Handbook of Statistics on Indian Economy, Reserve Bank of India, 2000

Table 7: Percentage shares of Major Countries in Exports of Selected Commodities

1. Cotton Yarn, Fabrics, Made-ups, etc.

Country	1988-90	1994-96	1998-00
Germany	7.3	6.5	4.7
Italy	5.8	4.8	4.7
U.K.	10.8	10.4	7.0
U.S.A.	13.3	12.4	13.6
Quota Countries	37.3	34.1	30.0
Bangladesh	8.6	11.1	6.1
Hong Kong	2.2	3.4	6.9
Japan	4.1	4.0	3.4
Korea, Rep	2.4	3.2	4.1
Mauritius	1.1	2.7	3.0
U.A.E.	3.5	3.6	3.1
Others	40.9	37.9	43.4
Total	100.0	100.0	100.0
Total Exports($m)	861.8	2115.8	3058.4
Growth Rate (% pa)		16.1	13.5
Share in total exports (%)	6.1	7.9	8.7

2. Readymade Garments

Country	1988-90	1994-96	1998-00
Canada	2.9	3.2	4.0
France	6.1	6.8	7.3
Germany	14.3	12.1	8.4
U.K.	10.9	9.8	7.7
U.S.A.	29.1	30.7	32.3
Quota Countries	67.4	66.0	62.8
C.I.S	10.5	2.6	4.2
Italy	4.1	3.4	3.0
Japan	2.9	3.4	1.7
Netherlands	4.2	4.3	3.2
U.A.E.	2.0	3.8	8.1
Others	13.0	19.9	20.0
Total	100.0	100.0	100.0
Total Exports($m)	1597.6	3181.2	4347.7
Growth Rate (% pa)		12.2	10.5
Share in total exports (%)	11.2	11.9	12.3

3.Export of Chemicals and allied products

Country	1988-90	1994-96	1998-00
C.I.S	31.8	8.2	4.6
Chinese Taipei	2.0	3.4	2.6
Germany	8.7	8.0	6.5
Hong-Kong	2.4	3.6	3.9
Italy	2.5	2.8	3.1
Japan	2.7	3.0	2.5
Netherlands	2.6	3.9	4.4
U.A.E.	1.4	3.0	3.8
U.K.	4.2	4.3	5.2
U.S.A.	11.4	12.3	11.2
Others	30.3	47.5	52.2
Total	100.0	100.0	100.0
Total Exports($m)	857.2	1930.8	3099.7
Growth Rate (% pa)		14.5	13.7
Share in total exports (%)	6.1	7.2	8.8

4. Engineering Goods

Country	1988-90	1994-96	1998-00
Bangladesh	3.8	4.2	2.8
Germany	2.7	4.3	4.4
Italy	1.0	1.5	3.0
Japan	3.9	3.7	2.2
Malaysia	1.3	2.9	2.8
Singapore	4.3	6.6	4.4
Sri Lanka	2.0	3.9	3.2
U.A.E.	2.2	4.5	6.3
U.K.	4.8	6.5	6.6
U.S.A	9.9	13.7	17.6
Others	64.2	48.2	46.7
Total	100.0	100.0	100.0
Total Exports($m)	1583.8	3645.7	4920.8
Growth Rate (% pa)		14.9	12.0
Share in total exports (%)	11.1	13.6	13.9

Notes: 1. Triennia 1988-90, 1994-96 and 1998-00 are the same as in Table 10.

1. Percentage shares relate to triennial average level of exports given in the last but one line.
2. Growth rates in the last line are mid-point to mid-point compound annual rates that is over 6 years for the first and over 10 years for the second post-reform triennium with pre-reform triennium base.

Source : Reserve Bank of India, Handbook of Statistics on Indian Economy (2000)

Table 8: Direction of India's Trade : Pre- and Post-Reform Triennia

(U.S. $ million(percent))

		1988-90		1994-96		1999-2000	
Ser. No.	Country Groups/Countries	Exports	Imports	Exports	Imports	Exports	Imports
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I	**O.E.C.D.** Of which	8180 (57.51)	11628 (60.28)	15266 (56.99)	15675 (53.05)	20138 (57.09)	21460 (49.11)
I.1	European Union	3525 (24.78)	6331 (32.82)	7179 (26.80)	8140 (27.55)	9276 (26.30)	10760 (24.63)
I.2	U.S.A.	2504 (17.61)	2114 (10.96)	4847 (18.09)	3168 (10.72)	7512 (21.30)	3662 (8.38)
I.3	Australia	174 (1.23)	472 (2.45)	322 (1.20)	865 (2.93)	410 (1.16)	1337 (3.06)
I.4	Japan	1457 (10.24)	1716 (8.90)	1994 (7.45)	2010 (6.80)	1751 (4.96)	2322 (5.31)
II.	**OPEC**	890 (6.26)	2640 (13.68)	2631 (9.82)	6308 (21.35)	3699 (10.49)	6108 (13.98)
III.	**Eastern Europe**	2507 (17.62)	1588 (8.23)	1133 (4.23)	1068 (3.62)	1214 (3.44)	995 (2.28)
IV.	**Developing countries** of which	2219 (15.60)	3428 (17.77)	7321 (27.33)	6492 (21.97)	10025 (28.42)	8195 (18.75)
IV.1.	SAARC	373 (2.62)	80 (0.41)	1278 (4.77)	182 (0.62)	1568 (4.44)	351 (0.80)
IV.2	Non-SAARC Asian countries	1491 (10.48)	2367 (12.27)	4691 (17.51)	4848 (16.41)	6114 (17.33)	8085 (18.50)
V.	**Africa**	281 (1.98)	571 (2.96)	1017 (3.80)	915 (3.10)	1669 (4.73)	2611 (5.98)
VI.	**Latin America**	74 (0.52)	410 (2.13)	334 (1.25)	547 (1.85)	675 (1.91)	724 (1.66)
VII.	**Total (I to VI)**	14224 (100.00)	19291 (100.00)	26788 (100.00)	29545 (100.00)	35275 (100.00)	43695 (100.00)

Note: Figures in bracket are percentages of the total.
Source : Reserve Bank of India, *Handbook of Statistics on Indian Economy* (2000).

Table 9: Incremental Total Exports and Extended Manufacturing Exports along with their major contributing categories : 1987-90 to 1993-96

	Increment Between 1987-90 & 1993-96	World	India	China	Pakistan	Bangladesh	S.Korea	Taiwan	Indonesia	Malaysia	Thailand
1	Total Exports ($ Billion)	1519.9	13.2	77.7	3.3	1.6	47.4	39.4	22.1	41.4	28.5
2	E-Mfg Exports ($ Billion)	1288.0	10.6	74.9	3.3	1.5	44.6	37.8	16.6	38.6	18.1
3	Share of (2) in (1) (%)	85.0	80.0	96.0	100.0	94.0	94.0	96.0	75.0	93.0	64.0
4	Share of country in World E-Mfg Exports	100.0	0.8	5.8	0.3	0.1	3.5	2.9	1.3	3.0	1.4
5	Labour Intensive Exports($ Billion)	150.0	4.5	33.3	3.1	1.3	2.0	1.9	7.3	3.0	5.1
6	Share of country in World Labour Intensive Exports	100.0	3.0	22.2	2.1	0.9	1.3	1.3	4.9	2.0	3.4
7	Percentage Composition of Increment in E-Mfg										
7.1	Resource-intensive	6.2							22.6	10.2	27.2
7.2	Labour-intensive	11.8	42.4	44.5	94.7	89.6	4.4	5.0	43.8	7.8	28.2
7.3	Scale-intensive	15.7	35.3	19.1			16.3	14.1			
7.4	Differentiated	54.0		23.6			68.9	68.3	15.8	63.3	36.0
7.5	Science based	9.8								10.8	7.2

NOTES : 1. E-Mfg : Extended manufacturing products. This includes in addition to the standard definition of manufacturing exports (SITC 5,6,7,8 minus 68) SITC 4 and 68.

2. Increment is over average of the annual exports over 4 years 1987-90 and 4 years 1993-96.

Table 10: Top 10 Manufacturing Export-Earners in 1993-94 along with Shares in Gross Output

Ser No.	I-O Sector No.	**I. Sector description**	Export Earnings U.S. $ million	Share in Mfg exports %	Share in sectoral gross output
(1)	(2)	(3)	(4)	(5)	(6)
1	98	Miscellaneous manufactures	2343.41	14.63	36.85
2	71	Other non-metallic mineral products	1990.72	12.43	91.20
3	48	Readymade garments	1917.76	11.97	75.62
4	42	Cotton Textiles	755.17	4.71	9.57
5	55	Leather and leather products	605.62	3.78	49.50
6	36	Edible oils other than Vanaspati	522.15	3.26	17.00
7	38	Miscellaneous Food products	515.29	3.22	7.30
8	66	Soaps, cosmetics and glycerin	454.05	2.83	20.56
9	54	Leather footwear	393.36	2.46	36.31
10	61	Organic heavy chemicals	356.54	2.23	23.89
11	Total contribution to manufacturing export earnings		9854.07	61.52	-

Note: Exchange rate used: $1=Rs 31.36
Source: Input-Output Flow Matrix supplied by Central Statistical Organisation.

Table 11: Input-Output Sectors with Export shares in Gross output Exceeding 20 % in 1993-94

Ser. No.	I-O sector No.	Sector Description	Export Shares in Gross Output (%)			
			1993-94	1989-90	1983-84	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	71	Other non-Metallic Mineral Products	91.20 (12.4)	53.08 (13.1)	51.28 (16.2)	38.08 (15.5)
2	48	Readymade Garments	75.62 (12.0)	70.26 (10.7)	36.38 (10.6)	40.48 (10.7)
3	47	Carpet Weaving	65.77 (0.9)	65.40 (3.4)	60.34 (3.1)	63.31 (2.7)
4	55	Leather and Leather Products	49.50 (3.8)	51.72 (4.8)	41.78 (3.7)	73.47 (6.7)
5	54	Leather Footwear	36.85 (14.6)	36.20 (12.9)	33.03 (15.8)	23.97 (7.9)
6	98	Miscellaneous Mfg	36.31 (2.5)	35.53 (2.3)	19.15 (2.1)	3.98 (0.4)
7	87	Electrical Appliances	28.49 (0.6)	10.07 (1.2)	13.60 (1.7)	18.49 (1.4)
8	61	Organic Heavy Chemicals	23.89 (2.2)	9.20 (1.6)	2.64 (0.4)	6.15 (0.4)
9	44	Silk Textiles	21.92 (0.5)	24.81 (0.9)	6.17 (0.7)	5.95 (0.3)
10	66	Soaps, Cosmetics & Glycerin	20.56 (2.8)	17.63 (2.7)	8.17 (2.0)	9.24 (1.4)
11	Total Contribution (%) to Mfg Exports (1-10)		52.3	53.6	56.3	47.4
12	Value of Export Earnings ($ million)		16021.88	13865.81	7146.63	5380.41

Notes: 1. Figures in brackets are percentages of total manufacturing exports.
2. Growth rates are compound annual rates from previous time-point.
Sources: Central Statistical Organisation: Input-output Matrices for 1978-79.

Table 12: Input Output Sectors with Export Shares in Gross Output Between 10% and 20% in 1993-94

Ser No.	I-O Sector No.	II. Sector Description	Export Shares in Gross Output (%)			
			1993-94	1989-90	1983-84	1978-79
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	37	Tea and Coffee Processing	17.35 (2.0)	25.36 (3.7)	23.95 (6.4)	29.79 (5.3)
2	36	Edible oils other than Vanaspati	17.00 (3.3)	8.92 (2.0)	2.81 (2.1)	5.57 (2.5)
3	64	Paints, Varnishes, lacquers	15.35 (1.6)	11.33 (1.4)	5.23 (0.7)	5.74 (0.7)
4	95	Bicycles and cycle rickshaws	15.35 (0.3)	8.28 (0.1)	14.54 (0.5)	14.80 (0.4)
5	89	Other electrical machinery	14.85 (0.8)	4.14 (0.1)	6.68 (0.5)	8.21 (0.5)
6	49	Miscellaneous Textile products	13.08 (1.4)	4.91 (1.1)	3.28 (0.1)	11.97 (2.1)
7	46	Jute, Hemp, mesta textiles	13.01 (0.5)	13.48 (1.0)	15.80 (2.0)	16.24 (2.0)
8	80	Industrial machinery (other than F & T)	10.67 (0.5)	12.08 (1.0)	3.66 (0.3)	2.79 (0.2)
9	77	Miscellaneous metal products	10.58 (1.4)	1.70 (0.8)	3.43 (1.1)	7.35 (1.5)
10	Total Contribution (%) to Mfg exports (1-9)		11.8	11.2	13.7	15.2

Source: Input-Output Flow Matrices for various years published/supplied by the Central Statistical Organisation.

Table 13: Number of Workers in the Factory Sector of Manufacturing Industry at 2-Digit Level

2-digit code	Average Number of Workers			Change between periods I and II	Change between periods II and III	Percentage Composition of Col.(6)
	1980-81 to 1982-83	1988-89 to 1990-91	1995-96 to 1997-98			
	Period I	Period II	Period III			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
20-21	1003917	841512	1019154	-162404	177642	15.96
22	389893	440774	532601	50882	91827	8.25
23	920280	729380	736656	-190900	7276	0.65
24	196030	231167	285914	35137	54747	4.92
25	234239	189043	212790	-45195	23747	2.13
26	81383	129342	295523	47959	166182	14.93
27	64027	56768	61643	-7259	4876	0.44
28	221490	207520	251038	-13970	43518	3.91
29	50639	83969	106574	33330	22605	2.03
30	137485	312553	525008	175068	212455	19.09
31	337526	251871	253583	-85655	1711	0.15
32	313039	353578	366623	40539	13046	1.17
33	446511	464682	518163	18171	53481	4.81
34	151701	168529	214906	16828	46377	4.17
35	293754	294784	328251	1030	33467	3.01
36	218543	251101	296148	32558	45048	4.05
37	377624	364991	438183	-12633	73192	6.58
38	51470	66188	107801	14719	41613	3.74
20-38	5489550	5437754	6550562	-51796	1112808	100.00

Source : Annual Survey of Industries

Description of the 2-Digit Industry code

20-21 food products
22 beverages, tobacco, etc.
23 cotton Textiles
24 wool, silk, etc
25 jute textiles
26 textile products
27 wood, furniture, etc.
28 paper & printing etc.
29 leather and fur products
30 chemicals, etc.
31 rubber, petroleum, etc.
32 non-metallic products
33 basic metal industries
34 metal products
35 non-electrical
36 electrical machinery
37 transport equipment
38 other manufacturing

Table 14: Share of Wages and Exports in Total Sales

Ser. No.	**III. Sector**	IV. Wage Share		V. Export Share	
		1980-90	1991-96	1980-90	1991-96
(1)	(2)	(3)	(4)	(5)	(6)
1	Leather Products	20.0(1)	15.7(1)	14.4(2)	25.5(1)
2	Publishing and Printing	16.0(2)	13.2(2)	0.9(15)	1.9(16)
3	Machinery and Equipment	13.1(4)	10.0(3)	5.6(4)	7.1(11)
4	Motor Vehicles	12.5(6)	9.5(4)	3.8(10)	7.2(10)
5	Basic Metal Products	11.0(10)	8.6(5)	3.1(11)	11.5(4)
6	Non-Metallic Mineral Products	11.8(8)	8.6(6)	2.7(12)	9.0(6)
7	Textiles	14.5(3)	8.4(7)	6.5(3)	12.1(3)
8	Paper products	10.7(11)	8.3(8)	0.7(16)	3.8(14)
9	Wood products	11.5(9)	8.1(9)	2.0(14)	5.8(13)
10	Chemical Products	9.1(13)	7.5(10)	4.8(7)	7.5(8)
11	Fabricated Metal Products	9.6(12)	7.5(11)	2.2(13)	6.1(12)
12	Rubber and plastic products	8.8(14)	7.5(12)	5.0(5)	9.9(5)
13	Tobacco products	12.8(5)	7.4(13)	19.1(1)	19.5(2)
14	Electrical Machinery	11.8(7)	7.1(14)	5.0(6)	2.4(15)
15	Other Transport Equipment	8.6(15)	6.5(15)	3.8(9)	7.5(8)
16	Food Products	6.7(16)	5.4(16)	4.2(8)	8.1(7)
17	Petroleum Products	4.4(17)	3.6(17)	0.0(17)	1.3(17)
18	All companies	11.3	8.3	4.8	8.6

Source: Part 1 Table C.VIII.1, p.76 for columns (3) and (4)
Part 1 Table C.VIII.7, p.79 for columns (5) and (6)
National Council of Applied Economic Research : The Impact of India's Economic Reforms on Industrial Productivity, Efficiency and Competitiveness: a Panel Study of Indian Companies **1980-97**, Part I (January 8, 2001).
Note: Ranks appear in brackets.

Table 15: Exponential Trend Growth rates and Partial Elasticities for Variables Associated with Factory Manufacturing

(Growth Rate % per annum)

Ser No.	Description	1980-81 to 1990-91	1990-91 to 1997-98
(1)	(2)	(3)	(4)
1	Number of workers	-0.12 (0.016)	2.92 (0.89)
2	Gross Value Added at 1993-94 prices	7.13 (0.97)	9.09 (0.94)
3	Wholesale Price Index for all Commodities	6.56 (0.99)	8.43 (0.98)
4	Implicit deflator for Aggregate Gross Value Added in Manufacturing	7.13 (0.97)	7.73 (0.98)
5	Consumer Price Index for Industrial Workers	8.29 (0.99)	9.05 (0.99)
6	Real Consumption wage per worker	3.02 (0.92)	1.29 (0.56)
7	Real Product wage per worker	4.48 (0.93)	2.62 (0.80)
8	Partial elasticity of Employment with respect to real output	0.85 (27.96)	0.90 (25.92)
9	Partial elasticity of Employment with respect to product wage	-0.83 (-15.43)	-0.97 (-21.30)

Notes: 1. Growth rates in lines 1 to 7 are slope coefficients of semi-log trend equations with squared product-moment correlation coefficients (r^2) in brackets.

2. Partial elasticities in lines 8 and 9 (with t values in bracket) are from cross-section regressions across eighteen 2-digit industry groups given below for 1981-91 (equation (1)) and 1991-98 (equation (2))

(1) $g_e = -8.98 + 0.8516g_{va} - 0.8307g_{pw} + 8.4257\alpha$ adjusted $R^2=0.9830$
(-9.19) (27.96) (-15.43) (8.07)

(2) $g_e = -15.53 + 0.8959g_{va} - 0.9705g_{pw} + 16.2980\alpha$ adjusted $R^2=0.9825$
(16.80) (25.92) (-21.30) (16.48)

where g_e=growth rate of number of employed workers.

g_{va}=growth rate of real value added defined by gross value added at current prices deflated by wholesale price index for output (1993-94=100) for each industry group.

g_{pw}=growth rate of product wage defined by average wage per worker at current prices deflated by wholesale price index of output for each industry group.

α=elasticity of nominal wage bill (NWB) with respect to nominal gross value added (NGVA) derived by growth rate of NWB divided by growth rate of NGVA.

3. Other variables whose growth rates are given in lines 3 to 6 are defined as follows:

(i) Wholesale price index for all commodities: average of months for a fiscal year (April-March)

(ii) Implicit deflator for Aggregate Gross Value Added (AGVA) in Manufacturing is derived as a ratio of AGVA at current prices divided by real AGVA at constant prices derived as a sum of 2-digit industry specific real gross value added defined in g_{va} above.

(iii) Consumer Price Index for Industrial Workers (CPIIW): average of the months in a fiscal year (April-March).

(iv) Real Consumption wage: average wage per worker deflated by CPIIW defined in (iii).

Table 16: Total Long Term Resource Flows to Developing Countries: An International Comparison

(billion U.S. dollars)

	1990	1992	1993	1994	1995	1996	1997	1998	1999
All Developing Countries	99.3	153.7	219.2	220.4	257.2	313.1	343.7	330.5	262.0
India	4.719	5.204	7.264	8.722	4.438	7.450	6.918	7.604	3.351
China	10.082	23.969	44.434	47.847	51.900	54.743	65.370	45.230	42.670
Indonesia	5.901	7.945	3.622	9.594	12.901	15.564	11.592	-0.808	-4.928
Thailand	4.691	4.175	8.226	4.863	10.630	14.220	9.615	8.987	4.700
Malaysia	1.183	6.093	10.923	8.680	10.495	12.031	9.152	8.529	3.616
S. Korea	1.369	7.753	8.603	12.244	13.045	19.358	22.382	13.201	9.758
Share of India in All Developing Countries (%)	4.75	3.39	3.31	3.96	1.73	2.38	2.01	2.30	1.28
Share of China in All Developing Countries (%)	10.15	15.42	20.27	21.71	20.18	17.48	19.02	13.68	16.29

Table 17: Foreign Direct Investment to Developing Countries: An International Comparison

(billion US dollars)

	1990	1992	1993	1994	1995	1996	1997	1998	1999
All Developing Countries	24.3	47.5	66.0	88.8	105.0	130.8	170.3	173.2	181.9
India	0.162	0.277	0.550	0.973	2.144	2.426	3.577	2.635	2.169
China	3.487	11.156	27.515	33.787	35.849	40.180	44.236	43.751	38.753
Indonesia	1.093	1.777	2.004	2.109	4.348	6.194	4.677	-0.356	-2.745
Thailand	2.444	2.113	1.804	1.366	2.068	2.336	3.746	6.941	6.213
Malaysia	2.333	5.183	5.006	4.342	4.132	5.078	5.106	5.000	1.533
S. Korea	0.788	0.727	0.588	0.809	1.776	2.325	2.844	8.415	9.333
Share of India in All Developing Countries(%)	0.67	0.58	0.83	1.10	2.04	1.85	2.09	1.52	1.18
Share of China in All Developing Countries(%)	14.35	23.49	41.69	38.05	34.14	30.72	25.98	25.26	21.30

Source: (1) Line 1 1990-98, Table 21 p 36 Global Development Finance, Analysis and Summary Tables 2000
(2) Lines 2 to 7 : 1990-98 Global Development Finance: Country Tables 2000.
(3) Global Development Finance: Country and Summary Data 2001 Advance Release CD-ROM pp. 8-10 for 1999 for all countries & all types of flows and groups of countries.

Table 18: Portfolio Investment to Developing Countries: An International Comparison

(billion US dollars)

	1990	1992	1993	1994	1995	1996	1997	1998	1999
All Developing Countries	3.7	14.1	51.0	35.2	36.1	49.2	30.2	15.6	34.5
India	0.105	0.241	1.840	4.729	1.517	4.398	2.116	0.342	1.302
China	0	1.194	3.818	3.915	2.87	3.466	8.457	1.273	3.732
Indonesia	0.312	0.119	2.452	3.672	4.873	3.099	0.298	0.250	1.273
Thailand	0.449	0.004	3.117	-0.538	2.154	1.551	-0.308	2.341	2.527
Malaysia	0.293	0.385	3.700	1.320	2.299	4.353	-0.489	0.592	0.522
S. Korea	0.518	3.045	6.029	2.525	3.559	3.700	1.257	4.096	12.426
Share of India in All Developing Countries (%)	2.84	1.71	3.60	13.43	4.20	8.94	7.01	2.19	3.77
Share of China in All Developing Countries (%)	0	8.47	7.49	11.12	0.80	7.04	28.30	8.16	10.82

Table 19: Official Debt Flows to Developing Countries: An International Comparison

(billion US dollars)

	1990	1992	1993	1994	1995	1996	1997	1998	1999
All Developing Countries	55.9	54.0	53.4	45.9	53.9	31.0	39.9	50.6	46.4
India	4.044	4.158	3.823	1.664	-0.803	-0.808	-0.911	3.943	1.538
China	6.346	11.095	12.500	9.808	12.371	10.725	11.138	2.497	2.038
Indonesia	0.422	2.647	1.198	2.081	0.951	-0.591	0.603	2.869	3.487
Thailand	-1.097	0.222	0.666	0.224	0.863	1.278	6.923	3.918	2.229
Malaysia	-1.899	-1.095	0.444	0.286	2.450	0.262	1.699	0.493	0.369
S. Korea	0.619	2.071	-0.266	1.562	2.191	3.300	11.989	9.760	3.349
Share of India in All Developing Countries (%)	7.23	7.70	7.16	3.63	-1.49	-2.61	-2.28	7.79	3.31
Share of China in All Developing Countries (%)	11.35	20.55	23.41	21.37	22.95	34.60	27.91	4.93	4.39

Source: (1) Line 1 1990-98, Table 21 p 36 Global Development Finance, Analysis and Summary Tables 2000

(2) Lines 2 to 7 : 1990-98 Global Development Finance: Country Tables 2000.

(3) Global Development Finance: Country and Summary Data 2001 Advance Release CD-ROM pp. 8-10 for 1999 for all countries & all types of flows and groups of countries.