Inter-Firm Scalar Linkage in India: A Class Within the Small Scale Industry

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ABSTRACT. Along with the growing industrial sector, functional complementarity between large and small scale enterprises has become a widely prevalent phenomenon. Expanding the base of the industrial production leads to division of processes where large and small scale units operate as complementary to each other. Such complementarity and division of labour between the different sized units results into cost minimization, and acceleration in growth of the manufacturing sector.

However the extent and the pattern of functional complementarity (between large and small scale enterprises) is likely to be conditioned by market as well as institutional factors. Therefore, in order to examine the impact of interscale complementarity in terms of growth as well as of distribution of gains across large and small scale enterprises it is very important to learn about the nature of interfirm linkages and the process through which linkages get established. It is in this context, the present paper furnishes details based on a case study of Textile Machinery Parts Manufacturing (TMP) industry in a metropolitan city (Ahmedabad). The industry represented is constituted by a large number of small scale firms that are engaged in fabricating replacement parts for the users of machinery equipments (i.e. Textile Mills) who operate on a large scale. Owing to wide range of products, and in case of some parts higher frequency of replacement, the TMP industry, at least till recently, has sustained a large number of small firms.

The major findings of the analysis are: (i) The incidence of inter-firm linkages is limited to about a third of the small scale firms; (ii) Among various forms of linkages the marketing linkages are the most predominant (iii) The linkage relationship has been a positive factor in determining the performance of the small scale firms; (iv) Personal contacts play an important role in inter-firm linkages, thus benefits of linkage relationship are mainly confined to a small social-group of industrialists; (v) While the small scale suppliers operate under a highly competitive market, the buyers often enjoy oligopsonist's advantage; hence the gains of competitive efficiency tend to favour the large scale sector.

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I. Introduction

Along with the growing industrial sector, functional complementarity between large and small scale enterprises has become a widely prevalent phenomenon. Expanding the base of industrial production leads to division of processes where large and small scale units[1] operate as complementary to each another. Given the free play of market forces (in a situation like that of "pure competition"), this kind of complementarity and division of labour between the different scales presumably result in cost-minimisation, which in turn has a favourable effect on rate of growth within the manufacturing sector. Keeping this functional relationship between the two sectors in view, a number of developing economies have been encouraging growth of small scale enterprises.

The extent to which the functional complementarity (between large and small scale units) would be established and become translated into inter-firm scalar linkages, would however depend on a number of market as well as non-market forces operating within the economy (Watanabe, 1983). The stages of economic development, size of market, imperfection in factor-markets, factory and other legislations, choice of technology, the nature of production organisation within the economy etc., are some of the factors influencing the linkage relationships (Nagaraj, 1982). For instance, inter-firm scalar linkages played an important role both in Japan as well as China; in Japan it developed into a 'child-parent' kind of relationship (Paine, 1971 and Seymour, 1966); whereas in China these linkages were developed across a wide spectrum of scale and technology such that each of them operated in a situation of mutual inter-dependence and collective gains (Bagchi, 1977).

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In comparison with these two, the experience in the developing countries appears to be somewhat different unlike in Japan or China. The evidence available from various studies indicates that the inter-firm scalar linkages are by and large of a '*floating*' type. This suggests a weak relationship between the two scales of operation (Watanabe, 1978 and 1980). The 'low level of industrial output' in the developing economies is offered as a major explanation for this weak relationship. Nevertheless the other factors, particularly the institutional ones have also been found to have influenced the extent and pattern of inter-firm scalar linkages.

Empirical evidence in the Indian context are quite scattered, and hence do not provide a comprehensive understanding of the interplay of the various market and non-market forces which determine inter-firm linkages between the large and small units. An endeavour is therefore made to provide further understanding on the extent, pattern and impact of scalar linkages in a specific situation where a large number of small producers are catering to the requirement of replacement parts in the large units. This is attempted through a case study of Textile Machinery Parts (TMP) industry in Ahmedabad. Some of the key issues related to distributive gains, form the scalar complementarity have also been raised subsequently.

II. Profile of the industry and the sample

II.1. *Profile of the industry*

The Textile Machinery Part (TMP) industry in Ahmedabad[2] dates back to world war II (Hiraway, 1970). Compared to the other important centres of textile machinery industry in India, Ahmedabad specialises in manufacturing of small parts. By the mid-eighties there were more than a thousand small scale TMP units which constituted the largest group of small scale manufacturing sector at 4-digit level of National Industries Classification in Gujarat. Since there are not many large scale textile machinery assembling units in Ahmedabad, these units mainly cater to the demand for replacement parts by the textile industry.

Two important features of the TMP industry influence the linkage relationship between large and small scale sectors. First, the TMP industry has forward linkages with the textile mills, besides the few large scale assemblers. Hence, growth of TMP industry in terms of rate as well as quality of products depends mainly on the level of modernisation, quality consciousness and maintenance of machinery in textile units. Recent stagnation in the textile industry, therefore, is likely to have hampered the growth of TMP industry. Moreover, being mainly concentrated in Ahmedabad, TMP units are likely to be operating under "buyers' market" (where a very large number of producers compete to sell almost identical products to a relatively smaller number of buyers), implying better bargaining power in the hands of the textile mills.

The other important feature of the TMP industry is the dominant position of a chain of middlemen/traders who work as link between small scale suppliers (i.e. TMP units) and large scale buyers (i.e. textile mill or machinery assemblers).

The market structure for the small scale enterprises in the TMP industry can be briefly described as follows. Basically, the industry produces two types of textile machinery parts (i) specialised parts; and (ii) simple general purpose parts. The first category of parts are used by both textile mills as well as machinery assemblers (which are often large scale units). The producers of these parts are characterised by better machinery equipments as well as organisational structure. Also they are fewer in number. Most of these units have direct supply arrangements with their buyers.

On the other hand, general purpose parts manufacturers, the main focus of the present study, provide replacement parts to the textile mills. They generally have low capital investment, belong to informal non-factory sector, and are very large in numbers. It is this segment of the TMP industry which is predominantly dependent on middleman/traders for their supply to the textile mills.

The main reason for the predominance of the middle agencies eminates from the fact that textile mills require a wide range of parts and components of different specifications. This makes it uneconomical for the textile mills to keep direct contacts with a large number of parts manufacturers. The traders thus help to ensure timely supply of specific products from the TMP manu-

facturing units who would otherwise find it difficult to get a bulk order from individual textile mills. On the other hand, a small minority of the general purpose parts manufacturers, directly supplying to the textile mills, have different type of sales arrangements, viz; tendering, contract for supplying the parts for a stipulated period of time, being on the selected list of the textile mills, job work (on piece rate basis), labour job (on payment of wages only) etc. Except for tendering, all the above arrangements are being treated here as marketing linkages. Although marketing linkages connote buyer-supplier relationships of all kinds, the term 'linkages' in this analysis has been used to capture direct access of the small scale suppliers to the ultimate buyers.

Thus layers of small scale suppliers with different degrees of specialisation are operating through different marketing channels at varying price margins. While the structure of TMP-market is quite complex, what has been captured here, is the dominant features of the industry which is represented by a large segment of the small scale units producing "not-so-specialised" products.

II.2. *The sample*

Primary data were collected through a sample survey of small scale units, conducted during 1982.[3] The units which were registered with the Small Industries Development Organization (SIDO) were considered for selection of the sample units. Of the existing SIDO units, 10 percent sample was drawn using two-stage stratification method. The criteria for stratification were year of registration (i.e. on or before 1972) and, the employment size. In all 75 small scale (SIDO) units in Ahmedabad were selected for the field investigation.[4] The survey was carried out mainly with the help of a structured schedule and discussions with the entrepreneurs as well as functionaries of the industry association.

Some of the important features of the sample firms presented in Table I through III are: (i) highest concentration of small scale firms in the employment size class of 5—9 workers. This suggests a critical importance of the cut-off point between the registered factory sector and the unregistered sector; (ii) easy entry conditions leading to a constant inflow of small scale units, rather than predominance of few rapidly expanding firms as reflected by the larger proportion of firms in the age groups up to 10 years; and (iii) sustained dominance of the traditional communities, viz; blacksmiths and carpenters indicates the critical role the social institutions play in emergence and survival of small scale units (Kashyap, 1982).

Further, if we probe into the work experiences of the small entrepreneurs we find that a very large proportion (76%) of these entrepreneurs already had previous work experience; mostly (89%) having it in the same line of industry. Only few of them had acquired some kind of formal technical education. Together, these evidence suggest that inherited skills and learning by doing played an important role in the TMP industry.

III. Pattern of linkages

III.1. *Nature and extent*

Out of the total 75 sample units, 37 percent were found to have some kind of linkages with the buyers. (See Table IV). The predominant form of this relationship is marketing linkages. They are also observed to have entrepreneurial and technological linkages in addition to the marketing linkages in quite a few cases. Among the total 28 linked units, only one unit had exclusive marketing linkages with a large scale firm. The rest were found to have more than one type of linkage along with the marketing linkages. The various types of linkage arrangements can be described as follows:

TABLE I
Employment size and age structure of the sample units

Employment Size Class	Age in years				Total
	<5	5—10	10—20	20 and above	
1—4	2	6	—	7	15
5—9	6	11	7	3	27
10—19	2	3	6	—	11
20 and above	3	6	4	9	22
Total	13	26	17	19	75

TABLE II
Caste and family occupation of entrepreneurs

Caste of Entrepreneurs	Family occupation				Ent. Total
	Agri.	Trade	Mfg.	Service	
Panchal	8	—	33	—	41
Patels	9	9	1	—	19
Jains	—	6	—	—	6
Others	2	3	—	4	9
Total	19	18	34	4	75

(i) *Marketing linkages.* As mentioned earlier, marketing channels for the supply of textile manufacturing parts are predominantly characterised by a chain of middlemen/traders. However, under certain situations, technological and/or institutional factors make it beneficial to have direct marketing linkages between the buyer and the supplier firms. For instance, in the case of 16 out of 28 linked units, technological considerations like product specifications and quality were the main reasons for entering into direct marketing linkages. Whereas in the case of remaining 12

TABLE III
Background of the entrepreneurs and the past experience

Working Experience (Years)	Educational background of the entrepreneurs							Total
	Engineering		Non-technical			Total	No Education	
	Degree	Diploma	Primary (Upto IV Std)	SSC (Upto X Std)	Degree (In any Faculty)			
<5	3	3	—	5	—	11	1	12
5—10	3	2	3	7	3	18	4	22
10—20	—	1	3	3	3	10	8	18
>20	—	1	2	—	—	3	2	5
Total (a)	6	7	8	15	6	42	15	57
No experience (b)	—	2	—	6	9	17	1	18
Total (a + b)	6	9	8	21	15	59	16	75

Table III (continued)

Working Experience (Years)	Experience in		Total	Type of ownership		Total	Techn. turned entrep.	Worker turned entrep.
	Same Industry	Other Profession		Founder	Inheritor			
<5	10	2	12	6	6	12	6	5
5—10	19	3	22	15	7	22	5	4
10—20	17	1	18	10	8	18	1	1
>20	5	—	5	3	2	5	1	—
Total (a)	51	6	57	34	23	57	13	10
No experience (b)	—	—	18	5	13	18	2	—
Total (a) + (b)	51	6	75	39	36	75	15	10

TABLE IV
Pattern of linkages: small scale units

	No. of units
1 Marketing linkages	28
2 Technological linkages (along with the marketing linkages)	13
(a) Technical guidance	6
(b) Labour job	7
3 Entrepreneurial linkages (by entering into agreement for purchase before inception of the firm)	14
Total units with linkages	28
Total number of units	75
Percentage of linked units in the total units	37

units, the main consideration was maintaining the personal or business relationship.

Here, marketing linkages involve reasonably stable arrangement between the two firms. In normal circumstances the supplier under such an arrangement would have a fairly good idea about the demand schedule, product specification and the price at which the product will be sold. Though the buyer firm would generally enter into such arrangements with more than one supplier, each of them would get to operate within a reasonable range of certainty about their future demand/ production schedules. It is interesting to note that these arrangements are often made on an informal basis. Yet, they tend to last for long, in the majority of cases.

(ii) *Technological linkages.* Under this kind of arrangements the small scale producers receive technical know-how from the buyer (mostly large) firms. This takes place in various forms e.g. by available product design, process know-how, quality control and supervision etc. In the present survey, technological linkages were mainly observed when replacement parts had to be tailor made. Since these replacement parts were required either for imported or for newly designed machinery, a close interaction was required between the user and the fabricator. For instance, the interaction would require fabricators to carefully observe the functioning of machinery before fabricating its parts, it would call for regular and interactive consultation to ensure the quality. Sometimes, this kind of linkages take the form of 'labour-job' arrangements[5] where a small entrepreneur is provided with the sample design, close interaction for technical guidance and quality control from the large scale buyer. Out of 13 sample units having technological linkages seven had 'labour-job' kind of an arrangement.

(iii) *Entrepreneurial linkages.* Entrepreneurial linkages take place when the buyer firm provides initial support for setting up of the small scale unit. The support could be provided in the forms of contacts for mobilising financial resources, guidance for official procedures, selection of product-mix, etc. besides assured market, at least in the initial stage. Of the 28 linked units 14 had received some kind of managerial/entrepreneurial support from their large scale buyers. It is also interesting to note that entrepreneurial support and linkages do not take place only between large and small firms. They could occur between two small scale units as well. The phenomenon of multiple ownership which is found to be fairly wide spread among small scale firms is a manifestation of such linkages. Of the 75 firms, 21 entrepreneurs had established more than one unit. And most of them were in the similar product lines. Though not directly relevant to the issue of scalar linkages, it throws light on the interlocking of interests forming distinctly different socio-economic interest groups within the small scale sector.

III.2. *Selection of firms in linkage relationship*

'Personal contacts' were found to be a very critical factor for selecting an enterprise to establish interfirm-linkages. The main sources for personal contacts were found to be past employment and/ or family relations of small scale entrepreneurs with the management. Technological capabilities in certain special cases were also counted side by side. For instance, for establishing technological linkages, personal contacts were important only as an initial step. The final choice would depend on various factors like fabrication facilities, work experience, technical know-how and past record of the small firm in adapting innovations etc. However, these factors do not carry much weight while selecting small scale firms producing standardised parts. Thus, our field investigation sug-

gests that the choice of firms is, by and large, guided by extra-market forces like caste, social relations, personal loyalties etc.[6] in linkages relationship.

The above observations may be taken to reflect a situation of a segmented market whereby privilege of direct interfirm linkages are more or less reserved for certain strata of small scale entrepreneurs (belonging to certain socio-economic groups); whereas the rest of the small scale units continue to operate within an already crowded and thereby highly competitive market structure.

III.3. *Inter-firm linkages among the original parts manufacturing units*

So far, the analysis has centered around examining the inter-firm linkages among the manufacturers of replacement parts. However, for a cross-comparison it would be worthwhile to report some observations from the original parts manufacturing units. Hence this caveat.

Since our sample units did not capture linkages between small scale original parts manufacturers and the large scale machinery assemblers, 10 large scale assembling units were approached for examining their purchase behaviour. The focus of the enquiry was two fold: first, examining the reasons for 'putting out' arrangements; and second, tracing the basis for selecting particular firms for these arrangements.

With regards to the first line of enquiry, it was revealed that while the primary reason for putting-out was requirement of wide range of parts in smaller quantities, the more specific reasons, in order of their importance, were:

- high over-head cost particularly in terms of supervision and quality control
- problems related to industrial relations
- shortage of work-premises
- tax policy discouraging larger turnover
- differential wage rates
- scarcity of working capital

It is important to note that the decision of large firms putting out the work was viewed more in the light of managerial problems rather than as a cost-saving device. Though, information regarding the comparative cost structure of the small vis-a-vis large scale firms is not available; it was clearly brought to our notice during the discussions that lower labour cost (in terms of wage rate) was not the major consideration for 'putting out' the work. For it was felt that some of these products could be manufactured by them without incurring higher cost. However, they still prefer the putting out arrangement in order to save efforts on managerial and supervisory tasks.

A low wage rate was found to be a major consideration in job-work type of a system where job workers take up further processing of semi-finished products, processed by large scale firms. The small scale units carry out specific jobs under the directions of the parent firms against payments on piece-rate basis. It was also observed that the assemblers usually prefer to put-out simpler (not very specialised) products. The more specialised products are either produced by themselves, or purchased from reputed large scale manufacturers.

The second line of enquiry was to know the basis on which particular small firms were chosen for putting out. It was observed that business contacts, besides caste and family relations, played a crucial role in establishing inter-firm linkages. Here the main source of business contacts was found to be personal recommendations which stood more as a guarantee for the quality of work rather than social obligation. A similar phenomenon was observed in the case of small industries in Pune, a metropolitan city in India (Brahme, 1979).

Overall, the foregoing analysis suggests that the incidence of linkage relationship is largely influenced by the range of products, degree of product specialisation, wage differentials and managerial problems. Watanabe (1978) and Lal (1980) among others have also observed similar phenomenon. However, the choice of a particular small firm for entering into linkage relationship is found to be dependent mainly on non-market forces, such as social contacts etc. To this extent, the impact of linkage relationship not only accrues to a small proportion within the small scale sector but mainly remains limited to a specific group within that, having social ties with the large and medium scale entrepreneurs. The major issues which emerge from the above observations are: what is the impact of linkage relationship on the functioning of the small scale firms? And, what is the extent of interlocking of interests between

large and small scale entrepreneurs? We may now turn our analysis to these issues.

IV. Impact of linkage relationship

The underlying rationale for establishing inter-scale linkage relationship is twofold: (i) it enables mobilisation of latent resources (human as well as physical); and (ii) it expedites industrial growth by facilitating division of labour between the large and small scale sectors (Lal, 1980). Hence, the expected impact of a linkage relationship is to generate a mechanism through which large scale sector can attain a higher degree of specialisation along with opening up new avenues for the small scale sector. In the process, the large scale sector is expected to contribute positively towards functioning of the small scale sector through diffusion of technical know-how, development of entrepreneurial skills, financial support, providing assured market etc. Against this, a negative impact could be the decline in bargaining power of small scale firms, particularly those which are technologically 'similar suppliers'.[7]

By and large, available evidence in the Indian context suggests that the linkage relationship has helped in expediting the pace of industrial growth through (i) a smooth transition of technological change, and (ii) cost-saving. However, it is argued that small scale units do not always seem to have received the full benefits of the linkage relationship due to (i) a low incidence of technological diffusion from large to small scale firms; (ii) low bargaining power, hence low prices offered to the small firms; and (iii) share in the ownership of small units which operate merely as a 'subsistent engineer' of the large scale units.

An attempt was made to see as to how far the linkage relationship in the TMP Industry in Ahmedabad lends support to the above paradigm, particularly, in what manner the linkage relationships benefits the small scale suppliers?

IV.1. *Relative performance*

The relative performance of linked and non-linked small scale units should ideally be examined in terms of their relative growth performance. However, it was difficult to get time series data on their output, investment, employment and profitability. Alternatively, the performance comparison has been done through a few efficiency parameters viz; productivity and turn over, price margin, and multiplicity of ownership.

(i) *Productivity and turnover.* Table V shows efficiency ratios for the linked and non-linked units. It is observed that the units with linkage relationships have higher capital intensity as well as labour productivity as compared to non-linked firms in each size class. However, in terms of output/capital ratio, benefits of linkage relationship have accrued only to those which employ more than 5 workers. The higher output-capital (O/K) ratio could be achieved by the linked units plausibly because of longer duration in a year they operated, irrespective of the employment size (Table VI).

(ii) *Price margin.* Given a varying value of products, relative performance can be judged on the basis of price margin of the linked and non-linked small scale producers. It can be seen from Table VII that a majority of the linked units have more than 20 per cent price margin, while majority among the non-linked units fall in the range of 10—20 per cent margin. Higher price margin earned by the linked units was also examined indirectly, that is, through impressionistic judg-

TABLE V
Key-ratios for the linked and non-linked small scale units

(Rs. 1000)

Employment Size class	Key ratios* Units	KF/L	O/KF	O/L	O/C
	Linked	9.38	3.05	15.80	0.50
1—4	Non-linked	7.87	3.70	14.13	0.47
	Linked	9.69	5.90	17.13	0.63
5—9	Non-linked	7.11	4.50	15.38	0.51
	Linked	8.01	4.90	21.34	0.63
10—19	Non-linked	7.74	9.84	18.39	0.55
	Linked	8.25	7.11	20.13	0.69
20 and above	Non-linked	7.31	6.07	27.87	0.73

KF/L = Fixed capital/Labor
O/KF = Output/Capital (Fixed)
O/L = Output/Labour
O/C = Output/Capacity

TABLE VI
Yearly average working period: linked — non-linked units

Employment Size-class	Linked (L)/ Non-linked (NL)	Working Periods (Months)			
		12	9—12	<9	Total
1—4	L	6	—	2	8
	NL	3	1	3	7
	Total	9	1	5	15
5—9	L	5	3	—	8
	NL	10	7	2	19
	Total	15	10	2	27
10—19	L	5	—	—	5
	NL	4	2	—	6
	Total	9	2	—	11
20 and above	L	7	—	—	7
	NL	14	1	—	15
	Total	21	1	—	22
Total	L	23	3	2	28
	NL	31	11	5	47
	Total	54	14	7	75

TABLE VII
Price margin and nature of the market: linked — non-linked units

Linkages	Price Margin		Total
	10—20%	>20%	
Linked	7	21	28
Non-linked	29	18	47
Total	36	39	75

ments based on the entrepreneur's response to specific questions, like: (1) whether they would have to face stiffer competition if they were to sell in the 'open market', i.e. without the linkage relationship; and (2) whether they would continue to produce if the market price settled at 5 to 7 per cent lower than the present price.

The response of the linked units to the first question was affirmative in majority of cases. To our second question the responses from linked and non-linked units were different. A majority of non-linked units, particularly in the smaller employment size classes, thought that it will be difficult for them to sustain beyond 6 months in the case of a reduction in prices by about 5 to 7 per cent. Compared to this, linked units showed better holding capacity and ability to wait till price level was revived.[8] This provides additional support to our findings that linked units enjoy higher profit-margins compared to the non-linked units.

Higher profit margins among the linked units (where direct marketing arrangement is the most predominant form of linkages), may be explained by saving on traders' margins and search costs. At the same time large firms save on inventory costs and overhead.

(iii) *Multiplicity of units and future plans.* Nearly 60% of the entrepreneurs owned more than one unit, mostly in the similar product line or related engineering products. The incidence of ownership of multiple firms is found to be higher among linked units as compared to non linked ones (Table VIII). This indicates that the linkage relationship facilitates the growth of firms not only vertically (i.e. within the firm) but also horizontally (i.e. by setting up more firms under the same ownership). The phenomenon of output expansion by multiple units can be partly explained by the existing policy which provides disincentives for a firm to outgrow a particular size both in terms of employment as well as in terms of investment (Papola and Mathur, 1982). Another reason for splitting the units could be reducing tax liabilities by spreading the profit across larger number of firms of the same family. The entrepreneurs circumvent the law and reduce tax liability even when all units are financed and managed jointly by the family members. Thus, multiple ownership to an extent is indicative of the concentration of economic power even within the small scale sector.[10]

The analysis suggests that the inter-firm linkages contribute positively towards the performance of small-scale units. Besides achieving a higher rate of profit, these firms have shown better performance in terms of expansion of output. Given the K/L ratio it will also enhance employment within the industry. Moreover, linked units are observed to have benefitted by acquiring skill

TABLE VIII
Multiple ownership of firms

Linkage Status	No. of Sample Unit with Multiple Ownership	Total No. of Sample Units
Linked	21	28
Non-linked	23	47
Total	44	75

and process know-how for new products which place them at an advantageous position in comparison with other (non-linked) small producers.

The complementary relationship between large and small scale firms seems to have generated positive impact on the functioning of small producers by enhancing overall technical as well as entrepreneurial skills within the small scale sector. At the same time large scale firms also derived certain benefits such as mitigating labour problems, securing smooth supply of components/parts, saving in costs etc. Prima facie, this mutually supporting and simultaneously growing co-existence of large and small scale sectors can be considered encouraging.

IV.2. *Distribution of gains*

The pattern of distribution of gains between the two could, however, be viewed in the light of different market structure within which each of the two sectors operate and interact. As mentioned earlier, the TMP industry operates under competitive market conditions whereas, the textile mills have advantage of oligopsnostic market structure. Consequently it has differential impact in terms of sharing the benefits of complementary production linkages between the two. This calls for a somewhat different approach whereby major sub-systems involved in producing the final product (i.e. cloth), are viewed as an integrated (rather than separate) production system. The TMP industry and the textile mills operate as active partners within the system.

Put in the above framework, our field investigation indicated that the profit margins earned by large scale producers were much higher than those of small scale producers, since they were already too numerous and there were still many more potential entrants in the market. This led to unidirectional dependence of small scale producers on middleman/trader or large scale buyers. Instead, if there were fewer small firms, where each of them had at least a recognisable share in the market, their bargaining position would have been better than what is prevailing. Alternatively, their bargaining strength could be improved through collective actions, which are non-existent at present. So long as there is disparity in the market and the consequent discrepancy in the profit earned by the large and small scale firms, the competitive efficiency of the latter becomes an instrument for the inequal distribution of surplus between the two.

The situation is further exacerbated when a sub-sector within the small scale sector, enters into linkage relationship. As observed in our study, the linked units in the small scale sector operate under relatively favourable market conditions vis-a-vis the non-linked units to the extent they obtain certainty of demand schedules, technical guidance and managerial support from their large scale counterparts. Hence, compared to the non-linked units, linked units operate in an environment of restricted competition. Moreover, those who benefit through linkage relationships constitute only a small minority of the large number of small producers. They are often found to be within the social (or economic) 'circle' of those who own large units.[11] It is likely that this kind of class specificity creates further anomalies and leaves a large number of small scale units in vulnerable conditions.

Ultimately this may lead to concentration within the small scale sector. A closer look at the physical as well as other infra-structural facilities across different firms would indicate existence of different layers (classes) within the small scale sector. This does not, however, imply that there are no economic rewards for the 'risk-taking' small entrepreneurs. There are some who manage to succeed even under highly competitive conditions, but they are relatively very few. Thus it could imply that a strait jacket policy package treating all the small scale firms as a homogeneous group may not fulfill the distributional objectives.

At present, the Government of India provides various kinds of support/incentives to small scale

units. Subsidy on capital investment, differential tax structure for small firms, somewhat relaxed labour laws (specially in the case of non factory small scale units which constitute major portions of the TMP units) are a few examples. For that matter even textile mills get certain incentives like a capital subsidy, tax holiday in the initial period, interest subsidy for modernisation, protection from the international competition through export subsidy etc. The important difference between the two however, is that, while a large proportion of textile mills are in a position to take advantage of the government schemes, especially for capital subsidy, very few TMP units have easy access to the institutional credit. Moreover, the former is also strong in terms of lobbying etc., whereas the only strength of the later is low wages. For, the benefits of the low tax rates invariably get siphoned off to the textile mills owing to delayed payments. Hence, there is a need to devise special measures which would improve bargaining strength of the TMP units. Those who are not privileged enough to get into inter-firm linkage relationship may need still more support.

V. Summary and conclusions

Overall, the analysis has shown that linkage relationship constitutes relatively a small proportion of TMP industry in Ahmedabad. In the case of large scale machinery assemblers the deciding factors for establishing inter-firm linkages are also managerial and social considerations besides cost efficiency. Guided by these considerations, various types of organisational linkages come into existence between the large and small scale firms. It has been observed that such types of organisational linkages help in enhancing diffusion of skill, technology and entrepreneurship in small scale units.

Notwithstanding the positive impact on the functioning of small scale firms, the emerging pattern of distribution of gains raises certain issues which deserve further considerations. The available evidence tends to suggest that the benefits of the complementary relationship get tilted mainly in favour of the large scale sector. This observation is further strengthened if one takes into consideration the differential market structure within which the large and small scale sectors operate. As indicated by our analysis there is a 'class' of linked units within the small scale sector which reaps special benefits. This leads to further concentration of economic power in a few firms within the small scale sector. In this context, it is noteworthy that the chances of being a part of this privileged 'class' are determined mainly by some socio-institutional considerations which favour the entrepreneurs who, directly or indirectly, belong to the social group of large firm owners.

The selective impact of linkage relationships thus suggests a need to have a fresh look at the policy for strengthening scalar linkages, especially in an industry where a large number of small scale units are supplying relatively simple replacement parts to a small number of large firms. This calls for a mechanism which not only strengthens the bargaining power of small scale suppliers but also spreads linkage relationships within the small scale sector in a manner that reduces the role of non-economic factors.

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Notes

[1] Here the term small scale sector refers to small enterprises operating below a stipulated level of investment in plant and machinery. At present, the investment limit for a small scale unit is Rs. 65 lakhs and Rs. 75 lakhs for an ancillary small scale unit, (i.e. approximately US$0.23 million and $0.28 million respectively). All other firms, exceeding this limit have been termed as firms belonging to large scale sector. Thus the official definition of small scale units in India is based only on investment criteria, irrespective of the employment size.

The employment criteria is however relevant for defining the coverage of factory sector. In this case all units employing more than 10 workers on any day of the year and using power *or* employing 20 workers without the use of power are liable for registration under Indian Factories Act (1948). According to this the units have to fulfill certain obligations e.g. related to the job conditions. A small proportion of the small scale enterprises in India is also covered under factory sector, whereas all the large scale firms are registered as factories.

[2] Ahmedabad, known as 'Manchester of India', is one of the largest textile centres of the country.

[3] These represent only that segment of the small units which is registered with the Small Industries Development Organisation (SIDO). No precise estimates are, however, available on the total number of small scale (registered + un-registered) units in a particular industry. Nevertheless, it will be a reasonably sound assumption that the unregistered small scale sector is significantly large at least in terms of number of units and employment compared to the registered sector.

[4] Since the central idea of the present analysis is to explain the existing structure of inter-firm linkages, especially in small scale sector, the primary focus of the investigation has been on the forces operating within the sector. However, in order to capture the reasons for entering into linkage relationship (or "working arrangements") initial enquiries were carried out with the large scale units.

[5] 'Labour job' refers to a particular type of putting out system where small firms are supplied with raw-material or semi-finished goods for further processing. In a large number of cases this kind of arrangements take place either within or adjacent premise to the large unit.

[6] A similar phenomenon is also observed in Diamond Cutting Industry in Gujarat. For details, see Kashyap and Tiwari (1982).

[7] Technologically "similar activities" can be considered as those which are based on a common production technology experience (e.g. automobile engines and pistons.)

[8] Competitive rate of profit was generally found to be in the range of 10% and 20%. Any rate below this may not allow the small firms to sustain in the market for more than two-three years. This explains high mortality rate among the small firms.

[9] In several cases it was found that second hand imported machinery was purchased by small firms to develop new designs. However, the machinery was procured (at a reasonable price) through personal contacts of small entrepreneurs with those in the textile mills, who could influence the sales decision.

[10] During our field visits, glaring differences were apparently visible in the working conditions across the small scale units. Even in the similar product line, we found small scale units operating under extremely poor conditions where even the entrepreneurs do not seem to have drinking water facilities, a proper chair and a cabin to protect themselves from the sun. The scene would immediately change if one entered the next door factory, which would usually be equipped with an air conditioned cabin and cushioned chairs, and a car parked near the gate, guarded by the watchman. This gives the idea of heterogeneous characteristics of small scale units within a homogeneous product line.

[11] It was observed that, relative efficiency was an important factor for choosing a small scale unit in linkage relationship. However, it provided for only necessary and not sufficient condition for making the choice.

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