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Promoting Competitiveness in Developing Countries: The India Report

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Three case studies are being done: Telecom, Cement and Pharmaceutical. The first is the obvious one in India from the point of view of investor interest and possibly concerning the first sectoral regulator (barring the stock exchanges). The second is of great interest to the CCI as it represents an industry with the most unresolved cases in the MRPTC. The third has been chosen given the current concern in India about what will happen to drug prices when the TRIPS regime kicks in. The general focus of each study is to look at some history of regulation and see how the regulator has been effective in recent years from the point of enforcing competition via production and/or price controls. That is, is the regulator effective or superfluous?

These case studies are being done by a Joint Secy, Govt. of India and an advocate of the High Court.

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Delimiting the Scope of the Private Sector

1.1.Introduction.

The background to Indian economic policy prior to 1991 is by now well documented (see, for example,). Some authors have argued that, in the ‘eighties, a wide variety of subsidies to domestic production and exports had led to a maze of incentives which completely distorted resource allocation (see, for example, Bhagwati and Srinivasan, Isher Ahluwalia). While the domestic policy led to unsustainable fiscal deficits, the trade policy was biased against exports. The end result was the state of external payment bankruptcy reached in 1991.

Yet the failure of economic policy in India before 1991 was scripted forty years ago in the Second Five year Plan. There were a number of elements to the economic strategy laid out at that time. For one, trade as an engine of growth was ruled out by the “elasticity pessimism” of that time. The argument was that India’s exports being largely of primary goods were faced with inelastic demand in the world market. Ergo, any attempts to increase exports would lead to a decline in prices and hence export revenues. This “ foreign exchange constraint” was thus built into the Indian development strategy. Some authors have argued that this elasticity pessimism was subject to the “fallacy of composition” (see,). In other words, while world demand for primary goods may be inelastic this does not imply that demand for any one country’s exports are also inelastic. In retrospect, India missed being part of the export boom which benefited the East Asian economies. But this must be put down to the development strategy rather than the lack of world demand for Indian exports.

The trade strategy was complimented by a domestic strategy which focused on the need to develop a domestic industrial economy based on production of investment goods like coal, cement, steel etc. Given also that the Indian private sector was too small and myopic to undertake production of such “investment goods”, the “ socialist “ pattern of growth followed: a domestic industry dominated by the public sector (PS) which was to occupy the

commanding heights of the economy through production of “ machines for machines” (see,). Finally, since investment demand was to be pushed then, in a resource scarce economy, consumption demand would have to be curtailed. This would be achieved via high consumption taxes and via industrial licensing to restrict production of luxury goods like cars, air-conditioners etc. This control of production was enshrined in the Industrial Licensing Policy of 1955 which found its expression in the Industries Act of 1956. The control of monopolies, particularly after 1970, was entrusted to the Monopolistic and Restrictive Trade Practices Commission (MRTPC) following the promulgation of the MRTP Act of 1975.

The main problem with the 2nd Plan strategy as outlined above was that an industrial sector based on production of “ machines for machines” turned out to be highly import intensive (see,). This then implied an internal contradiction with the assumption of export pessimism. Further, in domestic industrial policy, the MRTP Act seemed to have been designed to only restrain production not increase it. In other words, the net result was creation of “ entry barriers” in domestic industry (see,). Finally, the MRTPC was an attempt to control the creation of foreign monopolies in particular. In this it again failed in its basic objectives while creating an entry barrier for new foreign investments (see, Martinussen, 1988; Pant, 1995).

Given the above background, the objective of economic reforms after 1991 was primarily to eliminate entry barriers to both domestic and foreign enterprise. However, some tentative measures in this direction were taken in the ‘eighties itself particularly in eliminating the bias of trade policy towards an import substituting production sector. However, the strong vested interests created by 40 years of protection, meant that the only way to eliminate export bias was via export subsidies to counter the effect of import controls (see, for example,). A similar inertia of vested interests ensured continuation of licensing controls on domestic industrial production.

The principle effect of the crisis of 1991 was to create conditions in which measures could be taken to end some the distortion in internal and external trade outlined above. While the detailed policy measures will be discussed in the next section of this report, here we will see to what extent the measures to remove controls altered the structure of the Indian corporate sector.

1.2 . Scope of Our Study

In one sense the economic reforms of 1991 were incomplete. The principle sector left out of the ambit of reforms was the agricultural sector. This was largely due to the fact that the reforms of 1991 were based on legislation by the Central government. On the other hand, agriculture in India is entirely a state subject. Hence any policy decisions in the context of agriculture have to be made by the state government. This has been so far hampered by political considerations. This is why it is only in the last two years or so that any imports of agricultural items by the private corporate sector (PVT) has been allowed in India. In any case, since the agriculture sector in India is not open to corporate activity it does not come under the ambit of the Competition Act passed in 2003. Hence we will leave out of our study the primary goods sector.

The second sector excluded for detailed analysis is the Small Scale Industries (SSI) sector. An SSI is defined as any production unit in the manufacturing sector with a paid up capital of Rs. 10 million (\$ 4 million) or less. Whereas earlier, the SSI sector was also defined in terms of the level of employment, since 1999 the definition is only in terms of the level of paid up capital. The items produced by the SSI sector are reserved for this sector in that the non-SSI units are not permitted to produce these items. This reservation has existed since 1970's and any non-SSI unit producing these products had to freeze production at the old level. Hence, the SSI sector has deliberately been shielded from the effect of general competition in the corporate sector. In addition, this sector also receives 15 percent preferential purchase by the government and exemptions from Central excise tax and other local taxes. (see,NCAER, 2002). Data on the performance of the SSI is also not available on any continuous basis. The only source is

periodic surveys of the national Sample Survey Organisation (NSSO) which also releases the data at very irregular intervals. Given the protected status of the sector and the lack of any reliable data, it was decided to leave out this sector from our detailed study.

Our study then deals largely with the organized manufacturing corporate sector. Since this has been the sector most exposed to both domestic and external competition since 1991 a study of this sector gives us a good insight into the working of competition policy in India. Here we have two sets of data. At the aggregate level we can look at the relative importance of the private and public sectors based on published data of the Central agencies. However, this data does not permit any study at the more detailed sectoral level. Fortunately, exhaustive firm and sectoral level data is now available from the Centre for Monitoring the Indian Economy (CMIE). The CMIE data base, PROWESS, is culled from the balance sheets of firms. The Indian Companies Act makes it mandatory for all firms operating in the organized sector to file yearly balance sheets with the Registrar of Companies as long as they are in operation. This constitutes the raw data on which the CMIE data is based.

The CMIE data base contains information on about 8000 companies. The coverage includes public, private, co-operative and joint stock companies, listed (in the stock exchanges) or otherwise. Approximately, the coverage of this database is seventy percent of the manufacturing output of the organized industrial sector of India. PROWESS uses the detailed disclosures, which are mandatory in the annual accounts of companies in India. Besides it provides information from scores of other reliable sources, such as the stock exchanges, associations, etc. The coverage includes the detailed profit & loss account and balance sheet statements and ratios and funds flows based on these, half yearly results, products and plants, raw materials, history of capital changes, bonus and dividends, stock prices and related information, expansion plans etc. Different companies present accounting information differently. Inter year comparison, growth rates, inter-company comparisons and industry aggregates are all compromised by the uncritical use of raw data from annual accounts. CMIE's methodological framework for database normalisation addresses this problem. Databases are also subjected to rigorous formal validation and quality control.

In what follows we have used published data of the government for aggregate information. However, detailed sectoral data is compiled from the PROWESS data base.

1.3. Relative Importance of Public Sector and Private Sector—A Macro Perspective

As the discussion of section 1.1. showed, the primary aim of the Industrial Policy Resolution of 1956 was to promote the PS to occupy the dominant position in India's manufacturing sector. Hence, one of the primary components of the economic reforms undertaken after 1991 was to ease the entry barriers in the Indian manufacturing sector. Since the main entry barrier prior to 1991 was the system of licensing of production capacities as enshrined in the Industrial Policy of 1956, the first major reform was the Industrial Licensing Policy of 1991. While the detailed policy will be discussed in more detail in the next section of this report, here we note that the new Licensing Policy of 1991 sought to ease entry barriers to the PVT in all but a few strategic industries (see also Appendix A). In addition, it sought to allow automatic entry of foreign investment also in a large set of sectors excluding only the agricultural sector, the sector reserved for SSIs and in production of final consumer goods (for details of sectors where FDI is allowed see Appendix B). However, in the last two sectors automatic approval to foreign investment was permitted in projects which were 100 percent export oriented.¹

How did the role of the PS in the manufacturing sector change after 1991? At the aggregate level the share of the PS in Gross Domestic Product (GDP) and Gross Domestic capital Formation (GDCF) is given in table 1. As an inspection of the table indicates, while the share of the PS in GDP has remained at about 24-26 percent between 1993/94 and 2001/02, its share in investment (GDCF) has declined dramatically from about 39 percent in 1993/94 to 25 percent by 2001/02. As we will see later on, the share of PS in GDP does not give a true picture of its importance in the production activity. This is because the data in Table 1 includes (as the PS share) government spending on services like public administration which simply reflected the salary largesse handed out to government employees especially after 1996/97 (see, Acharya,). Second, the state has

¹ Since 2001 as the TRIMS regulations of the WTO have become operative, such export stipulations have since been withdrawn. This has been particularly important for the automobile industry. Hence now FDI in consumer goods sectors is give on a case by case basis.

Table 1

Relative Importance of Public and Private Sectors

	1993- 94	1994 -95	1995 -96	1996 -97	1997 -98	1998 -99	1999 -00	2000 -01
GDP at factor cost (1993/94 prices) (in US \$ bn.)	201.4	.	231. 9	250. 1	262	279. 1	296. 1	307. 8
% share of Public Sector	25.9	.	25.9	24.8	26.5	26.3	26.3	25.8
% share of Private Sector	74.1	.	74.1	75.2	73.5	73.7	73.7	74.2
Gross Domestic Capital Formation (unadjusted) (in US \$ bn.)	47	.	68.9	61.5	68.4	71	83.5	84.9
% share of Public Sector	38.8	.	28.2	30.6	27.3	28.2	27.9	28.2
% share of Private Sector	61.2	.	71.8	69.4	72.7	71.8	72.1	71.8
Note: Conversion rate : \$1 = Rs. 38.78								

Source: National
Accounts Statistics
(various years)

been withdrawing from investment activity as is clear from the decline in PS share in GDCF in Table 1. This has however mainly manifested itself in a decline in investment in the agriculture sector (see, Bhalla).

We can also look at the relative position of the PS and the PVT using data published by the Annual Survey of Industries (ASI). The ASI data is based on complete enumeration of the organized industry (the Census sector). However, this data is available with a considerable time lag so that the latest available is for 1997/98. In addition, ASI data is only available at the industry and not the firm level of disaggregation. Finally, while we are able to get a PS and PVT breakdown for some variables this is not possible for crucial variables like total production, capital etc.

In Table 2 below we present the relative share of the PS and PVT in total

Table 2

Industry-wise distribution of workers in public and private sectors (%)

Industry name	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Food & etc. (pub)	18.99	20.89	19.18	17.41	11.84	15.96	21.2
(pvt.)	81.11	79.11	80.82	82.59	88.16	84.04	78.8
Textile & textile product (pub)	25.72	25.9	21.68	21.35	14.62	15.31	22.8
(pvt.)	74.28	74.1	78.32	78.65	85.38	84.69	77.2
Wood & Paper (pub)	38.36	38.94	37.25	37.74	31.39	27.06	46.2 9
(pvt.)	61.64	61.06	62.75	62.26	68.61	72.94	53.7 1
Chemicals (pub)	28.88	28.43	27.85	27.7	24.5	19.23	30.0 5
(pvt.)	71.12	71.57	72.15	72.3	75.5	80.77	69.9 5
Non metallic minerals (pub)	16.11	16.96	18.32	17.6	10.66	12.29	19.8 7
(pvt.)	83.89	83.04	81.68	82.4	89.34	87.71	80.1 3
Metal + metal products (pub)	44.61	45.36	41	42.85	38.04	34.46	48.2 3
(pvt.)	55.39	54.64	59	57.15	61.96	65.54	51.7 7
Electricals+non electricals(pub)	33.85	34.44	30.92	27.88	29.81	24.05	16.5 1
(pvt.)	66.15	65.56	69.08	72.12	70.19	75.95	83.4 9
Transport equipment (pub)	45.97	42.58	43.87	47.6	50.34	35.97	37.7 3

(pvt.)	54.03	57.42	56.13	52.4	46.66	64.03	62.2 7
Conventional+non conventional energy (pub.)	96.58	90.22	97.03	98.31	90.2	86.01	98.6 8
(pvt.)	3.42	9.78	2.97	1.69	9.8	13.99	3.32
Services (pub.)	56.36	59.41	57.45	60.35	51.59	40.4	55.1 2
(pvt.)	43.64	40.59	42.55	39.65	48.41	59.6	44.8 8

Source: Annual
Survey of Industries
(Census survey of
various years)

employment in the organized sector. We have used the ASI data to aggregate employment into eleven industries at roughly the two-digit industry classification. A number of observations are in order from an inspection of table 2. First, the PS is dominant in terms of employment in wood and paper, chemicals, metal and metal products, transport and equipment, energy and service sectors. It accounts for about 30 percent or more of employment in these sectors. Second, the dramatic increase in share of PS employment in the year 1997/98 in all sectors (barring Electrical and Non-Electrical sector) probably reflects the fact that while the PVT has undergone some structural adjustment over the 'nineties, the PS as an 'employer of the last resort' is unable to restructure employment as an efficiency measure. However, non-availability of data after 1997/98 does not allow us to check this conclusion with additional data.

At the macro data level, given the availability of published data, we are unable to proceed any further to look at the relative importance of the PS and PVT particularly in the manufacturing sectors. We are however able to get considerably more mileage from the PROWESS data base.

In Table 3 we present the sectoral growth in sales in the period 1989-2003. As far as possible we have tried to match the two-digit sectoral classification used earlier. The

Table 3. Growth Rate of Sales, 1989-2003			
	1989 to 1995	1995 to 2003	1989 to 2003
Chemicals	14	5.8	8.7
Financial service	39	5.3	17.4
Food and Beverages	11	3	7
Machinery	12	3.5	7.4
Metals and Metals Product	15	3	7.7
Non Metallic Mineral Product	10	2.9	6.2
Textiles	12	1	6.4
Trading	12	3.8	7.6
Transport equipment	10	4	7.3

Note: Calculated by author using PROWESS data base.

data are presented for the beginning, mid-point and end of our reference period, 1988-2001.

Inspection of Table 3 indicates that in the first period of our study, 1989-95, all the sectors grew considerably faster than in the second period, 1995-2003. Second, the financial services sector grew at two to three times the rate at which other sectors grew in both the periods. Here two points need to be made. First, the high growth rate in the first period indicates the first rush of liberalisation as the Industrial Licensing Policy of 1991 eased entry into the production sector. So, in a sense, the high growth rates indicate measurement against a fairly low production base prior to 1991. Second, the lower growth rates in the second period reflect the fact that the years 2001/02 and 2002/03 were recession years in the Indian economy as in most other economies of the world (see,).

Did the Industrial Licensing Policy (ILP) of 1991 actually foster competition? To see this we looked at the relative shares of PS and PVT in total sectoral sales during our reference period. The results are shown in Table 4.

Table: 4.
Share of Public Sector Enterprises in Aggregate Sales of the Industry: 1988/89-2000/01

Sectors	April 1988 to March 1989		April 1994 to March 1995		April 2000 to March 2001	
	Sh. Of PSE	No. of Firms	Sh. Of PSE	No. of Firms	Sh. Of PSE	No. of Firms
Mining						
Coal and lignite	100	6	99.47	8	98.2	7
Crude oil and natural gas	100	2	97.38	2	99.17	3
Minerals	65.97	5	57.97	7	62.24	8
Electricity (gen+dist.)						
Electricity	54.19	6	64.43	7	73.31	7
Service(fin+non fin)						
Financial service	31.77	2	81.48	69	80.31	89
Health service	0	0	1.48	1	0	0
Hotel and tourism	26.05	2	16.08	4	11.55	3
Recreational service	0	0	0	0	4.63	1
Transport service	88.6	8	76.28	8	76.51	11
Communication	100	3	51.24	3	62.6	2
Trading	78.62	15	48.42	20	46.06	17
Construction						
Construction	30.42	7	22.75	8	5.55	10
Irrigation						
Irrigation	0	0	0	0	0	0
Manufacturing						
Chemical	65.74	31	59.06	42	64.79	39
Metals and metal product	53.78	12	41.6	15	30.26	13
Non metallic minerals	7.74	4	3.51	4	1.37	5
Textiles	12.73	16	2.68	14	1.85	16
Transport equipment	13.33	14	9.67	16	4.17	14
Machinery	39.04	18	21.98	33	15.04	25
Food and beverages	4.42	2	0.64	6	0.74	8

Note: Authors calculations from PROWESS data base.

Inspection of table 4 indicates that the share of the PS has declined quite considerably in most of the sectors. In a sense this reflects the objectives of the ILP which was the withdrawal of the PS from production sectors. Did this take place via a policy of privatisation of PS enterprises or entry of new PVT firms ? While the details of India's privatisation policy will be discussed in the next section, it may be noted here that even as of now there is no consensus on the method and scope of India's privatisation policy (see, for example,). In fact, in the earlier part of our reference period, almost no privatisation was carried out. Hence, we can assume that the decline in share of PS shown in Table 4 was largely a consequence of new entry of PVT and non-expansion of the PS. Some aspects of entry in the Indian corporate sector will be discussed in a later part of this report.

Second, in some sectors the PS has actually increased its dominance. These are Electricity, Financial Services and Chemicals where the shares of the PS in total sales has increased between 1988/89 and 2000/01. Third, in some other sectors the PS has maintained its dominating position with over 40 percent of sales. These are Mining and Transport and Trading Services. Finally, it may be noted that the number of PS firms in this period has increased continuously even though their share in total sales may have declined.

However, a look at more disaggregated data indicates that the increasing share of the PS in some areas is not a generalized phenomena. While the increasing importance of the PS in Mining reflects the strategic nature of these industries, the dominance in Electricity is largely a reflection of lack of clear deregulation policy in this sector along with the poor experience with Independent Power Producers (IPPs) in all the regions of the country. The specific case of the Enron Power company in the state of Maharashtra is well known. (see, for example,). Third, the increasing share of the PS in Financial services is a reflection of the vast retail network of PS banks like the State Bank of India which private banks (domestic and foreign) cannot easily match. Finally, the dominance of the PS in Chemicals is largely on account of the three large PS oil firms, Oil and

Natural Gas Commission (ONGC), Hindustan Petroleum (HP) and Indian Oil Corporation (IOC). Once again, in the oil sector there is still considerable disagreement on what are the sector that should be privatized, profit making or loss making? There is also disagreement on the method of privatization: strategic sales, auctions of government equity or public offloading of equity (see,). In 2004, some degree of government control of oil companies is being reduced by offloading shares to ordinary investors while a few large private sector firms have begun to emerge. However, in this sector the large capital requirements is a natural barrier to entry (see,).

1.4. Foreign Investment

Apart from the changing share of PS and PVT in the Indian corporate sector, the other major feature of the ILP was the special space given to foreign investment. To quote from the ILP, “ Direct Foreign Investment has always been preferred to loans and other forms of assistance”. It has been argued that Indian’s foreign investment policy has gone through three phases. Phase 1 lasted from 1960-1980 and was the most restrictive. The cornerstone of the policy was the restrictive Monopolies and Restrictive Trade Practices Act (MRTPA) , 1973 and the Foreign Exchange Regulation Act (FER), 1975. While the former act was implemented thorough the Monopolies and Restrictive Trade Practices Commission (MRTPC) the latter was enforced via the Reserve Bank of India. While the details of these agencies will be discussed in the next section, it may be noted that many commentators have argued that these agencies served more to prevent new foreign investment (FDI) rather than control the operations of foreign monopolies (see, for example, Martinussen,1988; Pant, 1995). However, starting from the Technology Policy Statement of 1982, the policy towards FDI was gradually liberalsied. However, it was only in 1991 that technology and equity ownership were finally unbundled while, in the last few years the more liberal Foreign Exchange Management Act (FEMA) and the Competition Commission of India have finally replaced the old FERA and MRTPA.

This is quite clear in Table 5 below which show the jump in FDI in India in the ‘nineties as compared to the earlier decades.

***** Table 5*****

In which areas has FDI concentrated? This is brought out clearly in table 6 below.

TABLE 6
Sectorwise Distribution of FDI
Approvals, 2001

Sector	No. of Approvals	Approvals (\$ billion)	% Share
Telecommunication	75	2.1	34
Fuels	60	1.7	28
Electrical Eqpt. (including software)	736	.44	7.4
Services (Financial and Non-financial)	94	.35	5.8
Metallurgical Industries	25	.214	3.6
Total	990	4.7	79

Source: Website of Confederation of Indian Industries (CII)

It is clear from an inspection of Table 6 that the FDI flows in the last decade have shifted from the earlier focus on Chemicals and Electrical products to Fuels and Telecommunications. This has been a consequence of changing government policy after 1991. Prior to 1991, FDI policy was guided by considerations of technology so that only FDI which brought in foreign exchange (or was export oriented) was encouraged. The unbundling of technology and equity after 1991, was accompanied by an emphasis on FDI oriented towards domestic infrastructure (see, Pant, 2002).

How important has FDI been in sectoral flows? To see this we calculated the share of sales of foreign owned firms (defined as those with equity of at least 10 percent owned by companies with headquarters located outside India) using our CMIE data base. It is useful to have this information at the level of products and in terms of domestic sales. Such information is not available from the published data of the Reserve Bank of India. Hence we have done our own calculations using firm level

data at a fairly disaggregated level. The results of our calculations are shown below in table 7.

TABLE 7
SHARE OF FOREIGN FIRMS IN INDUSTRY SALES: 1989,1995,2001

SL NO.	SECTOR	1989	1995	2001
1	AUTO ANCILLARY	14.30	17.72	15.61
2	AUTO MOBILE	13.44	25.74	36.30
3	BEVERAGES AND TOBACCO	61.71	65.69	64.43
4	COTTON TEXTILES	5.54	5.89	4.43
5	DRUGS AND PHARMACEUTICALS	46.68	30.43	20.01
6	DYES AND PIGMENTS	40.97	29.71	28.84
7	ELECTRICAL MACHINERY	33.57	30.88	25.39
8	ELECTRONICS	16.08	14.00	12.51
9	FERTILIZERS	0.25	2.20	0.02
10	FINANCIAL SERVICE	44.43	7.87	7.71
11	FOOD PRODUCTS	16.15	14.23	14.88
12	INORGANIC CHEMICAL	7.42	7.73	5.89
13	METAL AND METAL PRODUCT	1.40	3.14	5.85
14	NON ELECTRICAL MACHINERY	13.84	20.21	20.66
15	NON METALLIC MINERAL PRODUCT	2.87	3.98	5.99
16	ORGANIC CHEMICAL	8.75	4.96	5.02
17	OTHER CHEMICAL	61.98	44.48	44.13
18	OTHER TEXTILES	1.82	3.77	3.83
19	PAINTS AND VARNISHES	17.44	23.21	22.79
20	PESTICIDES	37.04	31.76	46.99
21	PETROLEUM PRODUCTS	0.54	1.09	0.78
22	PLASTIC PRODUCTS	5.80	4.00	5.68
23	POLYMERS	1.33	2.03	6.46
24	SOAPS, TOILETRIES	63.38	47.44	38.02
25	SYNTHETIC TEXTILE	0.68	2.00	12.80
26	TRADING	3.11	3.41	3.08
27	TRANSPORT SERVICE	0.47	0.93	1.02
28	TYRES AND TUBES	19.49	9.96	8.61

Inspection of table 7 indicates that foreign firms have increased their presence in 8 sectors, namely, automobiles and components, beverages and tobacco, foods products, non-electrical machinery, paints and varnishes, polymers and synthetic textiles. However, they still have a significant presence (25 to 40 percent) in three other sectors, dyes and pigments, electrical machinery and soaps and toiletries.

1.4. The Privatisation Policy in the ‘Nineties.

We have already noted that there is still no consensus on the mechanics of privatization policy in India although there is general agreement on the need for government to reduce its presence in sectors which are well served by the private sector. Consequently, lack of a political consensus on privatization implied that the actual progress on this front has been tardy in the ‘nineties. This is clear from table 8 below.

Table No. 8
Privatisation of India’s Public Sector Enterprises, 1991/92-2001/02

Year	No. of PSE in which equity sold	Target receipt for the year (Rs. billion)	Actual receipt (Rs. billion)	Methodology
1991-92	47	25	30.4	Minority shares sold by auction method in bundles of very good, good and average companies.
1992-93	35	25	19.1	Bundling of shares abandoned. Shares sold separately for each company by auction method.
1993-94	.	35	Nil	Equity of 7 companies sold by open auction but proceeds received in 1994-95.
1994-95	13	40	48.4	Sale through auction method, in which NRI’s and other persons legally permitted to buy, hold or sell equity,

				allowed to participate.
1995-96	05	70	3.6	Equities of 4 companies auctioned and govt. Piggybacked in the IDBI fixed price offering for the fifth company.
1996-97	01	50	3.8	GDR (VSNL) in international market.
1997-98	01	48	9	GDR (MTNL) in international market.
1998-99	05	50	53.7	GDR (VSNL) / Domestic offerings with the participation of FII's (CONCOR, GAIL). Cross-purchased by 3 oil sector companies i.e. GAIL, ONGC and IOC.
1999-00	03	100	15.8	GDR (GAIL) in international market and MFIL's strategic sale VSNL domestic issue.
2000-01	03	100	18.7	BALCO, KRL (CRL) and MRL through strategic sale or acquisitions.
2001-02	10	120	56.4	Strategic sales of CMC: 51%, HTL: 74%, VSNL: 25%, IBP: 33.58%, PPL: 74% and other modes: ITDC, HCI, STC, MMTC.
Total	52*	663	259	

Source: Website, Ministry of Disinvestment, India.

* Total number of companies in which disinvestment has taken place so far.

The stock realization of Rs. 260 billion or so shown above accounts for just over 10 percent of total value of manufacturing output in 2001/02.

Note: Privatization means transferring the control of an enterprise from the govt. sector to the private sector. It can be accomplished by govt. selling 100% of an enterprise, or selling 51% or even by selling a minority stake.

The govt. can raise money by selling some shares in state enterprise without transferring control to the private sector- but this is not privatization as such.

A perusal of table 8 indicates that the actual amount of privatization achieved till about 2002 is very small. In fact, the total stock of proceeds through privatisation till 2002 at about Rs. 259 billion is just about 10 percent of the total value of PS manufacturing output in 2001/02. In terms of the share of PS assets the figure would be

even smaller. Hence, increased PVT sector shares in sales in the manufacturing sector has come about through new entry rather than take over of PS enterprises.

Some observation of the privatization policy in India are in order. For one, as indicated in the last column of table 8, the general principle has been privatization of PS firms via strategic sales to existing firms in the PVT sector or to Non Resident Indians (NRIs). Even NRI sales are normally accepted not in individual capacity but via legal and registered foreign institutional investors (FIIs). The use of strategic sales is mainly due to the fear that releasing large blocks of PS stocks in the Indian stock market would destabilize the market. In addition, the restriction on sales to only NRI external buyers reflects the political sensitivity of the issue of privatization.

Second, the real big ticket disinvestments were undertaken only after 1996/97. Here the objective was disinvestment of small number of strategic PS enterprises in the infrastructure sector. For example both Videsh Sanchar Nigam Limited (VSNL) and Mahanagar Telephone Nigam Limited (MTNL) are large public sector concerns in the telecommunications sector. Similarly, Gas Authority of India Limited (GAIL), Container Corporation of India (CONCOR) and Bharat Aluminium Company (BALCO) are infrastructure companies. As is seen in the last column of table 8, fear of spoiling the domestic stock market and the recessionary conditions in the Indian corporate sector was the reason why these large PS firms were privatized via issue of Global Depository Receipts (GDRs) to foreign strategic investors.

Finally, the economic logic that the government should not be in areas where the market is well developed and can deliver the goods is still not the underlying philosophy behind privatization. In fact, the primary objective of the stop and go privatization in India has been to bridge the fiscal deficit and postpone politically unpleasant taxation decisions (see, for example,).

In general it is safe to conclude that privatization in India has been insignificant, half baked and not based on any consistent economic logic.

1.5 Conclusion.

Our objective in this paper has been to document the changes that have taken place in the Indian corporate sector particularly after the major liberalization measures

taken after 1991. In particular we have noted that one of the objectives of the Indian Industrial Licensing policy after 1991 has been to reduce the role of the public sector enterprises and facilitate the growth of the private sector. Our study of the macro and firm level data of the Indian corporate sector in the period 1989 to 2001 indicates that there has been a substantial reduction of the role of the public sector vis a vis the private sector over our reference period. We have argued that the relative position of the PS and the PVT can change either by planned reduction of the share of PS particularly via large scale privatization or by allowing greater entry of the PVT sector.

Our study concludes that the declining role of the PS in Indian corporate sector has come about largely by greater entry of PVT. This includes both domestic players and foreign players via foreign direct investment. However, the privatization policy is still in its infancy largely because of lack of consensus on the long term objectives of the policy.

Appendix A.

1.1 Industries reserved for PSUs prior to July 1991

- I. Arms and Ammunition and allied items of defence equipment.
- II. Atomic energy.
- III. Iron and steel.
- IV. Heavy castings and forgings of iron and steel.
- V. Heavy plant and machinery required for iron and steel production, for mining, for machine tool manufacture and such other industries as may be specified by the Central Government.
- VI. Heavy electrical plant including large hydraulic and steam turbines.
- VII. Coal and lignite.
- VIII. Minerals oils.
- IX. Mining of iron ore, manganese ore, chrome ore, gypsum, sulphur, gold and diamond.
- X. Mining and processing copper, lead, zinc, tin molybdenum and wolfram.
- XI. Minerals specified in the Schedule to the Atomic Energy (Control of Production and Use) Order 1953.
- XII. Aircraft.
- XIII. Air transport.
- XIV. Rail transport.
- XV. Ship building.
- XVI. Telephones and telephone cables telegraph and wireless apparatus (excluding radio receiving sets).
- XVII. Generation and distribution of electricity.

Through Notification No. 477(E) dated 25.7.1991; the industries reserved for PSUs were reduced to eight areas from the previous list of seventeen.

1.2 Industries reserved for PSUs since July 1991

- (I) Arms and Ammunition and allied items of defence equipment, defence aircraft and warship.
- (II) Atomic Energy.
- (III) Coal and Lignite.
- (IV) Mineral Oils.
- (V) Mining of iron ore, manganese ore, chrome ore, gypsum, sulphur, gold and diamond.
- (VI) Mining of copper, lead, zinc, tin, molybdenum and wolfram.
- (VII) Minerals specified in the schedule to Atomic Energy (Control of production and use) Order, 1953.
- (VIII) Railway Transport.

This list by December 2002 includes only three areas reserved for PSUs:

- (I) Atomic Energy.
- (II) Minerals specified in schedule to atomic Energy (Control of Production and Use) Order, 1953.
- (III) Railway Transport.

Appendix B.

List of Industries subjected to compulsory licensing:

- 1) Coal and lignite ^{##}
- 2) Petroleum (other than crude) and its distillation products ^{##}
- 3) Distillation and brewing of alcoholic drinks
- 4) Sugar [@]
- 5) Animal fats and oils*
- 6) Cigars and cigarettes of tobacco and manufactured tobacco substitutes
- 7) Asbestos and asbestos based products*
- 8) (Plywood, decorative veneers, and other wood based products such as particleboard, medium density fibre board, and block board. (All types of veneers come under compulsory licensing from 14.2.92))*
- 9) Raw hides and skins, leather, patent leather[#] and chamois leather*.
- 10) Tanned and dressed fur skins*
- 11) Motor cars [#]
- 12) Paper and newsprint except bagasse-based units*
- 13) Electronic aerospace and defence equipment; all types.
- 14) Industrial explosives, including detonating fuse, safety fuse, gunpowder, nitrocellulose and matches
- 15) Hazardous chemicals (under this, Industrial alcohol has been delicensed from 14.2.92)
- 16) Drugs and Pharmaceuticals (according to Drug policy. By the review of drug policy in 1994, all bulk drugs and their formulations and intermediated except a few identified bulk drugs and formulations have been delicensed).
- 17) Entertainment electronics (VCRs, color TVs, C.D. Players, Tape Recorders)**
- 18) White goods (Domestic refrigerators, domestic dishwashing machines, programmable domestic washing machines, microwave ovens, air conditioners) [#].

(Note: # - These industries (excluding chamois leather) have been delicensed from

23.4.93

** - Delicensed from 2.12.96

* - Delicensed from 17.7.97

@ - Delicensed from 31.8.98. However, to avoid unhealthy competition among sugar factories to procure sugarcane, a minimum distance of 15 KM would continue to be observed between an existing sugar mill and a new mill by exercise of powers under the Sugarcane Control Order, 1966

- Delicensed since 8.6.1998)

Annex II: List of industries for automatic approval of foreign technology agreements and 51% foreign equity approvals

- 1) Metallurgical Industries
- 2) Boilers and Steam Generating Plants
- 3) Prime Movers (other than electrical generators)
- 4) Electrical Equipment
- 5) Transportation
- 6) Industrial Machinery
- 7) Machine tools and industrial robots and their controls and accessories, Jigs, fixtures, tools and dies of specialised types and cross land tooling, and Engineering production aids such as cutting and forming tools, patterns and dies and tools.
- 8) Agricultural Machinery

- 9) Earth Moving Machinery
- 10) Industrial Instruments
- 11) Scientific and Electro medical Instruments and Laboratory Equipment.
- 12) Nitrogenous & Phosphate Fertilizers falling under Inorganic fertilizers under '18-Fertilizers' in the First Schedule to IDR Act, 1951.
- 13) Chemicals (other than fertilizers).
- 14) Drugs and Pharmaceuticals (According to Drug Policy.)
- 15) Paper and pulp including paper products & Industrial laminates.
- 16) Automobile tyres and tubes, Rubberised heavy duty industrial beltings of all types, Rubberised conveyor beltings, Rubber reinforced and lined fire fighting hose pipes, High pressure braided hoses, Engineering and industrial plastic products.
- 17) Plate glass
- 18) Ceramics
- 19) Cement Products
- 20) High Technology Reproduction and Multiplication Equipment.
- 21) Carbon and Carbon Products
- 22) Pretension High Pressure RCC Pipes.
- 23) Rubber Machinery
- 24) Printing Machinery.
- 25) Welding Electrodes other than those for Welding Mild Steel
- 26) Industrial Synthetic Diamonds.

- 27) Photosynthesis improvers, Genetically modified free-living symbiotic nitrogen fixer, Pheromones, Bio-insecticides.
- 28) Extraction and Upgrading of Minor Oils
- 29) Pre-fabricated Building Material.
- 30) Soya Products
- 31) (a) Certified high yielding hybrid seeds and synthetic seeds and
(b) Certified high yielding plantlets developed through plant tissue culture.
- 32) All food processing industries other than milk food, malted foods, and flour, but excluding the items reserved for small-scale sector.
- 33) All items of packaging for food processing industries excluding the items reserved for small-scale sector.
- 34) Hotels and tourism-related industry.
- 35) Software industry (Included in this list since 22.4.92)

Appendix C.

The tables in this appendix are derived from the PROWESS data base. The objective is to identify the sectors where public sector (PS) dominates

We took three points of Time:-1989, 1995, 2001(all financial years)

- (I) April 1988 to March 1989.
- (II) April 1994 to March 1995.
- (III) April 2000 to March 2001.

The dominance of the PS has been defined as follows:-

- (I) Share $> 80\%$ (exclusive dominance i.e. E.D).
- (II) Share $> 50\%$ but Less than 80% (dominant, D)
- (III) Share $< 50\%$ (less dominant, LD).

TABLE C. 1 - April 2000 to March 2001
(All sales figs. In Rupees billion)

	Total Sales (PS+PVT)(Rs. Cr.)	No. Of firms (PS + PVT)	Total Sales (PS)	No. Of PS firms	Share of PS in Sales	No. Of firms (PVT)	Dominance
Mining							
Coal and lignite	135.3	15.00	132.8	7.00	98.20	8.00	E.D
Crude oil and natural gas	266.6	7.00	263.9	3.00	99.17	4.00	E.D
Minerals	3557.09	38.00	2213.98	8.00	62.24	30.00	Dominant
Electricity (gen+dist.)							
Electricity	43277.04	41.00	31727.02	7.00	73.31	34.00	Dominant
Service (fin+non fin)							
Financial service	181422.54	847.00	145692.70	89.00	80.31	758.00	E.D
Health service	638.63	22.00	0.00	0.00	0.00	22.00	
Hotel and tourism	3428.66	82.00	395.87	3.00	11.55	79.00	L.D
Recreational service	1454.97	43.00	67.35	1.00	4.63	42.00	L.D
Transport service	18626.18	64.00	14288.96	14.00	76.71	50.00	Dominant
Communication	28462.42	42.00	17818.46	2.00	62.60	40.00	Dominant
Trading	69622.38	379	32068.29	17	46.06	362.00	
Construction							
Construction	41011.62	179.00	2274.21	10.00	5.55	169.00	L.D
Manufacturing							
Chemical	397469.69	912.00	257536.69	39.00	64.79	873.00	Dominant
Metals and metal product	88204.92	394.00	26694.89	13.00	30.26	381.00	L.D
Non metallic minerals	26164.58	209.00	358.97	5.00	1.37	204.00	L.D
Textiles	49289.99	537.00	912.61	16.00	1.85	521.00	L.D
Transport equipment	66082.63	227.00	2757.42	14.00	4.17	213.00	L.D
Machinery	99104.33	795.00	14909.72	25.00	15.04	770.00	L.D
Food and beverages	50332.05	496.00	372.80	8.00	0.74	488.00	L.D
Trading	69622.38	379.00	32068.29	17.00	46.06	362.00	L.D

TABLE C.2. - APRIL 1994 TO MARCH 1995

MINING	Total Sales (PS+PVT)	No. Of Firms (PS+PVT)	Tortal Sales (PS)	No. Of firms (PS)	Share of PS in Sales	No. Of PVT Firms	DOMINANCE
COAL AND LIGNITE	11301.06	16.00	11240.83	8.00	99.47	8.00	E.D
CRUDE OIL AND NATURAL GAS	15007.58	5.00	14614.56	2.00	97.38	3.00	E.D
MINERALS	1684.27	25.00	976.41	7.00	57.97	18.00	DOMINANT
ELECTRICITY							
ELECTRICITY	15832.61	25.00	10200.38	7.00	64.43	18.00	DOMINANT
SERVICE							
COMMUNICATION SERVICE	7846.19	14.00	4020.00	3.00	51.24	11.00	DOMINANT
FINANCIAL SERVICE	68057.61	676.00	55451.70	69.00	81.48	607.00	E.D
HEALTH SERVICES	115.16	18.00	1.71	1.00	1.48	17.00	L.D
HOTEL AND TOURISM	1947.60	71.00	313.09	4.00	16.08	67.00	L.D
RECREATION	280.53	24.00	0.00		0.00	24.00	L.D
TRADING	28781.67	310.00	13936.31	20.00	48.42	290.00	L.D
TRANSPORT SERVICE	9493.35	42.00	7241.77	9.00	76.28	33.00	DOMINANT
CONSTRUCTION							
CONSTRUCTION	5164.29	109.00	1175.13	8.00	22.75	101.00	L.D
MANUFACTURING							
CHEMICALS	137720.50	895.00	81330.90	42.00	59.06	853.00	DOMINANT
FOOD AND BEVERAGES	25675.93	457.00	164.10	6.00	0.64	451.00	L.D
MACHINARY	46310.60	598.00	10179.91	33.00	21.98	565.00	L.D
METALS AND METAL PRODUCT	51506.10	385.00	21428.02	15.00	41.60	370.00	L.D
NON METALLIC MINERALS	15126.18	227.00	531.40	4.00	3.51	223.00	L.D
TEXTILES	31072.07	550.00	832.45	14.00	2.68	536.00	L.D
TRANSPORT EQUIPMENT	31544.43	180.00	3050.91	16.00	9.67	164.00	L.D

TABLE C.3 - 1988 APRIL TO 1989 MARCH

<i>Mining</i>	Total Sales (PS+PVT)	No. Of Firms	Total Sales (PS)	No. Of PS Firms	Share of PS in Sales	No. Of firms (PVT)	DOMINANCE
Coal and lignite	5952.66	6.00	5952.66	6.00	100.00	0.00	Exclusive Dominance
Minerals	478.38	8.00	315.58	5.00	65.97	3.00	Dominant
Crude oil & natural gas	7470.12	2.00	7470.12	2.00	100.00	0.00	Exclusive Dominance
<i>Electricity</i>							
Electricity generation and distribution	4099.16	13.00	2221.42	6.00	54.19	7.00	Dominant
<i>Services</i>							
Financial service	237.22	12.00	75.37	2.00	31.77	10.00	Less dominant
Health	11.90	1.00	0.00	0.00	0.00	1.00	Less dominant
Hotel and tourism	540.59	19.00	140.83	2.00	26.05	17.00	Less dominant
Recreational services	48.01	2.00	0.00	0.00	0.00	2.00	Less dominant
Trading	11566.31	70.00	9093.63	15.00	78.62	55.00	Dominant
Transport services	3505.06	20.00	3105.35	8.00	88.60	12.00	Exclusive Dominance
Communication	1362.53	3.00	1362.53	3.00	100.00	0.00	Exclusive Dominance
<i>Construction</i>							
Construction	1722.70	32.00	524.05	7.00	30.42	25.00	Less dominant
<i>Manufacturing</i>							
Chemical	53003.62	278.00	34843.39	31.00	65.74	247.00	Dominant
Food and beverages	7638.81	137.00	337.88	2.00	4.42	135.00	Less dominant
Metals & metal products	16941.90	125.00	9110.85	12.00	53.78	113.00	Dominant
Non-metallic mineral products	5362.74	81.00	415.24	4.00	7.74	77.00	Less dominant
Transport equipment	10995.37	99.00	1465.60	14.00	13.33	85.00	Less dominant
Textiles	8520.86	183.00	1084.54	16.00	12.73	167.00	Less dominant
Machinery	16601.77	211.00	6481.83	18.00	39.04	193.00	Less dominant

Overview of Selected Policies affecting markets Where Firms Operate

2.1 Introduction.

It is obvious that promoting competitiveness is directly a function of the governmental regulations/policies that operate in national markets. It is also clear that competition policy must take account of all these government policies in determining the ease of doing business in any country. While these policies obviously impact on each other for analytical convenience we separate them into domestic policy, trade policy, foreign investment policy, privatization policy, policies and regulations on mergers and acquisitions, competition law and the regulatory framework. Since our purpose here is to concentrate on competitiveness, we will discuss these policies from the point of view of how their evolution has aided or hindered competition. Thus we might want to ask to what extent changes in domestic policy has aided or hindered entry and exit in the Indian industrial sector? In the same way, in policy liberalization governments often maintain a discretion to interfere with the market forces. We will attempt to identify these discretionary instruments in the hands of the government. In what follows, while discussing the policies, we will try, as far as possible, to indicate some quantitative measures regarding the degree of competitiveness encouraged by policy changes. Finally, we will note how policies of sub-national authorities modified (if at all) the effects of national policies.

2.1. Domestic Policy

As we mentioned in the first part, India's domestic Industrial Policy was first defined in the Industrial Policy Resolution of 1956 (IPR) which was put into operation by the Industries Act of 1956. The broad objectives of the IPR can be listed as follows:

- (i) Reserving certain sectors for production by the PS alone. (see, Appendix A). Here the logic was that not only were these sectors of strategic importance but, given the scarcity of resources with the nascent PVT only the state could promote industrialization in these sectors according to national priorities. The implication of this policy decision was that

existing PVT firms in these areas could not increase production without a license from the Ministry of Industry while new production was banned.

- (ii) To promote investment in priority areas, consumption in non-priority areas (automobiles, durable consumer goods etc.) would have to be curtailed. Since this cannot be done compulsorily in a democracy, it would be necessarily to control production. Hence all PVT firms would have to procure license from the Licensing Authority of the Ministry of Industry for both expanding existing production and/or undertaking new production.
- (iii) Certain areas of production (gems and jewellery, textiles and clothing, handicrafts etc) were reserved for production by the SSIs. The limit of SSIs was defined in terms of value of plant and machinery, sales and employment). Here the objective was the equity objective—SSIs could not compete with large industry and hence needed “infant industry” protection. In addition, since the reserved sectors were generally labour intensive, the objective of promoting employment was also achieved.

In a nutshell, the primary objective of the IPR was to restrict production by regulating entry into organized industry. The onus for industrialization was thus to lie with the PS industries.

While some de facto entry liberalisation may have begun in the ‘eighties itself, it was the Industrial Licensing Policy of 1991 (NIP) which gave legal status to entry liberalization. The primary consequence of the NIP was the removal of licensing of additional production and/or expanding existing production. There was no necessity of getting license for substantial expansion, unless the product was reserved for SSIs. In addition, there were some procedural simplification. For example, registration schemes like Delicensed Industries Registration Scheme (DLR), and Exempted industries registration scheme (EIR) were abolished. Furthermore, registration of industries with authorities like, DGTD, Textile Commissioner and Development Commissioner for Iron and Steel was no longer necessary. The Phased Manufacturing Programme was first made inapplicable to new projects and now has been eliminated altogether. In general, the effect of the NIP was to make entry of PVT substantially easier than before.

Did entry become easier after 1991? There is no official data on entry of new firms into the manufacturing sector. However, under the Indian Companies Act, all firms

have to file their annual balance sheets with the Registrar of Companies. Hence, as a first approximation, the year in which a firm is incorporated is a good proxy for the entry of a new firm. This data is readily available in our PROWESS database for our reference period. The data so generated, at a two digit level of aggregation, is shown in table 2.1.

Table 2.1
Gross Entry of New Firms in Manufacturing in India
1989-2003

Sector	1989-1995	1996-2003
Manufacturing	1656	284
Food and Beverages	285	23
Textiles	251	26
Chemicals	394	95
Non-Mettalic Mineral Products	96	12
Metals and Metal Products	153	20
Machinery	338	122
Transport Equipment	28	23
Services	1002	128

Source: Authors calculations

As we have noted the data above is based on date of incorporation of a company. While this is not the same as the date on which production is started, it does indicate the intentions of the company to commence production. In addition, our data base only gives us data on entry and not exit of companies. While we will comment on this in more detail in the next chapter, it is useful to note that in India there is still no simple process of exit of firms which are not small scale industries. Firms which want to wind up have to make an application to the Bureau for Industrial and Financial Reconstruction (BIFR) giving the reasons for closing down. Till 2002, exit was determined by one of three agencies, the Company Law Board, the BIFR and the High Courts (for winding up companies). While the details will be discussed in the next chapter when we look at regulatory agencies, here we note that exit is long drawn affair in India and permitted only when all possible methods of revival of firms have failed.

Keeping this in mind we must view the objectives of the ILP mainly to facilitate entry of PVT into manufacturing. As can be seen from Table 2.2, there was a large rush by companies to enter manufacturing particularly in the first part of our reference period, that is, 1989-1995. The concentration was naturally in the fastest growing sectors like food and beverages, textiles and chemicals sub-sectors of manufacturing and in the services sectors. The lower entry after 1995 is easy to understand: after initial entry possibilities were exhausted in the first period, entry in the second period was limited to a few competitive entrants. While we will study the phenomena of entry and exit in detail in a later chapter, here we have simply tried to show how after 1991 there has been a considerable degree of new entrants in Indian manufacturing sectors.

2.2. Trade Policy

As we noted in Chapter 1, the focus of economic reforms after 1991 was to effect changes in the external sector to cope with the possibility of default on external debt following the foreign exchange crisis of 1991. In this section we will see how various policy changes increased external competition in the manufacturing sector.

There were three elements of the restrictive trade policy prior to 1991. For one, there were quantitative restrictions on most imports. Second, there were strict exchange controls along with a fixed exchange rate policy. Third, the average rate of tariffs were around 300 percent. The policy changes towards a more competitive external regime was achieved in a series of steps.

The first step was to move towards a system of flexible exchange rates. Starting in 1991 a 19 percent devaluation of the rupee vis a vis the dollar was followed by freeing all exchange controls and letting the market determine the exchange rate. Gradually, foreign exchange restrictions were lifted from a large number of transactions on the current and capital account. Today, barring large value transactions on the capital account which need to be ratified by the Reserve Bank of India, the exchange rate for almost all transactions on current account and short term capital account are determined freely in the foreign exchange market. Further, capital account transactions under \$100 million are also freely permitted for foreign investors. On the trade account exporters and importers obtain their foreign exchange freely in the market while there are no restrictions on transfer of capital for payments of dividends etc. on the short term capital account. Today, for all practical purposes the value of the Indian rupee is freely determined in the market though the RBI

does undertake market intervention to prevent disorderly movements in the exchange rate. In sharp contrast to the situation before 1991, today the RBI is more concerned with a possible appreciation of the Indian rupee rather than a depreciation (see, Economic Survey, 2003).

The freeing of the rupee was accompanied by measures to reduce the quantitative restrictions and the high tariff barriers. The quantitative restrictions were gradually reduced and by 2000-01, they were abolished. Also the peak level of nominal tariffs was reduced from 150 % in 1991-92 to just 20 % in 2003-04. These changes are summarised in Tables 2.2.and 2.3. below.

Table 2.2.
Changes in Quantitative Restrictions

Total number of Tariff lines as on 01.04.1996	10202 (10 digit)
Tariff lines free as on 01.04.1996	6161
Tariff lines freed for import during 1996-97	488
1997-98	391
1998-99	894
1999-2000	714
2000-2001	715

The QRs in respect of 1429 tariff lines were withdrawn preferentially for imports from SAARC countries w.e.f. 01.08.1998.

Source: www.comm.nic.in

Table 2.3.
Average Nominal Import Tariffs, 1991-2004

Year	Tariff
1991-92	Reduced to 150%
1992-93	To 110%
1993-94	To 85%

1994-95	To 65%
1995-96	To 50%
1996-97	No change
1997-98	To 45%
1998-99	No change
1999-2000	To 40%
2000-01	To 35%
2001-02	To 30%
2002-03	To 25 %
2003-04	To 20%

Source: Economic Survey, Ministry of Finance, Government of India, various years.

It is indicative of the opening up of the economy that even the ‘holy cow’ of Indian industry, the SSIs, were opened up fully to import competition by 2002. This is shown in Table 2.3 below.

Table 2.3

Changes in number of items reserved for SSI

Year	Items Reserved For SSI	Items On OGL	Remaining Items Under Reserved List
1998-99	821	478	343
1999-2000	812	576	236
2000-2001	812	643	169
2001-2002	799	799	NIL

Source: <http://www.smallindustryindia.com/policies/preseve.htm>

Tables 2.1 to 2.3 are a good indication that both in respect of quantitative restrictions and nominal tariffs, the degree of protection available to the Indian manufacturing sector declined considerably after 1991. It may be argued that the decline in nominal protection does not reflect the decline in the effective rate of protection (ERP)

for imports. In general, the existence of exemptions from import tariffs and non tariff barriers (NTBs) and the differential import tariffs on intermediate goods and final goods would lead to a divergence of nominal and effective rates of protection (see, Corden, 1971). However, in the Indian context it has been seen that the ERPs have also shown an across the board decline in the ‘nineties (see, Nouroz, 2001). This is shown in Tables 2.4 below and Table A.2. of the Appendix A.

Table 2.4 : Frequency distribution of tariff rates

Nominal protection range	Share of imports in the range (%)	
	1987-88	1997-98
00.0-25.0	11.17	26.48
25.1-50.0	26.41	73.21
50.1-75.0	10.02	0.10
75.1-100.0	30.99	0.00
100.1-125.0	9.39	0.17
125.1-150.0	7.66	0.02
150.1-175.0	3.53	0.00
175.1-200.0	0.64	0.02
200.1-225.0	0.06	0.00
225.1-250	0.12	0.00
>>250.1	0.00	0.00
0-250	100	100.00

Source: Protection in Indian manufacturing: an empirical study, Hasheem Nouroz(op.cit.)

Table 2.4 gives the frequency distribution of nominal tariffs in the period 1987-88 to 1997-98. Inspection of the table clearly indicates that by the period 1997-98 almost 100 percent imports were in the tariff range less than 50 percent as compared to the period 1987-88 when over 60 percent of imports were in the tariff range of 75 percent or above. This indicates that the gradual reduction in peak tariff rates over the years has also result in a reduction of the average tariff rate.

The reduction in protection level comes out even more clearly in Table A.2. in the Appendix where the Effective Rate of Protection (ERP) is given for a select number of

commodities at the two-digit level of classification. The table clearly indicates that the ERPs have been falling in line with the decline in the NRP that we have already discussed in detail.

It is thus quite reasonable to infer that the tariff protection levels in Indian manufacturing sector have declined quite dramatically particularly after the 1991 reforms.

2.3 Anti-Dumping Duties.

One of the regulatory instruments available to curb " unfair" foreign competition is the anti-dumping instrument. While anti-dumping duties have a history that goes back to the 'sixties, the codification of anti-dumping measures, the definition of anti-dumping and the process of dispute settlement was strictly defined only in the Uruguay Round Agreement of 1995 in the Anti Dumping Agreement (ADA). It has been argued that the 'single undertaking' clause of the Uruguay agreement removed the benefit of 'non-reciprocity' available to most developing countries since the Tokyo Round of trade negotiations in the 'seventies, Consequently, some other measures had to be introduced to provide a temporary shield to developing countries in the process of adjusting to foreign competition (see, Pant, 2002).

However, studies of the use of the ADA particularly in the late 'nineties indicate that anti-dumping duties might well be becoming a method of permanent protection. In one study, Aggarwal (2003), has argued lucidly that anti-dumping rather than being an anti-trust instrument is becoming a permanent protectionist instrument in both developed and developing countries. This is clear in Table 2.6, below.

Table 2.6: Top eleven anti-dumping users: 1996-2000

Country	% share in total classes	Rank in antidumping use	% share within the country group
OECD			
EU	14.0	1	34.0
US	12.5	2	30.0
Australia	8.0	5	20.0
Canada	5.0	7	12.0
Newzealand	2.0	11	4.0

Upper middle			
Argentina	8.0	6	31
Brazil	5.5	8	21
Mexico	3.0	9	12
Korea	2.7	10	11
Lower middle			
South Africa	10.0	4	62
Low income			
India	12.5	3	81

Source: working paper No.113, Patterns and determinants of antidumping: a worldwide perspective: Aradhana Aggarwal (October'03), ICRIER.

As is clear from the table above, both developed and developing countries have shared equally in initiating anti-dumping cases. In fact, today, India is considered to be the largest initiator of anti-dumping cases with China the chief victim.

It is also shown in table 2.7 below that the primary targets of anti-dumping actions have been the developing countries themselves. Thus, as shown in the table, the strange paradox in the second half of the 'nineties is that developing countries are both the major initiators and victims of anti-dumping measures. In addition, inspection of Table 2.7 indicates that, with the exception of Brazil, the majority of cases by both developed and developing countries are filed against developing countries. In the case of the European Union, for example, almost 75 percent of the AD cases have been filed against developing countries. For India the figure is about 63 percent and South Africa, 55 percent.

Table 2.7

Anti-Dumping Initiations by main countries, 1995-2003

COUNTRIES	CASES INITIATED BY(%)	CASES INITIATED AGAINST DEVELOPING COUNTRIES
USA	329(13.61)	227
SOUTH AFRICA	166(6.87)	91
SOUTH KOREA	59(2.44)	33

CHINA	72(2.98)	57
BRAZIL	109(4.51)	38
INDIA	379(15.68)	236
EUROPEAN UNION	274(11.34)	190

* Figures in brackets indicate the percentage to total number of cases filed by all countries.

Note: Authors calculations based on WTO data base.

Has anti-dumping been used by India as an anti-competitive device? To see this we collected evidence on anti-dumping initiation by India in recent years and the sectors to which these anti-dumping measures were applied. This is shown in Table 2.8 below.

Table 2.8.

Sectoral Break-up of AD intiations by India, 2002-2003

SECTORS	NUMBER OF CASES
Chemicals	69
Metals	21
Fibers	17
Miscellaneous	20
TOTAL	127

Note: Authors calculations.

It is interesting to note that of the 370 cases filed by India in the period 1995 to 2003, over one-third were filed in the period 2002-03 alone. In addition, it would seem that India has been using the AD duties as a protective device. This is clear from Table 2.8 above where the maximum initiations have been in the chemicals sector and against China in particular.(For more detailed product coverage see Table A.1. of the Appendix). The chemicals sector is one where India has in general been a net importer. Similarly, the large number of AD duties in the fibers sector is surprising given that India principal exports have been of products in this segment.

We have argued earlier that anti-dumping has been used as a protective device by developing countries after the 'non-reciprocity' clause was dropped from trade negotiations from the Uruguay Round onwards. However, it is possible that AD duties

may be levied to reflect domestic political economy considerations rather than as a general protective device. To answer this question we need to know what is the value of goods on which anti-dumping is initiated as a ratio of total value of imports of these goods.

The answer to this question is not easy to get as existing data only pertains to the volume of import goods at a disaggregated level. In addition, all we know is the items on which AD action has been initiated. We have tried to get the relevant data for the class of items, chemicals, which have been subject to maximum AD duties. We first calculated the total value of all chemical items defined as Chemical Elements and Compounds and some Medicinal and Pharmaceutical products, from the Economic Survey. Call this M_1 . We then calculated the total import value of all items on which anti-dumping has been initiated. Call this M_2 . Finally, we calculated, M_3 , the value of imports of all items on which AD duties are imposed on 20 percent or more of imports. We then calculated the ratios M_2/M_1 and M_3/M_1 . If AD is being used as a general protection device both the ratios should be high. On the other hand, if AD is motivated by only sectoral political economy considerations, the first ratio is high but the second is low. The results for the chemicals sector is shown in table 2.8a below.

Table 2.8a.

Value of Chemical Imports Subject to Anti-Dumping Duties

	2001	2002	2003
M_1 (\$ mill.)	715	869	1044
M_2/M_1 (%)	85.6	3.3	2.1
M_3/M_1 (%)	19.2	1.1	1.0

As is clear from the last row of the above table, the value of items where 20 percent or more of imports are subject to anti-dumping is fairly low particularly in 2002 and 2003.

This suggests that domestic political economy considerations rather than general protectionist policies drive India's AD policy.

2.3. Business climate in India: A comparative Assessment.

In assessing competitiveness of the Indian economy we have so far relied on data on various policy changes. However, it is useful to look at how this competitiveness

is perceived by the business community. Presently, countrywise assessment of business climate is done by a number of organizations like the World Economic Forum (WEF) and the World Bank (WB). In general these assessments are done through a combination of survey data and hard economic data for the country concerned. Typically, these data are not always available on a continuous basis but on a world wide basis. In this section we will present data on India's relative competitiveness vis-à-vis other countries of South Asia and comparable countries like China, Egypt and Brazil.

One indicator developed by the WEF is the so called growth competitiveness index. This index has three components: a technology index, a Public Institutions Index and a Macroeconomic Environment Index.

1. The technology index is a weighted average of an Innovation sub index, an Information and Communication Technology sub index and a Transfer of Technology sub index. Each sub index is a weighted average of a survey data index and an index based on hard data.

Thus, the Innovation sub index is a weighted average of survey of companies inside a country relating to the degree of innovative potential of the country (one-fourth weight). The survey collects data on companies' assessment of the country's ability to absorb technology based on its R&D expenditure and links of industry and academia. The other part of the technology index (weight of $\frac{3}{4}$) is based on data on tertiary enrollment in the country in 2000 and grants of US patents for the year 2002. Second, the technology transfer index is based on survey of companies on the importance of FDI and licensing as a means of transfer of technology. Finally, the ICT sub index is based on survey data on the access of schools to the internet, development of Internet Service Provider network and role of the government in promoting IT sectors via digital signatures as well as hard data on telephone and internet usage in the population.

2. the Public Institutions Index.

Here survey data is used to equally weight answers relating to questions on contract enforcement and a corruption sub index.

3. Macroeconomic Environment Index.

This has three components: a stability index, a credit rating index and a government waste index with $\frac{1}{2}$ weightage to the first component. The stability sub index is a

weighted average of survey data on the recessionary condition of an economy and hard data on economic indicators like inflation, savings. Etc. The credit rating index is taken from the Institutional Investor Country rating for March 2003 and the government waste index is based on questionnaires regarding use of public funds and government subsidies.

The overall index of growth competitiveness is based on an average of 1, 2 and 3.

The final relative rankings are given below in Table 2.9.

Table 2.9
Overall growth competitiveness rankings.

Country	2001	2002	2003
China	39	38	44
Bangladesh	71	77	98
India	57	54	56
Srilanka	61	59	68
Egypt	-	-	58
Brazil	44	45	54
Pakistan	-	-	73

Source: Global Competitiveness Report. (World economic forum)

From the above Table 2.9 it is quite evident that among the major developing countries the position of India has been quite consistent. Although China has a higher rank relative to India, the point that's worth noting is that the ranking of China and the other countries has worsened over the years while that of India has improved or at least not changed significantly.

As some indication of how India ranks on the disaggregated indices we can look at the data available for the Technology Index and the Public Institutions index. The ranking by the two indices is given below in tables 2.10 and 2.11, respectively.

Table 2.10
Technology Ranking

Country	2001	2002	2003
China	53	63	65
Bangladesh	73	79	95
India	65	57	64
Srilanka	59	67	72
Egypt	-	-	68
Brazil	49	35	35
Pakistan	-	-	83

Source: Global Competitiveness Report. (World economic forum)

Table 2.11
Public institutions ranking.

Country	2001	2002	2003
China	49	38	52
Bangladesh	74	79	100
India	48	59	55
Srilanka	57	42	72
Egypt	-	-	57
Brazil	46	45	53
Pakistan	-	-	74

Source: Global Competitiveness Report. (World economic forum)

It is clear from table 2.10 that India's technological capabilities improved significantly in 2002 but then declined in 2003. however, over the three year period its relative ranking compares quite favourably to all the other countries barring Brazil which has improved its ranking significantly.

However, the state of its public institutions (table 2.11) does not offer such a rosy picture. Like all the other countries in the sample, its ranking in terms of public institutions has slipped drastically since 2001. This, however, seems to be a phenomena characterizing all the countries in our sample.

It may be worthwhile to look at a direct comparison of India and the other countries in terms of its business climate. This is given in table 2.12.

Table 2.12
Business competitive rankings.

Country	2002	2003
China	38	46
Bangladesh	74	86
India	37	37
Srilanka	47	57
Egypt	-	58
Brazil	33	34
Pakistan	-	72

Source: Global Competitiveness Report. (World economic forum)

Though the data in table 2.12 is available only for two years, it would seem that India seems to have maintained its relative position while the other countries seem to have slipped in their rankings. In addition, only Brazil seems to have a superior competitiveness ranking.

The World Bank also compiles its own assessment of the competitiveness of countries. We have used two indicators, the costs of starting a business and the enforceability of contracts. Presumably, the lower the costs of starting a business and the easier the legal mechanism to enforce a contract, the better the business climate of a country. The relative ranking of our sample countries is given below in Tables 2.13 and 2.14.

Table 2.14
Cost of Starting a Business.

year	2003-04		
Country	Procedures (units)	Duration(days)	Cost(US\$)
china	12	41	158.14

Brazil	17	155	274.05
Egypt	13	43	858.29
Bangladesh	7	35	352.86
Pakistan	11	24	177.98
Srilanka	8	50	101.77
India	10	88	238.90

Source: IFC (International Finance Corporation)

Table 2.15
Enforcing contracts.

year	2003-04		
Country	Procedures (units)	Duration(days)	Cost(% of GNI* per capita)
China	21	200	14.7
Brazil	16	380	2.4
Egypt	19	202	30.7
Bangladesh	15	270	270.3
Pakistan	30	365	45.8
Srilanka	17	440	7.6
India	22	365	95.0

* GNI per capita in US \$

Source: IFC (International Finance Corporation)

Table 2.14 measures the costs of starting a business in terms of the number of bureaucratic procedures required to start a business and the related cost of start up. On the other hand, given a firm is in business, table 2.15 measures the costs of enforcing contracts entered into in these countries in terms of the legal process, the litigation fees, time taken for final settlement etc. While the costs of starting a business seem to be lower in India as compared to Brazil, Egypt and Bangladesh what is disquieting is the relatively longer time (88 days) taken to start a business in India relative to the other countries in our sample.

2.4. The Regulatory Framework

As India moved to a liberalized climate after 1991, one of the objectives was to give greater emphasis to market forces in determining output and profits. At the same time, it was necessary to create the regulatory institutions to determine when the conditions of competition are or are not being violated. In other words, the role of the state shifts to creating conditions conducive to competition by regulation of the competitive climate rather than entering into countervailing production through the public sector.

In the table below we indicate the set of regulatory agencies along with the sectors in which they are operative. It is clear from the table that there are still many areas where the responsibility for regulation does not rest with an independent regulatory agency but with a department of the Central government.

Sectors	Name of the regulatory agency	Name of the regulatory bill	Passed (date)	Structure of the regulatory authority
Mining	Ministry of Coal & Mines	Coal Mines (Nationalisation) Amendment Bill, 2000	August, 2001	At the Secretariat level, the Department is headed by a Secretary who is assisted by one Additional Secretary, three Joint Secretaries (including the Financial Adviser), one Project Advisor, seven Director/Deputy Secretaries, four Under Secretaries, fourteen Section Officers, one Desk Officer, One Economist, One Assistant Director (Official Language) and one Deputy Controller of Accounts, and their supporting staff.
Electricity	Ministry of Power	The Electricity Bill, 2001	2001	At the Secretariat level, the Department is headed by a Secretary who is assisted by two Additional Secretary, five Joint Secretaries (including the Financial Adviser)
Health services	Medical Council of India, Pharmacy Council of India	Tobacco control act, 2003.	2003	http://mciindia.org/know/mci/mci_chart.htm
Hotel and Tourism.	Ministry of Tourism			
Transport services	Ministry of road transport and highways			http://morth.nic.in/adminr.htm
Communication	TRAI*	TRAI's Directive on Publication of tariffs for consumer information	March, 2004	

Trade	Ministry of commerce and industry, Dept. of commerce	Electrical Wires, Cables, Appliances, Protection Devices and accessories (quality control)	17 th February, 2003	http://commerce.nic.in/setup.htm
Irrigation	Ministry of water resources	Inter Basin Transfer NO.2/21/2002-BM	13th December, 2002	http://wrmin.nic.in/responsibility/default5.htm
Textiles	Ministry of textiles.	The Textiles Undertakings (Nationalisation) Act	1995	http://texmin.nic.in/ministry/mot with orgs.htm
Chemicals	Dept. of chemicals and petrochemicals	Interim policy for gas distribution projects in Gujarat	8 July, 2002	http://chemicals.nic.in/org1.htm
Food and beverages	Ministry of food processing industries	The Environment Tribunal Bill, 1992.	1992	<ul style="list-style-type: none"> • The Secretariat of Industrial Approvals (SIA), Ministry of Commerce, Government of India • The Reserve Bank of India • Directorate General of Foreign Trade) • The Company Law Board • The Securities and Exchange Board of India * • The Stock Exchange authorities.

* Autonomous regulatory bodies funded by the government.01

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APPENDIX A

TABLE A.1.

Detailed Sectoral Decomposition of the AD cases filed by India in ('02-'03)

SECTORS	Dumping Margins	no.of cases filed (pd).	Country.
Cchemicals			
Acyclic Alcohols			
	21.11% to 33.98%	31.1.2002	Brazil
Flexible slabstock polyol		21.5.2003	Brazil
Chloroquine Phosphate	43.66%	16.7.2003	China PR
Flexible Slabstock Polyol	82.53%	21.5.2003	China PR
Para Cresol	31.94 to 45.04%	27.8.2002	China PR
Calcium Carbide		20.6.2003 (R)	China PR
Caustic Soda	74.02 to 80.03%	14.5.2002	China PR
Melamine		10.9.2003	China PR
Mica Pearl Pigment		23.12.2003	China PR
Borax Decahydrate	96.5% to 132.84%	25.11.2002	China PR
Potassium Carbonate	23.4% to 36.7%	19.12.2002	China PR
Titanium Dioxide	57.70%	16.1.2003	China PR
Met Coke (R)	60.5% to 96.4%	07.05.2002	China PR
Methylene Chloride	Bulk 85.32%	19.8.2002	E.U.
	Packed 55.75%		
Oxo Alcohols (R)		27.8.2002	E.U.
6-Hexanelactum (Caprolactam)		22.9.2003	E.U.
Mica Pearl Pigment		23.12.2003	E.U.
Toluene Di-Isocyanate		20.10.2003	E.U.
Cyclohexanone		8.10.2003	E.U.
Propylene Glycol		22.8.2003	E.U.
PVC Paste Resin		22.8.2003	E.U.
Potassium Carbonate	4.5% to 18.6%	19.12.2002	E.U.
Caustic Soda	489.36%	8.10.2002	E.U.
Sodium Hydrosulphite	69.01%	14.11.2002	Germany
Caustic Soda	299.87%	8.10.2002	Indonesia
Oxo Alcohols (R)		27.8.2002	Indonesia
Hexamine	67.75%	18.9.2002	Iran
Ammonium Nitrate	150.65%	20.9.2002	Iran
Oxo Alcohols (R)		27.8.2002	Iran
6-Hexanelactum (Caprolactam)		22.9.2003	Japan
Micra Pearl Pigment		23.12.2003	Japan
Toluene Di-Isocyanate		20.10.2003	Japan
Met Coke (with Ash content less than 18%)	39.63% to 53.56%	20.3.2003	Japan
Methylene Chloride		19.2.2003	Korea, Republic of
Sodium Hydrosulphite	102.56%	14.11.2002	Korea, Republic of

Flerxible Slabstock Polyol	39.41 to 70.34%	21.5.2003	Korea, Republic of
Caustic Soda	53.22	14.5.2002	Korea, Republic of
Propylene Glycol		22.8.2003	Korea, Republic of
Oxo Alcohols (R)		27.8.2002	Korea, Republic of
Potassium Carbonate	47.3% to 38.7%	19.12.2002	Korea, Republic of
Toluene Di-Isocyanate		20.10.2003	Korea, Republic of
PVC Paste Resin		22.8.2003	Korea, Republic of
Acyclic Alcohols (Oxo Alcohols)	1.3% to 9.7%	31.1.2002	Malaysia
6-Hexanelactum (Caprolactam)		22.9.2003	Nigeria
Oxo Alcohols (R)		27.8.2002	Poland
Acyclic Alcohols (Oxo Alcohols)	25.97% to 43.11%	31.1.2002	Romania
Calcium Carbide		20.6.2003	Romania
Ammonium Nitrate	58.06%	20.9.2002	Russia
Oxo Alcohols (R)		27.8.2002	Russia
Polytetrafluoroethylene		8.10.2003	Russia
Methylene Chloride	Bulk 99.92%	19.8.2002	South Africa
Acyclic Alcohols (Oxo Alcohols)	24.42% 72.48%	31.1.2002	South Africa
Oxo Alcohols (R)		27.8.2002	Saudi Arabia
PVC Paste Resin		22.8.2003	Saudi Arabia
Methylene Chloride	Bulk 62.42%	19.8.2002	Singapore
Acyclic Alcohols (Oxo Alcohols)	46.63% 50.63%	31.1.2002	Singapore
Propylene Glycol		22.8.2003	Singapore
Caustic Soda	58.79%	8.10.2002	Taipei
Flexible Slabstock Polyol	88.36%	21.5.2003	Taipei
Toluene Di-Isocyanate		20.10.2003	Taipei
Cyclohexanone		8.10.2003	Taipei
Potassium Carbonate	19.2% to 48.5%	19.12.2002	Taipei
Sun/Dust Control Polyester Film	213%	3.3.2003	Taipei
6-Hexanelactum (Caprolactam)		22.9.2003	Thailand
Borax Decahydrate	15.41% to 79.44%	25.11.2002	Turkey
Sun/Dust Control Polyester Film			United Arab

			Emirates
Oxo Alcohols (R)		27.8.2002	United States
Mica Pearl Pigment		23.12.2003	United States
Toluene Di-Isocyanate		20.10.2003	United States
Cyclohexanone		8.10.2003	United States
Propylene Glycol		22.8.2003	United States
Metals			
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.2002	Australia
Hot Rolled Coils, Strips, Sheets & Plates		25.9.2002	Canada
Ball Bearings	98.97% to 344.46%	21.9.2002	China PR
Copper Clad Laminates	57.17%	24.12.2002	China PR
Non-Brass Metal Flashlights	468% to 798%	9.9.2002	China PR
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.2002	E.U.
Copper Clad Laminates	40%	24.12.2002	Hong Kong. China
Forged Rolls	11.05%	27.8.2002	Korea, Republic of
Copper Clad Laminates	29.49% to 56.46%	24.12.2002	Korea, Republic of
Copper Clad Laminates	14.47% to 39.47%	24.12.2002	Philippines
Ball Bearings	253.17%	21.9.2002	Poland
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.2002	Romania
Ball Bearings	181.46%	21.9.2002	Romania
Ball Bearings	436.78%	21.9.2002	Russia
Forged Rolls	79.69%	27.8.2002	Russia
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.2002	South Africa
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.2002	Saudi Arabia
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.2002	Singapore
Copper Clad Laminates	40.67%	24.12.2002	Taipei
Forged Rolls	60.13%	27.8.2002	Ukraine
Hot Rolled Coils, Strips, Sheets & Plates – II		25.9.200 2	Venzeuela

Fibres			
Acrylic fibre		1.7.2003	Belarus
Mulberry Raw Silk	15.79%	17.7.2002	China PR
	72.96%		
Nylon Tyre Cord Fabric		29.10.2003	China PR
Acrylic Fibre		3.9.03 (R)	Italy
Styrene Butadiene Rubber		30.7.2003	Japan
Acrylic Fibre		3.9.03 (R)	Japan
Polystyrene		10.2.2003	Japan
Styrene Butadiene Rubber		30.7.2003	Korea, Republic of
Polystyrene		10.2.2003	Korea, Republic of
Ethylene Propylene Diene Rubber (EPDM)	7.31%	27.12.2002	Korea, Republic of
Polystyrene		10.2.2003	Malaysia
Acrylic Fibre		3.9.03 (R)	Portugal
Acrylic Fibre		3.9.03 (R)	Spain
Styrene Butadiene Rubber		30.7.2003	Taipei
Polystyrene		10.2.2003	Taipei
Styrene Butadiene Rubber		30.7.2003	Turkey
Styrene Butadiene Rubber		30.7.2003	United States
Miscellaneous			
Vitamin-C	112.26%	14.8.2002 (R)	Canada
Measuring Tapes	1069%	22.10.2002	China PR
Float Glass	43.82%	5.7.2002	China PR
Vitamin-E	78.82% to	27.8.2002	China PR
	183.80%		
Plastic Ophthalmic Lenses	26.49% to 233%	27.8.2002	China PR
Vitrified Porcelain Tiles		23.5.2003	China PR
Vitamin-C	208.13%	14.8.2002 (R)	China PR
Coated Paper		17.6.2003	E.U.
X-Ray Baggage System	10.34% to	15.4.2002	Germany
	17.59%		
Float Glass	46.52 to 79.02%	5.7.2002	Indonesia
Thermal Sensitive Paper		29.7.2003	Indonesia
Gypsum Plaster Board		5.8.2003	Indonesia
Coated Paper		17.6.2003	Indonesia
Thermal Sensitive Paper		29.7.2003	Malaysia
Butter Oil		26.11.2002	New Zealand
Green Veneer Tape	164%	9.1.2003	Taipei
Plastic Ophthalmic Lenses	26.49% to 233.75%	27.8.2002	Taipei
Gypsum Plaster Board		5.8.2003	Thailand

Thermal Sensitive Paper		29.7.2003	United Arab Emirates
Vitamin-C	97.80%	14.8.2002	United States
TOTAL INITIATIONS FILED IN ('02-'03) : 127			

Table A.2.

Nominal and effective rates of protection for the manufacturing sector:

Sectors	1987-88		1997-98	
	Simple average	Import weighted	Simple average	Import weighted
Cotton textiles	111.9	83.8	55.5	58.2
Woolen textiles	114.7	111.6	43.9	43.2
Silk textiles	182.8	242.4	35.8	35.2
Art silk and synthetic fiber textiles	124.4	152.5	42.9	39.1
Jute, Hemp and Mesta textiles	169.0	-59.9	59.8	67.6
Carpet weaving	147.9	153.6	44.1	43.8
Readymade garments	146.7	112.2	42.8	43.3
Miscellaneous textiles Products	156.1	170.0	44.4	40.2
Furniture and Fixtures	95.8	51.5	47.2	48.9
Wood products excluding furniture	136.3	58.1	49.8	72.8
Paper and paper products	72.9	-23.1	25.6	14.9
Printing, Publishing and allied activities	174.3	212.0	19.1	14.2
Leather footwear	112.4	52.3	47.7	50.5
Leather products excluding footwear	181.9	198.8	36.1	22.5
Rubber products	177.1	258.1	48.9	51.1
Plastic products	90.1	-32.5	32.6	32.1
Petroleum products	20.2	-92.8	79.8	40.6
Coal and tar products	135.4	135	9.8	10.2
Inorganic heavy chemicals	120.7	172	33.3	28.4

Organic heavy chemicals	32.1	82.4	30.0	22.8
Fertilizers	116.3	131.5	12.1	18.0
Pesticides	244.0	247.2	31.1	18.9
Paints, varnishes and lacquers	109.1	106.8	32.8	34.7
Drugs and medicines	181.3	173.7	31.6	33.4
Soaps, cosmetics and glycerine	151.3	208.9	59.5	56.8
Synthetic fibers and resins	142.4	162.0	35.5	38.0
Other chemicals	149.9	132.4	35.2	32.1
Structural clay products	111.4	34.4	44.7	41.4
Cement	132.1	91.7	48.0	48.4
Other non-metallic mineral products	111.8	81.8	42.4	45.0
Iron, steel and ferro-alloys	165.5	174.8	24.7	32.7
Iron and steel casting and forging	164.8	164.6	42.0	35.2
Iron and steel foundries	97.2	101.9	33.0	29.9
Non-ferrous basic metals	118.0	75.0	31.9	48.8
Hand tools and hardware	131.8	86.0	33.5	29.2
Miscellaneous metal products	46.2	49.0	24.9	20.9
Tractors and other agricultural machinery	48.5	34.0	15.9	15.9
Food and textiles industrial machinery	48.4	44.2	22.4	19.7

Industrial machinery (except food and textile)	39.6	37.8	19.9	19.0
Machine tools	85.7	48.1	18.7	18.1
Office computing and accounting machinery	80.7	92.5	34.8	29.8
Other non-electrical machinery	55.8	52.5	20.8	18.1
Electrical industrial machinery	149.5	153.6	20.0	15.9
Electrical cables and wires	156.4	166.6	48.8	46.6
Batteries	102.3	140.0	47.4	46.3
Electrical appliances	113.7	134.5	39.9	29.8
Communication equipment	53.8	63.2	33.1	30.5
Other electrical machinery	110.8	125.7	32.4	31.2
Electronic Equipment and television	30.8	-15.7	31.7	25.8
Ships and boats	70.2	68.4	39.8	36.3
Rail equipment	97.5	36.3	40.2	26.4
Motor Vehicles	93.7	-0.4	49.0	49.4
Motor cycles and scooters	49.5	33.1	44.2	44.4
Bicycles, cycle rickshaws	131.9	89.5	47.3	47.6
Other transport equipment	148.4	150.2	40.3	43.9
Watches and clocks	99.6	81.4	36.3	32.3
Miscellaneous	823.3	908	364.4	331.7

Source: *Protection in Indian manufacturing: an empirical study, Hasheem Nouroz*