

**THE IMPACT OF ECONOMIC REFORMS ON
INDIAN MANUFACTURERS: EVIDENCE
FROM A SMALL SAMPLE SURVEY**

**Eckhard Siggel
Pradeep Agrawal**



सत्यमेव जयते

**Institute of Economic Growth
University of Delhi Enclave
North Campus
Delhi – 110 007, India
Fax: 91-11-27667410
Gram: GROWTH – Delhi – 110 007
Phones: +91-11-27667101, 27667288, 27667365
WEBSITE: iegindia.org**

Forthcoming in Asian Profile, Vol. 37, August 2009

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By

Eckhard Siggel and Pradeep Agrawal***

April 2009

ABSTRACT

Although there has been much theorising on the impact of India's economic reforms of 1991 on Indian manufacturers, there is hardly any previous study that has taken up the task of actually asking the manufacturing firms as to what the true impact of economic reforms has been on them. In this paper, we report the findings of a small sample survey of manufacturing enterprises in the Delhi region regarding perceptions of the impact of economic reforms of 1990s. Most firms felt that the reforms were helpful by increasing access to foreign technology and making imports of capital and intermediate goods cheaper. They also felt that improvement in infrastructure and more flexible labour laws will facilitate further growth of India's manufacturing sector.

Institute of Economic Growth,
University Enclave, Delhi 110007, India.
Phone : (+91-11) 2766 7288 (off.); 9811472459 (*mobile*)
Fax : (+91-11) 2766 7410
E-mail : pradeep@iegindia.org

* Department of Economics, Concordia University, 1455 de Maisonneuve Blvd., Montreal, Canada, H3G 1M8; (**E-mail**: siggel@alcor.concordia.ca)

** Professor and Head, RBI Chair Unit, Institute of Economic Growth, Delhi -110007 (**Email**: pradeep@iegindia.org)

Note: The underlying small-sample survey was conducted by Ms. Caithlin McArton as an intern sponsored by the Shastri Indo-Canadian Institute (SICI) and supervised by the authors. The authors wish to thank Ms. McArton for the good work of interviewing the respondents and for recording coherent questionnaire responses. The study has benefited from the financial support of a SICI partnership grant as well as from institutional support by the Institute of Economic Growth. We also wish to thank the participants in this survey for their kind cooperation and time.

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1. INTRODUCTION

The Indian economic reforms of the early 1990s have stimulated much research and a host of academic papers. It is common to attribute India's recently accelerated growth to the reforms. An aspect that has remained relatively unclear is which policy changes within the reforms have led to which consequences for employment, incomes and poverty. There is also debate about which further policy changes are required to sustain the increased growth and to strengthen the diffusion of progress to the lower-income segments of the population. Most studies have analysed the reform impact on macro aggregates, which leaves it unclear how different policies have worked. In order to examine this aspect it is useful to investigate at the firm level how different industries were affected by specific policy changes.

The objective of the present paper is to examine how the reforms were perceived and coped with by manufacturing enterprises, especially smaller ones, and to compare their perceptions with what has been found on the basis of industry-level data. For that purpose a small-sample interview survey was conducted in the first three months of 2006. Fifty manufacturing firms were contacted and their managers were interviewed using a questionnaire, which was adjusted for some specific aspects of the sub-sectors. The present paper reports the answers received and discusses them in the light of other findings, in particular our earlier findings from an analysis of industry competitiveness under the reforms (Siggel, 2007).

The paper proceeds in the next section by highlighting first some perceptions of the reform impact expressed in earlier studies. Some of them were clearly pessimistic since their authors saw their expectations of rapid positive change unfulfilled. In contrast, our earlier study (Siggel, 2007) of industry competitiveness had found that the outcome of the reforms was more beneficial to the industries, their exports and employment. The third section reports the industry perceptions, first of the reform impact on the

enterprises' business performance and then on issues of taxation and the business environment. The fourth section reports some of the industry-specific issues and compares them with our earlier findings based on aggregate data. The fifth section summarizes the main conclusions of the paper.

2. IMPACT OF ECONOMIC REFORMS OF 1991: AN OVERVIEW OF EARLIER PERSPECTIVES

Several earlier studies have attempted to analyze the impact of the economic reforms of 1991 on the economy and industrial sector of India. In one of the earlier studies Nambiar et al. (1999) started from the expectation that trade liberalization “encourages economic activity and hence raises production and employment”; he then asked whether this was also true in the Indian case. Although this expectation may be justified in the longer run, it seems somewhat unrealistic to expect immediate benefits since trade liberalization always implies increased foreign competition, which in turn may lead to the closure of less competitive firms and therefore job losses and income reduction in the initial phase following trade liberalization. One may argue, however, that by 1999 it was possible to expect the longer-run impact of increased productivity, competitiveness and accelerated growth. This raises questions about the timing of the reforms and about the time lags necessary to achieve the longer-run changes. In spite of the accelerated growth figures of the mid-1990s being already available, Nambiar et al. (1999) concluded that “trade has over the years shrunk India’s manufacturing base, both in terms of value addition and employment”. Although the authors admit that “this ‘high protection-high cost-poor quality’ syndrome needed to be corrected by import liberalisation”, their assessment of the reform impact is rather pessimistic.

Chauduri (2002) also reported that the “expectations of rapid and sustained growth of output and employment ...have not materialized.” The author concluded that value added growth in the 1990s was inferior to that in the 1980s, that the industrial base had become shallower, that employment growth in the 1990s was negative in five out of nine years and that the labour productivity stagnated after 1995/96, after having increased

in the early 1990s. Here again no attention is paid to the changes in protection, prices and costs that resulted from the reforms.

A much more positive picture was drawn by Panagariya (2004), who argued that growth in the 1990s was more robust than that of the 1980s and that it was achieved through important policy changes. The main policy changes held responsible for accelerated growth are the liberalization of foreign trade, the reduction in industrial licensing and opening to foreign direct investment.

Balasubramanyam and Mahambre (2001) attempted to relate different aspects of the reforms with changes in industry performance, in particular with productivity change. They first observed a decline in debt/equity ratios in the majority of industries, especially in new firms, which was seen as a consequence of financial reform. The observed changes in productivity (TFP decline) were mainly attributed to trade and licensing reforms. The authors concluded that in spite of declining productivity the industrial sector has benefited from the reforms by expanding its capacity.

Ahluwalia (2002) characterized the Indian reforms as gradualist, but less so by design than as a consequence of political constraints. He concluded that their cumulative impact was substantial and created the basis for accelerated growth. Although trade and industrial reforms were the most visible, the author cautioned that tariffs in India are still much higher than in China and other countries in Southeast Asia. Similarly, he also found that foreign investment had a much more limited impact in India than in China and Southeast Asia. The one area in which the trade policy reforms were most successful in his view is the sector of information technology-related services. Areas, where the reforms were found to need further progress are the labour market, agriculture, infrastructure and the management of fiscal balance.

Any assessment of the policy reform impact on industries has to start with a detailed evaluation and measurement of the incidence of specific policy changes. Das (2003) attempted such an assessment and computed effective rates of protection and import coverage as well as import penetration ratios for 72 three-digit industries for four sub-periods of the period 1980 to 2000. Although these ratios are useful they do not show the combined effect of tariffs and QRs on output prices. For that it would be necessary to estimate rates of protection based on price comparison, as had been done in the 1980s by

Pursell (1988). The author concluded that the Indian level of protection remained high in comparison with several South-East Asian countries.

Pandey (2004) focused on the measurement of several trade reform variables, including the measurement of protection based on price comparisons. As to the impact of trade liberalisation on industry performance he concluded that this link appears to be weak, given the presence of other factors. Among these factors, government controls in form of industrial licensing and public sector investments are singled out, but the author also points to the well-known ambiguity between protection and growth: High protection tends to generate growth in the initial stages, but declining protection may also lead to growth through competition-induced gains in productivity and exports.

Bajpai (2002) presented a detailed account of the reforms of the 1990s and focused on areas, in which further reforms are required, in particular fiscal consolidation, the labour market, but also trade and foreign investment. These conclusions are clearly based on a positive assessment of the reform impact on economic growth in India, although the author does not present an analysis of the impact.

One of the expected effects of trade liberalisation is the reduction of profit margins following increased competition from imports. This hypothesis was examined by several authors with differing results. While Srivastava et al. (2001) and Kambhampati & Parikh (2003) did not find substantial evidence of this competitive effect on Indian industries, Krishna & Mitra (1998) and Goldar & Aggarwal (2004) concluded that the tariff reduction and removal of quantitative import restrictions had a significant and profit-reducing impact. However the latter authors also found that the reduction in cost-price margins was mitigated by a reduction of labour's share in value added, which they attributed to declining union power.

Closely related to the competitive effect of profit decline is the reform impact on productivity. The longer-run expectation is of course increased productivity and competitiveness, but less dynamic enterprises may also disappear under increased import competition. While two recent studies (Unel, 2003; TSL, 2003) had found an acceleration of productivity growth in Indian industries, Goldar (Goldar & Kumari, 2003 and Goldar, 2004) re-examined the question by including further determinants, in particular capacity utilization. He concluded that trade liberalization had a positive influence on

productivity, but this was counter-acted by a decline in capacity utilization and a declining growth in agricultural production.

A somewhat different conclusion was reached by Das (2003a), who found that total factor productivity growth in manufacturing was close to zero over the 1980- 2000 period, that it was positive in capital goods, but mostly negative in consumer and intermediate goods, and that it slowed down from the 1980s to the 1990s. The recession of the mid-1990s as well as the continued labour market rigidity are held responsible for this outcome. Topalova's study (2004), on the other hand, is more supportive of Goldar's findings and also adds a distinction between private and publicly owned enterprises, with the former showing clearly more productivity growth than the latter.

Similar conclusions as for productivity were reached for real wages by Goldar (2003), who connected the adverse effect of trade liberalization on real wages with the reduction of rents and the weakening of trade union strength. Banga (2005) also examined the reform impact on wages, but focused on wage inequality. Analysing the impact of three reform targets, FDI, trade and technology, on labour productivity and wage inequality, the author concluded that all three reform components contributed to increased wage inequality.

In a more recent paper Goldar (2005) examined to what extent India's commitments under the WTO have influenced the manufacturing sector and concluded that changes in production, imports and exports are largely not attributable to the commitments arising from WTO membership. He showed that for a number of consumer goods, especially in textiles and clothing, the increase in imports during the early years of 2000 were modest and largely matched by increases in exports.

Athreya and Kapur (2006) examined the level and determinants of concentration in Indian manufacturing before and after the regulatory and trade reforms. They concluded that after liberalization the concentration declined in some industries and increased in others. The expected outcome of general decline was not observed, partially because the penetration of new competitors is a process that may be completed only over longer periods of time and the duration of this process is likely to vary among industries.

Our own earlier study of industry competitiveness (Siggel, 2007), which uses ASI data at the two-digit level, revealed that large-scale manufacturing industries have largely

benefited from the reforms. The potential effect of import competition leading to strong decline of formerly heavily protected industries thus inducing massive employment loss has simply not happened. Manufacturing employment has continued to grow at an average annual rate of 2.2% over the 1987/88 to 1997/98 study period and most industries have improved their international competitiveness, some of them very substantially. In section 4 (below), which reports the survey findings on an industry-by-industry basis, we compare these findings with the prior findings from the competitiveness analysis.

Thus the existing studies suggest that a variety of impacts are possible but do not come to any uniform conclusion regarding the impact of economic reforms of 1991 on the Indian industry. Given this situation, it should be of considerable interest to survey the manufacturers themselves and find out what they felt was the impact of the economic reforms on their firms and what further changes in economic policies they feel are needed to maintain the high growth of the Indian economy and industry. This is the purpose of the rest of this paper.

3. GENERAL PERCEPTIONS OF INDUSTRY REPRESENTATIVES REGARDING THE IMPACT OF REFORMS OF 1990S

In analysing how the reforms of the 1990s have affected Indian manufacturers it is useful to start with the distinction of various policy changes rather than treating the reforms as a single act of reform. The sample enterprises were therefore asked which policy changes affected them most strongly. Also, the firms were asked to describe specific problems of their industry that were related to the reforms.

Twenty out of 51 responding firms described the reform impact on their industry as positive, eighteen as mixed, eight as negative and five as absent. The policy changes most often cited as affecting their industry were trade liberalization (35/50), while domestic policy changes were named in 15 responses. The problems that had most affected the industries before the reforms were trade-related issues, in particular the

licensing of imports (21/33 responses), while the remaining 12 responses were split between domestic licensing (5), taxation (5) and other issues (2).

3.1 Trade liberalization

Trade liberalization has the immediate impact of increasing imports of products that compete with domestically produced products. These imports may be either cheaper at similar quality or similarly priced with superior quality attributes. In either case the domestic producers are likely to face increased competitive pressure, to which they can respond in various ways, mainly by reducing their own prices and profit margins.

The firms were asked to remember what had happened to their output prices following trade liberalization. Only half of the responding firms (23/46) reported price reductions, while 15 representatives remembered their prices to have risen. This outcome is not totally surprising, although unexpected, because it is difficult to separate relative price movements from the general upward trend of prices. Respondents tend to remember more the upward trend in prices than the downward pressure of relative prices following increased competition from imports.

Closely related to the question of price changes is that of the timing of the reform impact. When asked to remember the time in which competing imports started to penetrate the Indian market, the largest number of answering firms (13/28) claimed to encounter no competition from imports. This was particularly the case in metal industries (4/6) and pharmaceutical products (6/11). It may be explained either by the domestic firms thriving in niche markets implying greater competitiveness of the Indian firms in these sectors, or by the continued existence of some barriers to imports. Only six firms reported increased import competition in the early 1990s, while nine firms observed increased competitive pressure only in the late 1990s and after 2000. These responses surely reflect the timing of the reforms, i.e. its gradual reduction of import restrictions, and indicate that the adjustment to trade liberalization by the firms seems to have occurred with a long time lag following the beginning of the reforms in the early 1990s.

One of the less expected answers was obtained to the question of how the prices of competing imports compared with the producers' own prices. The majority (29/32) of the responses said that their prices were lower or equal to those of their foreign

competitors, and this applied to potential imports before import duty. Only three firms indicated that their prices were less competitive. In numerous interviews the impression was conveyed that the Indian producers were positively cost-competitive and, in some cases, ready to export. This opinion was most often heard in the Auto parts industry (6/7), but also in Metal products (5/6), Pharmaceuticals (8/11) and Wood products (5/7), whereas in Textiles and clothing it was heard in only three of 17 firms.

The adjustment to the new market environment usually takes various forms, such as cost cutting, product quality improvement, product or design change, organizational change etc. In 15 of the firms visited the managers confirmed that they succeeded in cutting costs, and in 12 firms product changes were made, mainly by upgrading product quality and design. Among the remaining 17 answering firms, several mentioned that they had achieved cost savings through expansion of output, both domestically and by exporting.

Cost reduction usually requires firing of redundant workers, but this is difficult in the Indian context due to the existing labour laws. Not surprisingly, only five of the responding firms admitted to having practiced retrenchment, while 35 respondents stated that they managed without retrenchment. Subcontracting, on the other hand, was more widely practiced, precisely in 24 of the 45 answering firms. Although subcontracting can take various forms, the most common form amounts to the replacement of regular workers by casuals, who are often hired by labour service providers. Such a change leads to cost savings as it reduces social overhead charges.

A further way of cutting production costs is by changes in material inputs. One particular cost cutting method involves subcontracting whole stages of transformation to suppliers of intermediate inputs, which is often referred to as outsourcing. In 30 of 49 answering firms this kind of subcontracting was chosen and it implied generally a reduction in labour and capital costs, but an increase of intermediate input purchases. Since this type of change involves changes in value added the specific tax regulations influence the choice of the input mix. We shall therefore briefly review the differences in tax regulation and their impact on the production technology adopted.

3.2 Taxation

The Indian taxation system is known to be complex and to differ regionally. While income and corporation taxes, as well as the value-added tax (replacing the excise tax), are administered by the Central Government, the states and municipalities levy their own taxes and provide discretionary exemptions to attract investment (KPMG, 2005). The answers obtained in our survey reflected not so much the regional differences, but the recent changes, as well as exemptions. The answers conveyed the impression that firms are not competing on a level playing field. The reported differences in tax rates seem to be as important within industries as they are between industries. The corporate income tax rate, for instance, was reported as 30% (for small firms) 33% for domestically incorporated firms (even if foreign owned) with profits exceeding Rs 1 million, and 42% for foreign firms (not incorporated in India). Although the tax rate on foreign firms has been lowered from 48% to 40%, new surcharges (corporate and education) have been introduced. The value-added tax (VAT) seems to vary between 4% and 12%, depending on the stage of transformation in manufacturing. Excise and sales taxes vary even more, especially according to enterprise location as they are determined by the states. Although the reforms have led to attempts of simplifying and reducing the tax burden, the survey conveyed the impression that more transparency and equity are desirable for international competitiveness.

3.3 Domestic reforms and the business environment

Three aspects of the business environment are considered here, first the bureaucratic side of doing business, then the supply of infrastructure and utilities, and finally policies furthering technological progress. One of the typical aspects of India's traditional business environment has been far-reaching regulation. Various authors have referred to it as the "licence raj" and identified it as an obstacle to faster growth and development. The reforms of the early 1990s gave rise to policy changes in this respect and led to an alleviation of the bureaucratic burdens imposed on the business community.

In spite of these changes, the regulatory arm of the government is still strong and very present. The sample firms were asked whether they needed government clearance for their business and the majority of responding firms (20/36) reported positively. As

expected, the pharmaceutical industry is leading in this respect, with 9 out of 11 firms citing licensing requirements. For wood products (4/7), metal products (2/6) and auto parts (2/7) industries follow with minority views.

In the area of infrastructure and utilities manufacturing industries rely very strongly on the availability at low cost of energy (petroleum and electricity), transport and communication. It is one of the governments' important tasks to generate an enabling environment, in which these goods and services are available at competitive costs. The sample firms were therefore asked to state their satisfaction or dissatisfaction with regard to these policy concerns. While for communication the satisfaction level was relatively high, with 26 out of 29 responses being positive, energy cost and availability drew largely negative responses, 11/18 for petroleum and 16 out of 31 for electricity. These responses underline the need for further reform in the area of energy supply. For transport services, the responses were similarly negative, with 15 out of 30 responses advocating further improvements of roads and rail transport as well as ports.

Finally, one of the instruments of industrial policy in liberal economies is technology policy. It can take the form of subsidies for research and development or of investment incentives. The latter are more questionable as they tend to distort the incentive structure across the different sectors of the economy. The majority of responding firms (24/37) reported that they did not receive any kind of particular benefits, whereas five firms reported investment-related support, four firms admitted to receiving technology-related support (in pharmaceutical and metal products) and four more firms claimed to receive other forms of support, such as cheaper credit from public sector banks, worker training and tax rebates.

4. VIEWPOINTS OF PARTICULAR INDUSTRIES REGARDING THE IMPACT OF REFORMS OF 1990S

The selection of industries for the present survey was based on two considerations. First, our earlier study of industry competitiveness using ASI data had identified rising and declining industries. It was decided to further investigate the reasons for both, growth and

decline. Second, some sectors are presently very much in the public eye, such as pharmaceuticals and automobiles and automotive parts. They attracted our interest in spite of possibly average industry performance in terms of growth and exports. Therefore, in this section we try to contrast the survey answers with our previous findings from the study of competitiveness (Siggel, 2007) and observations of a few other authors. This comparison, however, is necessarily somewhat impressionistic, because the subset of firms interviewed does not necessarily reflect the same structure as the corresponding industry at ASA 2-digit level.

4.1 Textiles and clothing

Although the textile and clothing industries are often treated as separate entities they are not easily separated, since many firms produce some kind of fabric together with garments. In fact, the ASI distinguishes at the 2-digit level three kinds of textile products, cotton textiles, wool and silk-based textiles and jute & hemp textiles, but only one clothing industry. The present survey covers 17 enterprises, 9 of which produce predominantly textile products (yarns, fabrics and other non-garment products) and 8 of them produce mainly garments. The majority of them are small and medium-sized firms and only three employ more than thousand workers. All except one are privately owned and only two firms are partially foreign-owned.

The competitiveness study revealed that the textile sector, especially cotton textiles, was one of the least profitable industries, in spite of being strongly tariff-protected and in spite of its success in export markets. This apparent contradiction can be explained by two further observations: First, de-facto protection based on price comparison was significantly lower than the nominal tariff. Second, in spite of relatively low production cost, the industry has been submitted to intense competition with imports under the reforms, especially due to imports from China. Garments, on the other hand, are in the middle range of profitability. While cotton textiles have seen their share in GDP decline, the share of wool & silk products, as well as that of garments, has increased. While textile products occupy the second rank in Indian exports (following other products including jewellery), garment exports have held fourth rank (following food products) in the late 1990s. The ratio of exports to output has gone up in the

combined three textile branches, from 15% in 1987/88 to 25% in 1997/98, while it has gone down in clothing. Finally, employment in textiles has grown less rapidly than in other manufacturing (at about 1%), but in clothing it has grown at 10%, significantly above the manufacturing average of 2.2%. Labour productivity rose by 7.5% in textiles, but only 5.5% in clothing.

The majority viewpoint expressed by the sample firms of the present survey is that the reforms had a positive impact, through reduced red tape and increased availability of new technology. The increase of exports was also related to the abolition of quotas of the Multi-fibre agreement (MFA). A smaller number of firms reported either no or a negative impact of the reforms, due to increased competition of imports. This was particularly emphasized by producers of silk products, who blamed cheap silk imports from China for the reduction in silk production. Subcontracting is particularly prevalent in the clothing industry, where many firms have much of their output produced by a large number of families in the villages.

Among the complaints and recommendations for change most respondents mentioned the labour laws, infrastructures, the need for export incentives, tax and interest rate policies, as well as bureaucracy and corruption. Although infrastructure improvements in recent years were recognized, more needs to be done in the view of most of the responding firms. In that context, unreliable electricity supply is often responsible for high cost. The call for export incentives, even when limited to duty draw-back schemes, was heard from five out of 17 firms.

4.2 *Wood products*

This industry was chosen for the survey as one of the declining ones. Wood products represented only 0.5% of manufacturing value added before the reforms and this share has gone down to 0.3% by the late 1990s. The analysis based on ASI data had shown that this industry has experienced declining profitability. Its export competitiveness has increased, however, which is in line with its growing export/output ratio (from 2.6% to 7.0%). Both its employment and labour productivity record have been below the manufacturing average.

The seven sample firms of our survey are all in the small to medium size range: only three of them employ more than 100 workers, the largest one no more than 300. Although five of the seven firms do export (two of them 100% of their output of handicraft and furniture), the majority expressed dissatisfaction with the reforms. Import penetration of cheaper products, mainly from China, seems to have been the main reason for declining profits. Another factor, however, which is specific to this industry, seems to have affected the industry's competitiveness. The 1997 ban of domestic logging forced the industry to use more expensive imported wood, which contributed to the profit squeeze. The firms' recommendations to government include, besides the frequently heard complaint against the labour laws, stronger incentives for exports through duty draw-back, but also further reduction of import duties on material inputs.

4.3 Rubber and plastics products

This industry, which in its 2-digit ASI definition also includes petroleum and coal products, stands out by its high labour productivity, due to its capital intensity. Within the 1987 to 1998 period its share of total manufacturing GDP declined from 9.1 to 6.4%. Its profitability has been positive, although declining during this period, and its export competitiveness has risen to slightly below the sector average. Export performance and growth (tires and tubes) have been minimal, but employment has grown at an average annual rate of 5.2%, the third-fastest among manufacturing industries. Not surprisingly, labour productivity growth has been slow and below industry average.

The present survey sample includes five manufacturers of plastics and rubber products. All of them are privately owned, without foreign participation, and all are medium-sized with between 25 and 150 employees. Four of them export, but only small proportions of their output (maximum of 15%). The general consensus on reform impact is positive and includes the following benefits: easier procurement of raw materials, access to new technology, enhanced opportunities for trading, increase in production efficiency and improved quality of products. Two firms reported declining profits due to increased competition, especially from Chinese imports, and increasing costs of power, transportation and labour. The main areas in need of further reform were identified as labour laws, road and sea port infrastructure, power supply and the cost of credit.

4.4 Chemicals including pharmaceutical products

The chemical industry was included in the present survey because of its increasing importance. Its share of value added increased from 16.3 to 18.5%, placing it at the first rank, although in terms of employment it ranks only fourth. Its profitability was found to be above the industry average and increasing, whereas its international competitiveness was found to be about average but rising. Its ratio of exports to output has doubled from about 5 to 10%. The main export products of the industry are pharmaceutical products, which prompted the present survey to focus on this sub-sector.

The Indian pharmaceutical Industry derives its strength from the development, production and export of generic drugs, which was encouraged by India's Patent Act of 1970. The legislation removed medicines, food and agro-chemicals from product patent protection to process patents, which had a shorter life (7 years as opposed to 14 years of product patents). Since 1995, when trade-related intellectual property rights (TRIPS) legislation was adopted by the World Trade Organization (WTO), India had to amend its patent laws to make them compatible with TRIPS. Since 2005 the law is now fully TRIPS-compatible, with product and process patent protection of 20 years. This means that the Indian industry experiences a similar confrontation between the R&D-based formulation drugs dominated by multinational corporations and its low-cost bulk drug manufacturing arm, as in other WTO member countries. India has competitive advantage in the latter, due to the expansion of this industry since 1970, but it also searches niche markets in the formulation drug domain.

All ten enterprises included in the present survey are in pharmaceuticals, so that, unfortunately, the apparent ambiguity about performance of the chemical industry could not be clarified further by the interviews. As Srinivasan (2006) reports, industrial chemicals (the other major sub-sector) also increased their share in global exports; therefore, the observed decline in value added and employment remains unexplained. The sample firms are mainly (7/10) of small-to-medium size, but three of them employ more than 100 workers. Only four of them sell in export markets. In addition to the ten pharmaceutical firms the survey also benefited from an interview with a representative of the Indian Drug Manufacturers' Association (IDMA).

Although the sample firms are predominantly in the business of generic drugs, which suffers from the TRIPS-based constraints, the majority view of the respondents is positive about the reforms. The main advantages are seen in reduced trade restrictions, free flow of technology, increased foreign investment and fewer restrictions on collaboration with foreign firms. The industry-specific policies, such as pricing control policies, testing procedures and patent rights, seem to have a larger impact on the firms than the 1991 economic reforms. Despite of these constraints, which tend to lower profits, the Indian drug industry seems to be a strong international competitor.

As to the complaints and recommendations for further reform, industry representatives added some industry-specific points to the often heard demand for labour law revision and improvements in electricity supply. In particular, the approval process of new drugs by the government should be shortened and price controls of drugs were criticised. Some concern was also expressed over the TRIPS-based constraints, which amounted to a call for government support in patent litigation against multinational corporations and in favour of laws that benefit the generic drug industry.

4.5 *Metal products*

In this industry six enterprises were visited, all of which are privately owned. Only two of them employ more than 100 workers, but three of them have more than one plant. Three firms export, but no more than 15% of their total output. Based on our earlier study of this industry using ASI data, we expected to hear about declining profitability and loss of comparative advantage, in spite of some export success, as well as relative decline in terms of the industry's value added share.

Four of the firms reported that the reforms had positively affected their industry, while two firms described the new business climate as more difficult and reported serious profit squeeze due to import penetration and relatively inflexible costs. On the positive side, the main benefits were seen in the increased availability and cost of manufacturing equipments and technologies. They helped the firms in competing with imports and in expanding exports. Only two of the six firms reported having benefited from export incentives, such as duty drawback and, in one case a subsidy for installing new machinery. Profit margins were reported to have declined in four firms, but increased in

two. This apparent contradiction is most likely due to differences in product mix and the nature of material inputs used.

The main obstacles to future growth were described as infrastructure deficiencies, especially those of the transport network and harbours, but also electricity supply (power failures) and the rising cost of fuel. All respondents emphasized the need for increased public expenditure for infrastructure development. Another argument frequently heard concerns the tax structure. All respondents argued in favour of more standardization of taxes across regions and states. The discussion of labour laws triggered the most unanimous recommendations for change. All respondents agreed that more flexibility in hiring and firing, as well as with regard to overtime regulation, is needed. It was also argued that, in spite of visible improvements, further reduction of bureaucracy, especially regarding small business, is required.

4.6 Automobile and automotive parts

This industry is one of the most interesting ones because of its visibility and the attention it has recently received by the government. One of the striking features of domestic consumption is the appearance of new automobiles on Indian streets since the 1990s, which has accelerated in the new millennium. The industry has attracted significant amounts of foreign investment and has become an exporter of automotive parts and a limited number of cars. According to a recent statement of the Government, the industry is targeted as global manufacturing hub for small cars in the next 3 to 5 years (Srinivasan, 2006).

Based on aggregate (ASI) data, which at the 2-digit level includes all transport equipment, the industry is still relatively protected. Its nominal rate (collection) declined only marginally from 48% to 47% from 1987/88 to 1997/98, but our price-based estimate is much lower at 15%, although higher than the industry average of 10%. The industry was shown to have improved its profitability and international competitiveness in the same time period (Siggel, 2007). Its growth of exports has been in the same order as that of metal products (13%), although its proportion of output exported was smaller than that of metal products. Finally, employment growth was only half the industry average,

suggesting that some retrenchment may have occurred. This is confirmed by larger than average gains in labour productivity.

The present small-sample survey has covered only seven enterprises, which included two very small firms (five to ten employees) but also three large firms with over 1000 employees. Their output ranges from automotive parts and maintenance/repair to assembly of commercial vehicles, buses and trucks. Three of the firms do export, one at a rate of 30% of its output. Four firms have existed since the 1960s or 1970s, but three of them have started operations only in the 1990s. Four of the firms were either foreign-owned or had joint ventures with foreign partners.

The reform impact was viewed quite differently by the participating firms, depending on whether the respondents were connected with foreign firms or not. The foreign-linked firms described the impact as favourable due to their access to new technology. The firms that are not connected to foreign firms saw the impact as unimportant or negative, due to diminished protection, increased competition and falling profits. The main obstacles to business were identified by the respondents as electricity supply failures, infrastructure deficiencies, rigid labour laws and access to and cost of credit.

5 CONCLUSIONS

Interview-based sample surveys often reveal a wide variety of views, depending on the size of the firm and the industry to which it belongs, and the present one is no exception. Nevertheless, there are a number of perceptions that dominated the responses in the present survey and they form our conclusions. First, the inquiry confirmed our former observation that the manufacturing sector as a whole did not decline as a result of the country opening its borders to freer trade and foreign investments. The main benefits occurred to industries through the access to new products, technologies and skills, as well as lower costs of intermediate inputs. In some industries the increased competitive pressure led to shrinking profit margins, but others managed to increase profits by adjusting to the new environment. Second, the relative success of the reforms can be

attributed to its timing and sequencing, as well as to the fact that they also included internal reforms amounting to reduced regulation. The timing of the trade liberalization was gradual over the 1990s and it was preceded by macro stabilization including currency realignment. Third, although the majority of firms in the sample were small firms and not affected directly by the existing labour laws, the need for further reforms in this area was frequently stated. Finally, most firms said that the manufacturing sector faces serious constraints in the form of infrastructure deficiencies in electricity supply, domestic transportation, sea ports, etc. and the government needs to improve the infrastructure to ensure continued future growth of the manufacturing sector.

Thus our study suggests that economic reforms of 1991 were helpful to most industries by increasing access to foreign technology and cheaper capital goods & raw materials. Most firms felt that improvement in infrastructure and more flexible labour laws will further aid the growth of India's manufacturing sector. The conclusions from our study tend to confirm the assessments of several earlier observers, especially Ahluwalia (2002), Goldar (2003, 2004 and 2005) and Panagarya (2004).

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