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INDIA

INDUSTRIAL REGULATORY POLICY STUDY

VOLUME I

Main Report

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Industrial Strategy & Policy Division
Industry Department

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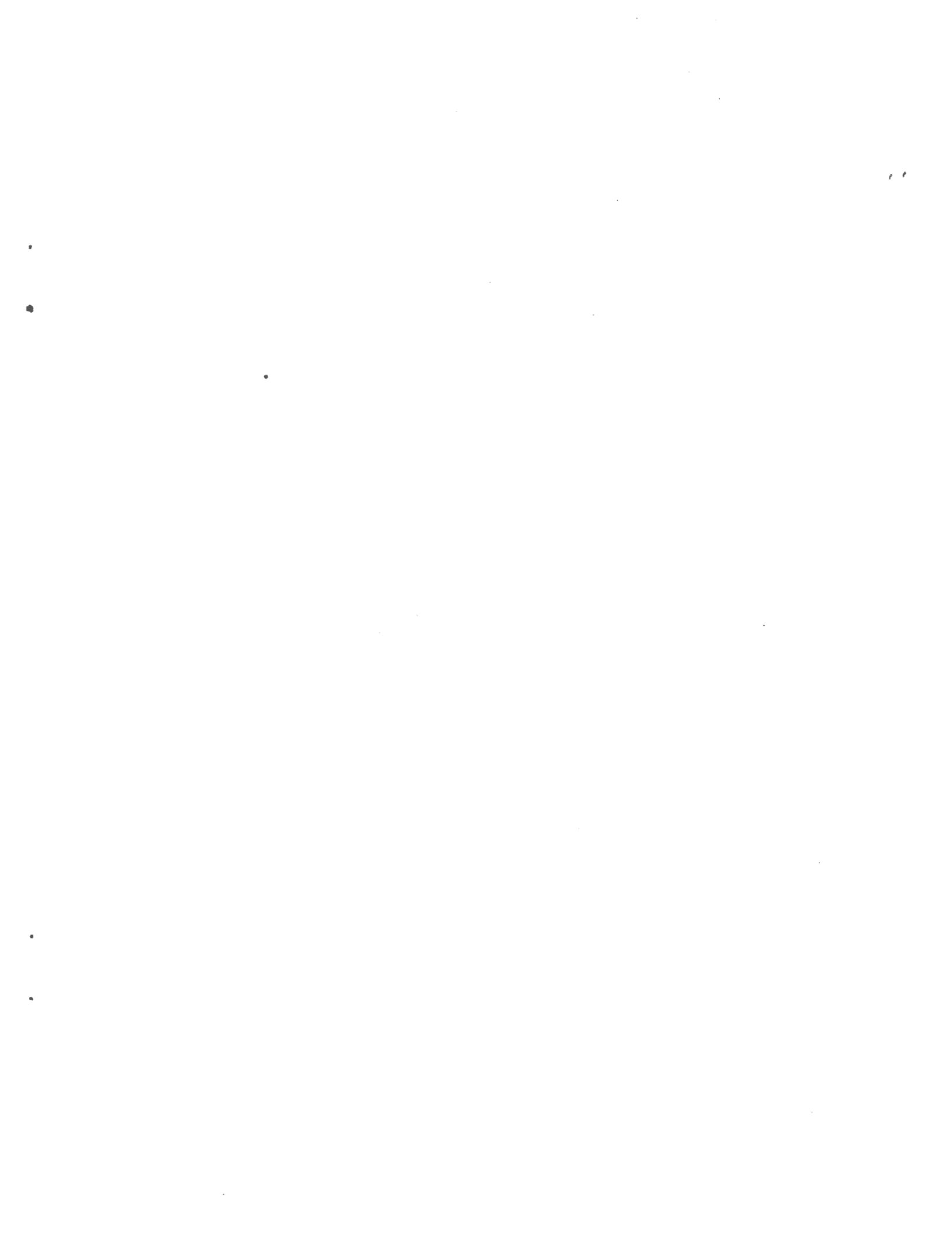
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ACRONYMS

ACC	Associated Cement Companies
ACMA	Automotive Component Manufacturers' Association
BTU	British Thermal Unit
CCI	Chief Controller Imports
CDOT	Center for the Development of Telematics
CIF	Cost plus Insurance and Freight
CKD	Completely Knocked Down
CMA	Cement Manufacturers Association
CMC	Computer Maintenance Corporation
CNC	Computer Numerical Control
CV	Commercial Vehicle
DCPL	Development Consultants Private Limited
DGTD	Directorate General of Technical Development
DCA	Department of Company Affairs
DOE	Department of Electronics
DOT	Department of Telecommunications
EGEAF	Engineering Goods Exports Assistance Fund
ETTDC	Electronic Trade and Technology Development Corporation
FAI	Fertilizer Association of India
FCI	Fertilizer Corporation of India
FERA	Foreign Exchange Restrictions Act
FICC	Fertilizer Industry Coordination Communications
FOB	Free on Board
GOI	Government of India
HCL	Hindustan Cables Ltd.
HMT	Hindustan Machine Tools Ltd.
HPC	Hindustan Paper Corporation
HTL	Hindustan Teleprinters Ltd.
ICICI	Industrial Credit and Investment Corporation of India
ICB	International Competitive Bidding
ICP	Indian Crossbar Project
IISCO	Indian Iron and Steel Company
ITI	Indian Telephone Industries Ltd.
JPC	Joint Plant Committee
LD	Linz Donawitz
MES	Minimum Efficient Scale
MODVAT	Modified Value Added Tax

ACRONYMS (Continued)

MPEDC	Madhya Pradesh State Electronics Development Corporation
MRTP	Monopolies and Restrictive Trade Practices Act
NC	Numerical Control
NEM	Non-electrical machinery
NIC	Newly Industrializing Country
NTC	National Textile Corporation
OEM	Original Equipment Manufacturer
OGL	Open General License
OGL	Outside General Ledger
OHL	Open-hearth Furnaces
OPC	Ordinary Portland Cement
PABX	Private Automatic Branch Exchange
PAX	Private Automatic Exchange
PMP	Phased Manufacturing Program
PPC	Portland Pozzoland Cement
PSC	Portland Blast Furnace Slag
RAX	Rural Automatic Exchange
SAIL	Steel Authority of India Ltd.
SCL	Semiconductor Complex Limited
SDF	Steel Development Fund
STC	State Trading Corporation
TFP	Total Factor Productivity
TPD	Tons per day
TPY	Tons per year
TRC	Telecommunications Research Center
TISCO	Tata Iron and Steel
VHF	Very High Frequency
VLSI	Very Large Scale Integration



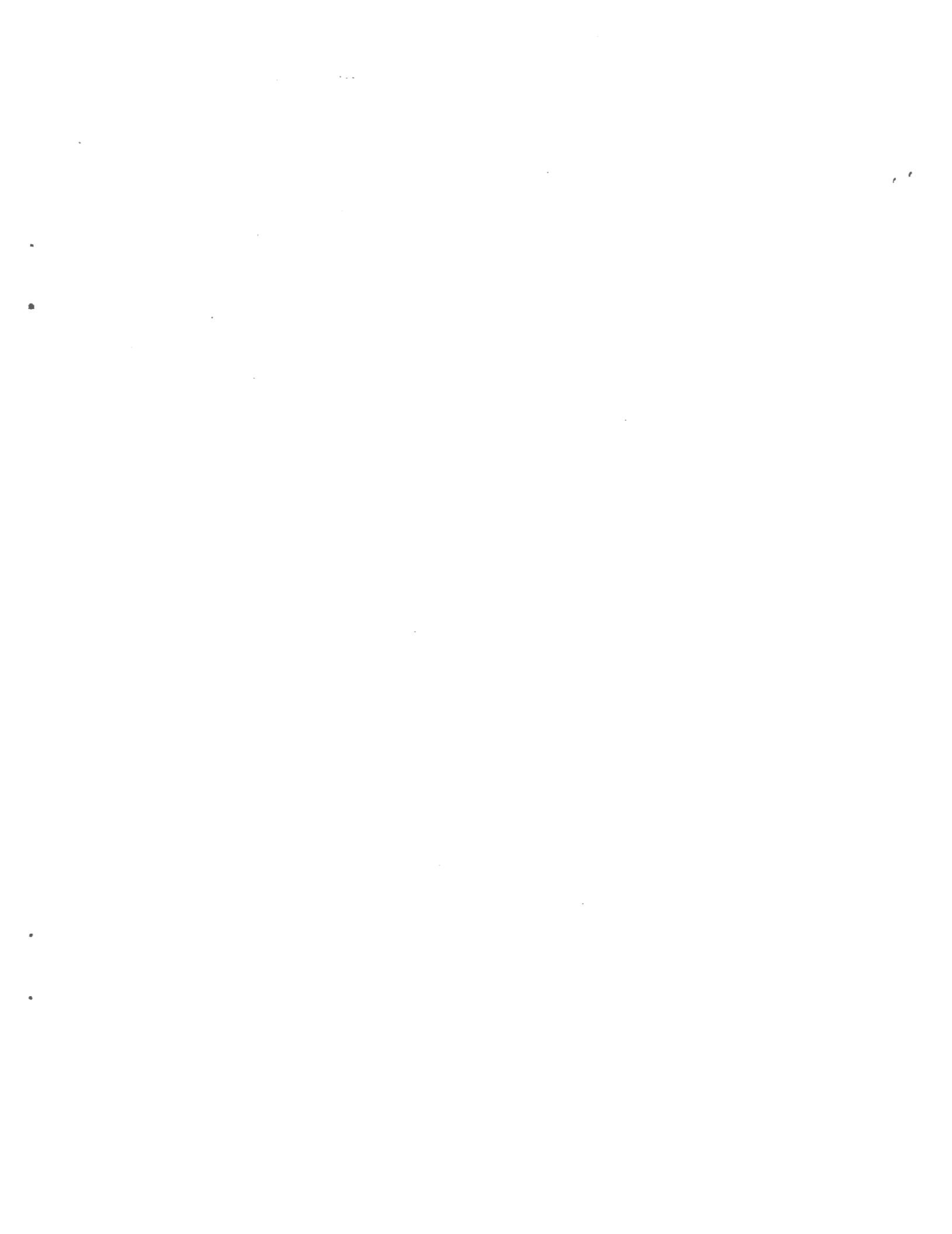
PREFACE AND ACKNOWLEDGEMENTS

This report examines the impact of industrial regulatory policies on the performance of Indian industry. These policies were adopted by a newly emerging nation in order to build a strong, self-reliant industrial base within a framework of interpersonal and interregional equity. To a large extent, these objectives have been accomplished. But this has been done at some cost in terms of static and dynamic efficiency of the industrial sector, its contribution to growth and its impact on the balance of payments. The Government is now re-examining the entire policy regime as it affects industrial performance. Policies are being modified to emphasize growth and efficiency, while preserving traditional values.

This report focuses on one aspect of the broad policy framework --regulatory policy--and its impact on industrial structure, firm behavior and performance. It makes a number of suggestions for further regulatory policy reform which are consistent with and supplement measures already taken by the Government.

The report does not attempt to cover all the factors influencing industrial performance nor does it present a complete recipe for reform, but we hope the recommendations contained herein will make a positive contribution, along with work currently in progress, to the government decision-making process. Other World Bank reports will be focusing on a number of equally important areas for industrial performance--export development, credit and capital markets, industrial technology development and trade policy. Their findings will be synthesized in the 1987 Country Economic Memorandum.

The World Bank team wishes to convey its deep appreciation to the Ministries and agencies of the Government of India that provided information and support for its effort, in particular, to the Ministry of Industry, the Ministry of Finance and the Planning Commission. The views, interpretations and conclusions of this report are strictly those of the World Bank.



INDIA

INDUSTRIAL REGULATORY POLICY STUDY

VOLUME I

Main Report

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This report was written by Claudio Frischtak (team leader, INDSP), Michele de Nevers (ASPID), Ann Harrison (INDSP) and Lloyd McKay (ASAIN), following missions in February and May of 1986. The individual subsector reports comprising Vol. II were the responsibility of: Ann Harrison (pulp and paper, cement and nitrogenous fertilizers); Michele de Nevers (automotive products); Lloyd McKay (garments); Kun-Kyung Lee, INDSP, (iron and steel, machine tools and electronics); Sunanda Sengupta, NDO, (cotton textiles); Peter Wogart, NDO, and K. Kalra, Consultant, (capital goods); and Claudio Frischtak (telecommunications equipment). The MICOM Unit of the Policy Wing of the Industry Department provided word processing services and Valerie Chisholm secretarial assistance.

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INDIA

INDUSTRIAL REGULATORY POLICY STUDY

SUMMARY AND CONCLUSIONS

(i) This report examines the impact of industrial regulatory policies on the performance of Indian industry. In the 1950s and 1960s the major challenge faced by Indian policy-makers was to mobilize resources, build an infrastructure and establish key industrial segments. Regulatory policies were established as instruments of economic growth and social equity with the objective of deepening and diversifying the industrial base.

(ii) First, the system of industrial licensing was aimed at allocating scarce productive resources among competing activities, consistent with Government priorities of building a large, self-sufficient and decentralized industrial sector. The build-up of such a sector was to take place through a systematic and across-the-board substitution of imports, with the public sector responsible for the production of most basic and intermediate goods. Second, the Foreign Exchange and Regulations Act (FERA) was used as an instrument for pursuing self-reliant industrialization, with Indians in a position of effective control. Technological activities were to be indigenized through restrictions on imports of foreign technology. Third, the promotion of small-scale industry, which included reserving the production of a number of goods for small units, was based on the premise that for employment to be maximized and for wealth and income to be more equitably distributed, small firms would need to take a major role in industrial production. Conversely, the Act regulating Monopoly and Restrictive Trade Practices (MRTP) was directed at curbing the expansion of large business concerns, in the belief that the growth and concentration of capital would lead to the exercise of monopoly power. Fourth, price controls were used to restrain inflationary pressures coming from an environment of acute scarcities, while making a number of goods available to preferential users. Finally, in order to protect existing jobs and conserve scarce resources, a "sick industry" policy effectively blocked exit of individual firms from industrial activities.

(iii) Yet regulatory policies played an additional and unwanted role in the process of industrial development. Together with trade policies, they also functioned as barriers to competition. At an early stage, competition was not perceived to be of critical importance to the attainment of major development goals. However, in India, as in many other industrializing countries, the dynamic efficiency losses from insufficiently competitive behavior tend to grow progressively in importance and tip the balance against whatever short-term gains may be achieved with the use of regulatory controls and trade restrictions.

(iv) Performance problems have become increasingly apparent since the mid-1960s. Manufacturing growth in value-added averaged just 4.0 percent per annum between 1966-84, lower than in other large developing countries.

Total factor productivity growth over the period 1966-80 was small or negative for most industrial subsectors and not significantly different from zero for the economy as a whole. It is not surprising therefore that the growth of India's manufactured exports has been very disappointing. In real terms they grew at an annual rate of 1.1 percent between 1973-83. It is also noteworthy that the share of manufacturing output in GDP, although still relatively small, has already started to decline--from 17 percent in 1978 to 15.5 percent in 1984. This runs counter to the development experience of many other countries, where the share of industrial output in GDP only starts to recede after reaching a 25-35 percent plateau.

Barriers to Competition and Growth and Industrial Performance

(v) A number of factors are responsible for the poor industrial performance observed since the mid-60s, including the slowdown of public investment and problems of public sector enterprise management; financial sector policies which failed to deepen India's capital markets and introduced significant distortions in the allocation of credit; labor policies which encouraged segmentation of the labor market and limited its flexibility; and industrial regulatory and trade policies.

(vi) The focus of this report is on industrial regulatory policies. Its key proposition is that many of the problems of industrial performance in India are, to a significant extent, the product of a dense set of regulatory barriers to competition and growth. These domestic barriers have been reinforced by a highly protective trade regime. As a result, industrial managers in India tend to perceive the domestic market as captive, an attitude that is reflected in insufficient technological and marketing efforts. Regulatory and trade policies have not only limited the extent of competition, creating an environment conducive to conservative management behavior. They have also brought about major structural deficiencies in industry, leading to plants of inadequate size and firms that are insufficiently specialized. Somewhat paradoxically, they have also resulted in high levels of market concentration. In an environment characterized by limited competition, firms were able to attain high rates of return with only marginal efforts in cost reduction and quality improvement.

(vii) There is strong evidence to establish the connection between the regulatory and trade regimes and problems of industrial performance. In this report, eleven major subsectors of the Indian economy comprising one-half of India's industrial output were individually examined. Comparative evidence was also drawn from cross-country experience. Together, the results strongly support the proposition that competition in its three key dimensions—internal competition, import competition and export rivalry--plays a major role in determining industrial performance.

(viii) First, the forces of competition act in a complementary and mutually reinforcing way to make management more aware of economic constraints and opportunities. As barriers are removed and profit margins

shrink, firms streamline operations, shift product lines, search for new markets and generally become more responsive to customer requirements. Entry, or its threat, works both as a disciplinary and an innovative force. It bids away excess profits driving the industrial structure to cost-minimizing configurations. Yet entry also operates by injecting new ideas embodied in the particular challenges of individual entrants to which incumbent firms must respond if they wish to remain in that market.

(ix) The importance of barriers to entry and expansion is highlighted by the experience of key industrial sectors in industrialized countries. In data processing equipment, for example, each of the three new generations of computers was ushered in by an entry challenge to IBM's dominance of the industry. The American steel industry tells a similar story. Protected by "natural" entry barriers and a coordinated pricing scheme which assured a "satisfactory" profit level, the leading American steel firms were very slow to adopt even well-known and profitable innovations. Blast oxygen furnaces and continuous casting methods came to be part of the production environment only after small domestic rivals and imports eroded their market position.

(x) Although barriers to competition of a regulatory nature still prevail in India, there are many examples where their removal produced a progressive response from management. For a major Indian producer of professional instruments, the challenge of new firms coming to dispute a tacitly shared market protected by licensing restrictions led him to shed outdated lines and to offer new or improved products. In telecommunications equipment, market demand became an explicit consideration for the strategy of the largest producer only after a number of private sector firms drew plans to enter in response to the new subsector policy. The response of cement producers to reduced price and licensing controls was an immediate increase in capacity utilization and output, a reduction in prices and an expansion of investment. This fed back to makers of cement machinery who were able to respond quickly in view of the more liberal entry and expansion conditions which have for some time characterized the non-electric capital goods sector.

(xi) In addition to domestic impediments to entry and growth, industrial firms in India have also faced binding barriers to exit. Exit barriers have made management far more risk-averse in undertaking new production activities. In some cases, such barriers have blocked substantial expansion of existing operations. Managers have instead chosen to augment production by incremental steps even if this approach was less economical, or have resisted altogether shifting production to new, more profitable areas. In the garments industry, for example, the unwillingness of producers to enter large-scale activities has impeded a shift from cotton-based garments to ones based on blended fabrics. This has helped shut Indian producers out of a high growth segment of the international market.

(xii) There have been other cases where entrepreneurs were simply not willing to risk starting a new activity in areas characterized by rapid changes in demand patterns and short product-cycles. Such activity would

have required a work force sufficiently large that the dismissal of any single worker would be subject to the (unlikely) approval of the labor commissioner. The opportunities foregone by the Indian economy in such cases have not been marginal. Entrepreneurs have, for example, shied away from mass-producing certain sporting goods associated with a major international sporting event in the belief that they would lack the flexibility to shift product lines and vary employment on a timely basis after the event was over. Such conservative behavior has adverse implications which go beyond lost employment and output opportunities. Rapid creation of new firms (and associated high mortality rates) has been a major factor explaining superior technological and market performance in a number of industrializing countries.

(xiii) Conservative management behavior in India is further reinforced by the trade regime. In an industrial sector generally characterized by very high levels of concentration and limited domestic competition, firms have been in a position to exert market power because import competition is not an effective threat. As a result, domestic producers in concentrated sectors reap excess profits with a negligible contribution to economic growth and welfare. In the automotive sector, for instance, quality has stagnated or significantly declined over time for most products and so have exports. Yet several automotive firms have thrived in their highly insulated markets, being consistently some of the most profitable producers in India. Another example is shaving blades. One firm has dominated 80 percent of the market and for nearly 10 years has effectively blocked an entry attempted by a joint venture. At the same time, import competition is precluded by a combination of high tariff rates (in the range of 100-150 percent) and restrictive non-tariff barriers. As a result of the absence of competitive pressures, Indian blades have been characterized by a low average number of shaves per blade when compared to international standards.

(xiv) In sectors where the technology of production requires scales that are large relative to the internal market or where one domestic producer is strongly entrenched and enjoys high internal barriers to entry, the threat of competitive imports becomes the main disciplinary force that "natural" monopolies face. The trade regime in India has effectively removed this threat and reinforced regulatory barriers to competition. In the case of heavy commercial vehicles, the main producer has established such a commanding position due to superior technology and after-sales service that domestic competition per se is not an effective threat to the firm's market position. Protection from import competition has eliminated a major source of competitive pressure for management to continuously upgrade its operations.

(xv) In most subsectors the Indian trade regime has also insulated producers from export rivalry. This is a dimension of competition which critically affects the technological conduct of management. The ability of firms to penetrate export markets depends to a large degree on a non-parochial attitude of management concerning costs, quality standards and delivery schedules. This is not a one-time change, but a process which

transforms the conduct of managers and workers, compelling them to come progressively in line with the rigorous parameters of the international market. In many countries, such as Brazil, the Republic of Korea (South), China and others, export rivalry is inducing a progressive technological behavior by exposing firms to new technological trends and requiring them to follow closely changes in designs and production methods occurring at the technology frontier. The Indian experience with industrial boilers is one case where a good product was much improved through export rivalry. This experience, however, has not been generalized due to the strong anti-export bias of the trade regime and the regulatory constraints on growth and technological upgrading.

(xvi) The extent of domestic and import competition and export rivalry also critically affects technical and allocative efficiency. Differential domestic mobility and growth barriers for firms of distinct sizes have led to widespread fragmentation of capacity as well as excessive horizontal diversification and vertical integration. The basic issue here concerns the role of small firms in the Indian economy and their relation to larger concerns. In countries where the potential of small firms is taken to be both their impact on employment generation and their contribution to an efficient division of labor, small units are closely integrated in the activities of larger producers as subcontractors and suppliers of parts and components. Small and large firms play complementary and mutually supportive role.

(xvii) In India, however, small-scale policies on the one hand fostered the replication of many production activities typical of larger units on a smaller scale. In the cement, sugar and paper industries, for example, the entry of small units was promoted despite the scale advantages of larger firms; in these industries many of the smaller units would be unviable even with efficient management, modern technology and reliable input supplies. On the other hand, these policies stimulated firms to remain small, even though to be effective suppliers and subcontractors they often lacked the necessary resources to improve their production and technological capabilities.

(xviii) The losses in technical and allocative efficiency due to domestic regulations have been compounded by the insufficient degree of specialization and the diseconomies of scale fostered by the trade regime. In addition to the well-known static losses from resource misallocation, the large barriers to the penetration of imports have decreased the possibilities for the potential technological, scale and growth advantages from intra-industry trade and specialization. These potential gains have been foregone in a large number of subsectors, including electronics, telecommunications and other engineering goods, where trade could bring the expansion of certain product lines while shedding others, strengthening the production, investment and innovation capabilities of the subsector as a whole. The extent of fragmentation of production in India is thus a joint product of regulatory and trade restrictions on mobility and growth. The static and dynamic losses incurred by the Indian economy are very substantial and were observed in almost all the subsectors examined, most of which have technologies characterized by moderate to large economies of scale.

(xix) This report suggests that the linkages between regulatory and trade policies and the performance of the Indian industry are substantial, mediated by the impact of these policies on the structure of industry and the behavior of firms. The policy regime has had a major role in explaining the poor industrial performance of the last 15-20 years. The restrictions on growth and on the three basic dimensions of competition have produced an environment conducive to large static and dynamic efficiency losses. The evidence provides only a glimpse of the enormous opportunities foregone by the Indian economy over this period. As a result, improvements in industrial performance have now become, to a significant extent, predicated upon regulatory and trade reforms which would lower the barriers to competition and growth in industry.

An Approach to Industrial Regulatory Reform

(xx) The process of industrial regulatory reform in India gained momentum in the 1980s, especially after 1984. The policy changes have generally been in the direction of promoting growth and efficiency, adopting a more selective approach to public sector investment and progressively replacing physical controls with fiscal and financial instruments. In a major shift in approach, the government intends increasingly to avoid establishing specific output targets with corresponding licensed capacities to match projected demand, and it has indicated minimum efficient scales in recognition of the importance of scale economies for manufacturing efficiency. The GOI wants to move toward a policy environment that stimulates flexibility and efficiency in resource use and encourages technological upgrading and improvements in productivity.

(xxi) In view of the difficulty of accurately predicting the supply response and behavior of economic agents, government policy makers have proceeded cautiously, introducing incremental changes of existing regulations. In the medium run, however, the regulatory reform will require a clearly articulated strategy to succeed. India is now at a point of transition. A substantial number of measures have been taken to stimulate firms to enter new markets, upgrade their technology and expand their output, and positive responses can be observed in some subsectors, particularly those where the regulatory changes were introduced a few years ago (see Annex I). To some degree, however, the limited nature of many of these measures has itself constrained the response of industrial firms to the new policy environment.

(xxii) This report suggests a set of measures that, by transforming the industrial regulatory framework, would lead to a more efficient manufacturing sector, bring a positive supply response in the medium and long-run and help attain some of the Government's major industrial policy objectives. These recommendations are not to the exclusion of the Government moving decisively in other areas of industrial policy, such as improving the administration of the public sector (particularly the operational efficiency of its enterprises) or strengthening credit and capital markets.

(xxiii) The effectiveness of regulatory reform in India will be predicated on its scope: changes need to be introduced in the way the government regulates the organization and activities of industry and the way it manages international trade. An improvement in industrial performance would require a new firm growth policy. It would remove regulatory impediments to firm growth to facilitate the accumulation of technological and production capabilities that most Indian industrial firms presently lack. A policy emphasizing dynamism and flexibility in the operation of industrial firms would be coupled with a new competition policy comprising three complementary and mutually reinforcing aspects: internal competition, export rivalry and import competition. It is essential that Indian policy-makers pursue a strategy of rapidly increasing competition along these three dimensions. Even though the speed at which different forms of competition are introduced may vary, the size of the barriers to competition are such that substantial and rapid rationalization of the policy instruments is necessary with respect to both the regulatory and trade regimes.

(xxiv) To ease the transition and minimize the possibility of creating new distortions, changes in regulatory policies need to be coordinated with adjustments in trade policies. Although a comprehensive discussion of trade reform falls outside the scope of this report, the effectiveness of changes in the regulatory and trade regime depend on the extent to which they are mutually consistent. Rapid import liberalization in an environment where producers are constrained in how flexibly and rapidly they can allocate and use their resources might lead to few economic gains, large social costs and a retrenchment of reform. Entry, expansion and exit barriers of a regulatory nature have limited the size, scale of production, degree of specialization, and existing technological and marketing capabilities of industrial firms so as to preclude them from being able to face export rivalry and import competition effectively. Regulatory reform would therefore free producers to enter into promising areas, expand profitable operations, shift product lines and exit from shrinking markets.

(xxv) At the same time, freeing Indian producers to decide on how to allocate and use their resources will bring the largest economic gains if economic and financial incentives are aligned. Behind high trade barriers, relative prices are such that financial incentives do not coincide with economic incentives and investments are not necessarily directed to socially profitable activities. In particular, easing entry barriers in the context of substantial trade impediments and large economic rents would lead to excessive entry as well as fragmented and inefficient production structures for industries characterized by substantial scale economies.

(xxvi) Reform of the import regime is also necessary as a means of promoting intra-industry specialization and injecting contestability into markets where high and not easily removable barriers have allowed one or a few firms to attain a dominant and unchallenged position. Through pre-announced changes in the trade regime, domestic and border prices should be

brought into line on a systematic and progressive basis and import competition allowed through the dismantling of non-tariff restrictions and the rationalization of the tariff structure. These would be necessary steps for the economy to realize substantial efficiency gains, with border prices guiding domestic producers to a more efficient allocation of resources.

(xxvii) Relaxing the controls on internal competition to stimulate greater resource mobility, firm growth and more progressive managerial conduct are measures that need to be equally accompanied by efforts to promote export rivalry. Internal regulatory reform would enhance the effectiveness of export promotion measures by allowing efficient firms to grow rapidly to international scales. Further, increased domestic competition would serve to exhaust rents and lower the profitability of the domestic market (currently two to five times as profitable as the export markets), thus diminishing the anti-export bias inherent in the current trade regime and decreasing the volume of fiscal resources necessary to offset it.

(xxviii) There are additional reasons why internal liberalization should not be too far removed from the penetration of international markets. First, a substantial expansion of exports would be needed in the medium run to meet the possible foreign exchange requirements associated with investment growth and technological modernization. Second, for products characterized by significant economies of scale, freer entry in a domestic market of limited economic size might lead in a first instance to uneconomic fragmentation of production. The external market would in most cases provide the scale needed for efficient operations, in addition to serving as a competitive arena in which domestic firms would face the challenges that might otherwise be absent because of natural barriers to entry in the domestic market. Thus, an effective regulatory reform would be predicated on removing policy-induced barriers to entry, growth and exit in domestic markets, allowing for a significant degree of import competition, and improving export promotion policies and institutional arrangements. This report focuses on domestic regulatory policies however, and does not discuss the details of possible trade reforms.

(xxix) Five areas of regulatory policy are the object of specific proposals for reform: the system of industrial licensing; the Monopolies and Restrictive Trade Practices (MRTP) Act and its implementation; the instruments of entry promotion for small-scale firms; restrictions on exit related to labor retrenchment, asset transfer and financial restructuring; and the control of industrial prices. These measures could be instrumental in eliciting from industry a strong and sustainable supply response, while being consistent with the broader social objectives of the government.

(xxx) Licensing Policies. In the last two years the Government has taken a number of important steps to relax licensing constraints on entry (as in the case of delicensing 25 industries in March 1986), growth (with "capacity re-endorsement) and changes in output mix (with "broad-banding).

The following recommendations deepen the thrust of current government policies. They are designed to improve industrial performance by further removing barriers to entry and growth, and thus allowing firms to expand to efficient size, freely choose product mix and provide a much larger measure of domestic competition to the Indian industrial environment. Proposals include:

Immediate Delicensing for Growth. Currently, capacity expansion beyond 5 percent a year to a total of 25 percent in five years requires an industrial license, except in certain industries in which more flexible rules prevail. It is recommended that the government no longer limit capacity growth by industrial licensing, a reform that will promote competition for market shares among incumbent firms, encourage capital stretching and investments in modernization that might require large discrete increases in output, and allow for and stimulate the establishment of minimum-efficient-scale (MES) plants.

Licensing Entry. Develop a negative list of industries that require an industrial license. In the medium term, that is, within about one year, a "negative" list of industries that would continue to require a license should be developed. This would replace the current practice of specifying activities that do not require an industrial license. It would eliminate the policy-induced barriers to entry for all industries other than the few that remained on the negative list in activities characterized by large social sunk costs. Areas with large health, safety or environmental risks or directly related to defense and national security would be included in the negative list on an interim basis, until appropriate controls, procedures and instruments are developed to monitor those industries.

Technology and Foreign Investment Licensing. In the short term, in view of the possibility that delicensing entry in the context of the current highly protective trade regime could lead to excessive entry, fragmentation of capacity and establishment of projects with suboptimal scales of production, technology licensing should be utilized as the instrument to ensure that new projects and expansions are consistent with minimum efficient scales. In the medium term, technology licensing should be relaxed, and the focus of decision-making concerning technology imports should shift from DGTD and the CG and FC committees to individual firms. In the case of process or product licensing, firms would be allowed to contract technology freely except in a few specified areas. For technology imported in the form of equipment and machinery, most capital goods would be shifted to the Open General License category, using the tariff as the means of ration foreign exchange and allowing firms to choose technology on the basis of specifications and price. Direct foreign investment through equity participation with Indian firms could continue to require scrutiny for levels exceeding a specified share, say 40 percent, but could be delicensed otherwise.

(xxxii) Monopoly and Restrictive Trade Practice Controls. The MRTP Act appears to have generally restricted competition rather than stimulated it. To correct some of the distortions that have arisen as a consequence of the MRTP Act and help attain its original goals, a number of revisions to the Act are suggested. Many of these measures further the reforms undertaken by the Government in the MRTP regulations in the last 18 months (see Appendix I). They complement and reinforce the proposed changes in licensing policies by allowing firms to expand operations, shift product lines and compete more freely and effectively with large or dominant producers.

(xxxiii) It is suggested that some firms be excluded from the MRTP Act on the basis of their technological requirements, the extent to which their markets are competitive and the degree to which their attempts at diversification actually mean lower concentration of economic power. The measures suggested include: definition of a firm's asset limit as the sum of the MES investment requirements for the firm's activities; a definition of dominance that takes into account the possibilities of substitution in consumption and the use of common inputs; and the use of "interconnection" as a valid criterion for application of the Act only in cases where the linked firms operate in the same market, defined at the two- or three-digit level. An additional procedure for excluding certain product groups or subsectors from the Act would be to establish a negative list of industries in which investment by MRTP firms would require additional clearances, instead of the current list of industries exempt from MRTP clearances. This measure would help make more transparent, and thus less subject to discretionary decision-making, the criteria and evaluation methods by which industries are excluded from the provisions of the Act. In the medium and long term, the list of products subject to MRTP controls should be progressively abolished, as the focus of regulatory concern shifts from controlling the structure of the industry, through curbs on entry and expansion, to restricting uncompetitive market actions and unfair trade practices.

(xxxiv) Small-Scale Policies. Small-scale policies have successfully promoted entry of new entrepreneurs and stimulated the expansion of industrial output and employment. However, these policies, while encouraging entry, have heightened the barriers to, and reduced the incentives for, growth, specialization and modernization. Small firms have been, in case of reserved items, prevented from growing. In non-reserved products, they are encouraged to remain small to avail themselves of significant benefits, which include fewer restrictions on shedding manpower and closing unprofitable operations, lower excise taxes, and effectively avoiding the corporate income tax.

(xxxv) Small-scale policies should continue to promote entry but the structure of incentives for small-scale firms should be shifted to equally encourage their efficient growth so as to promote improvements in product quality and factor productivity. This would be a condition for small and large units to integrate their activities, with the former serving as subcontractors and suppliers of parts and components, thus furthering specialization and growth. These objectives will require removing the limits on

firm size and reorienting the fiscal and labor policy incentives that help keep firms small. The gradual phasing in the small firms' excise tax liability announced in the 1986 budget is a step in the right direction, as firms will not abruptly be subjected to the loss of that tax exemption once their output reaches a certain level. Suggested changes include the following measures; dereserve a substantial number of products or at least immediately increase for them the small-scale investment limit; provide a time-bound set of incentives for small-scale firms; shift the incidence of taxes to the final product; require minimum health and safety conditions, as well as benefits, for workers in small firms; allow firms of all sizes to exit; strengthen government and private advisory services to small industry; and allow large firms to take a minority equity position in small firms.

(xxxv) Exit Policies. Barriers to exit were established as a means of protecting workers from unemployment and conserving scarce capital resources. Yet restrictions on exit have not simply resulted in the continued operation of some unprofitable firms. They have also made investors more cautious about establishing larger production units and work forces even when market conditions were favorable. In this way, they have increased the degree of plant fragmentation and hence militated against the attainment of economies of scale. By restricting the reallocation of capital, regulations on exit have decreased the efficiency of resource use. Exit policies involve three specific issues:

Labor Retrenchment and Reorganization. The Industrial Disputes Act should be modified to provide firm management greater flexibility to adjust, relocate or retrench employees with due compensation.

Transfer of Assets. The transfer of industrial assets should not be hampered by procedural impediments and should be executed expeditiously in order to improve the efficient allocation of capital resources. This principle should apply to the assets of all producers, including MRTP firms. It is recommended that wherever MRTP clearances or small-scale reservations are not involved, assets should be freely transferable without being subject to court approval. Land sales also need to be further simplified for its efficient use as a productive factor in industrial activities.

Financial Restructuring and Bankruptcy Procedures. The guidelines of the Reserve Bank of India should be revised to reward commercial banks and their management for the strength of their lending portfolios. It is recommended that the Reserve Bank require commercial banks to shift loans that have been non-performing for a period of time (say, six months) to a risky asset category and instruct them to set aside reserves to cover possible losses. The objective should be greater managerial autonomy and responsibility for the institution's performance.

In the meantime, information and monitoring systems should be improved to facilitate timely action on questionable assets and to make each bank's portfolio more transparent. Bankruptcy procedures, currently complex and time-consuming, should be considerably simplified, with flexible rules for the disposition of assets and payment of creditors.

(xxxvi) Price Controls. Price and distribution controls, originally designed as a means of allocating goods on a priority basis and minimizing the impact of short-term supply shortfalls, have had negative long-term effects. In some cases, prices have been set below the levels that would ensure adequate profits, and firms have responded by curtailing investment and reducing capacity utilization, actions that have exacerbated the supply shortages. In addition, the disincentives to modernization have reinforced the trend toward technological obsolescence produced by other regulatory constraints. In recognition of the problems brought on by price controls, the government has introduced more liberal pricing policies in some sectors (such as cement). However, a comprehensive and clearly formulated pricing policy for industry is still absent. To the extent the Government finds it desirable to have continued price controls in certain areas, the design of an economically sound pricing structure is of particular importance.

(xxxvii) For competitive and well supplied markets, full or partial de-control should be introduced immediately. In less competitive markets, progressive price decontrol must necessarily be accompanied by the removal of regulatory barriers to mobility, expansion and competition, and by a substantial reduction in trade barriers. Otherwise, sheltered incumbent firms could benefit from price decontrol by exercising their monopoly power and gouging consumers. The discretionary and complex nature of price and production controls in India has made the administration and enforcement of price controls difficult. The first step in policy reform should be to formulate a pricing policy that minimizes the degree of discretion enjoyed by government agencies in setting controls. They should establish pricing formulas that are transparent to producers, are frequently monitored and reviewed and remain within moderate limits (say, 20 percent) of the level and long-run movement of border prices.

(xxxviii) In sum, the specific recommendations of this report are an attempt to address the policy determined constraints that impede the necessary structural adjustments required for Indian industry to become substantially more competitive. The recommendations should be complemented and closely coordinated with measures aimed at reform of the trade regime, so as to support a rapid expansion of industrial exports and allow an increasing measure of import competition. Ultimately, it will be these three dimensions of competition--internal, import and export rivalry--that will bring sustained improvement to industrial performance in India.

CHAPTER I

INDUSTRIAL REGULATORY POLICIES:

THEIR SIGNIFICANCE AS BARRIERS TO COMPETITION, MOBILITY AND GROWTH

I. Introduction

1.01 The central characteristic of the industrial policy framework in India for the last three decades has been the dense set of regulations which has shaped the allocation and use of resources in industry. The regulatory system was established with a multiplicity of objectives. First, the system of industrial licensing was aimed at allocating scarce productive resources among competing activities, consistent with Government priorities of building a large, diversified, self-sufficient and decentralized industrial base. The build-up of such a base was to take place through a systematic and across-the-board substitution of imports, with the public sector responsible for the production of most basic and intermediate goods. Second, the Foreign Exchange and Regulations Act (FERA) was used as an instrument for pursuing self-reliant industrialization, with Indians in a position of effective control. Technological activities were to be indigenized through restrictions on imports of foreign technology. Third, the promotion of small-scale industry, which included reserving the production of a number of goods for small units, was based on the premise that for employment to be maximized and for wealth and income to be more equitably distributed, small firms would need to take a major role in industrial production. Conversely, the Act regulating Monopoly and Restrictive Trade Practices (MRTP) was directed at curbing the expansion of large business concerns, in the belief that the growth and concentration of capital would lead to the exercise of monopoly power. Fourth, price controls were used to restrain inflationary pressures coming from an environment of acute scarcities, while making a number of goods available to preferential users. Finally, in order to protect existing jobs and conserve scarce resources, a "sick industry" policy effectively blocked exit of individual firms from industrial activities.

1.02 Some of these industrial policy objectives have in fact been attained, and as the indicators below suggest, India now has a relatively large and diversified industrial base, with chemicals, basic metals and machinery comprising close to 70 percent of total manufacturing output. Industrial performance has nonetheless deteriorated significantly since the mid-60s. Manufacturing growth in value-added averaged 4 percent per annum in 1966-84, while the share of manufacturing in total GDP was still 15.5 percent in 1984. Technological progress and productivity growth have been slow. In the last two decades, total factor productivity growth has been very close to zero, and India has fallen behind the international price-performance frontier for a number of industrial goods.

Table 1.1: SELECTED MANUFACTURING INDICATORS, 1984

	India	Brazil	China	Indonesia	Korea, R.	Mexico	Turkey
Manufacturing Value-Added (1984 US\$ billion)	28.4	59.4	94.6	9.9	23.6	38.2	12.2
Percentage Share in Manufacturing Output:							
Chemicals	25.2	21.5	14.6	38.2	19.4	21.3	24.0
Basic Metals and Fabricated Metal Products	15.7	8.4	11.5	7.9	9.0	7.2	9.1
Machinery and Transport Equipment	26.6	28.6	27.8	14.5	22.9	21.3	19.0
Growth of Manufacturing Value-Added 1966-84 (% p.a.)	4.0	5.1	6.5	11.2	15.8	6.1	6.6
Share of Manufacturing GDP in Total GDP	15.5	28.4	N/A	12.4	28.4	21.8	24.3

N/A = Not available.

Source: INDSP data base; raw data from World Bank trade system and the Government of India (GOI).

1.03 After 30 years of industrial development, India has outgrown many of the conditions that may have called for a degree of centralized economic planning and allocation of resources. The period since Independence has witnessed the rise of a progressive industrial class that seems increasingly able to respond to appropriate production incentives and the removal of constraints on competition. The more liberal conditions for entry and expansion in the capital goods sector in the mid-1970s, for example, provided an impetus for its growth and technological upgrading. The response to (partial) price decontrol and a lowering of entry and expansion barriers was even more dramatic in the case of cement in the early 1980s, with increased capacity utilization, as well as rapid output and investment growth. Recent policy changes in telecommunications, electronics and automotive products, providing the private and joint sectors with expanded opportunities, so far appear to have promoted substantial entry.

1.04 There has also been a basic change in the external environment, as an increasing number of industrial activities are characterized by rapid technical progress, shorter product-cycles and renewed competition. In this context, an expansion of India's participation in international markets requires a degree of flexibility in resource allocation and speed in decision-making which is too demanding of traditional regulatory instruments. The long delays for approval of new industrial projects or expansion of existing concerns, and the policy-related difficulties in exiting from declining industries, are inconsistent with an environment that demands quick response to technological and marketing opportunities. As a result, India's share in world manufacturing exports has declined from 0.6

percent to 0.4 percent between 1966 and 1983, while the shares of all other industrializing countries have increased.

1.05 There is a growing body of evidence which suggests that the dynamic efficiency losses associated with barriers of regulatory nature are particularly pronounced. This study presents evidence that key regulatory policies have been responsible for major structural deficiencies in industry, weakly competitive markets, conservative management behavior, and significant static and dynamic inefficiency. The results underscore the importance of competitive forces as prime movers of the production frontier in expanding the productive and innovative capacity of the economy. The slow rate of technical change in India is partly a reflection of the fact that the three basic forms of competition--internal competition, import competition and export rivalry--have to a large degree been absent in most industrial markets. Other countries, in their pursuit of industrial growth and modernization, seem to have put emphasis on one or more of these dimensions of competition. Japan and Brazil, for example, have stimulated internal competition and export rivalry, whereas the Republic of Korea (South Korea) has made export rivalry, with a large degree of international specialization, its strategic focus.

1.06 The policies examined in this chapter, namely, industrial licensing, MRTP restrictions, small-scale incentives, price controls and exit regulations, have had a substantial impact on internal competition, both potential and actual. By raising entry, growth and exit barriers, they have reduced the degree of potential competition or market contestability. These policies have been equally important in affecting the number of firms, their size distribution, market shares and specialization patterns. Where entry and exit barriers are high and binding, these structural features determine, to a large extent, actual competitive behavior. In India industrial regulatory policies have had a pervasive and, in comparison with other industrializing countries, unique role in shaping the internal competitive environment. Internal barriers to growth and mobility and weak competitive forces have interacted with a small degree of export rivalry and an effective absence of import competition to affect industrial performance adversely, thereby constraining India's overall development.

1.07 The focus of this chapter is on internal regulatory policies and their impact on domestic competition. Section II examines five areas of regulatory policy: industrial licensing (including capacity, technology and foreign investment licensing); controls exerted through the MRTP Act; policies for small-scale industry; exit policies and procedures; and industrial price controls. A brief description of trade policies and the structure of import protection follows. Section III summarizes this chapter's main theme and draws some conclusions.

II. The Regulatory Framework and Key Industrial Policy Rules

A. Industrial Licensing

1.08 Capacity Licensing. The objective of capacity licensing has been to ensure that industrial activities are consistent with industrial and

social policy objectives. Through capacity licensing, the government has attempted to control the total amount of domestic capacity, as well as the allocation of that capacity among sectors, firms and locations. Industrial licensing has been used to promote growth of priority areas of the economy while decentralizing plant location to "backward" regions and attempting a measure of resource conservation through adherence to a physical balance between domestic supply and demand.

1.09 The legal framework for capacity licensing in India is contained in the Industrial Development and Regulatory Act of 1951 (IDRA), a statutory enactment of Parliament. Under the IDRA, most private and public industrial investments require prior approval by the licensing authorities. Schedule 1 of the IDRA specifies 38 broad industrial subsectors, comprising 71 product groups, for which an industrial license is required to: (i) establish a new manufacturing unit, (ii) expand output by more than 5 percent a year or go beyond a maximum expansion of 25 percent in five years, (iii) manufacture a new product in an existing plant, and (iv) relocate a plant. Capacity licenses are firm and product, time and location-specific, and they stipulate the yearly output for each product the firm is allowed to produce.^{1/}

1.10 The IDRA applies equally to public and private sector companies. Private investment is, however, precluded in some areas, including defense equipment, some mining activities, and air and railway transport. These areas are listed in Schedule A of the Industrial Policy Resolution (IPR) of 1956; Schedule B of the IPR lists activities which are to be progressively state-owned but open to private investment on a joint-venture basis. Schedule B includes some mining activities, fertilizer, antibiotics and other essential drugs. All other industries are open to private investment.^{2/}

1.11 Since the inception of the IDRA, a number of exemptions and relaxations of the licensing requirements have been introduced to promote growth in individual product groups and selected subsectors. Small- and

1/ The terms "industrial license" and "capacity license" are used here interchangeably to refer to capacity licensing.

2/ In 1974/75 the private sector (excluding joint public private investments) constituted 35 percent of fixed assets and 74 percent of output. The public sector accounted for 59 percent of fixed assets and 18 percent of output (ASI, 1974/75). The balance was made up by joint public-private investments. By 1982, private sector fixed assets and output had declined to 26 percent and 64 percent of the total, respectively; public sector fixed assets and output had grown to 67 percent and 28 percent, respectively (ASI, 1981/82). This trend is partly related to the fact that in sectors open to both public and private firms, public firms often have been given preference in licensing. In the steel industry, for example, the public sector grew from a small share of total capacity in the 1950s to two-thirds in 1984. In nitrogenous fertilizers, the public sector increased its share of licensed capacity from 51 percent to 58 percent during the five-year period between 1978 and 1983.

medium-sized firms, whose fixed assets fall below Rupees (Rs) 50 million, generally do not need an industrial license.^{3/} Other exemptions and relaxations include the complete "delicensing" (for entry or growth) of various product groups (in 1975, 1978, 1982 and 1986); "unlimited growth" for 29 products (that is, permission for actual output to exceed licensed capacity, provided no additional investment is made, 1975); "capacity regularization" for 24 products (that is, an increase in the capacity licensed to reflect installed capacity which exceeds licensed capacity limits, 1980); "automatic growth" for 15 products in 1975, 19 products in 1980 and 45 products in 1984 (that is, permission to expand licensed capacity by twice the normally allowed 25 percent in five years, with minor investments permitted); and "re-endorsement of capacity" (that is, authorization for firms to expand licensed capacity 33 percent above the highest output level in the preceding five years, provided actual capacity utilization in any of the preceding five years reached 80 percent of licensed capacity in 1986. Until 1985, re-endorsement of capacity required that actual capacity utilization in any of the previous five years reach 94 percent of licensed capacity).

1.12 In spite of the relaxations outlined above, the system of capacity licensing continues to function as a significant, and often binding barrier to entry and growth for most firms outside the small-scale sector.^{4/} The number of licenses issued annually, the rates of approval for different categories of licence applications and the time taken for licensing decisions have basically depended on the government's use of industrial licensing as an instrument for subsector specific and economy-wide resource allocation, rather than on the quality and volume of investment demand. Thus, while the average number of industrial licenses approved each year between 1972 and 1984 was 634, there have been

3/ Small- and medium-size firms do not require licenses provided that they are located at least 30 miles outside urban areas and the annual foreign exchange outflow for imported raw materials and intermediates does not exceed Rs 7.5 million (\$585,000, a ceiling that was increased in 1985 from Rs 4.0 million, or \$310,000) or 15 percent of the ex-factory value of all output. In addition, Schedules II to V of the Official Notification of February 2, 1973, which announced the de-licensing for small and medium-size industries, stipulate certain classes of firms (those under the MRTP and FERA Acts), activities (those reserved for public sector firms) and "special" products which continue to require an industrial license, regardless of firm size.

4/ Even in the areas where exemptions and relaxations from capacity licensing have been allowed, restrictive conditions have been imposed regarding location, foreign exchange usage, additional investment and export obligations. In addition, exemptions have generally excluded investment in products reserved for small-scale industries and by companies subject to the MRTP and FERA Acts. An exception is "automatic growth," which was allowed for non-dominant MRTP firms.

Table 1.2: INDUSTRIAL LICENSES ISSUED BY UNDERTAKING, 1972-84

Nature of Undertakings	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Total
New	187 (33.2)	145 (24.3)	428 (39.0)	296 (28.8)	254 (38.4)	141 (27.2)	93 (26.8)	95 (26.0)	132 (27.8)	143 (30.1)	123 (28.5)	180 (16.5)	232 (25.6)	2,449 (29.7)
Substantial Expansions	135 (24.0)	203 (34.1)	185 (16.8)	291 (28.8)	124 (18.7)	115 (22.2)	81 (23.3)	90 (24.7)	115 (24.2)	131 (27.5)	111 (25.7)	148 (13.8)	133 (14.7)	1,862 (22.6)
Manufacture of New Article	116 (20.6)	143 (24.0)	161 (14.7)	168 (16.4)	173 (26.1)	161 (31.1)	124 (35.6)	110 (30.1)	143 (30.1)	128 (26.9)	112 (25.9)	148 (13.8)	133 (12.5)	1,820 (22.0)
Manufacture of New Article/ Substantial Expansion	3 (0.5)	10 (1.7)	8 (0.7)	6 (0.6)	8 (1.2)	7 (1.4)	4 (1.1)	7 (1.9)	5 (1.1)	1 (0.2)	3 (0.7)	3 (0.3)	2 (0.2)	—
Carrying on Business	118 (21.0)	93 (15.6)	317 (28.8)	266 (25.9)	103 (15.6)	94 (18.1)	46 (13.2)	63 (17.3)	80 (16.8)	73 (15.3)	83 (19.2)	596 (55.4)	416 (46.0)	545 (55.5)
Shifting	4 (0.7)	2 (0.3)	—	—	—	—	—	—	—	—	—	—	—	(28.0)
Total	563	296	1,099	1,027	662	518	348	365	475	476	432	1,075	905	8,241 (100.0)
Number of Licenses Revoked/Cancelled -	30	21	10	56	121	141	135	101	78	104	44	37	27	905

Sources: Secretariat for Industrial Approvals, Ministry of India, GOI.

Note: Figures in parentheses indicate the percentage share. Discrepancies between total approvals in table A.2 and this table are due to differences in aggregating licenses sanctioned to individual firms.

significant policy-determined variations in the number issued from year to year (Table 1.2). The peak numbers of approvals in 1974-75 and 1983-84, for example, reflected policy measures designed to stimulate industrial investment and output growth.^{5/}

1.13 The sectoral distribution of licenses further demonstrates the importance of licensing as a policy instrument to direct investment to priority areas.^{6/} The greatest share of licenses issued during the period 1978-84 was in the capital goods sector, for the production of non-electrical and electrical machinery (Table A.1). Licensing policies in this sector have generally been liberal, in keeping with the Government of India's (GOI) objective of stimulating the production of investment goods. In contrast, the production of telecommunications equipment was closed to private investment until 1984, so that the number of licenses issued up to that year was small and allocated to three public monopolies (ITI, HCL and HTL). The system was used to protect the market position of these firms, in the belief that they would be sufficient to provide for India's needs. For the automotive sector, no new licenses for cars or two-wheel vehicles (considered luxury goods) were issued for a period of about 15 years, in spite of excess domestic demand and few firms dominating the sector.

1.14 Did the system have a significant impact in discouraging potential investors and dampening the overall rate of capital accumulation? On average, only 43 percent of applications were approved between 1981 and 1985 (Tables 1.3 and A.2). Since some applications are filed for strategic reasons (that is, to preempt entry or expansion of competitors),^{7/} and many firms accumulate a stock of licenses to ensure a pipeline of potential projects, capacity licenses may go unused for relatively long periods. Still, even though not all license applications are converted into actual capacity, *a priori* the licensing authorities do not generally know the individual applicants' intentions. As a result, the authorities might be approving applications filed for strategic reasons, and rejecting those that would have been translated into actual capacity expansion.

1.15 There is an additional informational problem which suggests that high rejection rates might have discouraged investment, with the unintended

^{5/} For a description of the development of industrial policy, see S. Sengupta, "Review of Industrial Licensing Policy," India: Structural Change and Development Perspective, Supporting Working Papers, World Bank, 1985.

^{6/} The relative ease of entry among sectors could be measured best by the percentage of license applications approved or rejected and the time taken to do so. However, such data are not available at the sectoral level.

^{7/} As the amount of licensed domestic capacity is generally fixed in accordance with projections of domestic demand, one firm may obtain a license at the expense of another applicant. By obtaining a license and not utilizing it fully in an environment of scarcity, firms can increase unit profits and rents.

effect of creating systematic shortfalls in output. The reason most commonly given by licensing authorities for rejecting an industrial license application is that adequate capacity exists in the economy, with an assessment of domestic capacity requirements generally motivated by the need to utilize fully the capacity already sanctioned or installed. In view of data limitations (e.g., the Annual Survey of Industries, the source of aggregate data regarding output and investment by subsector, is published with a four to five year delay) and the complexity of estimating actual capacity requirements and projecting future demand, licensing authorities have generally been limited to information on licensed capacity. Since, for reasons discussed in the previous paragraph, licensed capacity would normally be an overestimate of installed capacity, data on the former would constitute an inadequate basis for attempting to balance domestic supply and demand over time.

Table 1.3: CAPACITY LICENSE, FOREIGN COLLABORATION AND CAPITAL GOODS IMPORTS
DISPOSITION OF APPLICATIONS
1981-85 a/

Type of Application b/	Decisions							
	Approved		Rejected		Other c/		Total	
	No.	%	No.	%	No.	%	No.	%
C/L	4,794	(43)	5,895	(53)	425	(4)	11,114	100
FC	2,092	(74)	639	(23)	113	(3)	2,844	100
CG	1,398	(70)	429	(22)	154	(8)	1,941	100

Source: Department of Industrial Development, Annual Reports, various issues.

a/ Total for these years.

b/ C/L—Capacity License; FC—Foreign Collaboration; CG—Capital Goods Import License.

c/ Application withdrawn or closed with no decision.

1.16 The industrial licensing system has also deterred entry and growth through delays in the processing of applications. As Table 1.4 indicates, between 1982 and 1985, fewer than 50 percent of the applications for capacity licenses were decided within three months of submission, and only 66 percent were handled within six months, although there was some improvement during the period.

Table 1.4: TIME TAKEN FOR DECISION ON CAPACITY LICENSE APPLICATIONS a/
1982-85

	1982	1983	1984	1985
Within 60 Days	7.8	4.7	7.4	26.4
Within 90 Days	48.3	41.5	64.4	59.4
Within 120 Days	61.5	56.1	75.0	71.4
121 Days and Above	38.5	43.9	25.0	28.6
Total	100.0	100.0	100.0	100.0

Source: Department of Industrial Development, unpublished data.

a/ Percentage shares in total applications.

1.17 More generally, when a license application is delayed, the time lag tends to be substantial: about 15 percent of the applications pending from one year were not decided in the next year (Table A.3). That is, once a decision is delayed, it may take one, two years or more for a final decision to be reached. Particularly in the case of products for which technology and prices are changing rapidly, delays of a year or more in starting or expanding a project would seriously compromise the ability of an Indian firm to attain and maintain international competitiveness.

1.18 Finally, the licensing system has functioned as a barrier to expansion, limiting specialization and the exploitation of scale economies. Restrictions on expansion appears to have been greater than on entry or the introduction of a new product. Of the applications that were approved between 1972 and 1984, on average only 23 percent were for "substantial expansions"^{8/} of existing enterprises (Table 1.2). Thus, while fewer than half of all industrial license applications were approved, only one-fourth of these--or roughly one-eighth of all applications--were approved for expansion. The remaining licenses issued were for new entries, the manufacture of new articles (with or without an expansion) or

8/ A "substantial expansion," which requires a license, is growth in output by more than 5 percent a year or a maximum of 25 percent in five years.

the carrying on of business.^{9/} There is some evidence of this bias at the subsector level. In nitrogenous fertilizers, for example, private firms have not been permitted to expand by establishing new greenfield urea plants. Consequently, they are all single plant producers, whereas public sector firms have an average of 2.2 plants. In the two-wheel vehicle segment of the automotive sector, most firms have traditionally manufactured mopeds, motorcycles and scooters; while diversification was permitted, expansion by leading firms in their primary product (e.g., Bajaj Limited in scooters) was generally restricted until recently. Constraints on increasing capacity in fine and synthetic fabrics have motivated some textile firms to invest in unrelated products, most recently in the automotive sector.

1.19 Technology and Foreign Investment Licensing. The Government has stimulated the progressive indigenization of the production of capital goods and of technological activities as a means of pursuing self-reliant industrialization. Firms must as a result seek government clearances to purchase technology outright; to enter into a technical agreement, i.e., to license a product or process technology; to accept a foreign equity partner; to employ foreign consultants or technicians; and to import capital goods that are not under the "Open General License" (OGL) import category. These capital goods import (CG) and foreign collaboration (FC) clearances have been used in an attempt to save foreign exchange, avoid multiple imports of the same technology and stimulate domestic production of capital goods.

1.20 It appears that where imported technology (in the form of capital goods or licenses, designs, etc.) or collaboration with a foreign partner has been critical for the project, the licensing process has become an additional investment barrier for two reasons. First, rejection rates have not been insignificant. Between 1981 and 1985, over 20 percent of applications for foreign collaboration and capital goods imports were denied on average (Table 1.3). Rejection rates for foreign collaborations also varied considerably during the period, adding an element of uncertainty to investment planning (Table A.2).

9/ A "carry-on-business," or COB, license is required in cases where an investor has to register his unit within a certain time period and fails to do so; a registration has been revoked; or an industrial activity which was previously delicensed becomes subject to licensing. An example of the latter would be an enterprise that grows to the point that its fixed assets exceed the asset limit (of Rs 50 million) exempt from licensing. Once the firm grows beyond this point, it requires a COB license. Interestingly, in 1983 and 1984, when the number of industrial license approvals roughly doubled (see Table 1.2), the bulk of the increase came from COB licenses, whose share of total approvals rose from 19 percent in 1982 to 55 percent and 46 percent in 1983 and 1984, respectively. This trend may indicate the growth of small- and medium-scale firms which had not previously required licenses.

1.21 In addition, in view of the careful scrutiny, application procedures have tended to be time-consuming and cumbersome. Licensing authorities have attempted to simplify the procedures by introducing a "composite" type of application, which allows an entrepreneur to condense the process into a one-step, single-window procedure, avoiding the need for sequential applications for capacity license, import of capital goods and foreign equity or technical collaboration. In practice, however, few entrepreneurs have availed themselves of the composite application, as indicated by the fact that only about 5 percent of requests each year by non-MRTP companies have been of this type (Table A.4).^{10/}

1.22 The second reason why technology and foreign investment licensing constitute an investment barrier is thus related to delays in the application process, although a substantial reduction in the time taken to resolve such applications was achieved between 1982 and 1985 (Table 1.5). Still, in 1985, over 22 percent of the applications for foreign collaboration and 9 percent of those for capital goods imports took over 120 days to be decided. Since the majority of applications are non-composite, where sequential clearances are required, serial approvals for capital goods imports and foreign collaborations have caused incremental delays of an average of three months each (Table A.5). Thus, sequential applications for capacity creation or expansion, capital goods import and foreign collaboration could take from 10 months to a year to be cleared.

1.23 The impact of the industrial licensing system--capacity licensing as well as technology licensing--appears significant. High rejection rates for applications, relatively long delays and changing subsector priorities have functioned as non-trivial barriers to entry and growth. Although not always binding, these barriers have nonetheless been costly to overcome and have seriously constrained actual and potential competition among domestic

^{10/} There are at least two reasons for the low proportion of composite applications. First, many firms regularly apply for licenses that they may not intend to use immediately, both to develop a pipeline of projects for development in the future--at which time they would apply for the necessary foreign collaboration agreement or capital goods import--and to deter entry of competitors. In the case of strategic entry deterrence, the simple non-composite, industrial license application is simpler and just as effective. Second, some firms have indicated that they may be unable to line up a foreign partner or obtain a valid quotation for an imported machine until they have the license, since foreign suppliers and potential partners familiar with the Indian industrial environment may be unwilling to negotiate seriously without a license. As a result, the composite application procedure, established to reduce the time taken for license clearances, has been of limited benefit to investors.

firms.^{11/} Actual competition has been reduced, since firms have not been able to expand freely, and potential competition from new entrants has been dampened by delays in obtaining licenses and the roughly 50 percent probability that the application would be rejected. In addition, the systematic

Table 1.5: TIME TAKEN FOR DECISIONS ON FOREIGN COLLABORATION AND CAPITAL GOODS IMPORT APPLICATIONS
1982-85
(percentage of applications)

	1982	1983	1984	1985	1982	1983	1984	1985
<u>Foreign Collaboration Applications</u>					<u>Capital Goods Import Applications</u>			
In 60 Days	11.5	17.1	19.3	22.3	11.7	17.8	19.7	16.6
In 90 Days	25.7	25.6	55.3	56.7	43.6	41.2	46.9	77.2
In 120 Days	38.1	41.3	78.2	77.1	68.3	65.8	71.8	90.2
121+ Days	61.9	58.7	21.8	22.9	31.7	34.2	28.2	9.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Department of Industrial Development, unpublished data.

bias against growth has limited specialization and the exploitation of scale economies (para 1.19). The consequences, as pointed out in Chapter II, have been an economy-wide fragmentation of capacity, suboptimal scales of production, a lack of technologically progressive behavior and low rates of factor productivity growth. These, however, are not simply the outcome of licensing barriers; as suggested below, other regulatory policies have had an equally important role.

B. Monopolies and Restrictive Trade Practices (MRTP) Act

1.24 The Monopolies and Restrictive Trade Practices Act was put into effect on June 1, 1970. It had three major objectives: (i) to curb the

11/ Restrictive licensing policies have also reinforced other regulatory barriers. In nitrogenous fertilizers, for example, the dominant role played by public sector firms has been a major deterrent to entry by private firms. Similarly, in the cement, sugar and paper industries, price controls have played a significant role in discouraging entry.

concentration of economic power if it was "to the common detriment";^{12/} (ii) to prevent practices that restrict competition; and (iii) to control unfair trade practices.^{13/}

1.25 Uncompetitive and unfair trade practices are seen to be a "function," or natural outcome, of the concentration of economic power, and therefore the implementation of the Act has been focused more on controlling firm size, market share and other structural aspects than reacting to observed firm behavior. To curb the expansion of large enterprises and groups, the Act regulates: (i) the growth of an existing undertaking; (ii) the establishment of a new undertaking; (iii) the merger, amalgamation or takeover of another undertaking; and (iv) the extent of common ownership and management of firms ("interconnection"). Section 20 of the MRTP Act establishes the following "structural" criteria for determining whether a firm comes under its purview:

- 20a (i) Single large undertaking. A firm with assets of Rs 1,000 million (\$77.8 million) or more.^{14/}
- 20a (ii) Interconnected undertaking. A firm with assets of less than Rs 1,000 million, but under joint management or ownership of one or more firms that collectively have assets of Rs 1,000 million or more, and that control at least 25 percent of the management or equity of the "interconnected" firm.
- 20b (i) Single dominant undertaking. A firm with a market share of 25 percent or more of a given product or service (as defined by the industrial license) and assets of Rs 10 million (\$778,000) or more.

12/ The Act does not provide a precise definition of "concentration of economic power"; it has been generally equated with the growth of larger firms and major economic groups, or "houses." Curbing the process of concentration has been justified as a means of avoiding a deterioration in the distribution of wealth and as a way to moderate the influence large groups might exert on political and economic decision-making. This objective was to be achieved by "encouraging new enterprises as a countervailing force to the concentration of economic power to the common detriment" and by regulating "the control of material resources of the community to subserve the common good" (Chapter III, Part C, Section 28).

13/ By prevention of uncompetitive practices, the Act refers to predatory and other strategic behavior which affects the market position of individual firms. By contrast, "unfair trade practices" are those which affect the welfare of individual consumers (as in the case of misleading advertisement and false representations, bargain and bait and switch sales techniques, the offering of gifts or prizes with the intention of not providing them and the conduct of promotional contests, non-compliance with product safety standards, and the hoarding or destruction of goods (section 36A)).

14/ In May 1985, the asset limit was increased to Rs 1,000 million from Rs 200 million, the limit since the Act took effect in 1970.

20b (ii) Interconnected dominant undertaking. A firm that, together with one or more "interconnected" firms, has a combined market share in a given product or service of at least 25 percent and combined assets of Rs 10 million or more. The group's total assets and market shares determine whether each individual firm is subject to MRTP provisions.

1.26 The majority of companies have been subject to the MRTP Act on the basis of asset size rather than dominance.^{15/} However, when the asset limit was raised from Rs 200 million to Rs 1,000 million in 1985, fewer than 300 companies were able to deregister. Most companies continued to be subject to the Act on the basis of interconnection, or collective asset size greater than Rs 1,000 million.

1.27 Companies subject to the MRTP Act on the basis of size, dominance or "interconnection" must register with the Department of Company Affairs (DCA). In addition to the normal industrial licensing requirements described in part A of this section, the DCA must clear all proposals by MRTP firms to enter, expand, relocate, merge, etc.^{16/} While the approval rate for industrial license applications by MRTP companies does not seem in general to differ from the approval rate for all companies (in the range of 40-50 percent), the government clearance authorities have taken far longer to process applications from MRTP companies than from industrial enterprises as a whole. Between 1982 and 1985, the average amount of time taken to decide on an industrial license application was three to four months, and about 72 percent of all simple industrial license applications were decided within one year. For MRTP companies, however, on average fewer than half were decided within one year, and many applications took two or more years (Table A.3).^{17/}

1.28 Large firms have faced substantially higher entry barriers in comparison to those outside the purview of the Act not only because of the lengthy clearance procedures for setting up or expanding a project, but

15/ At the end of 1983, out of 1,321 MRTP firms, 1,224 were companies which came under the purview of the Act based exclusively on asset size, 20 on dominance and 77 on the basis of both dominance and asset size (Thirteenth Annual Report, DCA).

16/ The DCA may further decide to refer the MRTP proposal for consideration by the MRTP Commission, a quasi-judicial tribunal body consisting of a chairman (a high court judge) and various members with experience in economics, law, commerce, accountancy, industry, public affairs or administration.

17/ One reason for the delays in clearing MRTP applications is that MRTP firms are required to advertise publicly their intention to apply for an entry or expansion license. "Interested parties" are allowed to entreat the DCA to reject the application, for example, on the grounds that "sufficient capacity already exists in the economy." This process allows incumbents--including other MRTP firms--to lobby in order to block new entries or expansions by competitors. (See para 2.52 and footnote 38, Chapter II.)

also due to restrictions on the scope of investment by MRTP companies.^{18/} These barriers have conflicted with the purpose of bringing a measure of competition to markets dominated by large concerns. They have either blocked or made entry and expansion for large firms significantly more difficult in markets often characterized by high levels of concentration and excess profits. In this perspective, the system of MRTP controls has possibly led to a further concentration of economic power by excluding from the market the only firms which had the financial staying power and technological resources to enter and compete effectively for the shares of dominant firms.

1.29 Thus, in the absence of trade competition and in view of the difficulties of bringing actual competition by enlarging the number of firms in the market without a perverse efficiency trade-off, MRTP barriers restricted competition along its remaining dimension, that of potential competition or market contestability. The implementation of the MRTP Act has led in this way to the paradoxical and perverse possibility, that of concentrating effective market dominance in the hands of those firms which already dominated their markets at the time of the implementation of the Act and were subsequently protected from potential and actual competition of other large concerns. Industry-wide and subsector-specific evidence presented in the next chapter does suggest that to a large extent, such a possibility has materialized.

C. Policies for Small-Scale Industry

1.30 The objectives of policies covering small-scale firms are to achieve an improved distribution of wealth, by encouraging entry of new entrepreneurs into the industrial sector, and an expansion of industrial employment, on the presumption that small-scale firms make relatively more use of labor-intensive methods of production. These policies include the reservation of a growing number of goods for production by small-scale firms; investment and income tax concessions; exemptions from excise duties on output; technical and infrastructural support from government extension

18/ Investment by MRTP and FERA firms has generally been restricted to the "core" industries specified in Appendix I of the Press Note of February 2, 1973. In 1982, Appendix I comprised approximately 40 percent of the manufacturing sector in terms of value added, an increase in the coverage of core industries from 30 percent of manufacturing in 1970 and 36 percent in 1980. This increase was the result of additions to the list and faster growth in core sector industries relative to the industrial sector as a whole. Exceptions to the prohibition on investing in non-Appendix I products could be made if the MRTP company exported 60 percent of its output of the non-Appendix I item or, in the case of items reserved for small-scale industries, if it exported 75 percent of the output.

organizations; and access to credit at reduced rates of interest.^{19/} These promotional policies have facilitated entry for small firms and new entrepreneurs and have had a positive impact on employment and industrial deepening.

1.31 Since 1973, a number of products have been reserved for exclusive production by small-scale firms, defined as those with investment in machinery and equipment not exceeding Rs 3.5 million (\$272,000), or Rs 4.5 million (\$350,000) in the case of ancillary firms.^{20/} The original reservation list has been expanded gradually so that it presently includes some 863 items. Simply stated, the policy has been that whatever can be made by small-scale firms should be produced only by them. Larger firms that had installed capacity to manufacture an item at the time it was reserved for small-scale industry have not been permitted to expand; new firms have not been allowed to enter into the production of reserved products if their assets exceed the specified limits unless they export at least 75 percent of their output. Thus, small firms have enjoyed complete protection from competition from medium-sized and large firms for the manufacture of the 872 reserved products. However, they have not been permitted to grow, since no firm--even a firm formerly classified as small--can manufacture reserved products once its assets exceed the investment limit.

1.32 Although many hundreds of reserved products are critical intermediates for engineering or other final goods, large buyers cannot use the threat of backward integration to induce small-scale suppliers to upgrade product quality to meet their specifications. In several of the approximately 150 engineering goods reserved for small-scale firms, the

19/ The government maintains a "directed lending program" that requires all nationalized banks to provide a percentage of total loans to target groups, including small-scale industries. Between 1977 and 1984, these firms on average received 13 percent of total bank credit. In 1985, the basic lending rate to industry was 14 percent, whereas that for small firms ranged from 12.5 percent in backward areas to 13.5 percent in non-backward areas. In contrast, in Japan, which has a large population of small-scale companies, credit allocation has been heavily biased toward large firms, for which the cost of credit has been approximately one-third less than that for small firms. (R.E. Caves, Industrial Organization in Japan, The Brookings Institution, Washington, D.C., 1976, p. 37).

20/ The investment limits for small-scale industries and ancillaries were increased in 1985 from Rs 2.0 million and Rs 2.5 million, respectively. Ancillary firms are defined as "undertakings engaged in the manufacturing of parts, components, sub-assemblies, toolings or intermediates, or firms rendering 50 percent or more of their total production or services to other firms producing other articles." (Department of Industrial Development, Notification, February 16, 1973). Since the reservation list was established, products have been added to the list on a progressive basis, but until 1986 only one product--sodium bichromate--had ever been dereserved. In October 1986, seven products were dropped from the list.

asset limit prevents small manufacturers from installing modern, high quality equipment and machinery, while the low levels of turnover do not allow the accumulation of sufficient resources to support the R&D expenditures needed to improve product quality and reduce cost. The result in many cases is poor product quality, lack of standardization and quality control, and technological obsolescence.

1.33 In addition to the reservation provision, small-scale firms have enjoyed investment allowance and fiscal benefits unavailable to large firms and have effectively been exempt from most direct and indirect domestic taxes. For example, small firms generally have been exempt from excise taxes up to a level of Rs 750,000 in turnover.^{21/} Small-scale units have also generally been free from price and production controls, which have been imposed, for instance, in the textile, cement, steel and paper industries. In the cement industry, these exemptions have enabled small units to compete despite higher operating costs, and small units have, in turn, resisted complete decontrol of the industry because it could lead some to close. In the paper and textile industries, differential excise taxes between large and small firms have given the latter substantial advantages. Freedom from licensing requirements, excise tax incentives and price and production control exemptions have created a strong inducement for firms to stay small rather than grow, modernize and specialize, even in products that are not reserved.

1.34 The remaining important difference between small firms and medium-size and large ones is the greater mobility and flexibility regarding labor the former enjoy. In India, it is very difficult for industrial concerns to cease operations, liquidate and shed labor or product lines (see part D of this section). Small firms, however, have been unofficially but effectively exempt from the difficulties larger firms face, because the former can permanently lay off workers or close operations without government approval, provided they have no outstanding credits from the financial system. Further, firms with less than 10 employees with powered machinery, or 20 employees without, have not been subject to the Factories Act and thus have been effectively exempt from the minimum wage

^{21/} Prior to 1986, for amounts of annual turnover between Rs 750,000 and Rs 4 million, excise taxes were charged at progressively higher levels as turnover rose, ranging from 25 percent, 50 percent and 75 percent of the regular rate. Small firms paid the full amount of excise taxes on the amounts of turnover exceeding Rs 4 million and up to Rs 7.5 million. Once sales turnover exceeded Rs 7.5 million, the entire excise tax benefit was lost. In 1986, the turnover level for excise tax benefits for small firms was increased from Rs 7.5 million to Rs 15 million. Firms pay reduced amounts of excise taxes on turnover levels up to Rs 15 million.

and employee benefit payments that apply to larger firms.^{22/} The advantage small firms have with respect to exit creates an additional incentive for them to stay smaller than what might be the technically or economically efficient size.

1.35 Small-scale policies have therefore had a number of unintended consequences. For products in which scale economies are important, the policy of reservation has limited the scales of production to suboptimal levels (para 2.18 and seq.).^{23/} By preventing growth beyond the asset limit and eliminating potential competition from medium-size and large firms, small-scale policies have also failed to induce small firms to improve technology, update productive techniques, introduce modern product designs and reduce costs. (para 2.44 and seq.)

D. Exit Policies

1.36 Exit has been restricted in order to conserve scarce capital resources and protect existing jobs in an environment characterized by significant resource constraints and high levels of unemployment. As a result, both voluntary closures and bankruptcies in India have been subject to extremely restrictive procedural and policy-related constraints. Regulations inhibiting the dissolution and/or merger of industrial units have acted as a deterrent to entry and expansion. Without the ability to exit, entrepreneurs have become more risk-averse in their investment plans, foregoing growth opportunities that in a different policy environment might have led to capacity creation or expansion.

1.37 Exit barriers are thus another form of entry barrier. Policy-induced exit barriers in particular act as deterrents to entry to the

22/ Companies under the Factories Act, 1948, must pay twice the ordinary wage for overtime; employers must pay a minimum bonus equivalent to 8.3 percent of salary or wages, or Rs 100 to an adult employee and Rs 60 to an employee below the age of 15; if there is an "allocatable surplus" (an accounting measure of profits in excess of a "reasonable" return on capital invested), employers must distribute 60 percent of it to employees, up to a maximum of 20 percent of salary and wages earned; under the Employee's State Insurance Act, 1948, employers must contribute 3 percent of the wage bill, with a minimum of Rs 0.8 and a maximum of Rs 7.5 per week per worker to an insurance fund; and employers must pay to the Employee's Provident Fund and Family Pension Fund a total of 6.25 percent (8 percent for establishments employing 50 or more persons in four industries) of the combined cost of basic wage and allowances. Small-scale firms are effectively exempt from many of these required payments.

23/ The policy has also resulted in industrial holdings under one owner being artificially subdivided into several small plants, ostensibly under different owners, to conform to the small-scale investment limits.

extent that they convert investment outlays that would normally be recoverable into additional sunk or irretrievable costs, a situation that reduces the expected rate of return on investment and thus lowers overall investment activity. In evaluating an industrial project, the higher the value of salvageable assets, or the lower the abandonment cost, the greater is the expected rate of return. Generally, difficulties in exiting raise the cost of abandonment.

1.38 A number of regulations inhibit labor shedding, the transfer of assets, amalgamation and bankruptcy. The most binding restrictions on exit are those pertaining to the retrenchment of labor. Under the Industrial Disputes Act of 1974, as amended in 1976 and 1984, any unit with more than 100 employees must obtain government permission to dismiss workers or cease operations. This regulation has become progressively more restrictive--government permission was not required prior to 1976, and between 1976 and 1984 the threshold figure was 300 employees. In practice, securing government permission has proved virtually impossible. Nonetheless, retrenchment has been possible with varying degrees of difficulty by normally costly agreements between management and unions.

1.39 Provisions for the transfer of assets and for amalgamation exist but have been inordinately time-consuming and cumbersome. Takeovers of enterprises experiencing financial difficulties have typically taken years to complete, as legal and government clearances have been required. Even the simplest of takeovers (under Sections 391 and 392 of the Companies Act) involve the courts and are excessively time consuming. Larger firms have not been allowed to take over firms manufacturing products reserved for the small-scale sector, which in part explains the fact that roughly 98 percent of the firms with financial debts in excess of the value of their assets (i.e., "sick" units) have been small. Whenever mergers or asset transfers involve MRTP firms, or would create an MRTP firm, even more restrictive clearance procedures operate.

1.40 While bankruptcy provisions also exist, and a large number of bankruptcies have been handled each year, the process is often unduly delayed. Government policies have instead focused primarily on "rehabilitating" sick units through injections of capital to avoid the loss of jobs, without sufficient regard to the dynamic impact of efficient resource mobility on the creation of employment or the opportunity cost of the resources allocated for the survival of chronically "sick" units.

1.41 A very small number of firms relative to the number of "sick" units have actually gone out of business altogether. Whereas, in 1984, there were 93,282 sick units (of which 91,450 were small and 1,832 medium and large), no more than 254, or 0.27 percent of the total, actually closed, an indication of the difficulty of exit.^{24/} Between 1979-80 and 1983-84, just 1,485 firms ceased working (Table 1.6). Further, the average paid-up capital of companies that did close has been quite small. In 1983-84, it was Rs 1 million for private firms and Rs 8 million for public sector firms, averaging Rs 2.5 million. These data confirm the proposition that not only is exit difficult, but it is basically feasible only for small firms.

^{24/} Data on the number of sick units are drawn from Reserve Bank of India (RBI), Report on Currency and Finance, 1984-85.

1.42 Recent initiatives (the formation of the Industrial Reconstruction Bank of India's [IRBI] in 1984, and the Sick Industrial Companies [Special Provisions] Bill of 1986) have introduced a form of single window clearance for the exit of a subset of firms--those which are chronically "sick", and are a positive step. However, there are still no provisions for the timely exit of firms prior to the total loss of their net worth. As the board to administer the Sick Industrial Companies Bill 1986 has not yet been appointed, it is too early to assess the effectiveness of this measure.

Table 1.6: PRIVATE COMPANIES THAT CEASED WORKING
(Both Liquidated and "Struck-Off")^{a/}

	Voluntary Liquidations	Liquidations under Court Order	Companies Struck-off	Total No. of Companies	Paid-up Capital (Rs million)	Avg. Paid-up Capital per Company (Rs million)
1979-80	74	81	99	254	119.1	0.47
1980-81	109	56	223	388	95.5	0.25
1981-82	68	42	220	330	42.4	0.13
1982-83	54	43	162	259	118.3	0.46
1983-84	37	65	154	254	64.8	0.25
Total	342	287	858	1,485	440.1	0.30

Source: Annual Report on the Workings of the Companies Act.

- a/ Private and public companies subject to the Companies Act are required to register with the Ministry of Industry. If a company has effectively, though not formally, ceased operations, it is deleted or it is "struck off" from the register.

E. Price Controls

1.43 Price controls have played an important role in India's regulatory policy framework since World War II. The present system was first introduced through the Defence of India rules in 1939, after the outbreak of the war. Prices were decontrolled in 1944, but this attempt was short-lived because of the subsequent rapid rise in prices. The power to control prices and distribution with respect to scheduled industries was later formalized in the Industries Act of 1951, and the list of industries covered by price and distribution controls was extended to other sectors with the Essential Commodities Act of 1955. Since independence, price controls have been applied to iron and steel, coal and infrastructural

industries such as energy and transport, fertilizers, aluminum, textiles, paper, sugar, bicycles, cement, drugs, petroleum products, rubber, tires and vanaspatti.^{25/}

1.44 The prices of controlled products have generally been set by the Bureau of Industrial Costs and Prices (BICP) and various industry-specific committees (e.g., the Fertilizer Industry Coordination Committee or the Joint Plant Committee for steel). Although prices often have been set on a cost-plus basis, the procedures have varied. To determine production costs studies are conducted to evaluate: (i) technical norms and input coefficients at stated rates of capacity utilization at the firm level; and (ii) standard costs for the industry. Generally, averaging procedures or a cut-off point have been set to determine average costs, and "adequate" returns on capital have been established. In principle, this approach is to be used where there are a large number of units and a relatively homogeneous product. Where there are only a few firms or the industry produces a heterogeneous product, the prices are set firm-by-firm. In practice, controls have been applied and administered in a variety of ways across different industries. In the fertilizer sector, for example, there have always been several firms and the product is fairly homogeneous, yet prices have been set on the basis of an individual firm's cost structure. Standard costs have been determined using actual (as in the case of coal) costs, historical averages or other means. The return on capital allowed has also varied--for some commodities it has been defined as return on net worth, while for others as the overall return on capital.

1.45 A system of differential retention prices across firms within a given industry has been applied, for example, in the fertilizer subsector. Since 1977, a complicated system of price controls sets ex-factory prices for producers of nitrogenous fertilizers while providing subsidized prices for farmers. The pricing formula has allowed producers a 25 percent pretax rate of return on equity when the plant is operated at 80 percent capacity utilization. Input norms have been estimated on an individual plant basis and revised every three years by the Fertilizer Industry Coordination Committee, based on each plant's historical consumption and the norms for similar plants. Consequently, there have been as many different retention prices as there have been individual plants, and two plants run by the same

25/ Price controls have varied considerably in scope and aim across sectors. The following objectives have generally been pursued:
(i) Priority allocations--price controls have been combined with distribution controls to ensure the allocation of adequate amounts of intermediate goods such as cement to priority sectors (e.g., the government) at preferential prices. For some consumer products, controls have been imposed to make the goods accessible to low-income consumers, (ii) Increased production--price controls have been used to encourage the production of certain items by ensuring an adequate rate of return (e.g., fertilizers, telecommunications and other public sector industries), and (iii) Inflation control--price controls have also been used to prevent shortages of intermediate goods in widespread use (such as steel) from leading to generalized price increases.

company may have received very different prices per ton of fertilizer. This system of differential prices was introduced to ensure continued production by high-cost firms while preventing low-cost firms from absorbing economic rents.

1.46 A second category of price control is a system of uniform price controls applied to a portion of a firm's output. In paper, sugar and, since 1982, cement, uniform retention prices have been set for all firms, but only a fraction of total production has been subjected to the price and distribution controls. In the paper industry, large firms (those with installed capacity greater than 16,500 tons a year) have had to devote from 20-25 percent of their production to white printing paper, which has then been sold to educational institutions at uniform levy prices of Rs 6,400 a ton. In the sugar industry, producers have had to supply 65 percent of production to the GOI at official levy prices.^{26/} Since 1982, the cement industry has been subject to pricing policies similar to those for the sugar and paper industries.^{27/} All cement producers (with the exception of mini-cement plants) have had to sell 60 percent of their production to the government at uniform levy prices, with the remaining production sold on the free market. For all three sectors, the levy price has varied from 15-50 percent below the free market price.

1.47 Finally, price controls have applied to all infrastructural industries, including coal, electricity and transport, sectors characterized by "natural" monopolies. The coal sector, in particular, has suffered from unremunerative prices. Although in principle the pithead price of coal has been based on the industry-wide average cost of production (differentiated by grade of coal), in reality prices have fallen below costs. The reason is the exclusion of a margin for return on capital and/or depreciation, and increases in the costs of inputs between relatively infrequent price adjustments.

26/ As in the fertilizer industry, where the input prices for natural gas and naphtha have been controlled, the raw material prices for sugar manufacturers have also been set by the government. The GOI has mandated the cane prices, which sometimes have been revised upwards by the state governments. Faced with rising input costs on the one hand and government-controlled output prices on the other, sugar producers have sometimes found themselves caught in a so-called price "scissors."

27/ Cement prices were initially set based on the prices of the largest firm, Associated Cement Company (ACC). However, differential prices were eventually introduced to account for variations in the cost structures of firms and were used off and on between 1952 and 1982. From 1979 to 1982, for instance, cement firms operated under a three-tier retention price structure with provisions for annual escalations. Units in the industry were classified as low-cost, medium-cost and high-cost and received retention prices of Rs 185, Rs 205 or Rs 220 per ton of cement, respectively. After 1982, uniform retention prices were introduced for all firms.

1.48 It appears that in many subsectors, price controls reduced profits to levels that, in the past, discouraged entry, expansion and full utilization of capacity (Table 2.10, p. 55). The expansion in capacity for selected price-controlled industries since 1970 is an indication of investment barriers that have resulted, inter alia, from price and production controls (Table 1.7). With the exception of the paper industry, all other subsectors have expanded their capacity at a rate lower than the average rate for manufacturing as a whole. In the paper industry, capacity expansion did not exceed the average for all industries until after 1979, when the policy promoting entry by small paper units exempt from price controls was introduced. The entry of small paper units has been responsible for nearly all the capacity expansion in that industry since 1979. Capacity expansion in the cement industry (in spite of excess demand) was significantly below average until 1982, when prices were partially decontrolled. By 1984, the index for capacity expansion in cement had nearly overtaken the average for the manufacturing sector as a whole.

Table 1.7: EXPANSION IN CAPACITY FOR SELECTED INDUSTRIES, 1970-84
(1970 = 100)

Price-Controlled Areas	1970	1975	1979	1980	1981	1982	1983	1984
Cement	100	124.1	141.8	151.8	172.4	180.6	197.1	225.9
Paper & Board	100	139.0	179.2	200.0	215.6	236.4	249.4	281.8
Iron & Steel	100	131.3	157.9	158.2	161.8	163.5	164.7	166.6
Vanaspati	100	156.1	157.3	157.3	157.3	157.3	157.3	157.3
All Manufacturing Industries	100	142.3	186.8	194.0	206.0	213.3	220.8	228.2

Source: Center for Monitoring the Indian Economy, Capacity Utilization in 160 Industries, Bombay, 1986.

F. Trade Policies

1.49 The previous sections have suggested that regulatory policies have functioned as barriers to competition, mobility and growth. While this report does not directly address the effects of trade policies, nevertheless, their influence and interaction with domestic regulatory policies cannot be ignored here, as the Indian economy is characterized by extremely high levels of protection from import competition and domestic producers do not face substantial export rivalry. The principal instruments of import policy have been (a) ad valorem tariffs, and (b) quantitative restrictions imposed through a system of import licensing.

1.50 The Tariff Structure. Import tariff duties in India presently range from zero to 340 percent (before exemptions), with a mean duty of 137.7 percent and a standard deviation of 52.8 percent. Exemptions and other relaxations would reduce the average tariff levels by a substantial number of points and possibly increase its variance. Nearly 60 percent of the tariff categories are in the range of 140-190 percent, whereas almost 9 percent of tariff positions are found above this level (Table A.6 and Figure A.1). When tariffs are weighted by imports, the average tariff falls to 108.0 percent; when weighted by production, it reaches 140.5 percent. The difference of nearly 30 percentage points in weighted tariffs is significant and is an indication of how binding trade barriers in India are. A low import-weighted average tariff denotes the fact that imports of goods facing higher tariffs are effectively curtailed; thus, the weight of imports is inversely proportional to the tariff level. Conversely, a high production-weighted average tariff is evidence that higher tariffs are indeed protective of domestic production.

Table 1.8: NOMINAL PROTECTION FOR INDIA MANUFACTURING SECTORS
CUSTOMS TARIFFS + OTHER IMPORT DUTIES ^{a/}
(1981-82 Weights)

Sector	Unweighted Average (%)	Weighted by Production at Domestic Prices (%)	Weighted by Imports at World Prices (%)
Food	144.2	132.1	114.0
Textiles	133.2	125.6	115.4
Wood	119.0	106.3	105.3
Paper	124.0	107.2	94.1
Chemicals	151.3	135.9	114.0
Nonmetal minerals	133.9	136.9	137.5
Basic metals	161.7	129.1	167.2
Machinery	109.0	109.5	110.9
Other goods	127.5	112.9	96.3

Sources: SINTIA, India Tariff File based on "1986-87 Customs Tariff of India," tenth ed., Central Law Office, New Delhi; Monthly Trade Statistics of the Foreign Trade of India, Vol. II - imports, Jan. 1982, Directorate General of Commercial Intelligence Statistics, Calcutta; and GOI, "Annual Survey of Industries, 1981-82."

a/ The figures in the table do not take into account exemptions, discounts and other relaxations.

1.51 Although the dispersion of tariffs across major manufacturing sectors is quite narrow, the basic metal sector (including iron and steel products) is more heavily protected than other sectors (Tables 1.8, A.7 and

Figure A.2). Tariffs for iron and steel articles are twice as high as the overall average, and tariffs for automobiles are above average as well. For fertilizers, food grains, wood pulp, petroleum products, and scrap iron, tariffs are much lower than average. These lower tariffs partly reflect the fact that these products are imported by government agencies.

1.52 Non-Tariff Barriers. Tariff duties, which are high in absolute terms, are generally surpassed in importance by quantitative restrictions. First, an extensive system of import licensing, introduced in 1947, applies to most categories of imports. In 1972-73, 99 percent of India's total imports were covered by licenses (Table A.8). Since 1973 (except for 1976-78), the proportion of the value of import licenses in total imports has been declining, and after 1978-79 it has hovered around 50 percent. Second, a complex set of regulations restricts imports to various categories of eligible importers. Third, bulk items (food grains, fertilizers, cement, newsprint, iron and steel) are imported by government agencies through what is known as "canalization". The proportion of these "canalized" imports in India's total imports went from about 40 percent in 1972-83 to 63 percent in 1983-84.

1.53 Thus, the share of imports subject to discretionary government controls, either through eligible importer conditions or through purchasing of bulk items by government monopolies, has not declined as has that of imports subject to licensing. Even though there has been some recent liberalization, as more items have been placed under the "Open General License" (OGL) category (it does not require a prior license), they are nonetheless subject to certain other restrictive conditions regarding importer eligibility. The Indian trade regime continues in this sense to be highly protective of domestic production.

1.54 The extent of import protection accorded to domestic producers can be assessed by examining the import ratios in the manufacturing sector. Although import availability (defined in the source as the ratio of value of imports to value-added) varies substantially across sectors, it fell in every industry between 1959-60 and 1979-80 with the exception of food and non-metallic mineral products (Table 1.9). In the cement industry, shortages were exacerbated by price and production controls, and consequently a high import availability for non-metallic mineral products is more indicative of supply shortages than competition from imports.

1.55 International Comparisons. The extent of tariff protection in India is not only high in absolute terms, but it also stands out in comparison with other developing countries (Table 1.10). In a sample of 10 countries, including a number with relatively large internal markets and diversified industrial structures (such as China, Mexico and Turkey), India has the largest mean tariff rate (137.7 percent) and a correspondingly significant standard deviation (52.8 percent). Most other countries (the exceptions being China and Bangladesh) have mean tariffs and standard deviations under 50 percent and 30 percent respectively.

Table 1.9: IMPORT AVAILABILITY RATIOS
(percent)

Industry Group	1959-60	1965-66	1979-80
Food, Except Beverages	4.2	2.9	8.1
Beverages	15.8	7.5	0.7
Tobacco	1.5	0.9	--
Textiles	2.9	1.3	1.9
Footwear, etc.	--	--	--
Wood and Cork	22.1	4.5	2.9
Furniture and Fixtures	0.9	0.4	0.2
Paper and Paper Products	23.4	17.1	18.2
Printing and Publishing	--	--	--
Leather and Fur Products	5.4	4.6	0.1
Rubber Products	11.5	3.5	8.1
Chemical and Chemical Products	30.0	17.0	19.5
Petroleum Products	43.9	27.8	42.3
Non-metallic Mineral Products	6.5	2.2	22.7
Basic Metals	32.3	22.2	22.7
Metal Products	23.4	6.8	6.9
Non-electrical Machinery	65.8	56.3	30.6
Electrical Machinery	38.1	27.7	9.9
Transport Equipment	25.7	15.8	11.1
Miscellaneous	18.8	15.6	16.7

Source: Isher Ahluwalia, Industrial Growth in India; Stagnation Since the Mid-Sixties, Oxford University Press, New Delhi, 1985.

1.56 A similar pattern emerges in examining mean tariffs and standard deviations for the intermediate, capital and consumer goods. India has a consistently higher mean tariff than other countries and a substantial degree of tariff dispersion. This is most clearly observed in intermediate goods, with mean tariff rates nearly 50 points above those of Bangladesh (the next highest). The very high levels of nominal tariff protection for intermediates is found, for example, in paper, chemicals, non-metallic minerals and basic metals (Table A.9). Basic metals appear to be the most extreme case: the mean tariff rate is 217.2 percent and the standard deviation 106.1 percent, far above the rates found in other countries.

Table 1.10: NOMINAL TARIFF RATES

Mean and Standard Deviation of Tariffs by Country, 1985 a/
(% ad valorem)

COUNTRY	Intermediate Goods		Capital Goods		Consumer Goods		Manufacturing Sector	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Argentina	21.2	15.3	25.0	12.6	21.9	8.0	22.9	14.3
Bangladesh	97.9	60.0	80.5	18.1	116.1	82.0	100.8	67.3
China (PRC)	78.9	55.7	62.5	47.8	130.7	66.9	91.2	63.4
Hungary	14.2	27.3	14.0	51.4	22.6	17.5	20.9	15.0
India	146.4	55.6	107.3	48.1	140.9	38.4	137.7	52.8
Mexico	23.5	16.3	23.5	17.3	32.2	26.4	24.7	19.0
Morocco	21.6	16.9	18.1	12.0	43.0	20.5	27.8	20.4
Thailand	27.8	20.4	24.8	16.2	48.5	38.7	33.5	28.6
Turkey	29.4	25.0	34.9	18.3	55.3	40.6	37.1	30.9
Yugoslavia	18.0	4.9	20.7	4.2	20.0	6.4	19.0	5.5

Source: SINTIAL Country Tariff files.

a/ 1985 or most recent year. Includes CET + Other Import Duties + Flat Duty (if any); excludes exemptions, discounts and other relaxations.

1.57 The very high levels of tariff and non-tariff protection in India have introduced a strong anti-export bias in the industrial environment and this bias is far from being offset by existing fiscal and financial mechanisms. For local producers, the trade regime has made the domestic market far more profitable and less costly to penetrate than the international market. As a result, the growth of India's manufacture exports has been, in comparison with other countries, quite low (Table 1.11). In real terms, it grew at an annual rate of 1.1 percent between 1973-83.. For other large developing countries such as Brazil, China, Indonesia and Turkey, the average annual rates of growth in manufacture exports were in the order of 10 percent during the period. The manufactured export-output ratio for India is equally low when compared to other countries. In 1984 it was just 6.5 percent, the lowest ratio in the sample of countries of Table 1.11.

Table 1.11: INDICATORS OF EXPORT COMPETITIVENESS,
Selected Countries

	Brazil	China	India	Indonesia	Japan	S.Korea	Turkey
Real Growth of Manuf. Exports							
1966-73	8.8	2.9	5.0	15.2	13.8	41.6	10.9
1973-83	9.7	9.4	1.1	10.0	10.3	16.2	10.9
Manuf. Exports/ Manuf. Output (1984)							
	14.1	7.0	6.5	12.1	17.9	37.2	9.2

Source: INDSP data base, using EDP (World Bank) estimates and UN country-specific price indexes for the deflator.

III. Conclusions

1.58 In the past three-and-a-half decades, India established a comprehensive system of regulations to serve a number of legitimate industrial and social policy objectives. Yet these policies, individually and in synergy with each other, have also become major barriers to mobility, growth and competition in the industrial sector.

1.59 These domestic barriers have been reinforced by the highly protective trade regime that has limited to a large extent the degree of import competition and export rivalry. The small exposure to international markets has implied that domestic firms, already operating in a heavily regulated environment, enjoy extensive protection from competitive forces.

1.60 As will be argued in the next chapter, regulatory and trade policies not only limited the extent of competition, creating an environment conducive to conservative management behavior, but also brought major structural deficiencies in industry regarding firm size distribution and specialization. It has been the combination of structural deficiencies and poor managerial conduct that explains to a significant degree the deterioration in India's industrial performance.

CHAPTER II

THE IMPACT OF INDUSTRIAL REGULATORY POLICIES: EMPIRICAL EVIDENCE

I. Introduction

2.01 This chapter provides empirical evidence on the impact of regulatory policies on market structure, firm behavior and performance. It draws on 11 subsector studies (contained in Volume II of this report) and industry-wide data.^{28/} Section II examines the impact on firm size distribution, plant fragmentation and product specialization. Section III discusses how protection of domestic firms from competition has affected the technological and strategic conduct of management. Section IV then assesses the consequences of regulatory policies on industrial performance. The focus will be on growth and changes in the structure of output, capacity utilization, productivity shifts and the international competitiveness of Indian industry.

II. Impact of Regulatory Policies on Industrial Structure

A. Size Distribution of Firms

2.02 The policies described in the previous Chapter, namely, industrial licensing, constraints on MRTP firms, small-scale incentives, exit restrictions and price and production controls, have implied differential barriers to entry, growth and exit for different size classes of firms. These barriers have been high for medium-size and large firms and substantially lower for small ones. As an outcome of these policies, most markets are characterized by a bimodal size distribution of firms, with a concentration of assets, output and employment in a few large firms and many small units, while medium-sized producers have been progressively squeezed out.

2.03 Table 2.1 indicates the distribution of output and value added by firm size. In 1981-82, firms employing less than 50 or over 500 workers

^{28/} The subsector studies include paper, cement, nitrogenous fertilizers, iron and steel, capital goods (focusing on non-electrical machinery), machine tools, motor vehicles, telecommunications, electronics, textiles and garments. These subsectors constitute approximately 50 percent of the value added and manufacturing output (see Table A.10). They encompass capital, consumer and intermediate goods and include sectors that are dominated by public sector firms (i.e., telecommunications) and private firms (i.e., garments). Consequently, these studies provide evidence from a representative cross-section of Indian industry.

accounted for 70.4 percent of total manufacturing output and 77.5 percent of value added. While the shares of smaller firms in output and value added remained roughly constant between 1975-76 and 1981-82, those of larger firms rose from 55.1 to 57.1 percent and 67.5 to 69.4 percent, respectively, at the expense of producers employing between 50 and 500 workers.^{29/}

Table 2.1: MANUFACTURING OUTPUT AND VALUE ADDED BY FIRM SIZE

Firm Size (Number of Workers)	Output		Value Added	
	1975-76	1981-82	1975-76	1981-82
0-49	14.1%	13.3%	8.2%	8.1%
50-99	7.3	7.3	5.0	4.8
100-199	8.2	8.0	6.8	6.3
200-499	15.3	14.3	12.5	11.4
500-999	13.7	12.2	15.4	11.8
1,000-1,999	16.6	15.6	18.5	15.1
2,000-4,999	13.4	14.9	16.7	17.7
5,000 and above	11.4	14.4	16.9	24.8

Source: Annual Survey of Industries, 1975-76 and 1981-82.

2.04 A similar distributional pattern is found at the subsector level. In textiles, spinning is dominated by large pure spinning units and composite (integrated) mills. Weaving, on the other hand, takes place in both the large composite mills and in highly decentralized small units; there is a virtual absence of medium-size firms. In automotive products, two-wheel vehicle and component manufacture are similarly concentrated in a few large and a host of small firms. The steel subsector is populated by a number of large, mostly state-owned integrated mills and many relatively small mini-mills. The same two-humped distribution characterizes the

29/ Such bimodal distribution has also been identified by Little, Mazumdar and Page (1985) who found that Indian industries are strongly represented by small and large establishments but under-represented by medium-size ones. They compared the size distribution of all Indian manufacturing establishments with evidence from Taiwan, South Korea, Colombia, Japan and the United States. In comparison with these countries, India has relatively large establishments. Firms with over 500 workers account for a much higher proportion of employment in India than even in the United States. Medium-size establishments employing between 50 and 500 workers account for over half of employment in the United States and in the Far Eastern countries, but for only 30 percent in India in 1981-82. (See Ian M.D. Little, Dipak Mazumdar, and John M. Page, Jr., Small Manufacturing Enterprises: A Comparative Study of India and Other Countries, World Bank, Washington D.C., 1985.)

electronics industry, with the public sector dominating one end of the spectrum (e.g., BEL and ECIL) and many small private firms crowded in the other.

2.05 These structural features have a number of implications. The first is a direct consequence of the fact that India's industrial structure is characterized by an "empty middle": cross-country and Indian experience indicates that medium-size firms often enjoy better labor relations and higher labor productivity than large firms, and respond most effectively to changing technological and market requirements.^{30/} Their policy-induced absence has added an element of rigidity and contributed to the slowness of technological progress and structural change in Indian industry.

2.06 A second consequence relates less to the issue of bimodality per se but more to the insufficient degree of specialization and the weak subcontractual relationships between large and small firms in India. Other countries are also characterized by a bimodal size distribution of industrial enterprises, and although in India the share of firms with more than 75 and fewer than 189 workers (8.6 percent) is smaller than in most other market or mixed economies, the exceptions of Japan and South Korea (with shares of 6.9 percent and 10.7 percent) possibly suggest that the issue here is not merely the skewedness of the size distribution (Table 2.2). In these two countries, small firms are closely integrated in the activities of larger concerns as subcontractors and suppliers of parts and components. Smaller and large firms play complementary and mutually supportive roles.

Table 2.2: SIZE DISTRIBUTION OF INDUSTRIAL ENTERPRISES
(in percent)

Firm Size ^{a/}	U.K. (1979)	U.S. (1977)	Japan (1972)	S. Korea (1981)	India (1977)	China (1982)	Yugoslavia (1981)	Hungary (1981)
5-33	65.5	56.4	80.2	70.7	51.7	59.2	6.6	2.2
33-75	15.8	20.3	10.7	14.4	35.3	19.5	15.8	4.8
75-189	10.8	12.4	6.1	9.2	7.8	12.2	32.1	18.7
189-243	1.5	3.8	0.8	1.5	0.8	8.5	12.0	9.2
243+	6.9	7.1	2.1	4.3	4.4	0.6	33.5	65.1

Source: The World Bank, China Division.

a/ Size of firm by number of workers.

2.07 In India, however, small-scale policies have induced a qualitatively different role for small units: they have stimulated the replication of many production activities typical of larger units on a smaller

30/ For a discussion of the role of small and medium firms in R&D and innovation, see M. Kamien and N. Schwartz, Market Structure and Innovation, Cambridge University Press, Cambridge, 1982.

scale. In the cement, sugar and paper industries, for example, the entry of small units was promoted despite the scale advantages of larger firms; in these industries, many of the smaller units would be unviable even with efficient management, modern technology and reliable input supplies. In the automotive industry, which is characterized by economies of scale which are generally larger than in other industries, component manufacture takes place predominantly in both very small firms and large MRTP houses. The results are an excessive degree of plant fragmentation, an insufficient extent of both horizontal and vertical interfirm division of labor, and the loss of economies of scale and of specialization (see parts C and D of this section below).

B. Firm Concentration

2.08 Table 2.3 presents the four-firm concentration ratios in India in 1983-84 for a number of industrial sectors.^{31/} It indicates the dominant role played by relatively large firms in capital goods, as well as in many of the intermediate and consumer goods industries. A similar picture is found in product level data (Table A.11). In most machinery segments (as with pulp and paper, earth moving, packaging, printing and cement), the top four firms have accounted for 70 percent or more of output. The concentration ratios have been likewise high in intermediates, such as basic metals (aluminum, salable steel, pig iron, etc.), synthetic fibers (acrylic fiber, high and low density polyethylene, etc.) and paper products (newsprint and hardboard). In final goods and fabricated items (such as steel ingots, steel pipes and tubes, plywood products, processed fruit, paper, and cotton and blended fabrics), the concentration has been lower, with four-firm ratios generally not exceeding 30 percent.

2.09 The differences in concentration ratios are attributable to the variance of scale requirements for different products relative to their domestic market. They are also a result of regulatory policies that attempt to assign production of certain goods to different size classes of firms. Licensing policies have permitted the establishment of relatively few firms for the production of basic and intermediate goods (although many of their plants are still small relative to international efficiency standards). Production of more processed or fabricated products, such as some plastic products, biscuits, many paper products, footwear, and some plywood products, has often been reserved in whole or in part for small scale firms.

2.10 In some industries, large public sector firms have contributed to high levels of concentration. These enterprises dominate some of the chemical and basic metals industries, as well as a number of capital goods segments. In salable steel, for example, the four-firm concentration ratio in 1983-84 was 71 percent and participation of public sector firms in total output was 74 percent. In this sector, restrictive licensing policies have led to a concentrated market structure in the production of steel wire, special steel and other types of steel products.

^{31/} Four-firm concentration ratios are computed by calculating the share of the top four firms in sales, output or capacity.

Table 2.3: INDUSTRIAL CONCENTRATION IN INDIA
Four-Firm Concentration Ratio, 1983-84 a/

Consumer Goods

Food Products	13.6
Beverages	62.3
Tobacco	95.7
Footwear	32.9

Intermediates

Textiles	23.1
Wood and Cork	18.0
Pulp, Paper Products	37.1
Chemicals	50.7
Rubber and Plastic	61.0
Cement	41.2
Basic Metals	50.4

Capital Goods and Consumer Durables

Metal Products	91.1
Non-Electrical Machinery	72.8
Electrical Machinery	72.8
Transport Equipment	96.6

Source: Centre for Monitoring the Indian Economy, Market and Market Shares, Bombay, March 1986.

a/ The concentration ratios for selected industries were computed separately using industry sales data, by calculating a weighted average for the sectors. For example, among the industries in the transport sector (i.e., autos, two-wheel vehicles, trucks, etc.), the (weighted) average four firm-concentration ratio is 97 percent.

2.11 In the automotive sector, two of the four licensed car manufacturers (HML and PAL) accounted until recently for close to 100 percent of the market for cars, although the scales of both are substantially below international efficiency standards. High shares are also found for two-wheel vehicles, where, despite the existence of 25 licensed firms, the four-firm concentration ratio is 65 percent. In other products, including motorcycles, mopeds and scooters, the bulk of the market share is held by the top two or three firms. For most components, the Herfindahl indexes are extremely high (greater than 0.2), indicative of a high level of

concentration despite the proliferation of firms and the government's explicit objective of limiting concentration.^{32/}

2.12 Cotton textiles, by contrast, is characterized by a low level of concentration, the outcome of two related policy decisions. The first is a freeze on expansion of capacity by large mills, imposed in 1956, when the industry had reached a fairly advanced stage of development and contained many units. Second, fiscal labor and small-scale reservation policies have encouraged the development of power and hand loom producers, whose proportion of total output in cloth production expanded from 21 percent in 1951 to 71 percent in 1985.

2.13 Concentration in India is also high relative to other countries. Table 2.4 compares the distribution of four-firm concentration ratios in India in 1983-84 with Japan in 1963. It is striking that 55 percent of industrial segments in India had four-firm concentration ratios in the 80-100 percent range, while in Japan only 9 percent of segments had reached this degree of concentration. In addition, whereas 17 percent of Indian industry segments exhibited relatively low levels of concentration (between 0 and 39 percent), in Japan the majority of industries (over 58 percent) were in this category.^{33/}

2.14 These results are all the more remarkable, given the fact that in India, licensing and MRTP policies have attempted to discourage the concentration of economic assets, restrict the growth of large firms and stimulate the expansion of small- and medium-size units. By contrast, government policy in Japan has promoted large, minimum efficient scale (MES) plants and did not enforce anti-concentration policies.^{34/} The relatively low degree of concentration in Japan is a reflection of the size and growth rates of the Japanese domestic market and the significant share of exports in total output in many industries. These characteristics have been instrumental in supporting the existence of very large and small firms without leading to excessively concentrated markets or fragmented capacities.

^{32/} The Herfindahl index is a measure of concentration derived by adding the squares of market shares for each firm. In the United States, a recent 1982 revision of regulations makes it difficult to gain approval for a merger if the post-merger H-index exceeds 0.18. These guidelines illustrate that the H-indices of above 0.2 are high, at least by US standards. See the sector report on automobiles for product-specific H-indexes (Volume II, Report VII).

^{33/} Since the Indian data were gathered at a more aggregate level, these figures underestimate the difference in degrees of concentration. If the Indian data were available at a more disaggregated level, the percentage of industries with a high concentration would be even greater.

^{34/} See R. Caves and Uekusa, eds., Industrial Organization in Japan, op. cit., Chapter 8.

Table 2.4: DISTRIBUTION OF INDUSTRIES BY FOUR-FIRM CONCENTRATION RATIO

Concentration Ratio	India (1983-84)		Japan (1963)	
	Number of Industrial Segments	Percent	Number of Industrial Segments	Percent
0-19	10	9.2	157	30.7
20-39	9	8.2	142	27.7
40-59	15	13.8	117	22.8
60-79	15	13.8	50	9.8
80-100	60	55.0	46	9.0
Total	109	100.0	512	100.0

Sources: CMIE, Market and Market Shares, op. cit; Richard Caves and Masu Uekusa, eds., Industrial Organization in Japan, Brookings Institution, Washington, D.C., 1976.

2.15 Concentration Dynamics. During the period immediately following independence, concentration ratios fell across industrial sectors. This decline coincided with a more rapid growth of industrial output, compared with the period after the mid-sixties, and with less restrictive regulatory policies. Table A.12 indicates that the four-firm concentration ratio fell by an average of 10 percent during the 1953-63 period. During 1963-68, the shares of the top firms do not appear to have changed significantly, falling on average by 0.2 percent.

2.16 More recent data on changes in firm concentration over time suggest that in the period of slow growth and restrictive regulatory policies since the early 1970s, the structure of Indian industry has been characterized at best by stability and often by an increase in concentration. Table 2.5 presents the changes in four-firm concentration ratios for selected products in the 1976-84 period. The average change in concentration across industrial segments was -0.7 percent, indicating a slight fall in concentration over the period. For the nine industries where concentration fell by more than 10 percent between 1976-84, five still had four-firm ratios above 60 percent in 1983-84. The stability of these product markets, particularly during the period of implementation of the MRTP Act, supports the observation that policy-induced barriers to entry and growth of large firms have not reduced high levels of concentration and may in fact have contributed to its persistence.

2.17 The evidence presented above is unequivocal in suggesting that the degree of industrial concentration in India is very high. In the absence of competitive forces, a high degree of concentration is a *prima facie* indication that firms are in a position to exert market power. In India's protected industrial environment, a concentrated structure while

Table 2.5: CHANGES IN FOUR-FIRM CONCENTRATION RATIOS
FOR SELECTED PRODUCTS, 1976-84

Product Category	4-Firm Conc. Ratio, 1976	4-Firm Conc. Ratio, 1983-84	Change
Acrylic Fiber	100.0	100.0	0.0
Newspaper	100.0	100.0	0.0
Pig Iron	100.0	100.0	0.0
Jeeps	100.0	100.0	0.0
Motorcycles	100.0	97.0	-3.0
Cars	100.0	100.0	0.0
Three-Wheelers	96.0	93.0	-3.0
Malted Foods	98.0	97.8	-0.2
Cigarettes	96.3	95.7	-0.6
Commercial Vehicles	93.4	95.0	1.6
Soaps	85.7	94.0	8.3
Soda Ash	100.0	91.2	-8.8
Polyester Staple Fiber	100.0	89.7	-10.3
Boilers	80.2	87.7	7.5
Milk, Baby Products	78.6	84.3	5.7
Nylon Industrial Yarn	100.0	84.2	-15.8
Detergents	88.4	82.0	-6.4
Dry Cells	66.1	80.2	14.1
Viscose Fiber	69.0	79.9	10.9
Ball/Roller Bearings	75.6	74.3	-1.3
Cement Machinery	88.6	72.5	-16.1
Dyes	75.1	71.7	-3.4
Polyester Fiber	88.3	71.6	-16.7
Electric Motors	48.1	68.1	20.0
Nylon Fiber	82.0	64.5	-17.5
Auto Tires	35.8	61.1	25.3
Auto Tubes	50.7	60.2	9.5
Agricultural Machinery	54.0	56.1	2.1
Textile Machinery	42.4	53.4	11.0
Chem/Pharmaceutical Machinery	42.3	52.5	10.2
Cement	59.6	41.2	-18.4
Vanaspati	26.1	29.9	3.8
Paper Products	42.5	28.7	-13.8
Jute Textiles	17.4	25.0	7.6
Drugs, Pharmaceuticals	20.7	18.4	-2.3
Steel Pipes, Tubes	34.4	16.1	-18.3
Ferrous, Castings, Forgings	25.5	13.0	-12.5
Sugar	3.6	6.7	3.1
Total Average Change in Concentration			-0.7

Sources: Center for Monitoring the Indian Economy, Markets and Market Shares, Bombay, 1983 and 1986; sector reports.

increasing the likelihood of successful oligopolistic coordination, enables firms with high market shares to attain high rates of return without a corresponding effort in cost reduction and quality improvements. Such conservative behavior is observed across industrial sectors (see section III), and has had an adverse impact on technological progress and in the growth of industrial productivity in India.

2.18 It is important to stress that the problem is not necessarily of a few firms dominating a significant proportion of individual markets. In view of the relatively small size of the domestic market, the predominance of few producers might be quite justified on scale considerations. In fact, in areas such as synthetic fiber, synthetic yarn, fiber intermediates (caprolactum, TPA, ethylene glycol, etc.) and in many other chemical and petrochemical segments, efficient production would require fewer plants and fewer firms (as most are single-plant units), leading therefore to an even higher degree of concentration. In some cases, even a single plant would have been inefficient by international standards (as, for example, with acrylic staple fiber). Thus the issue is not so much the degree of concentration per se but the extent of protection from competition that most firms enjoy. Improving industrial performance necessarily involves the removal of regulatory barriers to growth and competition, in order to stimulate firm mobility and expansion both in relatively concentrated and atomized markets. Depending on the cost-minimizing configurations of the subsector, the structural outcome of such measures could be either a higher or a lower degree of concentration.

C. Plant Size

2.19 Licensing constraints on plant size for firms of all sizes, the encouragement of small-scale entry in industries with significant scale economies and the limited size of a domestic market protected by high trade barriers have led to the proliferation of plants with less than economic scales of production. In addition, public sector enterprises were often encouraged to expand output by building additional (although not necessarily economic) plants in "backward" areas. Table 2.6 indicates that average plant size in India is below international norms for nearly every product covered by the Vol. II studies. Although the largest plants in many industries, including cement, nitrogenous fertilizers and steel, are now being built to conform with minimum efficient scales, average plant sizes are below international norms.

2.20 In the paper industry, for example, the number of small and medium-sized mills rose from 30 percent to 50 percent of total installed capacity between 1979 and 1985, in response to licensing and fiscal policies implemented in 1979 to promote entry by small units and to limit the growth of other firms. In the cement industry, a similar policy promoting the growth of mini-plants was also introduced, although the growth of these plants has not been as significant due in large measure to the competitive pressure from large entrants and incumbents. In the steel

Table 2.6: AVERAGE PLANT SIZE, 1984-85
(000 Units/Year)

Industrial Sector	India	International Efficiency Standards (IES)
Cement	450 tons <u>a/</u>	1,000 tons
Fertilizers (Ammonia)	186 tons <u>b/</u>	300-450 tons
Steel		
Integrated Salable Plants	980 tons <u>c/</u>	1,000-2,500 tons
Mini-Plants	29 tons	500 tons
Electronics		
Color TVs	22 units <u>d/</u>	2,000 units
Components	19,000 units	500,000 units
Cathode Ray Tubes	3.4 units	500-2,000 units
Film Capacitors	39,250 units	500,000 units
Ceramic Capacitors	47,500 units	500,000 units
Integrated Circuits SS1/MSI	2,500 units	5,000-200,000 units
Pulp and Paper	9.9 tons	> 25 tons
Automotive Sector		
Cars	37 units <u>e/</u>	250 units
LCVs	10 units	250 units
HCVs	15 units	30 units
Bicycles	> 1,000 units	> 5,000 units
Telecom Equipment		
Telephone Instruments	185 units	200 units
Cables	500 units	2,000 units
Switching Equipment	500 units	1,000 units

Source: Sector reports.

a/ 535 tons, excluding the mini-plants.

b/ 70% of capacity is in plants whose size is inferior to IES.

c/ 1981 data.

d/ 86 firms in the organized sector and 368 in the small-scale sector produce an annual total of 10 million.

e/ Total capacity of this segment is 40% of IES.

industry, mini-plants jumped from 11 percent of total crude steel production in 1977 to 23 percent in 1983. Mini-steel plants have been successfully developed in the United States and Japan; however, average plant sizes in Japan for mini units are twenty times those in India.

2.21 In the electronics industry, small-scale reservation policies have resulted in suboptimal plant sizes. In consumer electronics, there are 20 units in the organized sector and over 3,000 units in the small-scale sector. Although about 70 single-plant firms account for two-thirds of production, the annual production of the leading firms is less than the monthly output of leading firms in the international market. Large South Korean firms produce between two and three million color TVs annually on a per plant basis, while in India the 86 firms in the organized sector and 368 in the small scale sector produce an annual total of only 10 million units. A similar picture emerges in the components industries which produce CRTs, capacitors and integrated circuits.

2.22 The phenomenon of a highly concentrated structure combined with the existence of many plants producing at levels below economic scales is also present in the automotive sector. Recent estimates of minimum scale requirements are in the range of 250,000 to 350,000 units annually for automobiles, yet until 1984, India's two major car manufacturers were constrained by licensing policies to produce less than 30,000 units each. By 1985, total licensed capacity in India's five-car manufacturers was only 185,000 units, yielding an average of 37,000 units each, and the licensed capacity of the largest firm was only 100,000. In light commercial vehicles, which employ a mass production technology similar to cars, the annual output in India of 34,000 units in 1985 was also small by international standards. Total installed capacity for these vehicles, which is now 87,500, is fragmented among 9 firms, with the licensed capacity of the largest at 40,000 a year. Capacity in the components sector is similarly fragmented. There are, for example, 14 licensed manufacturers of clutch plates and 7 licensed manufacturers of carburetor in India, compared to 4 and 3 in Japan.

2.23 The largest segment of the Indian automotive market is in two-wheel vehicles, where plant scales of production by the largest two-wheel firms are close to international levels. Bajaj Auto Limited, whose production in 1984 was close to 200,000 units, is the second largest scooter manufacturer in the world. Nevertheless, there are a large number of firms in each segment of the two-wheel vehicle market whose scale of production is small. Seven single-plant firms produce scooters, with the 1984 output of the smallest two less than 5,500 units each. There are six motorcycle firms; the 1984 sales of the smallest reached only 273 units. Of the six moped manufacturers, the smallest three sold fewer than 10,000 units each in 1984. These small, inefficient producers survive because capacity licensing and MRTP policies constrain the expansion of the larger units while many segments in the automotive sector are characterized by overall excess demand (as evidenced by waiting lists of several years for products of the better firms).

2.24 The garment industry illustrates that exit barriers (together with the cost and quality of cloth--see para 2.48) have also contributed to fragmentation of production by acting as a deterrent to the establishment of large scale units. Garment manufacturing for both the domestic and export markets is almost exclusively undertaken in small-scale units. Although small-scale reservation policies apply to the domestic market, producers for the export market have no constraints on size. Nevertheless, export-oriented units generally avoid assembly operations based on larger scale, centrally located units. By operating a "putting out" system for material cutting, and using third party fabricators to assemble the garments, producers maintain flexibility in production and avoid the potential sunk costs associated with exit regulations. In a dynamic and volatile industry such as garment exports, the risks of failure after a few years motivate firms to stay small to ensure flexibility with respect to closing.^{35/} Yet producers in other Asian countries, including Sri Lanka, Bangladesh and Hong Kong, have shown that production costs in garment assembly can be substantially reduced by larger scale production units using flow production methods.

D. Product Specialization

2.25 Product Mix. In a number of industries, output and price controls, product-specific industrial licenses and other regulatory policies have led to a product mix at the firm level which has not reflected the composition of, or changes in, consumer demand. In cement, for example, levy prices have failed to differentiate adequately between high quality PPC cement and Ordinary Portland cement. Since the government-mandated price difference between the two types of cement was inadequate to cover differences in production costs, manufacturers have increasingly concentrated on the cheaper varieties (Table A.13).

2.26 In the paper industry, price controls have reduced the profitability of printing and writing paper. Consequently, their production has declined as a proportion of total industry output, from 56 percent in 1971 to 45 percent in 1983. The reduced supply of higher quality paper has led to excess demand and the formation of a black market for price-controlled paper products.

2.27 For many product categories, including the automotive sector, product-specific industrial licenses have prevented firms from shifting output mix. In addition, the often stringent allocation of capacity licenses in accordance with domestic demand projections has led to shortages and motivated firms to seek licenses for a broad range of

^{35/} In the late 1970s, several export manufacturers in fact attempted to operate with central assembly units, but they have since reverted to small-scale assembly. The difficulties experienced by these manufacturers in gaining permission to close large scale assembly units outside the Kandla Free Trade Zone remains a major deterrent to others who may consider establishing such units.

products, both to achieve plant-level economies of scope and as a strategic measure to block the entry of potential competitors. The result in the automotive component sector has been a lack of horizontal specialization and a production range in most component manufacturing firms that is costly in terms of product-specific scale economies.

2.28 In the textile and garment industries, organized spinning and weaving firms have been required to produce specified amounts of low quality yarn and fabric, and garment manufacturers have been unwilling (because of exit constraints) to achieve scales that would allow for mass production of standard export items. In textiles, producers have been unable to shift to synthetic fabrics and yarns because of restrictive licensing policies regarding the production of synthetic fabrics. Since domestic demand has shifted toward synthetics, incumbent cotton textile manufacturers have experienced slow growth. While many textile mills have been unable to maintain profitability because of constraints on product mix, domestic synthetic fabric manufacturers are able to exploit a protected and profitable oligopolistic market.

2.29 Horizontal and Vertical Specialization. The structure of production in many subsectors is characterized not only by an inappropriate product mix, but also by insufficient horizontal specialization and excessive vertical integration. Often, too many types of products are produced locally (in view of the small size of the domestic market and the lack of substantial exports) and an excessive proportion of inputs manufactured in-house.

2.30 There are several reasons for the insufficient degree of specialization. First, highly protective trade policies designed to encourage self-sufficiency have meant that any item that could be produced in India would be so produced with reasonable levels of financial profitability. As a result, the levels of import penetration in India are low in comparison with other countries (Table 2.7). Import ratios for India are low particularly when market sizes are taken into account. India's manufacturing value-added at US\$28.4 billion (1984) is not much larger than South Korea's (US\$23.6 billion), is substantially smaller than China's (US\$94.6 billion) and is only 7.7 percent of Japan's (US\$368.5 billion). India's manufacturing imports as a percentage of GDP are proportionately much smaller than those of comparator countries with larger economies and thus lower specialization requirements (on efficiency grounds).

2.31 Second, a number of firms manufacture intermediate inputs for in-house consumption to ensure product quality, even though buying from external sources would be more economical. This is often observed for products with low fault tolerance and that require precision manufacturing methods. Many of these products are reserved for small-scale industry, in spite of the scale of the technological efforts and resources involved in producing them.

2.32 A final reason for the specialization patterns observed in India is related to the policy of industrial licensing. In order to avoid dominance of individual firms within a product category, it has often been easier for a firm to obtain a license for new product lines than for expansion within the same product category (see Chapter I, para 1.18). This has

stimulated excessive horizontal diversification in the machine tools, electronics and other subsectors.

Table 2.7: IMPORT RATIOS: 1966-83

	Merchandise Imports as % of GDP			Manufacturing Imports as % of GDP		
	1966	1975	1983	1966	1975	1983
India	6.3	6.2	6.7	4.4	3.5	5.3
China	3.3	5.1	6.9	2.4	4.9	6.5
Japan	6.9	8.0	9.8	3.2	3.8	3.8
S. Korea	18.0	31.1	32.5	14.9	21.0	20.6
Low Inc Asia a/	13.9	13.7	19.9	12.2	9.8	16.5
Developing Countries	11.9	17.1	18.6	10.2	14.2	14.3

Source: INDSP Database.

a/ Low income Asia includes Afghanistan, Bangladesh, Burma, Nepal, Pakistan and Sri Lanka.

2.33 In the organized sector of the Indian machine tools industry, even firms with a small proportion of the total market and very small volumes produce several different types of machine tools. Kirloskar Brothers, for example, has a 2 percent share of the total machine tools market but manufactures lathes, grinders, milling machinery and drilling machinery. In contrast, machine tools in Taiwan (province of the People's Republic of China) and South Korea are manufactured by firms specializing in one or two types of general purpose machine tools, such as lathes, grinders, and drilling or milling machines. This specialization in few products has helped these countries to attain a competitive edge in product pricing.

2.34 India produces a wide array of products in professional and (to a lesser extent) consumer electronics. While imports of electronics in India are approximately 7-8 percent of domestic production, they are greater than 50 percent in South Korea, which has concentrated on a smaller number of products to enable it to reap scale economies and compete in world markets.

III. The Impact of Regulatory Policies on Firm Behavior

2.35 The previous section has shown that the structural impact of regulatory and trade policies on industrial performance is potentially significant, insofar as such policies have adversely affected the size distribution of firms, their scale of operations and degree of specialization. It also suggested that regulatory controls and trade protection in

an environment characterized by high levels of concentration has adversely affected the conduct of management. This latter proposition is confirmed below as this section attempts to assess the extent of competitive activity in Indian industry and the implications for technological and market behavior.

A. Regulatory Policies and Competitive Activity

2.36 Chapter I described a number of binding barriers to competition. MRTP restrictions have tended to protect large firms from other similarly large producers that could actually threaten their market position. Small units, on the other hand, although largely free from restrictions, have not generally had the resources to challenge large incumbents. Conversely, reservation and other policies have protected small firms from competition by larger units. Finally, both large and small firms have been sheltered from international competition through tariff and non-tariff barriers and by the anti-export bias of the trade regime.

2.37 The degree of market competition among large firms may be assessed from indications of their changing market shares. Table 2.8 shows the results from firm-level data of the top eighty firms in 14 industries over 1974-84. In each industry, the average absolute change in market share for firms was computed. The fluctuations in market shares are taken as an indication of competitive activity.

Table 2.8: CHANGES IN FIRM-LEVEL MARKET SHARES, 1974-83

Industry	Average Change in Firms' Market Share
Plastic Products	3.2
Pesticides	4.8
Two-Three Wheelers	2.9
Tractors	3.7
Gears and Pumps	4.0
Mopeds	7.5
Motor Cycles	2.6
Machine Tools	2.8
Cables and Conductors	1.8
Commercial Vehicles	2.5
Switch Gears	9.2
Compressors	7.3
Automobiles	8.2
Trucks and Buses	2.1

Source: Balance sheets of individual firms.

2.38 For the majority of the sectors shown, the average change in an individual firm's market share over 1974-84 was below 5 percent annually. Since most of the sectors examined are characterized by high four-firm concentration ratios, these changes are relatively small, denoting the absence of significant competitive activity. Even in cases where the average change in market shares was high, as with autos, they do not necessarily reflect competitive behavior. Excess demand in the auto segment ensured that the two main car producers could sell all their output. Changes in market shares in this case reflected changes in the constrained output levels of individual firms.

2.39 There are other indications of weak competitive activity. Although entry by small units has been encouraged to counter the market power of larger firms, they have usually failed to provide effective competition. In the cement industry, incentives were introduced in 1979 to promote the growth of mini plants both to provide a balance to the large units and to permit exploitation of smaller limestone deposits. Yet, because of significant scale economies in cement production, the small units have not been competitive with the larger mills, in spite of the exemptions from price controls and the benefits of higher free market prices. Complete liberalization of the industry through elimination of the dual-pricing structure would probably lead to both entry by large units and exit by many small units.

2.40 In the paper subsector, where similar incentives for entry by small producers have led to a proliferation of plants far below optimal economic scales, the smaller units have also been incapable of competing with the larger plants. Lack of captive power sources and chemical recovery facilities, the inability to obtain raw materials reliably, and an insufficiently trained management have led to low levels of capacity utilization, poor profitability and industrial "sickness."

2.41 In the automotive sector, large firms with significant market shares often operate at high levels of capacity utilization and have lengthy waiting lists for their products. Bajaj, with a 62 percent market share in scooters, until recently had a waiting list of seven years, despite the presence of eleven other scooter manufacturers. With greater financial assets and managerial experience, such firms usually have wider sales and servicing networks, and their products do not have the quality problems characteristic of the output of smaller firms.

2.42 Finally, small producers cannot compete effectively with large firms; they are nonetheless protected from competition from those firms through small-scale reservation and other policies. In electronics, reservation of some consumer electronics products for small-scale producers shelters these firms from competition by larger units with superior technological and marketing skills. In the paper industry, where paper conversion products such as boxes and packing materials are similarly reserved for small scale producers, entry by large manufacturers (such as Ballarpur), if allowed, would undoubtedly provide significant competition.

B. Regulatory Policies and Management Behavior

2.43 A corollary of the proposition that firms are protected from competition is that their markets are captive. In some subsectors, the Government is the main or sole buyer, and often a symbiotic relationship develops between producer and procurement agency (as in telecommunications). More often, captivity is a product of various policy-determined barriers to mobility, growth and competition and generates significant economic rents. As an indication, in 1981-82, net pretax profits in India's manufacturing sector comprised on average 20.8 percent of value-added, whereas in S. Korea it was 3.5 percent in 1981 (Table A.14). From the point of view of industrial performance, the issue here is that managers perceive the Indian market as captive and act accordingly. This attitude shows up, for example, in the intensity of technological efforts and in their market conduct.

2.44 Technology Behavior. Protection from both external market forces--through import competition or export rivalry--and internal competition has fostered conservative technological behavior. The majority of R&D spending in India is conducted by the state and central governments (accounting for about 85 percent of R&D), and research intensities (defined as the ratio of R&D expenditure to sales revenue) are moderately low in both public and private sector firms.^{36/}

2.45 Although there are significant exceptions (as in the non-electric machinery industries), conservative technological behavior is, indeed, an economy-wide phenomenon. In the steel industry, the public sector plants essentially employ technologies that are three decades old. Raw material blending facilities are inadequate, coke ovens and sinter plants have old designs, and 53 percent of steel-making capacity is based on open-hearth furnace (OHF) technology, instead of the more efficient basic oxygen furnaces. In contrast, the share of OHFs in developed countries range from nil (Japan, France and UK) to 8 percent (US). For selected developing countries, the share of OHFs is also lower: China (31 percent), Philippines (23 percent), and Argentina (22 percent). The telecommunications industry, which is dominated by public sector enterprises, is also behind world standards. ITI is one of the few remaining producers of first and second generation switching equipment, whereas fourth generation digital electronic technology dominates world sales. HCL is behind most firms in other countries in converting from paper-insulated, dry-core cables to plastic-insulated, jelly-filled cables.

2.46 In the cement, textile and paper industries, the impact of price and production controls on investment has had derivative effects on the level of technology. Entry and expansion in the cement industry (as measured by changes in production capacity), although vigorous in the 1960s, declined between 1971 and 1979 to an average rate of only 1.8 percent a year. After the price revisions, which began in 1979 and culminated

^{36/} In 1982-83, the research intensities for the public and private sectors were 0.58 and 0.68 percent, respectively. These percentages are small even if the major focus is on technology transfer and adaptive R&D.

in a partial price decontrol in 1982, expansion of capacity increased. Nevertheless, in the long run the controls on investment have contributed to lags in adopting energy-efficient processing plants. The Indian cement industry has a higher proportion of plants employing outdated technology than do other developing countries. Wet-process plants, which are more costly and energy-intensive than dry-process plants, accounted for 42 percent of production in 1985, in comparison to 10 percent in Turkey (1978), 21 percent in Tunisia (1981), and less than 5 percent in developed countries such as the Federal Republic of Germany (West Germany).

2.47 Price and distribution controls in conjunction with licensing policies have also significantly affected the level of technology in the spinning and weaving sectors of the textile industry. In contrast with the freeze on capacity imposed on large mills in the weaving sector, licensing policies in the spinning sector were liberal and led to an increase in the number of new spinning mills that averaged 5 percent annually over the entire 1950-79 period. The creation of new capacity has led to substantial technological change. Thus the pure spinning mills, in comparison to the more heavily regulated composite mills, operate with a higher percentage of improved machines in all five areas of spinning operations. In the pure spinning mills, only 12-15 percent of the machinery in the blowroom and carding sections is now conventional, in contrast to 43 percent in the blowroom and 18 percent in the carding sections for composite mills. Nevertheless, even in the new spinning mills, a large percentage of capacity is still based on conventional machinery. To ensure adequate yarn to the handloom sector, all spinning mills are required to supply 50 percent of yarn production to the handloom sector in hank form, a requirement that has confined half the spinning capacity to the production of coarse yarn. This bias has perpetuated technological obsolescence, since new technologies inevitably imply the production of stronger yarn in blended and finer counts of cotton.

2.48 Compared to spinning mills, the weaving mills are technologically much further behind. Of the 210,000 looms in the organized sector, barely 53,000 (25 percent) are automatic, and most of them are simple; the total number of shuttleless looms is only 464. The technological backwardness of weaving operations is surprising, since India's textile machinery industry developed fairly early in the sixties, and manufacturers reached technology agreements with the leading manufacturers of Switzerland and West Germany. Yet the machinery industry has been reduced to the production of conventional looms and ancillaries, spare parts and replacements. On account of technological obsolescence, the cost of cloth manufacture is relatively high and the percentage of defect-free (sound) cloth is low. Data show that only 70 percent of fabrics are "sound", and the rest are cut and sold as short pieces (fents, rags and chindies). This has ultimately contributed to the fragmented nature of garment manufacture. Small-scale units buy and stitch these short pieces at substantially lower costs, and hence are able to sell at considerably lower prices as compared to "mechanized" garment manufacturers who require large length of fabrics for mass cuttings.

2.49 In the paper industry, price and production controls in conjunction with rising input costs and slack demand have reduced investment. The growth rate of paper production declined from over 11 percent annually in

the 1950s to as low as 1.4 percent between 1981 and 1983. Because of the lack of investment in expansion and modernization, the majority of large paper mills is quite old and have undergone little technological upgrading. Most units operate with equipment that is past its operating life cycle and is in urgent need of major overhaul or total replacement. In many units, even the installation of equipment or production systems which are considered as standard or even obsolete in developed countries would be a major step toward modernization.

2.50 The nature of the lag in technological progress is most evident in the electronics industry, where the international technological frontier has shifted rapidly. Many segments of the Indian electronics industry are still in the infant stage. In the semi-conductor industry, one firm is producing simple chips for pens and watches, although there are plans for the production of 64K RAM and 16 bit microprocessors. Reflecting the lack of development of consumer electronics, India does not yet have the technological capability to produce either VCRs or picture tubes for color TVs. The constraints on foreign technology and equity, in conjunction with the emphasis on self-sufficiency and indigenous technology development, have contributed to the fact that India's electronics industry lags behind advances in the international technology frontier. Both the number of foreign collaborations and the share of transnational corporations in electronics output were low in the seventies: between 1974 and 1979, there were on average 11 foreign collaborations annually, and the share of TNCs was 2 percent in 1977.^{37/}

2.51 Outdated technology in electronics has had repercussions on the machine tools industry. Among 35 machine-building countries, India ranks eighteenth in terms of production. Although the industry produces a wide range of general purpose machine tools and conventional products, numerical control (NC) and computer numerical control (CNC) machines are only produced in small numbers. In contrast, NC/CNC machines have been rapidly replacing traditional machine tools in other countries since the mid-'70s. A sample of seven OECD countries showed that the share of CNC lathes in total production of lathes grew from 28 percent in 1975 to more than 50 percent in the early eighties. In Taiwan, the share of CNC lathes increased from about 7 percent in 1979 to about 20 percent in 1981. The slow response by producers to this changing global pattern has resulted in slower growth rates for domestic production and a surge in imports of sophisticated machine tools since the early 1980s.

2.52 Market Conduct. Certain regulatory policies have directed management's conduct to avoiding competition. The combination of licensing restrictions and price controls has, for example, substantially decreased the degree of price competition in a number of sectors, including fertilizers and steel. Regulatory policies have also induced management to adopt certain forms of anti-competitive and strategic behavior, particularly as regards preemptive capacity and technology licensing. Firms have sought to

^{37/} In South Korea, although foreign firms and joint ventures have played a minor role in consumer electronics, their share in the total production of components was 57 percent and for industrial electronics 39 percent in 1983.

deter entry and expansion by competitors by blocking applications or applying for licenses they do not intend to use (see Chapter I, para 1.13).^{38/} Firms have equally sought to restrain access to markets by preemptive technology licensing, appealing to the indigenous angle clearance: if the technology is already available in India to at least one producer, then there is no need to issue further licenses.^{39/}

IV. THE IMPACT OF REGULATORY POLICIES ON INDUSTRIAL PERFORMANCE

2.53 The linkages between policies and performance are usually not directly observable (the dramatic increase in production in the cement industry after the price decontrol in 1982 is one exception). Most often, the connections are of a roundabout nature, that is, mediated by the impact of policies on the structure of industry and behavior of firms. The previous sections have been an attempt to establish those connections. It was shown that differential mobility and growth barriers for firms of distinct sizes contributed to industrial concentration, led to fragmentation of capacity, as well as excessive horizontal diversification and vertical integration. It has also been suggested that regulatory policies have sheltered markets from competitive turbulence, fostering conservative technological and market behavior.

2.54 India's deteriorating industrial performance is explained not only by regulatory policies, but also by the trade regime. Its anti-export bias contributes to the small degree of intra-industry specialization and is a disincentive to enter the international market, reinforcing barriers of a regulatory nature that restrict the expansion of firms within the domestic market. The combined effect is substantial losses in economies of scale and in the potential for growth.

2.55 The additional significance of the trade regime is that it is a major barrier to competition. It reinforces the protection afforded to domestic producers by internal regulatory policies. As a barrier to import

38/ A number of MRTP companies applying to manufacture a new generation of pesticide were stalled for four years by protests to the DCA by other MRTP and FERA companies. Their arguments included: (1) the pesticide concerned was so effective that existing manufacturers would find their products obsolete and be forced to reduce employment; (2) the pesticide was too dangerous and required a 10-15 years waiting period; and (3) a more modern version of the pesticide was already under development and the government should wait to license the new version.

39/ Vehicle manufacturers, for example (particularly those with Japanese partners) demanded that Indian component manufacturers supplying them enter into more than one new collaboration agreement to assure timely supply of components of acceptable quality. The component manufacturers complained to the government about this practice, and in most cases multiple imports of a particular technology or multiple collaborations by component firms and the same Japanese partner were rejected.

competition, the trade regime is an obstacle to specialization and gains in allocative efficiency. It also contributes to poor managerial efficiency, by removing the threat of competitive imports. Particularly in sectors where the technology of production requires scales that are large relative to the internal market, the lack of an import threat removes the main disciplinary force that "natural" monopolies or oligopolies face.

2.56 The Indian trade regime has also insulated producers from export rivalry. In many countries, this competitive force has been critical in inducing a progressive technological behavior, by exposing firms to changes in design and production methods occurring at the technology frontier. This force complements and reinforces the role of internal competition, which stimulates technical change specifically by fostering user-producer interaction (facilitated by geographical proximity).

2.57 The deterioration in India's industrial performance seems to be the product of a number of factors, including the slowdown of public investment and problems of public sector enterprise management; financial sector policies which failed to deepen India's capital markets and introduced marked distortions in the allocation of credit; and labor policies, which have encouraged the segmentation of the labor market.

2.58 Yet poor industrial performance is also, to a significant extent, the joint outcome of regulatory and trade restrictions on growth, mobility and competition. Their impact will be analyzed first, by examining manufacturing growth and changes the structure of GDP. In comparison with other developing countries, India's manufacturing sector has had lower growth rates and accounts for a smaller proportion of GDP. Second, productive efficiency is assessed using measures of static efficiency such as prices and rates of capacity utilization, combined with measures of dynamic efficiency such as total factor productivity (TFP) growth. Indian industries are characterized by low levels of capacity utilization, high prices and, in cross-country comparisons, low rates of TFP growth. Third, export performance is used as a measure of international competitiveness. High prices in combination with limited incentives to export have led to declining export shares for a number of manufacturing sectors.

A. Industrial Growth and Structural Change

2.59 Industrial output grew relatively rapidly between 1950 and 1965 but has slowed down considerably since the mid-sixties.^{40/} The latter period has also coincided with the implementation of industrial policies which have been more restrictive regarding the entry, growth and exit of industrial firms. The MRTP Act, which restricts entry and growth of large

^{40/} Recent empirical work by Isher Ahluwalia examines industrial growth from 1956-57 to 1981-82, and documents a significant decline in growth of industrial output and productivity, and an increase in capital-output ratios, in the period since 1965-66. See Industrial Growth in India, Stagnation Since the Mid-Sixties, op. cit.

firms, came into effect in 1970, and the reservation of several hundred products for small scale firms was initiated in the late 1960s.

2.60 Annual growth rates for manufacturing value-added, total investment and infrastructural industries are presented in Figures 2.1 to 2.3.^{41/} From 1966 through 1980, manufacturing growth rates in India were below those of developing countries. This pattern is also evident in total investment growth and in the expansion rates of infrastructural industries (which include electricity, gas and water).

2.61 Table 2.9 shows the structural changes in the composition of GDP for India and other countries over the 1966-83 period. It has been observed that in the process of development, countries often go through two stages of structural change. In a first phase, agriculture's share of GDP falls and manufacturing output rises. In a second, the share of agriculture continues to fall, but that of industrial output in GDP, after reaching the 25-35 percent plateau also starts to decline as the share of services increases.

2.62 During the 1966-83 period, India witnessed a shift in the composition of GDP away from agriculture and into services. The share of services rose from 31.7 percent to 40 percent, while the share of output in manufacturing increased slightly from 14.3 percent in 1966 to 14.9 percent in 1983. It is noteworthy that in India, the share of manufacturing output in GDP, although still relatively small, had already begun to decline--from 17 percent in 1978 to 14.9 percent in 1983. China, for example, increased its share of manufacturing from 30.3 percent to 37.5 percent of GDP between 1966 and 1978, and South Korea increased its share of manufacturing from 18.6 percent to 27.8 percent of GDP, before they both began to decline. With 36 percent of GDP devoted to agriculture and only 14.9 percent devoted to manufacturing, the observed changes in the composition of Indian output toward services indicate that growth was slowed when the manufacturing sector still had the potential for fast expansion and an increasing share of GDP.

B. Regulatory Policies and Economic Efficiency

2.63 Regulatory and trade policies have had an adverse impact on technical, allocative and managerial (or x-)efficiency. First, technical efficiency has been affected by an excessive degree of fragmentation and insufficient specialization. These structural deficiencies have precluded firms from reaping available economies of scale and accumulating significant technological capabilities. Second, trade restrictions and regulatory barriers to mobility have slowed down structural change, with an adverse impact on allocative efficiency. Third, the quality of management has suffered in an environment characterized by protection from competition and captive markets. Weak managerial conduct is revealed by low levels of capacity utilization and a slow moving technological frontier. Technical, allocative and x-inefficiencies are difficult to disentangle. Their joint effect may be observed in the low rates of capacity utilization and productivity growth, and in the high price structures, with the consequent loss of international competitiveness.

41/ The growth rates were calculated using least squares estimates.

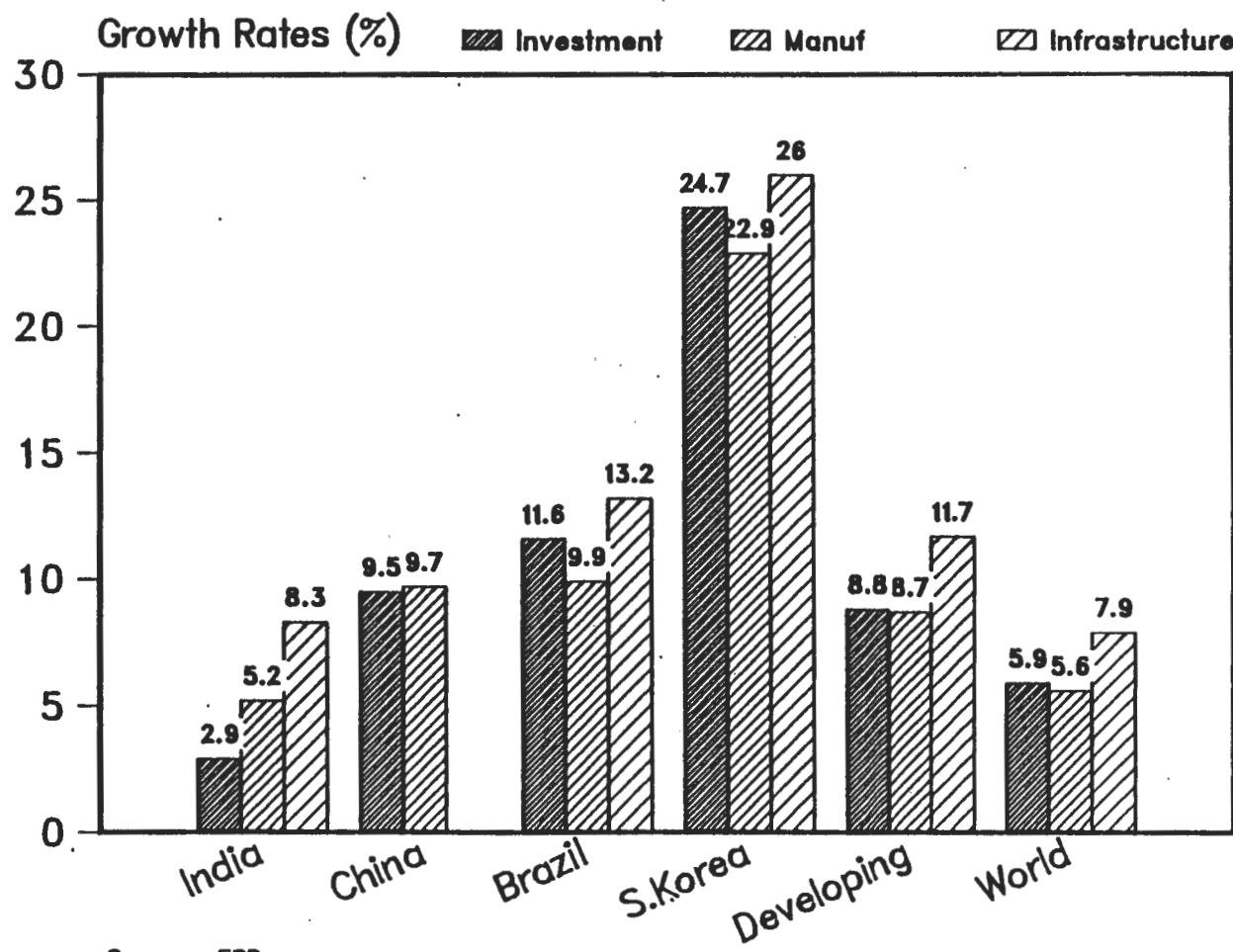
Table 2.9: STRUCTURAL CHANGES IN GDP, 1966-83

	India	China	Brazil	S. Korea	Developing Countries	World
Agriculture						
1966	47.8	37.5	15.9	34.9	28.6	9.4
1978	38.6	29.8	14.0	20.2	21.4	7.2
1983	36.1	35.3	13.4	13.9	20.8	6.4
Mining						
1966	1.0	4.4	0.8	1.9	4.7	2.5
1978	1.4	5.5	0.7	1.4	6.2	3.5
1983	3.3	6.7	1.2	1.4	7.8	4.6
Manufacturing						
1966	14.3	30.3	27.2	18.6	21.1	27.9
1978	17.0	37.5	27.5	27.8	22.2	25.6
1983	14.9	32.5	27.2	27.4	20.6	23.0
Construction						
1966	5.1	3.2	5.4	3.7	4.5	5.8
1978	5.3	3.7	5.8	7.9	5.9	6.4
1983	5.7	4.6	4.4	8.4	5.7	5.6
Services						
1966	31.7	24.5	50.8	41.0	41.1	54.4
1978	37.7	23.6	52.0	42.7	44.3	57.3
1983	40.0	20.9	53.8	48.9	45.1	60.3

Source: INDSP data base.

Figure 2.1

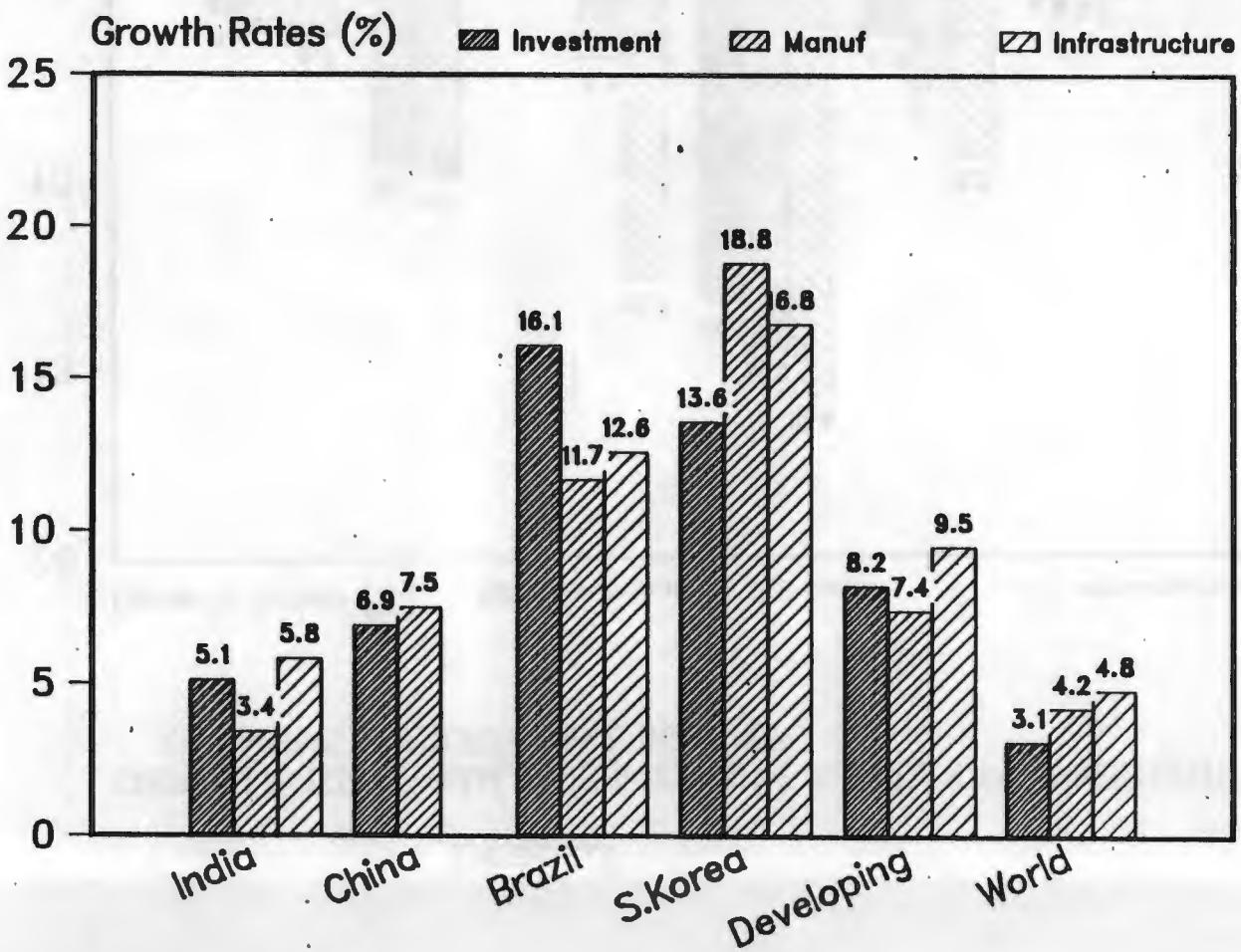
GROWTH RATES OF MANUFACTURING VALUE ADDED, TOTAL INVESTMENT
AND INFRASTRUCTURAL INDUSTRIES, 1966-70



Source: EPD

Figure 2.2

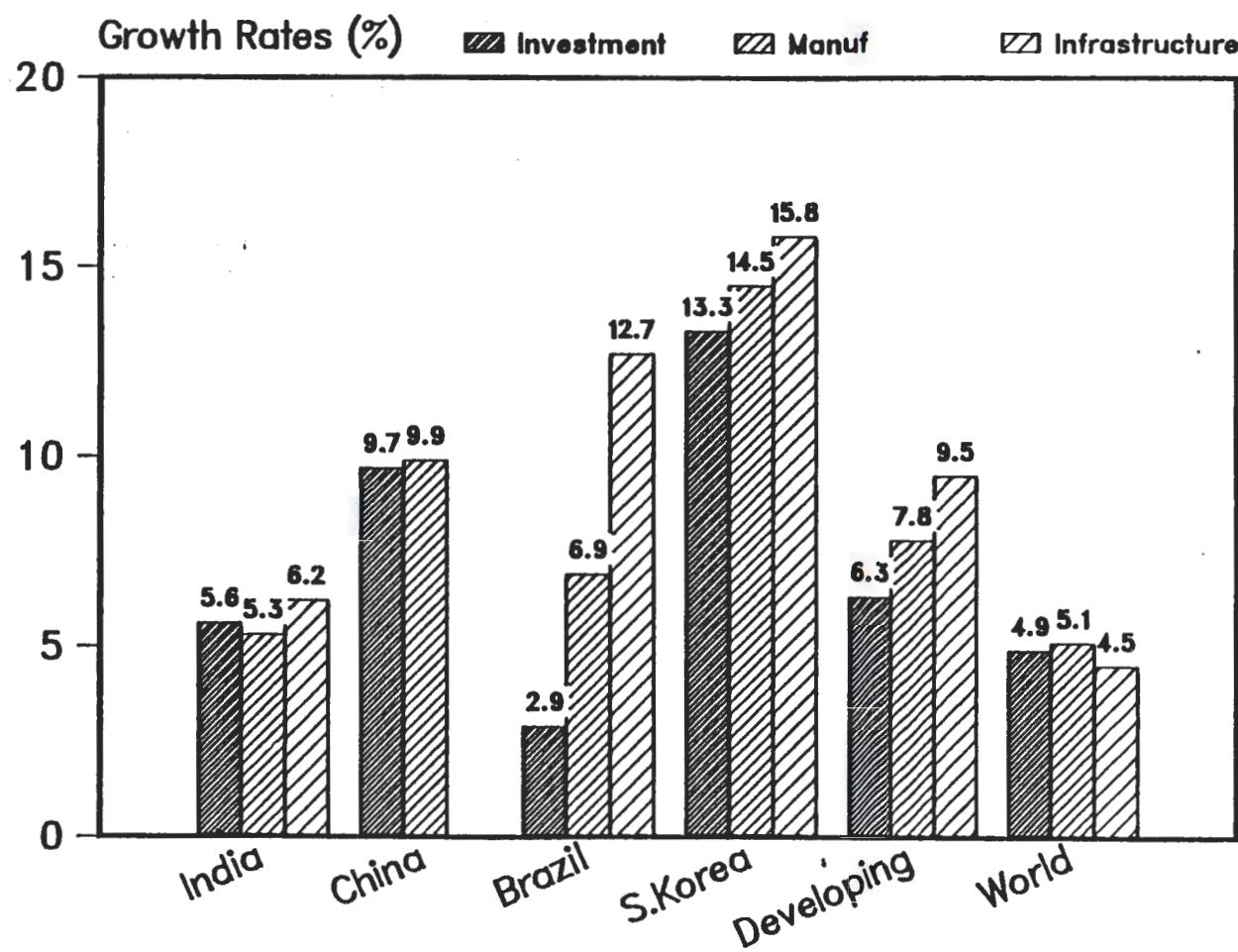
GROWTH RATES OF MANUFACTURING VALUE ADDED, TOTAL INVESTMENT
AND INFRASTRUCTURAL INDUSTRIES, 1970-75



SOURCE: EPD

Figure 2.3

GROWTH RATES OF MANUFACTURING VALUE ADDED, TOTAL INVESTMENT
AND INFRASTRUCTURAL INDUSTRIES, 1975-80



SOURCE: EPD

2.64 Capacity Utilization. The rates of capacity utilization can be used as a measure of static efficiency. For more than half the product categories presented in Table A.15, capacity utilization was below 80 percent in 1983-84. This pattern seems to be mainly related to problems of availability of infrastructural services, managerial efficiency and the implementation of price controls. Prices in controlled industries, in particular, have been set below levels that ensure adequate profits, and firms have responded by curtailing investment, including for debottlenecking and balancing, a pattern of response that has reduced capacity utilization. Table 2.10 shows the rate of capacity utilization for selected industries under price controls for 1971 through 1980. In nearly every price-controlled sector, the rate of capacity utilization was lower than average.

Table 2.10: CAPACITY UTILIZATION OF SELECTED PRICE-CONTROLLED PRODUCTS,
1971-80

Sector	1971-75	1976	1978	1980
Basic Goods	77.4	84.8	83.8	77.2
Cement	75.9	81.7	88.5	72.8 <u>a/</u>
Steel Casting	40.4	32.0	44.0	42.0
Aluminum Sheets	66.4	57.0	60.0	60.0
Nitrogenous Fertilizer	60.9	57.5	65.2	57.0 <u>a/</u>
Consumer Goods	80.1	80.9	83.3	80.1
Paper and Board	81.9	84.6	79.5	72.3
Bicycles	60.6	66.0	92.0	80.0
Vanaspati	45.6	41.0	51.0	54.0

Source: Reserve Bank of India, Report on Currency and Finance, 1982/83.

a/ Based on the financial year.

2.65 Productivity Growth. Total factor productivity (TFP) growth over the 1966-80 period has been uniformly low for all industries and slightly negative for the economy as a whole (Table 2.11). For industries accounting for about 50 percent of total value added in manufacturing, the decline in TFP was more than 1 percent annually. This is particularly significant in view of the fact that when comparing the distribution of gross output TFP growth among industries in India with 8 other countries, the rates in India were the lowest as well as the most uniform. (Figure 2.4).

2.66 The small spread and the low rates of TFP growth for the industrial sectors in India are evidence of the inability of material and human resources to shift away from low growth and productivity areas. They are

also a result of constraints on firm growth and the limited degree of competition that has restricted India's ability to adjust to a shifting international technological frontier.^{42/} Policy-induced barriers to growth and competition have reduced the incentive for product innovation and curtailed the introduction of new machinery and equipment. It has already been shown that in a large number of subsectors, much of the technology embodied in equipment is conventional or outdated (paras 2.45-2.51).

Table 2.11: TFP GROWTH RATES, 1966/67-1979/80

Industry Growth	(1) Solow Measure of TFP Growth Using Value added, 1966-67 to 1979-80	(2) Average Ratio of Value added to Output, 1966-67 to 1979-80	(3) TFP Growth Using Gross Output a/
Food	-2.4	0.10	-0.24
Beverages	-2.0	0.30	-0.60
Tobacco	-2.9	0.22	-0.64
Textiles	1.2	0.25	0.30
Footwear	3.7	0.21	0.78
Wood and Cork	-0.8	0.24	-0.19
Furniture	3.1	0.31	0.96
Paper	0.4	0.29	0.12
Printing	0.2	0.41	0.01
Leather and Fur	-2.2	0.11	-0.24
Rubber Products	-3.5	0.23	-0.81
Chemicals	-1.5	0.24	-0.36
Petroleum and Coal	2.0	0.13	0.26
Non-metallic Mineral Products	-1.8	0.28	-0.50
Basic Metals	-2.2	0.25	-0.55
Metal Products	-2.1	0.26	-0.55
Non-electrical Machinery	-0.1	0.29	-0.03
Electrical Machinery	0.9	0.27	0.24
Transport Equipment	-0.3	0.30	-0.09
Misc.	<u>-1.5</u>	<u>0.29</u>	<u>-0.44</u>
Total	-0.7	0.22	-0.15
	—	—	—

Source: Ahluwalia (1985), op. cit.

$$a/ (3) = (1) * (2)$$

2.67 Thus, the stagnation of industrial productivity in India is related not only to constraints on resource mobility, but to the presence

^{42/} B. Goldar, examining Indian cross-industry econometric evidence from an earlier study of his and the recent work of Ahluwalia, concludes that "competition and the exploitation of scale economies are two important causes of TFP growth." See B. Goldar, "Import Substitution, Industrial Concentration and Productivity Growth in Indian Manufacturing," Oxford Bulletin of Economics and Statistics, 48, 2 (1986), p. 160.

FIGURE 2.4

MANUFACTURING TOTAL FACTOR PRODUCTIVITY GROWTH SELECTED COUNTRIES

Japan (1960-73)

XXXXXX XXXX X

Argentina (1956-73)

XXXXXXX XXXX X

Mexico (1970-80)

XXXXXXX XXXX X

Korea (1960-77)

XXXXXXX XXXX X

Turkey (1963-76)

XXXXXXX XXXX X

Philippines (1956-79)

XXXXXXX XXXX X

Thailand (1963-77)

XXXXXXX XXXX X

Indonesia (1975-82)

XXXXXXX XXXX X

India (1966-80)

XXXXXXX XXX



Sources: M. Nishimizu and J. Page, "Economic Policies and Productivity Change in Industry: An International Comparison", World Bank mimeo; and estimates for India based on Ahluwalia (1985), op. cit.

of relatively few high growth areas undergoing rapid technological change, to which resources could move. Estimates of gross output TFP growth rates in the period 1966-80 strongly suggest that the economy is close to the local best-practice frontier, but this frontier has shifted very slowly over the period.^{43/}

C. International Competitiveness and Export Performance

2.68 Table A.16 shows the domestic and cif prices for selected products. While domestic prices for non-synthetic textiles, paper, cement and bicycles are roughly comparable to international prices, in many other products domestic price levels are above international levels. Low rates of capacity utilization and of total factor productivity growth are the more immediate cause of relatively high domestic prices although they also possibly indicate problems of exchange rate overvaluation. At the sub-sector level, the reports contained in volume II identify problems of inadequate scale, product mix and specialization, and the absence of a competitive drive to stimulate aggressive technological and market behavior.

2.69 Note that these price comparisons fail to account adequately for differences in product quality (although quality standards comparisons should also take into consideration the low income levels of Indian consumers and the low labor maintenance costs). The quality of both cement and paper products, for example, is much poorer than that of comparatively priced products. The texture, durability and strength of domestic paper products are all below the levels achieved abroad, a situation that in turn reduces the marketability of poorly packaged export products. Ninety-five percent of all applicants for import licenses cite poor quality as their primary reason for importing cement.

2.70 A direct consequence of price structures and quality levels that compare unfavorably with international parameters is a deteriorating export performance. Table 2.12 presents export shares for India in 1966 and 1983. While the share of China, Brazil, South Korea, and developing countries as a whole in world manufacturing exports rose between 1966 and 1983, that of India declined. The decline was particularly significant in basic metals and textiles (including garments).

2.71 The case of the textiles industry illustrates some of the problems related to the lack of international competitiveness and poor export performance which have afflicted both cotton textiles and garments.

43/ In the equation, output growth = a + b input growth, a = -.252 (.272) and b = 1.011 (.034), where b is statistically significant at the 99 percent level (the standard deviations are in parenthesis) and the goodness-of-fit measure (R^2) is .978. The coefficient of input growth is thus not significantly different from unity, a result that suggests the economy is at the (local) best practice frontier (the capacity utilization factor is disregarded in view of the length of the period) and the frontier has moved very slowly over time.

**Table 2.12: EXPORT SHARES, 1966-83
REGIONAL EXPORTS AS A PERCENTAGE OF WORLD EXPORTS**

PRODUCT	REGION									
	India		China		Brazil		S. Korea		Developing	
	1966	1983	1966	1983	1966	1983	1966	1983	1966	1983
Agri	1.9	1.4	4.6	3.0	1.1	1.6	0.2	0.7	43.8	35.0
Mining	2.5	2.3	1.2	0.2	2.3	6.4	0.4	0.3	39.7	40.4
Fuels	0.0	0.5	0.7	0.2	0.0	0.0	0.0	0.0	37.1	36.7
Food	0.9	0.6	2.0	1.8	4.9	6.7	0.0	0.4	35.6	33.0
Textiles	3.2	1.8	3.4	7.3	0.0	1.8	0.4	6.3	30.7	42.0
Wood	0.0	0.1	0.6	0.1	2.2	1.3	0.8	0.8	17.6	21.5
Paper	0.1	0.0	0.7	0.5	0.0	1.3	0.0	0.3	4.7	8.4
Chemicals	0.2	0.2	0.7	1.6	0.1	1.2	0.0	0.7	11.8	15.9
N-m Miner	0.8	0.6	1.7	1.2	0.1	0.4	0.0	1.2	24.8	23.7
Basic Met	0.2	0.1	0.8	0.4	0.1	2.0	0.1	1.8	24.8	25.0
Metal Pro	0.1	0.1	0.2	0.3	0.1	0.6	0.0	1.6	2.5	8.5
Misc.	0.4	0.5	2.7	3.4	0.0	0.3	0.5	2.3	15.1	23.0
Services	0.7	0.8	0.4	0.7	0.3	0.5	0.4	1.7	18.4	22.3
TOTAL	0.8	0.6	1.3	1.2	0.8	1.2	0.2	1.5	20.3	21.8
Agri	1.9	1.4	4.6	3.0	1.1	1.6	0.2	0.7	43.8	35.0
Mining	1.2	0.7	0.9	0.2	1.0	0.6	0.2	0.0	38.3	37.1
Mfg.	0.6	0.4	1.1	1.4	0.9	1.5	0.1	1.7	15.9	17.5
Services	0.7	0.8	0.4	0.7	0.3	0.5	0.4	1.7	18.4	22.3

Source: INDSP data base (EPD).

The textile industry has been heavily regulated. Domestic cotton yarn prices range from 70 percent to 90 percent of international values, in spite of a relatively fragmented production structure centered on power and handlooms. Were it not for a freeze on the expansion of capacity of large composite mills and controls over prices and distribution that have minimized the incentives to modernize and prevented the adaptation of product mix to changing demands, the competitive advantage in price and quality of cotton textiles would be substantially improved.

2.72 High entry and expansion barriers in synthetic fibers has on the other hand significantly limited their use. These barriers have created an oligopolistic market structure which, combined with a rising demand, confers on producers a substantial degree of monopoly power. This is further reinforced by a substantial tariff (for polyester staple fiber, for example, it is 243 percent). As a result, the domestic prices for polyester fibers and filament yarn in 1985 were 282 percent and 220 percent of cif values, respectively.

2.73 The relative prices of cotton and synthetic textiles have contributed to the difficulties of the garment industry in switching or diversifying product lines to standard and large order items based on blended fabrics. Combined with exit restrictions that have discouraged the establishment of larger units, they have brought a loss of export markets characterized by increasing quality requirements and rapidly changing demand patterns.

V. Conclusions

2.74 This chapter has been an attempt to establish the impact of the Indian regulatory environment on industrial performance. The task is not a simple one because only infrequently performance is directly affected by industrial policies. More often, the impact of regulatory policies is indirect, affecting the organization of markets and the behavior of firms. The major objective of this chapter was thus to identify and assess the structural and behavioral changes brought about by regulatory policies which have had a substantial impact on industrial performance.

2.75 A basic reason why Indian industry has been unable to adjust to a shifting technological frontier and exploit opportunities for growth are the policy-induced constraints on firm mobility, competition and expansion. Regulatory policies led to uncompetitive domestic markets within highly concentrated structures. The trade regime has reinforced the impact of regulatory policies by protecting industry from import competition and failing to stimulate export rivalry.

2.76 These policies have brought both static and dynamic efficiency losses. They are the outcome of suboptimal scales of production, excessive product diversification and vertical integration, and insufficient managerial efforts to upgrade production technology and be more responsive to new demand requirements regarding product design and quality. A substantial improvement in industrial performance will thus be predicated upon a removal of regulatory and trade restrictions on competition and growth. A discussion of this process is the object of the final chapter of this report.

CHAPTER III

AN APPROACH TO INDUSTRIAL REGULATORY POLICY REFORM

I. Introduction

3.01 The process of industrial regulatory reform in India gained momentum in the 1980s, especially after 1984. The policy changes have generally been in the direction of promoting growth and efficiency, adopting a more selective approach to public sector investment and progressively replacing physical controls with fiscal and financial instruments. In a major shift in approach, the government intends increasingly to avoid establishing specific output targets with corresponding licensed capacities to match projected demand, and it has indicated minimum efficient scales in recognition of the importance of scale economies for manufacturing efficiency. The GOI wants to move toward a policy environment that stimulates flexibility and efficiency in resource use and encourages technological upgrading and improvements in productivity.

3.02 In view of the difficulty of accurately predicting the supply response and behavior of economic agents, government policy makers have proceeded cautiously, introducing incremental changes of existing regulations. In the medium run, however, the regulatory reform will require a clearly articulated strategy to succeed. India is now at a point of transition. A substantial number of measures have been taken to stimulate firms to enter new markets, upgrade their technology and expand their output, and positive responses can be observed in some subsectors, particularly those where the regulatory changes were introduced a few years ago (see Annex I). To some degree, however, the limited nature of many of these measures has itself constrained the response of industrial firms to the new policy environment.

3.03 To prevent the regulatory reform from stalling, it is essential that the GOI conceptualize and implement a well-designed strategy of changes in the regulatory structure. This chapter discusses a specific set of measures, instruments and procedures that, by transforming the industrial regulatory policy framework, would produce a more efficient manufacturing sector, bring a positive supply response in the medium and long run and help attain some of the Government's major industrial policy objectives. These recommendations are not to the exclusion of GOI moving decisively in other areas of industrial policy, such as improving the administration of the public sector (particularly the operational efficiency of its enterprises) or strengthening credit and capital markets.

II. The Direction, Scope and Coordination of Industrial Regulatory Policy Reform

3.04 The Seventh Plan has as a "central theme" the improvement in productivity and capacity utilization, and the technological upgrading of the economy.^{44/} To achieve these major objectives, the Plan calls for a "substantial degree of competition" and a progressive shift toward a "system of [financial] incentives" rather than one based on regulatory fiat (vol. II, p. 170). Technological dynamism, in particular, "requires the stimulus of a competitive environment with both domestic and international pressures on firms to improve technology." (vol. I, p. 77).

3.05 The results of this study are consistent with the orientation of the Seventh Plan. They point to the need of industrial regulatory policy reform that moves in the direction of enhanced conditions for firm growth, an increased degree of competition, progressive decentralization of economic decision-making and greater flexibility on the part of economic agents so they can respond to changing market and technology conditions.

3.06 The effectiveness of regulatory reform in India will be predicated on its scope: changes need to be introduced in the way the government regulates the organization and activities of industry and how it manages international trade. In this context, a new firm growth and competition policy would be a key element in addressing the major theme raised in this report, that regulatory and trade policies have generated significant barriers to competition, mobility and growth. The technical, allocational and managerial inefficiencies resulting from these barriers would need to be dealt with both by lowering the policy-determined barriers to entry, growth and exit, and by stimulating export rivalry and introducing a substantial measure of import competition.

3.07 An improvement in industrial performance would require a new growth policy. It would remove regulatory impediments to firm growth to facilitate the accumulation of technological and production capabilities that most Indian industrial firms presently lack. A policy emphasizing dynamism and flexibility in the operation of industrial firms would be coupled with a new competition policy comprising three complementary and mutually reinforcing aspects: internal competition, export rivalry and import competition. It is essential that India pursue a strategy of rapidly increasing competition along these three dimensions. Even though the speed at which different forms of competition are introduced may vary, the size of the barriers to competition are such that substantial and rapid rationalization of the policy instruments is necessary with respect to both the regulatory and trade regimes.

44/ GOI, Seventh Five-Year Plan - 1985-1990, 2 vols., New Delhi, 1985. See vol. I, chapter 6 and vol. II, chapter 7, for a discussion of industrial policy objectives and an analysis of the planning instruments.

3.08 To ease the transition and minimize the possibility of creating new distortions, changes in regulatory policies need to be coordinated with adjustments in trade policies. Although a comprehensive discussion of trade reform falls outside the scope of this report, the effectiveness of changes in the regulatory policies and trade regime depend on the extent to which they are mutually consistent. Rapid import liberalization in an environment where producers are constrained in how flexibly and rapidly they can allocate and use their resources might lead to few economic gains, large social costs and a retrenchment of reform. As argued in the previous chapters, entry, expansion and exit barriers of a regulatory nature have limited the size, scale of production, degree of specialization, and existing technological and marketing capabilities of industrial firms so as to preclude them from being able to face export rivalry and import competition effectively. Regulatory reform would therefore free producers to enter into promising areas, expand profitable operations, shift product lines and exit from shrinking markets.

3.09 At the same time, freeing Indian producers to decide on how to allocate and use their resources will bring the largest economic gains if economic and financial incentives are aligned. Behind high trade barriers, relative prices are such that financial incentives do not coincide with economic costs and investments are not necessarily directed to socially profitable activities. In particular, easing entry barriers in the context of substantial trade impediments and large economic rents could lead to excessive entry as well as fragmented and inefficient production structures for industries characterized by substantial scale economies.

3.10 Reform of the import regime is also necessary as a means of promoting intra-industry specialization and injecting contestability into markets where high and not easily removable barriers have allowed one or a few firms to attain a dominant and unchallenged position. Through pre-announced changes in the trade regime, domestic and border prices should be brought into line on a systematic and progressive basis and import competition allowed through the dismantling of non-tariff restrictions and the rationalization of the tariff structure. These would be necessary steps for the economy to realize substantial efficiency gains, with border prices guiding domestic producers to a more efficient allocation of resources.

3.11 Relaxing the controls on internal competition to stimulate greater resource mobility, firm growth and more progressive managerial conduct are measures that need to be equally accompanied by efforts to promote export rivalry. Internal regulatory reform would enhance the effectiveness of export promotion measures by allowing efficient firms to grow rapidly to international scales. Further, increased domestic competition would serve to exhaust rents and lower the profitability of the domestic market (currently two to five times as profitable as the export markets), thus diminishing the anti-export bias inherent in the current trade regime and decreasing the volume of fiscal resources necessary to offset it.

3.12 There are additional reasons why internal liberalization should not be too far removed from the penetration of international markets.

First, a substantial expansion of exports would be needed in the medium run to meet the possible foreign exchange requirements associated with investment growth and technological modernization. Second, for products characterized by significant economies of scale, freer entry in a domestic market of limited economic size might lead in a first instance to uneconomic fragmentation of production. The external market would in most cases provide the scale needed for efficient operations, in addition to serving as a competitive arena in which domestic firms would face the challenges that might otherwise be absent because of natural barriers to entry in the domestic market. Thus, an effective regulatory reform would be predicated on removing policy-induced barriers to entry, growth and exit in domestic markets, allowing for a significant degree of import competition, and improving export promotion policies and institutional arrangements. This report focuses on domestic regulatory policies, however, and does not discuss the details of possible trade reforms.

III. Specific Measures of Regulatory Policy Reform

3.13 Five areas of regulatory policy are the object of specific proposals for reform: the system of industrial licensing; the Monopolies and Restrictive Trade Practices (MRTP) Act and its implementation; the instruments of entry promotion for small-scale firms; restrictions on exit related to labor retrenchment, asset transfer and financial restructuring; and the control of industrial prices. This section outlines measures that could be instrumental in eliciting from industry a strong and sustainable supply response, while being consistent with the broader social objectives of the government. Proposals include: immediate removal of licensing barriers for capacity growth, considerably narrowing the number of industries subject to capacity licensing and simplifying the procedures for technology and foreign investment licensing; an increasing focus on firm conduct and restrictive trade practices and reduced concern with individual firm size and some of the structural features of industrial markets; a shift away from reservation policies for small-scale industry and toward the promotion of growth and modernization of small firms; increased expediency of shedding activities, the transfer of assets and the redeployment of labor (with mandatory compensation) in the context of stricter lending guidelines and a fully implemented government commitment to avoid taking over "sick units"; and the progressive decontrol of industrial prices and greater focus on the impact of price regulation upon investment, innovation and competitive behavior. In addition, improvements are needed in trade and fiscal policies to stimulate export activities and to allow greater import competition.

A. Licensing Policies

3.14 In the last two years the Government has taken a number of important steps to relax licensing constraints on entry (as in the case of delicensing 25 industries in March 1986), growth (with "capacity re-endorsement") and changes in output mix (with "broad-banding"). The

following recommendations deepen the thrust of current government policies. They are designed to improve industrial performance by further removing barriers to entry and growth, and thus allowing firms to expand to efficient size, freely choose product mix and provide a much larger measure of domestic competition to the Indian industrial environment. They are categorized according to reforms which might be implemented immediately and those that could be phased in gradually to avoid adjustment shocks in some subsectors.

3.15 Immediate Delicensing for Growth. Currently, capacity expansion beyond 5 percent a year to a total of 25 percent in five years requires an industrial license, except in certain industries in which more flexible rules prevail. It is recommended that the government no longer license growth, a reform that will promote competition for market shares among incumbent firms, encourage capital stretching and investments in modernization that might require large discrete increases in output, and allow for and stimulate the establishment of minimum-efficient-scale (MES) plants. Delicensing growth would remove restrictions on capacity creation by incumbent firms (subject to technology licensing conditions discussed in para 3.18). Competition dynamics could result in some firms achieving a dominant position, while others experience operating losses. As a result, a policy of delicensing for growth needs to be coordinated with MRTP and exit policy reforms.

3.16 Licensing Entry: Develop a negative list of industries that require an industrial license. So far, the Government has established a "positive" list of delicensed industries. Although this list has been expanded recently (see Appendix I), it might be time to accelerate the process of delicensing capacity creation or expansion by establishing a relatively limited number of industries for which capacity licensing would be necessary. In the medium term, say, within about one year, such a "negative" list should be developed. Regulatory controls on entry would be eliminated entirely for industries not included in the negative list, provided they do not require imported technology. In case they do, capital goods and foreign collaboration clearances would remain under simplified procedures (para 3.17 contains suggestions on relaxing these controls). Over time, the "negative" list should be progressively narrowed to cases of large social sunk costs (see para below).

3.17 The negative list could include a few industrial activities such as (i) Industries Important for Defense. Industries that are primarily defense-related or that are "strategic" from a national security point of view might initially continue to require licensing. However, licensing would be eventually phased out and substituted by appropriate controls and procedures for defense and related production; (ii) Industries characterized by large health, safety or environmental risks. There are a number of industries in which public safety or health are at risk. Examples include public rail and air transport, which must meet safety standards, new pharmaceutical drugs for which public health standards apply, and potentially highly polluting industries. Firms would not necessarily undertake on their own the expense of controlling the risks and minimizing the negative externalities of their activities. In such cases, continued licensing could be used as an interim measure to ensure that producers meet health, safety and environmental regulations until appropriate and effective monitoring and disciplinary instruments (including fiscal mechanisms)

are developed to deal directly with such issues; and (iii) Industries characterized by large social sunk costs. Licensing might also continue to be required for projects whose technology is such that there are extremely large, irretrievable costs for the economy in undertaking them. The costs would only be partly internalized by the producer because, in these cases, lending operations would de facto have inadequate guarantees. As a result, entrepreneurs might take more risks than would be socially desirable. While the sunk costs to the economy may not be zero for any investment, only in the few cases where they are very substantial would licensing barriers be justified (as, for example, with an integrated steel mill, in which fixed costs are extremely high and a large proportion of these costs are sunk).

3.18 Technology and Foreign Investment Licensing. While the importance of capacity licensing as a barrier to entry and growth would be considerably diminished as a consequence of the delicensing measures outlined above, technology and foreign investment licensing--i.e., capital goods import licensing and foreign technical and equity collaboration licensing--would continue to allow government authorities to regulate entry and growth in the case of firms needing imported technology to set up a new project or to expand or modernize an existing plant. In the short term, in view of the possibility that delicensing entry in the context of the current highly protective trade regime could lead to excessive entry, fragmentation of capacity and establishment of projects with suboptimal scales of production, technology licensing should be utilized as the instrument to ensure that new projects and expansions are consistent with minimum efficient scales. A simpler and possibly more effective disciplinary device would be to allow imports over moderate tariffs. In the medium term, technology licensing should be relaxed, and the focus of decision-making concerning technology imports should shift from DGTD and the CG and FC committees to individual firms. In the case of process or product licensing, firms would be allowed to contract technology freely except in a few specified areas. For technology imported in the form of equipment and machinery, most capital goods would be shifted to the Open General License category, using the tariff as the means to ration foreign exchange and allowing firms to choose technology on the basis of specifications and price. Direct foreign investment through equity participation with Indian firms could continue to require scrutiny for levels exceeding a specified share, say 40 percent, but could be delicensed otherwise.^{45/}

B. Monopoly and Restrictive Trade Practice Controls

3.19 The MRTP Act appears to have failed, at least in part, to attain its main objectives--to curb the concentration of economic power, to prevent restrictive competitive practices or to control unfair trade practices. The basic reason is that, by design, the Act was aimed at regulating changes in market structure. In so doing, however, it generally restricted competition rather than stimulated it. To correct some of the

^{45/} For a discussion of major technology policy issues, see "Industrial Technology Development Review," Industry Department, The World Bank, forthcoming.

distortions that have arisen as a consequence of the MRTP Act and help attain its original goals, a number of revisions to the Act are suggested. Many of these measures further the reforms undertaken by the Government in the MRTP regulations in the last 18 months (see Appendix I). They complement and reinforce the proposed changes in licensing policies by allowing firms to expand operations, shift product lines and compete more freely and effectively with large or dominant producers.

3.20 The basic presumption behind these suggestions is that, in general, market misconduct is not simply a product of the relatively high levels of market concentration observed in India but is the result of protection from competition that firms enjoy in India's industrial environment. In view of the limited size of the Indian market, the presence of relatively few firms might well find justification in scale considerations. It is by stimulating firm growth and competition, not by constraining it, that the objectives of the MRTP Act will be attained. Depending on the cost-minimizing configuration of the specific industry, an emphasis on firm growth and on increased competition could lead to either a higher or a lower degree of concentration. However, as long as firm growth and mobility are not restricted and there are competitive alternatives so that the market is effectively contestable, concentration per se should not be the object of regulation. What is being recommended, therefore, is a shift in focus from attempting to control the structure of markets to regulating and restricting uncompetitive and unfair practices.

1. Criteria and Instruments for Exclusion from the Act

3.21 Asset Size. Presently, any enterprise with assets above Rs 1,000 million (\$77.8 million) comes under the purview of the Act. Firm size itself is considered to be the indicator of the extent of concentration of economic power and is therefore regarded an appropriate target for government control. This concept, when compared with legislation in other countries, is nearly unique. It relates market power neither to the technology of production nor the MES of operations, nor to market size, dynamism and organization. The MRTP asset limit is an absolute measure of the concentration of capital with no relation to the technological requirements of production nor the probability that control over capital values above that limit would be prejudicial to the public interest. It is suggested that the asset limit be the sum of the investment requirements for the firms' diverse operations under MES, whenever it is higher than Rs 1,000 million. In addition, the Rs 1,000 million limit should be progressively raised by substantial increments (say, Rs 300-500 million), so that over a 5-year period asset limit per se is no longer a de facto constraint on the expansion of firms.

3.22 Market Dominance. Since 1982, dominance was attributed to firms with more than Rs 10 million in assets with market shares of more than 25 percent.^{46/} More important, a new definition of "goods of any description" (section 2 [ee]) was inserted in the Act, by virtue of which dominance is

^{46/} The definition of dominance includes companies with assets of at least Rs 10 million (singly or "interconnected") whose licensed capacity is one-fourth of the total installed capacity of the "industry" in which they operate.

determined with reference to the nomenclature of an industrial license. As a result, each item in a license, which is firm-specific, is treated as a class by itself, with no reference to broader classes.

3.23 This definition of product market for the purpose of dominance raises two issues. First, to the extent that licenses are awarded on a product- and firm-specific basis, their breadth may vary across firms, with paradoxical results. For example, one firm producing a specific good may be classified as "dominant" in its narrowly defined market, whereas another, even though producing a larger value of the same product, is not classified as dominant insofar as its license is applicable to a broader set of goods.

3.24 A second and more important issue concerns market boundaries. Insofar as goods are substitutes in consumption, even with some degree of imperfection, market boundaries are hard to define in any operationally meaningful sense. The same can be said for goods that share installed machinery or a range of common inputs. The presence of such economies of scope allows producers to shift across goods with relative ease, so that effectively (or at least potentially) they would be competing in more than one narrowly defined market. In such cases, actual output may be much less than licensed capacity for a particular product, and the firm may not reach 25 percent of actual market share, but it would still be classified as dominant.

3.25 In adopting a nomenclature for goods on the basis of which markets will be defined, policy-makers should use a reasonably broad and consistent definition of product groups. It is therefore suggested that dominance be based on a two- or three-digit level of industrial classification and be measured in terms of the value of total domestic output, rather than licensed capacity. In addition, dominance should continue to apply to that proportion of licensed capacity or actual output destined for the domestic market; the proportion of capacity or output allocated for exports should be excluded in assessing market dominance.

3.26 "Interconnection" is a weak criterion for establishing the concentration of economic power or the probability of firms engaging in monopolistic behavior. That a large undertaking has a minority ownership of or control over another undertaking of undefined asset size or market importance does not per se establish that the economic power of the large undertaking is any greater than it would have been in the absence of that linkage. To the contrary, diversification by the larger concern could actually mean a dilution of its economic power to the extent that it shifts its resources to unrelated lines of business over which it can exert only marginal economic influence. It is a practice justified within a strategy of shifting risks and minimizing the year-to-year variance in the firm's rate of return.

3.27 Second, and more important, if "interconnected" undertakings operate in different markets, the economic importance of their linkage depends on the extent to which those markets are related. To the degree that they are unrelated, the undertakings should not be classified as interconnected. It is suggested that, for the purpose of market shares,

"interconnection" refer to specific product markets, such as those defined at the two- or three-digit level of industrial classification.

3.28 In addition, mergers and amalgamations should not necessarily be precluded, insofar as they are not harmful per se to the public interest. In fact, they can be essential to the rationalization of an industry or to enabling Indian firms to compete effectively in international markets by improving efficiency and achieving economies of scale and scope. They should be prohibited only when there is a significant probability that the merged companies would have the market power--in the specific product market--to boost prices above competitive levels and to keep them there for a significant period, or when there is a strong probability that the new concern would try to deter entry by others or to engage in unfair trade practices. Some general guidelines could be established (such as forbidding firms to merge if their combined market share is above 60 percent or if the two-firm concentration ratio is above 75 percent), but they should not substitute for a detailed market analysis regarding the conditions for firm mobility and growth and the extent of actual and potential competition in the industry.

3.29 So far, it has been suggested that some firms be excluded from the MRTP Act on the basis of their technological requirements, the extent to which their markets are competitive, and the degree to which their attempts at diversification actually mean greater concentration of economic power. The measures suggested include: definition of a firm's asset limit as the sum of the MES investment requirements for the firm's activities; a definition of dominance that takes into account the possibilities of substitution in consumption and the use of common inputs; and the use of "interconnection" as a valid criterion for application of the Act only in cases where the linked firms operate in the same market, defined at the two- or three-digit level.

3.30 Although such changes should move the implementation of the Act more toward its original objectives, an approach that may often be simpler and less prone to discretionary mistakes is to take a product focus, according to which markets that are characterized by dynamism and competition would be excluded from the purview of the Act. Indeed, the government has already adopted this approach by: (i) including additional subsectors or industries in Appendix I (areas open to MRTP and FERA firms), although all the MRTP clearances would nonetheless have to be obtained; (ii) excluding firms in specific product groups from MRTP clearances, a step that eases the investment procedures for MRTP firms in these product groups; and (iii) in MRTP-specific delicensed subsectors, permitting MRTP firms, subject to certain constraints, to invest without a license, provided they abide by the locational restrictions and fulfill certain export targets.

3.31 An alternative procedure for excluding certain product groups or subsectors from the Act would be to establish a negative list of industries in which investment by MRTP firms would require additional clearances, instead of the current list of industries exempt from MRTP clearances. This measure would help make more transparent, and thus less subject to discretionary decision-making, the criteria and evaluation methods by which industries are excluded from the provisions of the Act. This list should

be relatively short and possibly limited to weakly competitive markets where "natural" barriers to entry are very large.

3.32 In cases where entry barriers are binding and a single producer dominates a very large proportion of the market, the government might consider the break-up of the concern into independent units. This step, however, might not be economically advisable whenever the scale economies are substantial relative to the size of the market. In those circumstances, the government should allow a threat of import competition, preferably by freeing imports of the good or of close substitutes from restrictions other than a moderate tariff.

2. Instruments and Procedures Regarding Uncompetitive and Unfair Practices

3.33 MRTP controls decrease the extent of actual and potential competition and, in this sense, increase the probability of unfair competitive practices. They remove or significantly dissipate both the threat of, and actual entry or expansion by, MRTP firms. Through a system of closed hearings, where the arbitrator holds substantial discretionary powers, incumbents in some cases are able to preclude new entries by establishing that excess supply exists (relative to domestic demand). Moreover, the Act has had only a marginal impact on protecting consumers from unfair practices, since the procedures for redressing grievances are complicated and very lengthy, taking from one-and-a-half to three years.

3.34 In the medium and long term, the list of products subject to MRTP controls should be progressively abolished, as the focus of regulatory concern shifts from controlling the structure of the industry, through curbs on entry and expansion, to restricting uncompetitive market actions and unfair trade practices. To oversee and curb behavior that is detrimental to the public interest, issues relating to actions that restrict competition and to unfair trade practices would be referred by the Department of Company Affairs (DCA), the MRTP Commission or consumers to the DCA for a public hearing which might be enlarged to include consumer representatives. The DCA should have the technical and logistical resources to establish (within a given timeframe) the extent to which firms, singly or in combination, have engaged in actions detrimental to consumers. The proceedings should generally be open and well-publicized, particularly when they involve consumer safety matters. At the same time, the proceedings should be time-bound so that firms cannot use them as an unfair competitive weapon against companies wrongly accused of market malpractices. In fact, there should be a mechanism for penalizing unfounded accusations of harmful intent and for compensating producers which were adversely affected.

C. Small-Scale Policies

3.35 Small-scale policies have successfully promoted entry of new entrepreneurs and stimulated the expansion of industrial output and employment. However, these policies, while encouraging entry, have heightened the barriers to, and reduced the incentives for, growth,

specialization and modernization. Small firms have been, in the case of reserved items, prevented from growing. In non-reserved products, they are encouraged to remain small to avail themselves of significant benefits, which include fewer restrictions on shedding manpower and closing unprofitable operations, lower excise taxes, and effectively avoiding the corporate income tax.

3.36 Small-scale policies should continue to promote entry but the structure of incentives for small-scale firms should be shifted to equally encourage their efficient growth so as to promote improvements in product quality and factor productivity. This would be a condition for small and large units to integrate their activities, with the former serving as subcontractors and suppliers of parts and components, thus furthering specialization and growth. These objectives will require removing the limits on firm size and reorienting the fiscal and labor policy incentives that help keep firms small. The gradual phasing in the excise tax announced in the 1986 budget is a step in the right direction, as firms will not be abruptly subjected to the loss of that tax exemption once their output reaches a certain level.

3.37 The changes outlined below would reduce the extent to which firms are induced by policy to remain small:

(i) Remove the product reservation requirement or increase the investment limit for a substantial number of reserved products. On the basis of established criteria (see para below) the list of reserved products would be divided into two blocks: for the first, de-reservation or at least immediate growth of the small-scale asset limit would be allowed, with the limit raised substantially from the current Rs 3.5/4.5 million to, say, Rs 50-100 million (or the asset limit requirements for MES operations, whichever is larger).

The criteria for de-reserving products or allowing immediate expansion would take into account: MES requirements which mandate a scale of production greater than that made possible by the small-scale asset limit; products with export potential, where quality requirements demand larger and possibly more automated production facilities; health or safety needs (such as with the production of some pharmaceuticals) for which the cost of the required quality control and other equipment may exceed the small-scale asset limit; and products for which sophisticated engineering skills and equipment are needed for design, manufacture and testing.^{47/}

A second category of products would continue to be reserved and subject to slower growth of the investment limit: in a period of, say, five years, the limit would be raised to Rs 50-100 million. This category would be made up of products in which small firms have a natural comparative advantage over large ones (such as baskets, most handicrafts, and some engineering castings, dies and moulds). In the case where small-scale production is relatively efficient, the reservation provision should be

^{47/} An example would be leaf springs for the automotive sector, the design of which is increasingly dependent on computer-aided techniques.

unnecessary. However, it may be desirable to maintain the reservation for a period and to raise the asset limit for these products more slowly to ease the transition and in view of the fact that the relative growth and efficiency gains from de-reservation are not as large as in the previous case.

(ii) Provide a time-bound set of incentives for small-scale firms. Small firms should be encouraged to grow and develop into mature industrial enterprises. Therefore, any package of subsidized credit, tax holidays and other incentives should be temporary (say, for a period of 5 to 10 years), depending on the technological complexity of the new enterprise. For example, small firms could receive a complete holiday from corporate income taxes for five years, after which time tax rates would increase gradually as a function of time rather than being an exclusive function of the value of output.

(iii) Shift the incidence of taxes to the final product. Shifting all taxes to the final stage of production such as in a regular value-added tax (VAT) system, would reduce the advantage in production costs enjoyed by small firms and would encourage them to expand to more efficient scales of production.

(iv) Require minimum health and safety conditions, as well as benefits, for workers in small firms. Practical minimum working and wage standards should be applicable to all firms to improve working conditions. Combined with measures regarding labor retrenchment (see section D below), the implementation of these standards should reduce the sharp segmentation of the labor market. Currently, costly wage and benefit packages are required of larger firms, whereas a number of statutory requirements regarding working hours are on the books but are often not enforced in the small scale sector. In addition, social insurance such as severance pay, sick leave, etc., are not available. These differential conditions are a strong disincentive for small firms to grow and should be progressively reduced.

(v) Strengthen government and private advisory services to small industry. In spite of the large number of government agencies currently providing technical, marketing and managerial advice to small firms, their delivery of support services is uneven and often not very useful to recipients. Existing agencies and programs should be reorganized and strengthened to provide services more effectively. In particular, detailed information regarding technology and marketing opportunities should be made available on a timely basis. In addition, private consulting firms should be encouraged to provide services to registered small-scale firms.

(vi) Allow large firms to take a minority equity position in small firms. Currently, large firms, including final goods manufacturers to which small-scale firms sell intermediate products, cannot take an equity stake in small firms producing reserved items. Allowing large firms to do so would encourage them to transfer process technology, product designs, technical know-how and managerial skills to the small suppliers, and would thus stimulate subcontracting arrangements. Large firms could also assist small firms with access to credit. Larger firms should also be allowed to acquire small firms that are "sick," a potential source of rehabilitation.

(vii) Allow firms of all sizes to exit. This proposal, which is discussed more fully in the next section, would eliminate one of the most important incentives for firms to stay small rather than expand, modernize and specialize. Currently, the ability of small firms to shed labor easily in comparison with medium-size and large producers is an important factor inhibiting their growth.

D. Exit Policies

3.38 Barriers to exit were established as a means of protecting workers from unemployment and conserving scarce capital resources. Yet restrictions on exit have not simply resulted in the continued operation of some unprofitable firms. They have also made investors more cautious about establishing larger production units and work forces even when market conditions were favorable. Moreover, they have increased the degree of plant fragmentation and hence militated against the attainment of economies of scale. By restricting the reallocation of capital, regulations on exit have decreased the efficiency of resource use.

3.39 Thus, in an attempt to save existing jobs, exit policies have slowed down structural change in Indian industry and restricted the growth of new employment opportunities. These policies involve three specific issues: (i) labor retrenchment and reorganization, (ii) asset transfer and amalgamation, and (iii) financial restructuring and bankruptcy.

3.40 Labor Retrenchment and Reorganization. Indian firms need greater flexibility to adjust their work force in terms of numbers and the functions they perform. The current requirement that industrial units with over 100 employees obtain government permission before dismissing workers (1976 and 1982 Amendments to the Industrial Disputes Act) has had an adverse impact on the structure and performance of industry. Government permission should not be required to retrench employees, although this increased employer autonomy should be accompanied by mandatory compensatory requirements. The Industrial Disputes Act should be modified to provide firm management greater flexibility to adjust, relocate or retrench employees with due compensation. This compensation may be broadened when compared to the current system (which requires payment of a specified number of days' wages for every year of employment), to embrace such aspects as the continued provision of health coverage (for a period of two years after retrenchment, for example). The required compensation could be made proportionate to the period of employment. In circumstances where retrenched workers are employed by another firm during the period covered by retrenchment compensation, some of the payments could be transferred to the new employer to help cover training costs. To make this system effective, unemployment compensation may be provided over time rather than as a lump sum.

3.41 Increased government funding may be considered for retraining, but, to be effective, it would need to be linked with specific skills demanded by employers and with employment opportunities. Current arrangements that require textile mills, for example, to maintain a certain

proportion of trainees are ineffective relative to changing skill requirements and should be abolished.

3.42 Transfer of Assets. The transfer of industrial assets should not be hampered by impediments and should be executed expeditiously in order to improve the allocational efficiency of capital resources. This principle should apply to the assets of all producers, including MRTP firms. Procedures for transferring assets through mergers or takeovers are often too lengthy to allow for an efficient adjustment process. It is recommended that wherever MRTP clearances or small-scale reservations are not involved, assets should be freely transferable without being subject to court approval. Land sales also need to be further simplified for its efficient use as a productive factor in industrial activities. In particular, consideration should be given for lowering restrictions on land sales in Bombay and Delhi to facilitate closure and/or rehabilitation of industrial enterprises.

3.43 To achieve increased flexibility in operations, licenses also need to be transferable. License transfers should be made automatic with the acquisition of licensed production facilities. As effective are the recent moves to broad-band certain license categories and to delicense other items. They help overcome the barriers to exit by enhancing the flexibility of producers to cut back or terminate certain lines of production and to transfer capacity to other lines.

3.44 If provisions to adjust the work force to changing technologies or market opportunities quickly cannot be introduced immediately, firms taking over existing production facilities should be relieved for a specified period (say, two years) of the burden the Industrial Disputes Act's requirements concerning the retrenchment of labor. This measure would increase the value of the asset transferred and facilitate the reallocation of capital and the consolidation of production capacity.

3.45 Financial Restructuring and Bankruptcy Procedures. As long as firms have outstanding loans with commercial banks or development finance institutions, they are not free to close without the agreement of those creditors. In practice, this situation has constituted a significant impediment to exit, as lending institutions have been reluctant to agree to closures which would possibly require them to write off bad debts. They have often chosen instead to extend additional credit in the hope that the loss-making unit would be rehabilitated and they would eventually recover all their outstanding loans. Moreover, limited liability provisions have not operated effectively, as lending institutions have held the related enterprises responsible for the bad debts.

3.46 This unwillingness to recognize and write off bad debts has led to the extension of credit in amounts exceeding the point of prudence. This practice arises, in part, from the system of management prevalent in public sector banks, which allows non-performing or bad debts to remain on the asset side of a bank's balance sheet until the loan is written off. Shifting the questionable loan to a non-performing debt category would detract from the apparent profitability of banks. In addition, management of these public sector institutions is normally appointed for a relatively

short-term period; it thus faces few incentives to write off debts which in the balance sheet, would be an indication of poor financial performance (although often the result of previous managers' decisions). Moreover, although the government does not explicitly direct banks to provide extended credit for firms in difficulty, there is implicit encouragement in the form of requests that banks reconsider decisions to stop extending credit and redouble their efforts to help management rehabilitate the units.

3.47 The guidelines of the Reserve Bank of India should be revised to reward commercial banks and their management for the strength of their lending portfolios. It is recommended that the Reserve Bank require commercial banks to shift loans that have been non-performing for a period of time (say, six months) to a risky asset category and instruct them to set aside reserves to cover possible losses. This measure would be part of a program to improve the efficiency of banks as financial intermediaries. Over time, this program should include changes in regulations pertaining to directed credit, priority sector lending and interest rates. The end result should be greater managerial autonomy and responsibility for the institution's performance. In the meantime, information and monitoring systems should be improved to facilitate timely action on questionable assets and to make each bank's portfolio more transparent.

3.48 In recent statements, including the Seventh Five-Year Plan, the central government has indicated a commitment to avoid taking over "sick industrial units." This policy should be implemented as it has important implications for the behavior of industrialists and lending institutions. Until this policy is firmly entrenched, there will be a significant "moral hazard" problem: the management of lending institutions and industrial units will continue to see the government as the lender of last resort, at least for the larger projects, regardless of the quality of their investment decisions. Currently, investors and banks often believe that if an important project fails, it will be taken over by the government, with the investor thereby absolved of his obligations regarding employees and the banks guaranteed some repayment. In this connection, bankruptcy procedures, complex and time-consuming, should be considerably simplified, with flexible rules for the disposition of assets and payment of creditors.

3.49 When coordination of decisions regarding exit of a multiplicity of economic agents is involved, government intervention might be advisable, as in the case of reductions and consolidation of capacity for depressed or declining industries. In the absence of timely contraction intervention, the Government might be eventually compelled to effect a substantially more costly intervention to slowdown massive disruptions in the industry. The government should devise policy instruments and institutional arrangements to allow producers with relatively similar cost structures an equi-proportional shedding of chronically loss-making activities and eventual

consolidation of capacity.^{48/} This step should, however, be focused on selected subsectors where marginal market-driven reductions by each producer are not normally possible and where each producer has an incentive not to reduce capacity, in the expectation that profitability would be restored if others do it first.

E. Price Controls

3.50 Price and distribution controls, originally designed as a means of allocating goods on a priority basis and minimizing the impact of short-term supply shortfalls, have had negative long-term effects. In some cases, prices have been set below the levels that would ensure adequate profits, and firms have responded by curtailing investment and reducing capacity utilization, actions that have exacerbated the supply shortages. In addition, price controls have often worked as a disincentive to modernization and technological obsolescence.

3.51 In recognition of the problems brought on by price controls, the government has introduced more liberal pricing policies in a few sectors (such as cement). However, a comprehensive and clearly formulated pricing policy for industry is still absent and prices in key sectors of the economy will probably continue to be set by the GOI. The design of an economically sound pricing structure is therefore of particular importance.

3.52 For competitive and well supplied markets, full or partial decontrol should be introduced immediately.^{49/} In less competitive markets, progressive price decontrol must necessarily be accompanied by the removal of regulatory barriers to mobility, expansion and competition, and by a substantial reduction in trade barriers. Otherwise, sheltered incumbent firms could benefit from price decontrol by exercising their monopoly power and gouging consumers (para 3.66).

^{48/} For instance, in the late 1970s, Japan introduced a number of measures to assist in the adjustment of declining industries by smoothing the process of factor reallocation, especially labor. The government designated certain industries as "depressed" and developed "basic stabilization programs" for them to reduce capacity in an orderly fashion. Firms that scrapped their capacity in accordance with these programs qualified for special loans, and displaced workers were entitled to receive extended payments for unemployment insurance, vocational training and services necessary for reemployment. When it was judged that contraction could not occur efficiently by firms acting alone, enterprises were asked to form a "designated cartel" to coordinate capacity reduction. See S. Sekigudin and T. Hauriuchi, "Myths and Reality of Japan's Industrial Policies," World Economy, Vol. 8, No. 4 (December 1985). In the 1960s, the German coal mining industry successfully implemented similar programs to reduce capacity and output.

^{49/} Full price decontrol in the cement (expected to take place in 1990) and paper industries would, for instance, be desirable.

3.53 Price decontrol for producers must be undertaken within the context of an overall pricing policy that also takes into account the way inputs are priced. High mandated costs of inputs, either domestic or imported, give the producer less flexibility in adjusting to a decontrolled market environment. To the extent that the Government finds it desirable to have continued price control in certain areas, the following general guidelines would be instrumental in minimizing its adverse impact on industrial performance.

3.54 The discretionary and complex nature of price and production controls in India has made the administration and enforcement of price controls difficult. The first step in policy reform should be to formulate a pricing policy that minimizes the degree of discretion enjoyed by government agencies in setting controls. They should establish pricing formulas that are transparent to producers, are frequently monitored and reviewed and produce prices that converge and remain within moderate limits (say, 20 percent) of the level and long-run movement of border prices.

3.55 Administered prices should be reviewed regularly and systematically. Small and frequent price changes are preferable to large and infrequent ones. An approach that minimizes discretion associates price changes in each industry with changes in input costs or border prices. This policy should be made clear and adhered to. An automatic procedure should be adopted that requires committee review only if there are unanticipated and large changes in an industry.

3.56 Differential pricing across plants producing the same product should be discouraged. In the past, this approach has sustained inefficient plants and eliminated competition. The new policy must be accompanied by an easing of the exit barriers for firms that cannot survive without differential pricing.

3.57 Prices should reflect product differentiation. In some industries (as in the case of cement), administered prices have not reflected sufficiently the differences in product quality and as a result the production of higher quality products has declined.

3.58 Consumer prices should be explicitly linked to producer prices. If the government has certain equity objectives and if decontrol would raise prices, it might consider reducing the high excise duties or directly subsidizing low-income groups.

3.59 Generally, policies must be formulated that provide sufficiently attractive prices to promote innovation, modernization and capacity expansion. Prices that take into account the replacement costs of capital instead of the historical costs and that set uniform realistic rates of return on capital should be adopted. In addition, and as an incentive for cost containment, contracts for the delivery of goods under retention prices should include penalty clauses for substandard products or failure to meet promised delivery dates.

3.60 Pricing policies should stimulate competitive behavior and controls should be designed in such a way as to avoid becoming a facilitating practice. In some instances price controls have promoted oligopolistic

behavior. In particular, they have ensured the stability of collusive arrangements by making price changes costly to each firm. A fall in prices may be interpreted by regulators as evidence that an industry or firm is able to handle lower mark-ups, leading then to downward price rigidity.

3.61 The imposition of controlled prices also institutionalizes the frequency and method of price-setting, a situation that can induce explicit and tacit collusion among firms, both when price controls are in effect and after they have been eliminated.^{50/} Finally, pricing rules might facilitate collusive behavior by affecting the nature and height of entry barriers. Thus, when cost-plus prices are set on the basis of a uniform rate of depreciation across firms, entry is deterred, because for new units depreciation costs tend to be much higher.

IV. Phasing and Coordination of Changes in Industrial Regulations

3.62 This report has argued that the industrial licensing, MRTP controls, small-scale policies, exit restrictions and price controls have increased the barriers to entry by most firms, discouraged growth and blocked exit for all but the smallest producers. They should therefore be treated as a cluster of policies that jointly have major implications for the structure of the market, the behavior of firms and industrial performance. In this sense, policy reforms to stimulate growth and mobility should focus on more than the individual policy areas. Instead, they should address the policy-induced barriers and their consequences from an integrated perspective. In this context, phasing and coordination of the changes in industrial regulations are critical to successful reform.

3.63 First, reform of entry and exit policies needs to be approached jointly. Policy-induced exit barriers are in effect entry barriers. The former not only makes investment activity more risky but also less attractive, by depressing the overall profitability of the industry. Entry and exit barriers should therefore be removed in tandem.

3.64 Even where exit barriers do not preclude entry, there is an additional and pressing reason to coordinate the two reforms. New entries increase the degree of actual competition and thus the probability that firms may need to exit. The inability of producers to respond flexibly to changing market conditions by shedding old products, restructuring, and consolidating operations will increase the financial distress of firms and the proportion of "sick" units in the economy and in turn raise the costs to the government. The very success of the policy reforms, in terms of new entries, would lead to this paradoxical result.

3.65 There are other links between entry and exit policies that call for close coordination of their reform. Freer entry without easier exit could lead to an even greater degree of capacity fragmentation, a major

^{50/} This type of behavior has been documented, for example, in both Brazil, where the Interministerial Council of Prices (CIP) set prices for a number of industries, and in Greece, where price controls are imposed on a number of commodities.

cause of the present technical inefficiencies in production. Further, the managerial or x-efficiency gains that might be obtained by subjecting market-dominating firms to increased actual and potential competition would be reduced by the permanence of policy-determined exit barriers; if survival is assured, the instruments of competition policy will lack effectiveness. In sum, growth and competition are predicated upon an exit policy that facilitates and does not block adjustment.

3.66 Second, coordination is also needed between mobility, growth and modernization policies and price controls. Entry and expansion would be clearly discouraged if price controls constrained incumbents to low or negative profitability; in fact, producers would fall into obsolescence and be forced to exit. To the extent that exit is precluded, industrial "sickness" will grow. In this sense, lowering entry and expansion barriers should be accompanied by the progressive decontrol of prices, or at least by a structure of prices that encourages new investment and modernization. Conversely, if prices are freed from controls in a market where entry and expansion are either precluded or made difficult by regulatory fiat, the exercise of market power by incumbents could lead to the gouging of consumers. Producers would not face the threat of actual or potential competition, and they could extract from buyers the rents generated by protection. Therefore, decontrol of prices should be accompanied by phasing in changes in the regulatory policies to lower the barriers to entry and expansion. As part of a strategy of regulatory reform in India, the lowering of mobility (entry-exit) and growth barriers should be timed to be implemented, pari-passu (or with a small lag), with the changes in the mechanism of industrial price controls in the direction of greater freedom of pricing. Finally, a significant measure of import competition would be equally critical in order to decontrol prices in the context of excess demand or large natural barriers to entry to constrain the exercise of market power by incumbent firms.

3.67 Third, regulatory changes in the area of monopoly control require close coordination with shifts in entry and exit policies. In particular, a shift in focus from the concentration of economic power toward regulation of market behavior (e.g., restrictive trade practices) would be predicated upon lowering the barriers to mobility and growth. The importance of size, market shares and other internal features of industry is in inverse proportion to the degree of potential competition. More contestable markets require not so much structural but behavioral sanctions. Thus, policy-induced barriers to competition need to be removed at the same time that the control of monopoly power becomes basically a matter of monitoring market conduct. It is of particular importance that producers of all sizes be able either to threaten or actually to penetrate stable markets dominated by few large firms (including public sector enterprises) that are shielded from competition by existing regulations.

3.68 Finally, regulatory changes regarding lowering entry, growth and exit barriers need to be coordinated with shifts in financial sector policies and practices. Gradually increasing the asset limit for capacity licensing would allow an easier transition from the current situation of physical controls to one of financial controls, under which the financial institutions and banks would appraise investment projects and decide on the

allocation of investable funds. Since the financial system has in the past relied heavily on industrial licensing for screening projects, a transition period would be required to allow financial institutions and banks to develop the capability to evaluate market opportunities and for potential investors to hone their managerial skills to exploit those opportunities in a changed environment. The gradual increase in the delicensing limit and retention of an interim negative list will provide banks the time needed to develop improved appraisal skills.

3.69 Reforms of financial sector policies are also needed to encourage lending agencies to deal more aggressively with non-performing assets, to rehabilitate those that are viable and to write-off bad loans. More stringent policies with respect to questionable loans should instill a conservative lending behavior by banks as they assume greater responsibility for determining investments. Recent efforts such as the one undertaken by the Industrial Development Bank of India to strengthen the capacity of banks to assess market prospects as part of project appraisal are welcome and need to be continued.

V. Concluding Remarks

3.70 India's regulatory and trade policies have played a dual role in its industrial development. They have been instruments for deepening and diversifying the industrial base, but they also have often functioned as binding barriers to competition. At an early stage, the major challenge was to mobilize resources, build an infrastructure and establish key industrial segments; at that time, competition was not perceived to be of critical importance. However, in India, as in many other industrializing countries, the dynamic efficiency losses from those competitive barriers tend to grow progressively in importance and eventually tip the balance against the industrial gains achieved with the use of regulatory controls. This shift has become increasingly apparent since the mid-1960s. Moreover, the structural implications of these barriers, for which evidence is now available, regarding firm-size distribution, degree of specialization, and accumulation of technological and other capabilities, as well as the conservative management behavior they have generated, seem to run counter to many of the industrial development objectives that originally motivated the regulations. As a result, improvements in industrial performance have now become, to a significant extent, predicated upon regulatory and trade reforms which would lower the barriers to internal and import competition, and stimulate export rivalry.

3.71 The specific recommendations described above are an attempt to address the policy-determined constraints that either impede or severely slow the necessary structural adjustments required for Indian industry to become substantially more competitive. These recommendations should be complemented and closely coordinated with measures aimed at reform of the trade regime, so as to support a rapid expansion of industrial exports and allow an increasing measure of import competition. Ultimately, it will be these three dimensions of competition--internal, import and export rivalry--that will bring sustained improvement to industrial performance in India.

Table A.1: INDUSTRIAL LICENSES ISSUED BY SUBSECTOR, 1978-84

	1978	1979	1980	1981	1982	1983	1984
Machine Tools	9 (2.6)	5 (1.4)	8 (1.7)	10 (2.1)	3 (0.7)	12 (1.1)	3 (0.3)
Transport	13 (3.7)	24 (6.6)	14 (3.0)	15 (3.2)	13 (3.0)	21 (2.0)	38 (4.2)
Other Non-Electrical Machinery	58 (16.7)	67 (18.4)	89 (18.7)	94 (19.8)	98 (27.7)	458 (42.6)	421 (46.5)
Telecommunications	3 (0.9)	4 (1.1)	2 (0.4)	6 (1.3)	5 (1.2)	18 (1.7)	31 (3.4)
Other Electrical Machinery	58 (16.7)	52 (14.3)	70 (14.7)	55 (11.6)	75 (17.4)	101 (9.4)	102 (11.3)
Misc. Engineering	13 (3.7)	16 (4.4)	30 (6.3)	20 (4.2)	15 (3.5)	35 (3.3)	28 (3.1)
Chemicals (Other Than Fertilizer)	52 (14.9)	57 (16.6)	85 (17.9)	83 (17.4)	61 (14.1)	125 (11.6)	103 (11.5)
Drugs & Pharmaceuticals	43 (12.4)	43 (11.8)	61 (12.8)	37 (7.8)	62 (14.4)	24 (2.2)	22 (2.4)
Textiles	19 (5.5)	10 (2.7)	8 (1.7)	18 (3.8)	20 (4.6)	44 (4.1)	30 (3.3)
Paper & Pulp	4 (1.1)	9 (2.5)	16 (3.4)	32 (6.7)	15 (3.5)	13 (1.2)	4 (0.4)
Food Processing Industries	7 (2.0)	7 (1.9)	18 (3.8)	12 (2.5)	9 (2.1)	84 (7.8)	8 (0.9)
Vegetable Oils & Vanaspathi	4 (1.1)	3 (0.8)	8 (1.7)	10 (2.1)	3 (0.7)	17 (1.6)	10 (1.1)
Leather, Leather Goods & Pickers	12 (3.4)	12 (3.3)	9 (1.9)	15 (3.2)	8 (1.9)	6 (0.6)	11 (1.2)
Cement & Gypsum Products	4 (1.1)	9 (2.5)	15 (3.2)	19 (4.0)	8 (1.9)	19 (1.8)	21 (2.3)
Sugar	14 (4.0)	1 (0.3)	11 (2.3)	1 (0.2)	0	16 (1.5)	28 (3.1)
Fertilizers	0	6 (1.6)	5 (1.1)	4 (0.8)	3 (0.7)	5 (0.5)	8 (0.9)
Total (Including Others)	348 (100.0)	365 (100.0)	475 (100.0)	476 (100.0)	432 (100.0)	1,075 (100.0)	905 (100.0)

Sources: Industrial Licenses Data Sheet, AIEI;
Quarterly Bulletin of Industrial Statistics, Ministry of Industry;
Supplements to Monthly Newsletter, Indian Investment Centre, New Delhi;
Secretariat for Industrial Approvals, Ministry of Industry, GOI.

**Table A.2: CAPACITY LICENSE, FOREIGN COLLABORATION AND CAPITAL GOODS IMPORTS
DISPOSITION OF APPLICATIONS
1981-85**

Year	Type of Application ^{a/}	Decisions						Total	
		Approved		Rejected		Other ^{b/}		No.	%
		No.	%	No.	%	No.	%	No.	%
1981	C/L	669	(36)	1,064	(56)	152	(8)	1,885	100
	FC	243	(76)	78	(24)	-	-	321	100
	CG	339	(67)	138	(27)	30	(6)	507	100
1982	C/L	936	(45)	1,116	(54)	24	(1)	2,076	100
	FC	346	(78)	72	(16)	27	(6)	445	100
	CG	304	(73)	73	(18)	40	(9)	417	100
1983	C/L	985	(51)	923	(47)	40	(2)	1,948	100
	FC	417	(70)	150	(25)	34	(5)	601	100
	CG	259	(70)	72	(19)	40	(11)	371	100
1984	C/L	917	(41)	1,285	(57)	44	(2)	2,246	100
	FC	465	(66)	208	(30)	31	(4)	704	100
	CG	227	(74)	59	(19)	23	(7)	309	100
1985	C/L	1,287	(43)	1,507	(51)	165	(6)	2,959	100
	FC	621	(80)	131	(17)	21	(3)	773	100
	CG	229	(68)	87	(26)	21	(6)	337	100

Source: Department of Industrial Development, Annual Reports, various issues.

a/ C/L—Capacity License; FC—Foreign Collaboration; CG—Capital Goods Import License.

b/ Application withdrawn or closed with no decision.

Table A.3: DISPOSITION OF APPLICATIONS FOR INDUSTRIAL LICENSE, 1982-85

	1981			1982			1983			1984			1985		
	Received	Disposed	(%)	Received	Disposed	(%)	Received	Disposed	(%)	Received	Disposed	(%)	Received	Disposed	(%)
<u>Breakdown of Disposition:</u>															
(a) Applications Pending from Previous Year	561	446	(79.6)	778	648	(83.3)	841	738	(87.8)	770	635	(82.5)	1,145	1,102	(96.2)
(b) New Applications															
I/L (Capacity License)	1,759	1,068	(77.0)	1,761	1,241	(70.5)	1,529	1,035	(67.7)	2,189	1,405	(64.2)	1,914	1,583	(82.7)
I/L Composite	108	68	(70.0)	115	66	(57.4)	90	64	(71.1)	140	86	(61.4)	130	94	(72.3)
I/L MRIP or MRIP Composite	240	81	(51.0)	261	119	(45.6)	258	111	(43.0)	292	120	(41.1)	338	180	(53.3)
Total (a + b)	2,668	1,663	(62.3)	2,915	2,074	(71.1)	2,718	1,948	(71.7)	3,391	2,246	(66.2)	3,527	2,959	(83.9)
Cases Deferred to Next Year Of Which Pending from Previous Year		1,005 (205)			839 (130)			770 (130)			1,145 (135)			568 (43)	

Source: Department of Industrial Development, Annual Reports, various years.

a/ There are slight discrepancies among the different government sources of information. Government publications report 841 cases pending at the start of 1983, while our calculations show 839. Similarly, government records show 2,079 disposals, although our breakdown accounts for 2,074.

Table A.4: APPLICATION FOR INDUSTRIAL LICENSES, 1982-85

	1982	1983	1984	1985
Valid New Applications Received a/	2,137	1,877	2,621	2,382
Of Which:				
I/L (Capacity license)	1,761 (82.4)	1,529 (81.5)	2,189 (83.5)	1,914 (80.4)
I/L Composite (non-MRIP)	115 (5.4)	90 (4.8)	140 (5.3)	130 (5.4)
I/L (MRIP + Composite MRIP)	261 (12.2)	258 (13.7)	292 (11.2)	338 (14.2)

Source: Department of Industrial Development, Annual Report, various years.

a/ Valid new applications are total applications received net of defective applications, which are returned immediately. Figures exclude 100 percent export-oriented units, non-resident Indian applications, fertilizer projects and carry-on-business applications.

Note: Figures in parentheses are the percentage share.

Table A.5: DISPOSAL OF FOREIGN COLLABORATION AND CAPITAL GOODS IMPORT APPLICATIONS, 1982-85

	FC Applications				CG Applications <u>a/</u>			
	1982	1983	1984	1985	1982	1983	1984	1985
New Applications Received	656	724	856	1,076	392	336	313	325
(a) Referred to Administrative Ministry <u>b/</u>	174	158	152	196				
(b) Registered (Net of Returns)	482	566	704	880	392	336	313	325
(c) Disposed of by AC <u>c/</u> (% of b)	294 (61)	401 (78)	550 (78)	773 (88)	277 (71)	256 (76)	229 (73)	254 (78)
(d) Balance (b-c)	188	165	154	107	115	80	84	71
Applications Pending from Previous Year	164	169	204	170	140	80	115	84
(a) Disposed of by AC <u>c/</u>	156	153	200	165	140	80	115	83
(b) Balance	8	16	4	5	0	0	0	1
Total Dispositions	450	704	601	773	417	309	371	337
As a % of Applications (Pending and New)	70	81	78	89	78	79	82	82

Source: Department of Industrial Development, Annual Reports, various years.

a/ For non-OGL capital goods imports with a CIF value greater than Rs 5 million.

b/ Applications for technical collaborations not requiring foreign equity and with a total cost of less than Rs 5 million and monthly consultant fee of less than Rs 30,000 can be considered by the Administrative Ministry without reference to the Foreign Investment Board (FIB).

c/ AC--Approval Committee; FIB--Foreign Investment Board; CG--Capital Goods Committee.

Note: Figures in parentheses are percentage shares.

Table A.6

BASIC AND AUXILIARY DUTIES BEFORE EXEMPTIONS AND ADDITIONAL DUTIES, 1985

Ad Valorem Duties			Number of Six-Digit Categories	Percent of Total
Basic Duty	Auxiliary Duty	Combined Duty		
0	40	40	54	1.09
20	Specific	Varies	1	0.02
30	40	70	1	0.02
40	40	80	547	11.00
60	40	100	836	16.81
100	40	140	2,979	59.89
150	40	190	102	2.05
200	40	240	221	4.44
300	40	340	114	2.29
Specific Basic Duties ^{a/}			116	2.33
Other Basic Duties ^{b/}			3	0.06
			4,974	100.00

a/ Combined with ad valorem basic duties in 113 cases: 270% (11 cases), 200% (38), 170% (1), 150% (19), 100% (38), 60% (1), 50% (5).

b/ Rate of duty applicable to the instrument or apparatus for which they are parts or fittings.

Sources: Basic duties from Book Corporation, The Customs Tariff (Amendment) Act, 1985, Calcutta 1986. Additional duties from R.K. Jain, Customs Tariff of India, 1986-87, New Delhi, Central Law Office, 1986.

Table A.7

THE STRUCTURE OF NOMINAL TARIFFS - INDIA

Description	Nominal Tariff ^{a/} 1986	Value of Imports (00,000 Rs) ^{b/}
Live animals	140.0	37
Meat and offal fresh	140.0	3
Meat and offal preserv	140.0	72
Fish and products	100.0	550
Milk and cream	90.0	7,090
Butter	100.0	5,553
Cheese and curd	100.0	4
Eggs and egg yolk	100.0	1
Wheat	0.0	14,786
Rice	0.0	1,351
Corn	0.0	486
Other grains	0.0	438
Wheat and meslin flour	40.0	962
Other flour, meal	81.7	171
Cereal and preps	123.5	725
Fresh vegetables	127.3	4,305
Frozen or preserv veg	140.0	1
Fresh fruits and nuts	237.9	2,995
Preserved fruit	236.7	13
Sugar and honey	124.8	4,784
Coffee	140.0	0
Cocoa	140.0	7
Chocolate and prod	140.0	1
Tea and mate	140.0	0
Spices	140.0	1,609
Animal feed	100.0	159
Margarine and lard	237.9	1
Beverages	131.1	55
Tobacco, manuf	140.0	17
Hides and skins	64.7	27
Oilseeds, oleag fruits	100.0	400
Natural rubber latex	124.0	2,530
Synthetic rubber latex	140.0	2,756
Cork	100.0	145
Fuel wood, charcoal	100.0	9
Wood pulp	92.6	47,010
Other rough wood	100.0	434
Wood, simply worked	100.0	51
Paper and products	128.6	23,452
Silk, raw and yarn	85.0	663
Cotton, raw and combed	95.0	580
Other veg text fibers	183.9	252
Synthetic fibers	140.0	5,005

Table A.7 (Continued)

Description	Nominal Tariff ^{a/} 1986	Value of Imports (00,000 Rs) ^{b/}
Wool and hair	80.0	3,712
Fertilizers	81.5	47,463
Sand, pyrites, abrasives	137.7	7,723
Other crude minerals	140.0	2,617
Iron ores and scrap	100.0	9,434
Other ores and scrap	109.2	7,762
Coke and coal	88.5	956
Animal vegetable oils	236.8	53,552
Organic chemicals	141.0	17,786
Inorganic chemicals	140.3	15,783
Tanning and dying prod	173.8	1,414
Paints and varnishes	182.5	310
Essential oils, flavor	190.0	516
Toiletries	190.00	11
Soaps and waxes	174.8	602
Explosives, pyrotechnic	140.0	114
Plastic, artif resins	238.5	9,539
Starches and albumins	140.0	101
Disinfect, herbicides	140.0	902
Misc chem products	139.7	4,403
Leather products	140.0	69
Fur products	140.0	0
Rubber products	133.5	1,617
Wood products	108.2	114
Cotton woven fabrics	140.0	13
Knitted, crochtd fabric	140.0	3
Spec fabrc, lace, embrdy	127.5	742
Made-up textile articl	137.9	828
Carpets, floor covers	140.0	0
Construc, Mineral Manuf	135.5	6,499
Glass products	131.6	1,153
Ceramics, pottery	125.7	0
Precious stones, pearls	75.6	36,957
Iron and steel	160.1	77,432
Iron, steel articles	284.2	23,330
Silver, Platinum	122.9	137
Copper and articles	140.0	13,332
Nickel and articles	96.3	4,903
Aluminum and articles	136.5	4,442
Lead and articles	140.0	1,460
Zinc and articles	140.0	4,986
Base mtl, tin, metallur	92.9	4,278
Tools, cutlery	104.3	1,922
Misc. base metal manuf	135.6	6,841
Power gen machinery	111.9	18,653
Agriculture machinery	81.2	519
Food process machinery	75.0	570

Table A.7 (Continued)

Description	Nominal Tariff ^{a/} 1986	Value of Imports (00,000 Rs) ^{b/}
Paper, prntg machinery	79.3	3,625
Textile, leath machin	80.4	6,619
Civil engrn machinery	102.9	6,108
Heating, cooling machin	98.0	5,388
Metalworking machinery	74.5	11,861
Pumps, centrifuges	101.5	4,138
Office machinery	165.9	2,860
Telecom, sound equip	136.7	10,346
Elect generating equip	114.9	1,967
Electrical apparatus	107.0	1,453
Other electric machin	138.7	4,772
Railway vehicles	73.3	4,063
Tractors	75.0	33
Transport vehicles	95.8	394
Automobiles	190.0	51
Parts and accessories	140.0	5,060
Motorcycles, scooters	96.0	59
Trailers, carriages	135.6	11
Aircraft, equipment	84.0	8,890
Ships and boats	79.1	846
Optical, photog equip	121.3	3,713
Medical, veterin equip	91.1	1,220
Meters, measuring equip	87.7	9,019
Watches and timepieces	140.0	1,608
Furniture	145.4	95
Apparel, clothing	140.0	21
Shoes and footwear	140.0	7
Misc. manuf artcls nes	126.9	3,901
Cement, lime	140.0	4,768
Synthethic fabrics	137.3	64
Other natural fabrics	140.0	37
Other mech machinery	153.2	22,173
Textile yarns	122.8	5,867
Petrol, nat gas, electric	97.0	854,787

a/ Includes customs and auxiliary duties, average unweighted tariff.

b/ April 1981 to January 1982 (9 months)

Table A.8: CATEGORY-WISE VALUE OF IMPORT LICENCES ISSUED DURING THE YEARS 1972-73 TO 1983-84
 (in Rs. Crores)

	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84
1. Established Importers	55.3	38.5	42.3	46.3	52.3	43.4	5.0					
2. Actual Users	(3.0)					(0.6)						
i) Non DGTD, Non-SSI Industrial	376.0 (20.3)	483.4	720.1	633.3	1,404.4	801.5 (10.8)	645.5	686.1	1,191.0	2,307.5	1,894.0	1,075.5 (15.9)
ii) Non-Industrial							134.5	205.3	234.6	234.1	313.0	142.7 (2.03)
3. Raw Materials for Scheduled Industries (DGTD Units)	171.2 (9.2)	198.2	253.1	619.5	547.3	671.1 (9.1)	702.6	743.4	1,090.0	1,174.6	1,174.6	999.4 (14.2)
Small-Scale Industries	86.4 (4.6)	82.9	58.8	87.5	107.1	107.8 (1.6)	184.6	211.6	216.0	233.0	252.1	215.7 (3.1)
4. Registered Exporters	136.0 (7.3)	151.3	166.4	237.2	415.5	741.4 (10.0)	1,096.7	1,089.6	1,422.0	1,762.0	1,963.5	2,294.5 (32.6)
Capital Goods	249.5 (13.4)	254.4	268.6	562.2	506.2	497.2 (6.7)	425.3	647.2	980.1	1,682.4	1,259.4	1,181.6 (16.8)
Heavy Electrical Plant	18.6 (1.0)	7.2	0.7	4.2	3.9	24.3 (0.3)	135.9	90.0	147.3	77.5	50.5	685.5 (9.7)
Ad-hoc (All Categories)	16.5 (0.9)	36.5	31.9	147.4	1,203.0	1,293.0 (17.5)	96.3	95.5	86.5	59.9	46.1	182.1 (2.6)
Customs Clearance Permits	58.1 (3.1)	65.4	98.1	127.6	76.0	181.2 (2.4)	49.1	68.0	67.5	66.6	42.9	61.3 (0.9)
State Trading Agencies	620.9 (33.5)	948.3	935.6	764.7	1,570.9	1,669.7 (22.5)	469.5	207.9	205.7	156.5	93.0	129.0 (1.8)
Railways Contracts	20.1 (1.1)	17.1	14.6	15.8	16.6	18.6 (0.2)	47.7	89.8	36.0	45.2	15.8	29.0 (0.4)
Others	47.3 (2.6)	50.6	45.9	73.4	17.8	1,357.2 (18.3)	11.7	60.2	10.5	39.7	51.0	34.0 (0.5)
(A) Total of above	1,855.7	2,333.8	2,636.0	3,316.1	5,921.0	7,406.3	4,004.3	4,206.2	5,340.4	7,755.3	7,165.7	7,030.3
(B) India's Total Imports	1,867.4	2,955.4	4,518.8	5,265.2	5,073.8	6,025.3	6,814.3	9,142.6	12,549.2	13,607.6	14,360.0	15,618.2
Share of (A) in (B)	99.4%	79.0%	58.3%	63.0%	116.7%	122.9%	58.8%	46.0%	42.6%	57.0%	49.9%	45.1%

Source: Office of the Chief Controller of Imports and Exports.

Note: Figures in brackets indicate proportion of total value in percentages.

Table A.9: NOMINAL PROTECTION RATES FOR MANUFACTURING SECTORS

Mean and Standard Deviation of Tariffs by Country, 1985 a/
(% ad valorem)

COUNTRY	Food		Textiles		Wood		Paper		Chemical		Nonmetal		Basic Met.		Machinery		Other Manuf.		Manufacturing Sector	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Argentina	21.9	8.0	36.7	5.2	34.1	5.6	27.2	13.2	13.6	14.1	27.3	12.0	27.7	12.0	25.6	12.7	22.0	13.8	22.9	14.3
Bangladesh	100.1	83.7	158.8	84.8	120.2	52.5	84.7	61.6	81.9	57.1	114.0	45.8	65.7	32.4	97.6	56.3	100.8	63.1	100.8	67.3
China (PRC)	110.0	58.2	164.8	67.5	98.5	55.7	72.2	50.0	67.3	42.7	95.0	57.1	43.9	25.9	72.8	50.5	155.9	66.0	91.2	63.4
Hungary	26.0	24.5	21.9	10.3	14.5	7.8	11.5	9.1	11.1	8.0	13.2	9.9	7.1	5.0	25.7	14.0	18.0	9.8	20.9	15.0
India	140.9	48.3	135.7	26.3	114.0	19.1	124.0	40.0	147.3	33.7	128.5	22.3	217.2	106.1	124.3	57.9	137.8	46.4	137.7	52.8
Mexico	19.1	22.7	39.8	22.3	43.3	18.0	32.8	26.1	19.0	14.3	32.5	24.1	21.6	11.5	25.9	17.7	49.8	22.3	24.7	19.0
Morocco	41.0	21.1	40.3	20.6	30.6	18.8	30.1	18.0	17.3	13.3	28.3	21.2	9.6	11.1	22.4	16.3	42.3	15.2	27.8	20.4
Thailand	52.4	47.1	51.2	31.7	38.3	35.5	27.9	15.2	27.3	20.3	36.3	35.7	12.6	10.1	27.5	16.5	36.8	17.1	33.5	28.6
Turkey	47.2	35.3	60.4	47.7	34.6	28.0	24.0	20.8	23.1	20.5	50.3	33.9	18.3	15.8	37.9	21.6	75.4	30.8	37.1	30.9
Yugoslavia	16.8	6.0	22.7	5.4	17.9	5.0	18.9	6.7	16.8	5.1	19.7	5.7	17.5	4.8	20.8	4.1	22.6	4.1	19.0	5.5

Source: SINTIAL Country Tariff files.

a/ 1985 or most recent year. Includes CET + Other Import Duties + Flat Duty (if any).

Table A.10

COVERAGE OF 11 SUBSECTOR STUDIES, PRODUCTION AND VALUE ADDED, 1981-82
(% of total)

Sector	Value of Output	Net Value Added
Textile Fabrics	11.9	13.2
Textile Products (Including Garments)	1.3	1.0
Paper Products	2.8	0.7
Fertilizer	3.8	2.5
Cement	1.2	1.1
Iron and Steel	11.2	11.4
Machine Tools	0.6	0.9
Other Non-electrical Machinery	5.2	6.3
Telecommunications Equipment	0.5	0.1
Other Electrical (Electronics) Machinery	4.8	5.5
Transport Equipment	<u>5.8</u>	<u>7.6</u>
Total Industry Sample	49.1	50.3

Source: Annual Survey of Industries, 1981-82.

Note: The ASI only covers the registered factory sector, which includes factories using power and employing 10 or more workers and those not using power but employing 20 or more workers.

Table A.11: FOUR-FIRM CONCENTRATION RATIOS FOR SELECTED PRODUCTS, 1983-84

Product Category	4-Firm Conc. Ratio <u>a/</u>	Product Category	4-Firm Conc. Ratio <u>a/</u>
Aluminum	100.0	Ball/Roller Bearing	.74.3
Wheat/Cereal Products	100.0	Cement Machinery	72.5
High Protein Products	100.0	Dyes	71.7
Acrilyc Fiber	100.0	Polyester Filament Yarn	71.6
Newsprint	100.0	Saleable Steel	70.9
Hardboard	100.0	Switch Gears	70.9
HDP	100.0	Liquor	70.8
LDP	100.0	Electric Motors	68.1
Pig Iron	100.0	Nylon Fiber	64.5
Metal Containers	100.0	Paints	61.8
Aircraft	100.0	Auto Tires	61.1
Jeeps	100.0	Auto Tubes	60.2
Cars	100.0	Mixed Fertilizer	59.7
Typewriters	99.1	Steel Wires	58.7
Pulp/Paper Machinery	98.8	Plastic Products	58.4
Earth Moving Machinery	98.5	Transformers	57.9
Glycerin	98.1	Air/Gas Compressors	57.0
Generators	98.1	Agricultural Tractors	56.1
Malted Foods	97.8	Circuit Breakers	56.0
Bicycles	97.0	Textile Machinery	53.4
Motorcycles	97.0	Chem/Pharmaceutical Mach.	52.5
Packaging Machinery	96.4	Wires and Cables	52.1
Razor Blades	96.3	Urea	50.7
Mopeds	96.0	Superphosphates	49.0
Scooters	95.9	Paper Machinery	45.2
Cigarettes	95.7	Pesticides	44.1
Commercial Vehicles	95.0	Beer	43.0
Soaps	94.0	Cement	41.2
Shipbuilding	93.5	Confectionary	39.3
Three Wheelers	93.0	Caustic Soda	36.0
Printing Machinery	92.1	Biscuits	33.4
Bread	92.0	Footwear	32.9
Soda Ash	91.2	Butter	30.7
Industrial Explosives	90.0	Vanaspati	29.9
Polyester Staple Fiber	89.7	Paper <u>b/</u>	28.7
Alloy/Special Steel	88.8	Processed Fruit	25.6
Boilers	87.7	Jute Textiles	25.0
Cosmetics	84.6	Drugs, Pharmaceuticals	18.4
Milk, Baby Food	84.3	Plywood Products	18.0
Nylon Industrial Yarn	84.2	Steel Pipes, Tubes	16.1
Storage Batteries	82.9	Cotton, Blended Yarn	13.6
Diesel Engines	82.9	Ferrous Castings	13.0
Air Conditioners	82.5	Cotton Blended Fabrics	11.8
Detergents	82.0	Flour Milling	7.3
Carbon Black	81.6	Sugar	6.7
Electric Fans	81.2	Steel Ingots	6.2
Switchboards	81.0	Vegetable Oil	1.0
Dry Cells	80.2		
Viscose Fiber	79.9		
Refrigerators	79.3		
Hand Tools	75.4		

Sources: Market and Market Shares, Center for Monitoring the Indian Economy, Bombay, 1986; sector reports.

a/ Four-firm concentration ratio in a product category is defined as ratio of sales by top four firms to total industry sales.

b/ Paper excludes pulp, newsprint, and hardboard, listed separately.

Table A.12: CHANGES IN CONCENTRATION, 1953-68

Industry	Four-Firm Concentration Ratio			Change in Concentration	
	1953	1963	1968	1953-63	1963-68
Cotton Textiles	22.1	28.3	29.1	6.2	0.8
Wool Textiles	84.4	81.2	80.4	-3.2	-0.8
Synthetic Textiles	98.2	94.5	94.1	-3.7	-0.4
Jute Textiles	33.9	40.6	46.7	6.7	6.1
Paper	70.4	54.9	59.2	-15.5	4.3
Cement	83.6	77.0	71.6	-6.6	-5.4
Sugar	29.0	22.5	23.5	-6.5	1.0
Vegetable Oil	61.3	69.4	69.2	8.1	-0.2
Glass	70.5	70.7	63.8	0.2	-6.9
Rubber	93.2	76.4	79.2	-16.8	2.8
Tools, Instruments	74.1	52.9	50.6	-21.2	-2.3
Industrial Machinery	71.8	47.1	49.1	-24.7	2.0
Automobiles, Ancillaries	84.5	57.7	58.1	-26.8	0.4
Electrical Engineering	56.9	41.5	35.1	-15.4	-6.4
Mechanical Engineering	35.4	31.4	31.3	-4.0	-0.1
Metal Products	85.2	77.0	78.7	-8.2	1.7
Non-Organic Chemicals	70.6	47.3	46.6	-23.3	-0.7
Fertilizers	95.9	82.2	90.4	-13.7	8.2
Organic Chemicals	100.0	78.4	76.5	-21.6	-1.9
Plastic Chemicals	100.0	68.1	65.1	-31.9	-3.0
Dyes	100.0	92.9	91.5	-7.1	-1.4
Drugs, Pharmaceuticals	53.3	56.4	55.2	3.1	-1.2
Average Across Industries				-10.3	-0.2

Source: A. Ghosh, "Concentration and Growth of Indian Industries, 1948-68," Journal of Industrial Economics 23 (1975).

Table A.13: RELATIVE SHARES OF TYPES OF CEMENT

	1970	1977	1978	1983
OPC	89.80	71.30	52.30	25.02
PPC	0.60	10.20	31.10	56.27
PSC	9.20	17.20	15.80	17.11
White Cement	0.30	0.40	0.40	0.32
Other Types	0.10	0.90	0.40	1.28
Total	100.00	100.00	100.00	100.00

Source: Cement Production and Dispatches, various years.

Table A.14: DISTRIBUTION OF VALUE ADDED, INDIA AND S. KOREA

	India 1981/82				S. Korea 1981			
	Labor	Depreciation	Interest	Gross Profit (incl. taxes)	Labor	Depreciation	Interest	Gross Profit (incl. taxes)
Food/Beverages	<u>45.5</u>	<u>12.4</u>	<u>20.4</u>	<u>20.1</u>	<u>45.3</u>	<u>14.6</u>	<u>28.4</u>	<u>11.5</u>
Textiles/Garments/Leathers	<u>64.1</u>	<u>9.9</u>	<u>18.2</u>	<u>6.9</u>	<u>50.6</u>	<u>14.8</u>	<u>30.2</u>	<u>4.4</u>
Textiles	<u>65.7</u>	<u>10.2</u>	<u>17.9</u>	<u>5.5</u>	<u>45.2</u>	<u>17.8</u>	<u>34.0</u>	<u>3.0</u>
Garments	<u>43.9</u>	<u>6.2</u>	<u>20.7</u>	<u>26.6</u>	<u>66.1</u>	<u>6.6</u>	<u>17.8</u>	<u>9.5</u>
Leathers	<u>60.4</u>	<u>10.8</u>	<u>21.4</u>	<u>5.9</u>	<u>64.2</u>	<u>8.4</u>	<u>21.2</u>	<u>6.2</u>
Wood	<u>46.2</u>	<u>8.7</u>	<u>15.5</u>	<u>28.1</u>	<u>64.5</u>	<u>12.1</u>	<u>61.4</u>	<u>-38.5</u>
Paper/Printing	<u>53.4</u>	<u>11.9</u>	<u>16.5</u>	<u>16.9</u>	<u>55.8</u>	<u>14.3</u>	<u>36.9</u>	<u>-7.0</u>
Chemicals/Rubber/Plastics	<u>33.5</u>	<u>18.1</u>	<u>20.7</u>	<u>26.5</u>	<u>39.0</u>	<u>17.5</u>	<u>34.0</u>	<u>9.5</u>
Chemicals	<u>34.5</u>	<u>19.6</u>	<u>21.9</u>	<u>22.8</u>	<u>34.8</u>	<u>25.2</u>	<u>39.2</u>	<u>0.8</u>
Non-Metallic Minerals	<u>47.6</u>	<u>13.8</u>	<u>15.6</u>	<u>22.0</u>	<u>46.3</u>	<u>19.5</u>	<u>32.6</u>	<u>1.6</u>
Basic Metals	<u>42.4</u>	<u>13.9</u>	<u>18.7</u>	<u>24.5</u>	<u>30.8</u>	<u>26.6</u>	<u>44.3</u>	<u>-1.7</u>
Engineering Industries	<u>50.8</u>	<u>10.1</u>	<u>14.4</u>	<u>23.7</u>	<u>55.6</u>	<u>14.5</u>	<u>28.4</u>	<u>1.5</u>
Metal Products	<u>49.3</u>	<u>8.3</u>	<u>17.9</u>	<u>22.8</u>	<u>67.3</u>	<u>11.5</u>	<u>27.9</u>	<u>-6.7</u>
Non-Electric Machinery	<u>48.1</u>	<u>9.3</u>	<u>14.6</u>	<u>27.1</u>	<u>54.8</u>	<u>21.1</u>	<u>28.4</u>	<u>-4.3</u>
Electric Machinery	<u>45.7</u>	<u>8.0</u>	<u>17.7</u>	<u>27.5</u>	<u>52.7</u>	<u>11.2</u>	<u>24.5</u>	<u>11.6</u>
Transport Equipment	<u>57.7</u>	<u>13.1</u>	<u>10.5</u>	<u>18.1</u>	<u>55.0</u>	<u>16.5</u>	<u>34.5</u>	<u>-6.0</u>
Other	<u>41.6</u>	<u>9.4</u>	<u>18.2</u>	<u>21.6</u>	<u>67.1</u>	<u>7.2</u>	<u>10.2</u>	<u>15.5</u>
TOTAL MANUFACTURING	<u>47.7</u>	<u>12.7</u>	<u>17.8</u>	<u>20.8</u>	<u>47.5</u>	<u>16.6</u>	<u>32.4</u>	<u>3.5</u>

Sources: GOI, Annual Survey of Industries, 1981/82; Bank of Korea, Financial Statements Analysis, 1981.

**Table A.15: CAPACITY UTILIZATION FOR SELECTED INDUSTRIES
1983-84**

Product Category	Capacity Utilization (%)	Product Category	Capacity Utilization (%)
Beer	137	Auto Tires	70
Jeeps	127	Pulp	66
Viscose Fiber	119	Urea	66
Mixed Fertilizers	111	Paper Products	65
Polyester Filament Yarn	100	Agricul. Tractors	65
Electric Fans	96	Dry Cells	65
Nylon Industrial Yarn	96	Printing Machinery	65
Nylon Fiber	96	Caustic Soda	64
Vanaspati	96	Hardboard	62
Motorcycles	91	Detergent	62
Soaps	91	Special Steel Alloy	62
Electric Motors	89	Pig Iron	61
Biscuits	89	Superphosphates	61
Mopeds	88	Polyester Staple Fiber	61
Bicycles	88	Cars	60
Bread	85	Plywood	59
Steel Ingots	84	Confectionary	59
Acrilyc Fiber	84	Malted Food	59
Scooters	82	Flour Milling	57
Soda Ash	80	Earth Moving Machinery	57
Butter	79	Salable Steel	55
Newsprint	79	Switch Gears	54
Three Wheelers	78	Auto Tubes	53
Milk, Baby Food	77	Diesel Engines	52
Commercial Vehicles	76	Wheat/Cereal Products	52
Footwear	74	Ferrous Castings	51
Transformers	72	Switchboards	46
Cigarettes	72	Ball/Roller bearings	41
Generators	71	Steel Wires	38
Metal Containers	71	Processed Fruits	36
Hand Tools	71	Packaging Machinery	31

Source: CMIE, Market and Market Shares, Bombay, 1986.

Table A.16: INDIA, DOMESTIC VERSUS INTERNATIONAL PRICES, 1985 a/
(Rupees)

	(1) Unit Price	(2) Unit Price (cif)	Ratio (%) of (1)/(2)
Textile Yarns and Inputs			
Cotton 10-count	18 kg	22 kg	80
Cotton 14-count	20 kg	24 kg	85
Cotton 20-count	19 kg	25 kg	75
Cotton 30-count	27 kg	29 kg	92
Cotton 40-count	29 kg	35 kg	83
Polyester Staple Fiber	48 kg	17 kg	282
Polyester Filament Yarn	53 kg	26 kg	220
Monothylene Glycol	16,000 ton	6,600 ton	242
Dimethyl Terephthalate	21,500 ton	8,040 ton	410
Terephthalic Acid	22,000 ton	8,400 ton	262
Pulp and Paper			
White Printing Paper	7,200 ton	(roughly comparable)	100
Fertilizer			
Urea	2,300 ton	2,080 ton	111
Cement			
Non-levy Price	600 ton	878 ton	68
Levy Price	379 ton	—	43
Machine Tools			
Center Lathe (5kw)	160,000 unit	80,000 unit	200
Center Lathe (1kw)	280,000 unit	160,000 unit	175
Milling Machine (5.5kw)	250,000 unit	160,000 unit	156
Milling Machine (7.5kw)	350,000 unit	190,000 unit	184
Radial Drill	250,000 unit	120,000 unit	208
Tool & Cutter Grinder	110,000 unit	50,000 unit	220
Electronics			
Color TV	5,000 unit	2,100 unit	238
Microcomputer (8bmp)	50,000 unit	10,000 unit	500
Vehicles			
Bicycles	1,104 unit	1,272 unit	87
Iron and Steel			
Slab	3,100 ton	2,856 ton	109
Billet	3,260 ton	2,889 ton	113
Round	3,960 ton	3,407 ton	116
Equal Angle	5,090 ton	3,504 ton	145
Joist	5,200 ton	3,504 ton	148
Wire Rod	4,210 ton	3,603 ton	117
Hot-rolled Coil	5,115 ton	3,569 ton	154
Hot-rolled Sheet	5,445 ton	4,179 ton	130
Light Plate	5,400 ton	4,179 ton	129
Heavy Plate	5,920 ton	4,179 ton	142
Cold-rolled Coil	6,710 ton	4,153 ton	162
Colled-rolled Sheet	6,780 ton	4,153 ton	163
GP Sheet	9,490 ton	4,873 ton	195
Carbon Steel	9,424 ton	3,444 ton	274
Free Cutting Steel	9,530 ton	3,422 ton	278
Manganese Steel	9,880 ton	3,411 ton	290
Chrome Steel	10,475 ton	4,563 ton	230
Mang. Chrome Steel	10,688 ton	4,634 ton	231
Chrome Moly Steel	11,646 ton	5,134 ton	227
Mang. Moly Steel	11,484 ton	4,905 ton	234
Nickel Chrome Steel	15,241 ton	6,918 ton	220
Nickel Chrome Moly. Steel	12,028 ton	5,692 ton	211
Chrome Vanadium Steel	11,199 ton	4,820 ton	232
Ball Bearing Steel	11,384 ton	4,834 ton	235
Spring Steel	10,145 ton	3,722 ton	273
Stainless Steel (AISI 410)	17,640 ton	8,606 ton	205
Stainless Steel (AISI 304)	27,003 ton	14,580 ton	185
Stainless (AISI 316)	39,890 ton	18,953 ton	210
Valve Steel	19,623 ton	8,703 ton	225
Nonferrous Metals			
Aluminum	23,500 ton	14,000 ton	168
Copper	45,000 ton	17,500 ton	257
Zinc	26,000 ton	7,500 ton	347
Lead	13,750 ton	4,400 ton	313
Tin	197,000 ton	152,000 ton	130
Nickel	120,000 ton	50,000 ton	240

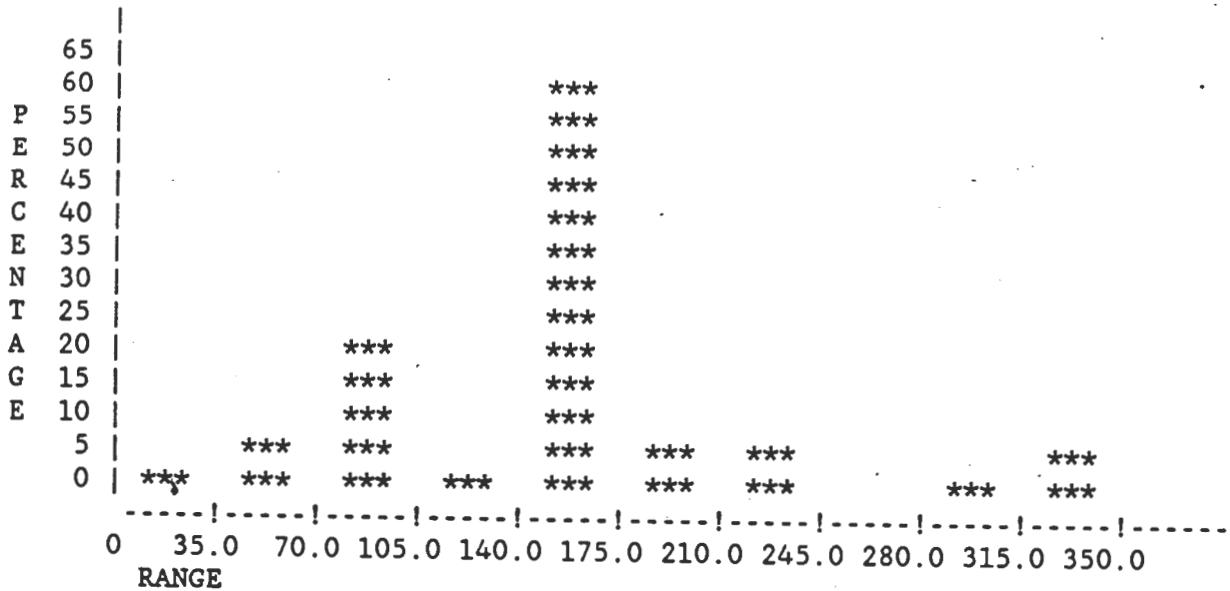
Sources: Sector reports.

a/ 1985 or most recent year.

Note: Domestic prices exclude excise duties.

Figure A.1

REPORT ON NOMINAL PROTECTION FOR INDIA
MANUFACTURING SECTOR
CUSTOMS TARIFFS + OTHER IMPORT DUTIES
FREQUENCY DISTRIBUTION



Source: SINTIA, India Tariff File.

REPORT ON NOMINAL PROTECTION FOR INDIA
 CUSTOM TARIFFS + OTHER IMPORT DUTIES
 AVERAGE TARIFFS BY SECTOR

Appendix Figure
 Page 2 of 2

195								***	
A 180								***	
V 165								***	
E 150					***			***	
R 135	***	***			***	***		***	
A 120	***	***	***	***	***	***	***	***	***
G 105	***	***	***	***	***	***	***	***	***
E 90	***	***	***	***	***	***	***	***	***
75	***	***	***	***	***	***	***	***	***
N 60	***	***	***	***	***	***	***	***	***
R 45	***	***	***	***	***	***	***	***	***
P 30	***	***	***	***	***	***	***	***	***
15	***	***	***	***	***	***	***	***	***

SECTORS FOOD TEXTIL WOOD PAPER CHEMIC N.MET BAS MT MACH OTHERS

WEIGHTED BY IMPORTS

169								***	
A 156								***	
V 143						***		***	
E 130						***		***	
R 117	***	***			***	***	***	***	
A 104	***	***		***	***	***	***	***	
G 91	***	***	***	***	***	***	***	***	***
E 78	***	***	***	***	***	***	***	***	***
65	***	***	***	***	***	***	***	***	***
N 52	***	***	***	***	***	***	***	***	***
R 39	***	***	***	***	***	***	***	***	***
P 26	***	***	***	***	***	***	***	***	***
13	***	***	***	***	***	***	***	***	***

SECTORS FOOD TEXTIL PAPER WOOD CHEMIC N.MET BASMTL MACHIN OTHERS

WEIGHTED BY PRODUCTION AT DOMESTIC PRICES

143									
A 132	***				***	***	***		
V 121	***	***			***	***	***		
E 110	***	***	***	***	***	***	***	***	***
R 99	***	***	***	***	***	***	***	***	***
A 88	***	***	***	***	***	***	***	***	***
G 77	***	***	***	***	***	***	***	***	***
E 66	***	***	***	***	***	***	***	***	***
55	***	***	***	***	***	***	***	***	***
N 44	***	***	***	***	***	***	***	***	***
R 33	***	***	***	***	***	***	***	***	***
P 22	***	***	***	***	***	***	***	***	***
11	***	***	***	***	***	***	***	***	***

SECTORS FOOD TEXTIL WOOD PAPER CHEMIC N.MET BASMTL MACHIN OTHERS

RECENT REGULATORY POLICY CHANGES AND THEIR IMPACT

The following is a summary description and a preliminary assessment of recent key industrial regulatory policy changes (the date of announcement is in brackets):

1. Industrial Licensing

(i) Delicensing of 25 Industries (3/16/85). Capacity licenses are no longer necessary for any new project or expansion in the delicensed industry provided the company is not MRTP or FERA and the product is not reserved for the small-scale sector. Delicensed products include engineering goods, such as automotive components, machine tools, and some products in the steel, electronics and pharmaceutical industries.

(ii) Broad-banding Industrial Licenses for More Than 25 Industries (1/11/85-2/2/86). Broad-banding allows a firm to shift production among each of the broad-banded products for which it has an industrial license, up to the limit of total licensed capacity for all the products, without seeking an increase in the product-specific licenses. For example, a firm with a license to manufacture 50,000 cars could, under broad-banding, shift production to light commercial vehicles or trucks up to a limit of 50,000 without seeking separate product-specific license for light commercial vehicles or trucks. The flexibility to shift capacity among all broad-banded licensed products is severely limited, however, by the condition that additional machinery not be installed. Thus, the ability to shift production and take advantage of possible economies of scope is useful only to the extent that installed machinery can be employed flexibly for a number of different products.

(iii) Liberalized Conditions for Expansion. Relaxation of the licensing restrictions on capacity expansion for specified industries has normally been subject to restrictive conditions regarding project location, additional investment and foreign exchange usage. Substantial expansion is now possible under "capacity re-endorsement," "modernization" and delicensing, subject to the following less restrictive conditions:

(a) Capacity re-endorsement. Re-endorsement (expansion of licensed capacity) is allowed for all firms that have achieved 80 percent (previously 94 percent) utilization of licensed capacity during any of the five years preceding March 31, 1985. Firms in which production has exceeded this re-endorsed capacity level will then be eligible for further re-endorsement in subsequent years to the extent of production already achieved plus a third. In addition, "dominance" under MRTP will not be taken into account when re-endorsing capacity. The rate of output expansion is still regulated, but firms are allowed to plan for a more liberal rate of growth. Expansions still have to be registered, and in the case of MRTP companies, unless exempt under Section 22A, MRTP clearance is required, although under more liberal criteria.

- (b) Modernization. An increase in capacity to the extent of 49 percent (previously 25 percent) is allowed if the increase in output takes place as the result of a "modernizing" investment. No locational restrictions apply.
- (c) Delicensing. In the case of products or firms that are delicensed, the limit on permissible expenditures for imported inputs has been raised from Rs 4.0 million to Rs 7.5 million or 15 percent of the ex-factory value of output, whichever is less.

(iv) Establishment of Minimum Production Scales. Minimum operational capacities have been established for 65 products, including synthetic fibers, chemicals, and some pharmaceuticals, engineering goods and electronics items. Incumbent firms will be encouraged to expand capacity to the announced levels, with streamlined approval procedures for expansion licenses, and new firms will be discouraged from establishing units with scales smaller than the announced minima.

2. MRTP Controls

(v) Increased Asset Limit for MRTP Companies (5/85). The asset limit used to determine MRTP companies was increased from Rs 200 million to Rs 1,000 million. This change should exempt a number of firms from the additional clearances and restrictions imposed on MRTP companies. As of December 1985, 232 of the roughly 1,300 MRTP companies had been deregistered, while an additional 31 firms came under the purview of the Act, so that the net deregistrations were 201. The majority of companies to deregister were those that had been included under MRTP on the basis of interconnection, that is, they were a number of medium-sized companies whose combined assets totalled Rs 200 million, rather than single large undertakings.

(vi) Exemption from MRTP Clearances for 27 Industries (5/25/85). Normally, MRTP firms that want to set up a new project, manufacture a new item or substantially expand capacity have been required, in addition to obtaining an industrial license, to seek clearances from the Department of Company Affairs, the Cabinet Committee on Economic Affairs and, in some cases, the MRTP Commission before proceeding. To stimulate growth and increased competition in the 27 designated industries, these additional clearances have been waived. This reform should reduce significantly the time taken for decisions on proposals by MRTP firms and it allows them to bypass the public hearings in which incumbent firms can try to influence new entries or expansions.

(vii) Delicensing for MRTP Companies of 23 of the 27 Items Exempted from MRTP Clearances (1/30/86). Twenty-three products have been delicensed even for MRTP companies, provided that the plant manufacturing them is located in a "centrally declared backward area" (see Annex 2). Several of these products, including automotive components, machine tools and some electronic components, were also included in the general delicensing list. This measure dramatically eases entry for MRTP firms in these product groups.

(viii) Reduction in Export Requirements for MRTP Companies Investing in Non-Appendix I Industries in Backward Areas. Normally, MRTP and FERA firms have been restricted from investing in products not included on the list of "core" industries open to them. These firms had been allowed to invest in non-core industries if the project was located in a designated backward area and if the firm undertook an export obligation ranging from 30 percent to 50 percent of output. Under the new ruling, the export obligation for MRTP firms manufacturing non-core industry products in backward areas has been reduced to 0-25 percent, depending on the "backwardness" of the area.

(ix) Addition of 17 Products to the List of Industries Open to Investment by MRTP and FERA Companies (Appendix I). The list of products in which MRTP and FERA companies are generally allowed to invest, and can do so without an export obligation or locational restriction, has been expanded.

3. Small-Scale Policies

(x) Increased Asset Limit for Products Reserved for Small-Scale Industries (3/19/85). Previously, products reserved for the small-scale sector were to be manufactured in firms with total fixed assets (plant and equipment) not exceeding Rs 2.0 million, or Rs 2.5 million in the case of ancillary firms. These asset limits were increased to Rs 3.5 and 4.5 million, respectively, allowing firms manufacturing reserved products to grow.

(xi) Phasing of Excise Tax Exemptions for Small-Scale Firms. In addition to increasing the investment limit for small-scale firms making reserved products, the concessions relating to excise duties were increased to encourage increased output and to remove the disincentive for small firms to grow. Previously, a firm lost the entire excise tax benefit once its turnover reached Rs 7.5 million. Under the new policy, small firms are completely exempt from excise taxes on annual turnover up to Rs 750,000; for sales between Rs 750,000 and Rs 7.5 million, the excise taxes are charged at a reduced rate.^{1/} These reduced tax rates on output levels up to Rs 7.5 million continue to apply until the firm's total turnover reaches Rs 15 million, at which point the reduced excise tax levels on the first Rs 7.5 million in turnover are rescinded.

The government has thus implemented a number of reforms during the last two years in order to improve industrial performance. Since most policy changes were introduced recently, their impact is not yet evident.

1/ For output between Rs 750,000 and Rs 1.5 million, excise duties are charged at 10 percent below the normal rate or 25 percent of the normal duty, whichever is lower, subject to a minimum duty of 2.5 percent ad valorem. For turnover levels between Rs 1.5 million and Rs 7.5 million the normal duty is reduced by 10 percent, subject to a minimum of 5 percent ad valorem.

The measures should stimulate investment in delicensed and "broad-banded" products, and enhance competition among MRTP firms.^{2/} In addition, the increase in asset limit for purposes of defining "small-scale" should allow some improvement in the technical efficiency of production of small units. More importantly, increasing the turnover level on which small firms enjoy excise tax advantages should encourage the growth of those that have yet to reach the asset limit. The recent measures should substantially reduce some of the policy-related entry and growth barriers.

Preliminary evidence of the impact of the recent changes shows a reduction in the number of firms subject to MRTP controls of approximately 15 percent; an increase in the absolute number and the share of approvals in applications by MRTP companies from 90 (37 percent of total applications) in 1982 to 255 (59 percent of total) in 1984 (Table 1); and a sharp rise in the number of applications for MRTP clearances in 1984 and 1985. The expansion in the number of letters of intent granted in 1985 (37 percent over 1984) should result in a significant supply response once these projects come onstream (Table 2). In addition, the large number of registrations of new projects in delicensed industries also suggests a positive reaction to the delicensing policy (Table 3).

Table 1: DISPOSAL OF APPLICATIONS UNDER SECTIONS 21 AND 22
OF THE MRTP ACT ^{a/}

	1982	1983	1984	10/30/1985
Proposals Approved	90	131	255	
Proposals Rejected	104	78	80	
Withdrawn/Closed	26	33	45	
Proposals Found Exempt	25	5	52	
Total Number of Applications	245	247	432	435

Source: Department of Company Affairs, Annual Reports, and unpublished data.

a/ Sections 21 and 22 relate to substantial expansion (more than 25 percent in five years) and establishment of new units, respectively.

2/ In addition to measures reducing restrictions and eliminating clearance procedures for MRTP companies, those remaining within the Department of Company Affairs (DCA) have been streamlined and simplified. Internal instructions have been issued regarding liberal consideration of incremental investment for balancing and modernization, and delegating enlarged approval powers to DCA staff.

Table 2: LETTERS OF INTENT/INDUSTRIAL LICENSES, 1974-85

	Letters of Intent		Industrial Licenses			
	Total	% Change	Total	% Change	New Entry/Expansion of Products	Of Which COB ^{a/}
1974	1,181		1,099		782	317
1975	962	-18.5	1,027		760	267
1976	547	-43.1	662		559	103
1977	533	-2.6	518		424	94
1978	440	-17.4	348		302	46
1979	550	25.0	365		302	63
1980	946	72.0	475		395	80
1981	916	-3.2	476	0.2	403	73
1982	1,043	13.9	432	9.2	349	83
1983	1,055	1.2	1,075	148.8	479	596
1984	1,064	0.9	905	-15.8	488	417
1985	1,457	37.0	985	9.0	440	545

Source: Department of Industrial Development, unpublished data.

a/ COB is a carry-on-business license, which is issued for existing undertakings.

Table 3: REGISTRATION OF "DELICENSED" INDUSTRIES
(as per notification 3/18/85)

	No.	%
<u>Total</u>	1,167	100.0
(a) Of Which Schemes in Backward Areas Other Than No-industry Districts	594	50.9
(b) Of Which Schemes in No-industry Districts	92	7.9
<u>Subtotal</u>	686	58.8

Source: Department of Industrial Development, unpublished data.

At the subsector level, major regulatory changes have been introduced since 1980 in over half the sectors examined in this study.

The Automotive Sector. In 1982, the GOI initiated a program to modernize and expand the automotive sector, spearheaded by the entry of Maruti, a new public sector company. Maruti, which was established to manufacture low-cost, fuel-efficient cars and light commercial vehicles, is the first attempt at entry into the automotive sector by a public enterprise. The modernization program stimulated by Maruti's entry led the GOI to relax some restrictions on capacity licensing and choice of product lines, foreign collaboration approvals and access to imported components and technology. As a result of the new policies, licensed capacity in cars has increased to 84,240 in 1985; in commercial vehicles, to 342,500; and in two-wheelers, to 3,731,900.

The entry of Maruti in the car segment is the first example of explicit price competition, since its retail price is 31 percent lower than that of HML and PAL. Between 1983 and 1985, car sales more than doubled, with Maruti capturing 47 percent of the market, Hindustan's share dropping to 29 percent from around 50 percent, and Premier to 24 percent from 45 percent. The increased competition, combined with a relaxation of regulatory and technology policies, has stimulated modernization of the sector and the introduction of fuel-efficient, light-weight vehicles in India.

Steel and Cement. Partial price decontrol was introduced in the steel and cement industries in 1982, and two years later, steel was fully decontrolled. In the cement industry, the results have been impressive, with large increases in capacity and production. The annual average growth rate in installed capacity jumped from 2 percent during the 1970s to 12 percent during 1981/82-1984/85, while production increased from 3 to 13 percent annually. In the steel industry, however, the results have been mixed. The steel industry experienced substantial increases in production and sales following the 1982 partial decontrol measures, but profits have dropped in the context of import liberalization. The steel industry's performance has been similar to that of the tire industry following price decontrol in 1974. Profits rose immediately after decontrol and declined in subsequent years during a period of recessionary market conditions for the tire industry.

Telecommunications. In March 1984, a revised industrial policy was announced that allowed the private sector to manufacture subscriber terminal equipment (PABXs, telephone instruments, teleprinters, automatic dialers, message recorders) and peripherals for data communication systems. The policy also provided for up to 49 percent equity participation by the private sector with central/state governments in joint ventures to manufacture transmission and switching equipment, and it further encouraged joint and private sector entry into the production of jelly-filled cables. GOI's target is to have 20 percent of telecommunications equipment made by private and joint-sector firms by 1990, compared to 4 percent in 1985.

The implementation of this policy has led to an increase in the number of letters of intent, as a large number of firms have expressed interest in or committed themselves to entering production. The interest

in establishing new production lines has been greatest in terminal equipment, particularly telephone instruments and answering and recording machines, PABXs, facsimile transreceivers, two-way radios and allied equipment. In the areas of transmission, multiplexing and switching, continuing restrictions on entry by private firms, technological barriers and market size have until now been major constraints on entry and expansion. Nevertheless the new policy has attracted considerable interest for a number of products in these areas.

There have also been signs of a tentative change in strategic behavior by the PSE's, which are increasing market-oriented technological activities and modernizing product lines in those segments that entrants are expected to target. PSEs have elaborated plans to move toward areas characterized by high financial or technological barriers to entry that afford greater protection from the private sector. Finally, there has been a greater focus by PSEs on quality and delivery schedules, the result of a progressive tightening of procurement guidelines and practices.

Electronics. In March 1985, a set of integrated policy measures was adopted for electronics to encourage investment, technological upgrading and manpower development. While there is no upper limit on capacity, a minimum investment is in many cases required to assure that producers will achieve economies of scale. Liberal capacity growth is permitted once satisfactory use of existing capacity has been achieved. In electronic components and entertainment products, no license is required for entry or expansion, provided there is no use of foreign collaboration, capital goods imports or foreign technology. Broad-banding has been introduced for several items, so that firms can now shift product lines according to changing market requirements. Moreover, all electronic segments, except integrated circuits and consumer electronics, are exempt from MRTP clearances.

Textiles. The New Textile Policy of May 1985 is the third in a series beginning with the Policy Statement of 1978. The salient features of the May 1985 policy include: (i) removing existing restrictions on fiber usage and permitting full fiber flexibility in the production of yarn and cloth (except wool blends); (ii) withdrawing of controls on capacity and establishing of a modernization fund to permit technological change; and (iii) moving toward a realistic view on the closure of non-viable units and rehabilitation of displaced labor. Although it is still premature to assess the full implications of the new policy, recently the output of cloth and yarn has recently shown considerable recovery, and the industry has recorded an improvement in capacity utilization.



