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PROBLEMS AND PROSPECTS OF INFORMAL MANUFACTURING SECTOR:
A CASE STUDY OF DURGAPUR CITY

INTRODUCTION

The Informal Manufacturing Sector (IMS) in India has gained significant importance in economic literature not only because of its contribution to the national economy, but also because, contrary to the conventional belief that it is a transitional phase and will fade away with time, it has proved to be a permanent phenomenon. As a result, the IMS has seen a flurry of research activities over the last few years. Apart from macro level studies on IMS in India [Kundu (1993), Mitra (1994), Kundu & Lalitha (1998), Mitra (1998), Shah (1998), Chadha (1999), Unni (2003)] there have also been various area and sector-specific studies to explore different qualitative and quantitative aspects of IMS at the micro level [Dhesi & Wadhwa (1980), Banerjee (1983), Romatet (1983), House (1984), Samal (1990), Shaw (1990), Swarooparani & Galab (1998), Patrick (1998), Mahadevia (1998)]¹. It has been observed that IMS in India has grown steadily over the last two decades. However, its composition and growth pattern has shown tremendous heterogeneity both within the same region and across regions. On one hand, there are segments of IMS having linkage with the organised sector, especially the factory sector, living and dying with it. On the other hand, there are segments that grow when the organised sector is slackening as people without alternative employment opportunities get deposited therein. While certain segments of the IMS cater to the industrial demand for intermediaries, some others fulfil the demand of the final consumers. This heterogeneity is not only across size class of the units but across product groups also². As a result, their growth is influenced by diverse economic processes and interactions that are highly region-specific. A closer analysis of this growth pattern, performance, problems, and prospects of the IMS is necessary if one has to evolve policy regime for their optimal development. In this context, region specific planning can play a much better role than centralised one as much of the growth dynamics of IMS is guided by local rather than global characteristics. This paper, based on a field survey at the industrial city of Durgapur of West Bengal, aims to bring out those interactions and suggest appropriate policies for optimal development of the region.

Durgapur is situated in the Bardhaman district of West Bengal, 175 km from the state capital Kolkata. The Grand Trunk Road (NH 2) and the main Delhi-Kolkata Railway line pass through it. The Durgapur Barrage on the River Damodar serves flood control, reservoir, water supply and Irrigation purposes. The Raniganj coalmines are also nearby (30 kilometres away). This locational advantage helped the city in being a part of post-independence industrialisation drive and by late 1970s there were more than 60 factories and around 800 other manufacturing units in Durgapur including two Steel Plants, two Thermal Power Plants, a Glass factory, a Heavy Machinery factory, a Fertiliser factory and a Chemical factory under the public sector. They provided employment to a substantial number of native and immigrant workers and this large and predominantly industrial workforce induced build-up of an impressive social infrastructure. An engineering college, an industrial training institute, two general degree colleges, more than fifty high schools, and the Central Mechanical Engineering Research Institute started fulfilling educational and training needs. Development of the core city facilitated both 'spread' and 'trickle down' of growth and attracted workers in search of living. However, since early 1990s, a deceleration of the organised sector set in here and the profile of the city has been changing ever since. From late nineties it has emerged as a major educational hub with two engineering colleges, one general degree college, various professional training institutes, large number of computer training centres coming up to compliment the existing facilities. In the last three years there seems to be a hint of industrial recovery with quite a few private enterprises (mainly sponge iron, machine tools, one cement and a few polymer units) being set up, though 3 large PSUs have downed their shutters. Naturally, the turbulence of the city's character has affected the pattern of growth and performance of IMS in Durgapur. It is in this backdrop that this paper tries to provide an insight into the operation of IMS in Durgapur so that proper policies can be framed for its smooth development - integrated with the overall developmental plan for the region. It is hoped that the study would have wider analytical significance and policy relevance as a plan document for the region.

METHODOLOGY

The present study uses both secondary and primary data. Primary data on IMS have been collected through a Sample Survey using Stratified Random Sampling Method. Secondary data from Directorate of Factories (DoF), District Industrial Centre (DIC), Durgapur Municipal Corporation (DMC), Office of

the Registrar of Small Scale Industries (SSI) and also from various publications of Census of India, Economic Census, etc. are used to gather relevant information. Statistics on the number of units and employment in the IMS in Durgapur urban area have been obtained from the Establishment Tables of Census of India-1971 using the employment size criterion. For 1981 and 1991, the numbers of units are obtained by deducting the number of factories (obtained from DoF) from the total number of Workshops, obtained from the Housing Tables of Census of India for the respective years. For 2001, two methods have been used. Unprocessed data of Economic Census 2000 has been collected from the Collecting Officer and using the employment size criterion, the informal manufacturing units have been identified. A pilot survey was also conducted during October-December 2000 in Durgapur, whereby almost all manufacturing units were visited and information regarding their Activity Group (2-digit National Industrial Classification Scheme, NIC-1987), Employment Size and whether electricity was being used for production, was collected. Using both these counts, a comprehensive list of all informal manufacturing units in Durgapur, along with their activity group and employment size was constructed. The units were then classified according to enterprise type and 2-digit NIC³. From each of these groups a 5 per cent random sample was drawn using random number series. The sample units were then surveyed during January 2001 using a structured, open-ended questionnaire. This methodology ensures that the sample represents the IMS in Durgapur properly and proportionately.

It may be noted that the three segments of IMS are characteristically different not only in terms of their employment size, but also in terms of their interactions with the rest of the economy and their role in the development process. This is more true when the region has a dominant formal industrial sector. Considering that, effort has been made in this paper to study the three segments of IMS in Durgapur separately wherever possible.

EXTENT AND GROWTH PATTERN

Growth of IMS

There were 999 informal manufacturing units in Durgapur with 2839 employees in 1971 according to the Establishment Tables. The highest number of units and employment were in Food product sector followed by Miscellaneous manufacturing and Repair Services. However, the Housing Tables of 1971 show presence of 786 informal manufacturing units in 1971 and 811 units in 1981 (Table 1). Using these

Housing Tables the number of units is observed to jump to 2566 in 1991. The Economic Census of 2000 and our primary survey figures show that in 2001 there were 2657 units, a marginal increase from 1991, while estimated total employment therein was 10683. Highest numbers of enterprises and employment are observed to be in Repair Services, followed by Food products, Wood products and Metal products sector (Table 2 and 3). This does not however imply that this sector has remained stagnant during the nineties. It is observed that whereas in 1989 there were about 600 DMEs in Durgapur, Economic Census 2000 could identify only 504 DMEs, implying that there is a decline of almost 15 per cent in the number of DMEs during 1989-2000 period, and the marginal expansion that has taken place has been mainly in the OAME and NDME segments. Moreover, this sector has both high death rate and high birth rate and so there is substantial churning within this sector that is not revealed by these aggregate figures. The last decade also experienced a slump and decline of the factory sector in Durgapur. From 79 units employing 67047 employees in 1991, it decreased to 62 units with 48169 employees in 2001. This indicates that perhaps the DMEs live or die along with the factory sector, while the OAMEs and NDMEs grow when the economic environment is slackening.

Reasons for Setting Up

The reasons for setting up the units and whether the entrepreneurs had any other alternatives were inquired. It is observed, that while most of the entrepreneurs setting up DMEs had other alternatives, 70 per cent of the OAMEs had no other alternative. The reasons for setting up a unit were classified into three categories – Pull Factors (Good Prospect, Adequate Demand, etc.), Push Factors (Previous Experience, Family Business, etc.) and Distress Factors (Low capital or skill required, etc.). It is observed that whereas 85 per cent of the DMEs and 51 per cent of the NDMEs are results of Pull factors, only 30 per cent of the OAMEs were so. Push factors are responsible for setting up of 40 per cent of NDMEs and 50 per cent of OAMEs, while 20 per cent of the OAMEs were set up due to Distress factors (Table 4).

PERFORMANCE

Structural and Performance Parameters of Segments

It is quite natural that the DMEs are in a better position among the three types of enterprises regarding different structural parameters like Fixed Capital per enterprise and Working Capital per enterprise

(Table 5). Performance parameters like Value Added per enterprise and Profit per enterprise are also better in case of DMEs. However, the NDMEs are in a superior position regarding Capital-Labour ratio and Labour productivity (Value Added per labour). A measure of Dynamism is also prepared using Profit per Family Labour (PFL) as index⁴. Units having PFL higher than Rs 5000 per month (Rs 60000 p.a.) are termed dynamic units while those having it below Rs 1000 per month (Rs 12000 p.a.) are termed distress units. It is observed that 38 per cent of the DMEs and 30 per cent of the NDMEs are dynamic and only 4 per cent and 3.5 per cent of them respectively are distress units (Table 6). On the contrary, 60 per cent of the OAMEs are distress units and are suffering from abject misery, while only 2 per cent of them are dynamic. However, all these units enjoying a certain minimum PFL (Rs 5000 per month) should not be marked as dynamic, unless their profit level is substantial compared to their scale of operation. It is observed that for more than two-third of these dynamic units, profit as a percentage of sales is more than 20 per cent. These units are thus enjoying sufficiently high levels of return, both in absolute and relative sense.

Dynamic Activity Groups

It is also investigated whether some specific activity groups are showing signs of dynamism. It has already been observed that among the dynamic units a majority are NDMEs, followed by the DMEs. Activity groups dominating the list of dynamic units are - Chemical Products, Electrical and Electronic Equipment, Food Products, Ornament manufacturing and a few Metal Fabrication units (Table 7). Noticeably poor performance is observed in the Wood Products, Repair Services and to some extent in the Paper Products sector.

FACTORS AFFECTING PERFORMANCE

Resource Availability and Use

Most of the distress units are observed to be operating with low Capital-Labour ratio and low Capital per enterprise. More than 70 per cent of them are situated on non-regularized land. 80 per cent of these distress units are found to be suffering from both resource and marketing problems. At the opposite end, the relatively better off units are those that are enjoying higher Capital-Labour and Capital-Output ratios. More than 90 per cent of them are situated on regularized land and only 40 per cent are found to be suffering from resource problem. The association between the partial productivity levels of the units and

level of their capital use is also examined (Table 8). It is observed that indicators of Capital Availability (Fixed and Working Capital per enterprise) and Capital Intensity (Capital-Labour ratio) have positive correlation coefficient with both Labour-productivity (VA per unit of Labour) and Unit-level productivity (VA per enterprise). This association is positive for the DMEs and significantly positive for the OAMEs and NDMEs. These measures of Capital-use also have significant positive association with PFL. Thus, it can be concluded that the economic performance of the units is crucially affected by availability of resources in terms of capital and land.

Productivity and Unit Size

The relation between size of the unit and its productivity level is also looked into. For the OAMEs, the labour productivity is observed to be decreasing with increase in employment size. However, for the DMEs the relationship is positive. A possible explanation may be that the DMEs generally have higher capacity and under-utilized capital stock. Therefore, higher employment in these units leads to increasing returns to scale and higher labour productivity. On the other hand, OAMEs suffer from capital scarcity, and higher employment therein cannot be complemented with adequate capital (tools and machinery). As a result, an increase in employment does not increase output proportionately and employment expansion leads to a decline in Labour Productivity in these units.

PROBLEMS FACED BY THE IMS IN DURGAPUR

One of the major objectives of this study has been to identify the problems faced by the IMS from the entrepreneurs' point of view, and to explore the future prospects of this sector in Durgapur. Various problems have been identified, and while there are some common problems, they do manifest themselves in different ways in different segments of the IMS (Table 9).

Demand Crunch

The economy in Durgapur has been historically dependent on the factory sector. The slackening pace of the factory sector in recent years has resulted in a general economic recession. Its effect is felt by the informal sector in general and the intermediate and capital goods producing sector in particular. Units producing such intermediate and capital goods, especially the larger units (DMEs and some NDMEs), had been set up mainly to cater to the demand of the local factories. Consequently, units producing Chemical and Chemical Products, Metal Fabrication, Machinery & Equipment and those engaged in

Repair of Capital goods enjoyed substantial forward linkage with the factory sector and were almost entirely dependent on them. The recent industrial recession has led to a sharp decline in the demand generated by the factory sector. Moreover, a substantial portion of demand is being out-sourced to larger producers outside Durgapur who enjoy considerable clout with the administration of these factories. As a result, these local informal units are having a demand crunch and are now saddled with substantial under-utilized capacity. The relatively smaller informal units engaged in production of Chemical Products and Fabricated Metal Products face a different situation. They had low capacity and hence could not take up bulk production for the factories. In addition, they lacked the substantially high working capital required for such linkages, since the payments by the factory sector are made only on delivery of goods and in many cases are delayed. These units thus had been catering to the demand of the final consumers (of Paints, Varnishes, Shutters, Grills, Gates, Almirahs, etc.). Faced with the general recession, downsizing of the factories and closure of many institutions, final consumers are increasingly postponing their purchases of such commodities. Therefore, the demand faced by these units is also declining.

The demand problem faced by the consumer non-durable sector is of a different kind. The aggregate demand faced by this sector has been steadily increasing due to increase in population. Since such activities have low capital and skill requirements, the number of enterprises in this sector has been steadily increasing too. Firstly, people having no other employment opportunities are setting up such units. Secondly, many of the employees working in such units start new enterprises of their own after acquiring some training and experience. Such a step provides them with marginally higher income (Profit + Wage) compared to the low wage paid by their ex-employers. This proliferation of new units and fragmentation of existing ones are leading to declining market share and low demand for individual units. Under such stiff competition, the entrepreneurs are increasingly resorting to aggressive price cutting and downgrading of product quality, etc. Such steps reduce their profit margin and hinder their prosperity. Units engaged in production of consumer durables like Ornaments Manufacturing and Metal Fabrications are also suffering from this problem.

Resource Crunch

The second major problem being faced by the informal sector in Durgapur is that of inadequate resources. A major part of this sector comprises of small and medium units operating with limited capital and having low capacity. These units depend entirely on regular turnover for generation of resources. Due to declining demand and proliferation of units, the turnover has become irregular, scanty and drawn out. This has slowed down the resource generation process significantly. The problem could have been mitigated by the formal credit system. However, such forces are inoperative mostly because the smaller units suffer from absence of collateral required for institutional loans. In many cases, the entrepreneurs are harassed by bank officials and are unable to get bank loan even after proving their credit-worthiness unless they grease their palms. A large number of entrepreneurs do not even approach the formal institutions because they are certain that this will lead to sheer wastage of time and money. Only a lucky few, having sufficient assets or personal rapport with bank officials, enjoy formal credit. Consequently, a major part of this segment are unable to modify their products or technology, extend credit to purchasers, produce and stock wide varieties and grades of products, etc. They are thus shut within some sort of 'low level equilibrium trap' and are unable to break the Low sales -Low capital spiral. For the larger units, the situation is somewhat different. They are also facing the problem of low demand and turnover and are already burdened with underutilized capacity. Though they have access to the formal credit system, they are unwilling to borrow and invest. They feel that faced with low demand, irregular turnover and price competition, the profit margin would not be enough to cover the high interest burden and allied costs of borrowing.

Infrastructural Problems

A few infrastructural problems are also identified. The infrastructural problems are most acute for those units that are situated on non-regularized land. Such units do not have access to electricity, sewerage, or telephone. Especially, absence of electricity implies that either they are unable to use necessary tools and implements, or can do so only by bearing substantial cost for small generators. This has prevented mechanization and upgradation of technique to a considerable extent and hinders their improvement. These units also live with the constant fear of administrative measures like confiscation of products and machinery or outright eviction and demolition. As a result, most of them are too apprehensive to set up

any permanent structure and operate within temporary structures. This also prevents them from having any reasonable stock of either raw material or finished product.

Activity-specific Problems

A few activities suffer from certain problems unique to themselves. Products like earthen potteries and paper packets are fighting a losing battle against cheap plastic substitutes. This is also true to some extent for wooden products because of availability of, and consumers' preference towards, metal and polymer substitutes. For the printing industry, the problem is somewhat different. Most of the traditional units have been operating with 'Treadle machines' and supplying printed office stationeries to the local banks and other offices. With the advent of modern office automation products, most of the banks and offices are having their own computing and printing provisions. The final consumers prefer 'Offset printing' because of its high quality. Whereas new units are able to flourish because they started with the modern technology, the older units are languishing, as they are unable to upgrade to offset printing technique due to inadequate resource.

Absence of Mobility

The absence of mobility of the entrepreneurs and workers of this sector is another major problem. After continuing their activity for a substantial period, they become specialized in their particular trade and find it very difficult to shift to other activities or to upgrade the manufacturing process by adopting modern techniques. On one hand, there is a complete lack of training and skill development programmes for the entrepreneurs and workers. On the other hand, being the only source of earning in most cases, they are unable to keep their workshop closed and take part in training programmes even if available. Moreover, the infrastructure that they have slowly built up over time and the business contacts that they have developed are specific to their particular product line. Consequently, they find it almost impossible to shift to other products or upgrade production process. This prevents any horizontal mobility. Vertical mobility is practically non-existent because of institutional barriers, downsizing of larger units and fragmentation.

These obstacles have naturally influenced the development pattern of IMS in Durgapur. The foremost of them has been a change in its composition. In the eighties, a thriving factory sector had led

to expansion of activities having close linkage with it, e.g. machine parts, chemical products, metal products, paper products, and repair of capital goods. However, in the changed scenario of slackening factory sector in the nineties, these segments are undergoing a slump and there has been a tendency of expansion in the consumer goods producing sector. The DMEs, which were the obvious beneficiary of the formal-informal linkage earlier, are now facing a difficult situation. Consequently, employment is shrinking in the larger units that are unable to utilise their capacity due to demand crunch. On the other hand, employment has increased in smaller units that are acting as a sink where people having no other earning opportunities (especially family labourers) are being deposited. Employment is thus expanding in distress segments having poor structural and performance parameters and contracting in the others, though this trend is not all pervasive.

FUTURE PROSPECTS OF IMS IN DURGAPUR

One should not get the impression that the informal manufacturing sector in Durgapur is only an amalgam of various problems and shortcomings. There are certain segments both in terms of specific product lines and types of units, and even individual units, which are dynamic and prospering. These pockets of vibrancy should form the core group of prospective and sustainable segment of informal manufacturing sector in Durgapur. As a result, identification of this segment becomes necessary.

One should take a futuristic view while outlining the prospect of a sector at the micro level. The economy of Durgapur is undergoing a transition. Over the last few years, the city has emerged as a major educational centre with 2 engineering colleges, few professional training institutes, management and biotechnology colleges and a few schools coming up. As a result, teaching aids and educational products are likely to face a rising demand (e.g. different types of paper products, office stationeries, computer consumables, and printing and binding jobs etc.).

Service sector activities have also expanded in recent years significantly. Numerous new and modern market complexes have come up along with private sector banks and hotels. There is also a construction boom in and around the city with various modern housing complexes being developed. This is a reflection of the recovery of the city economy, and the IMS catering to these sectors (e.g. paints & varnishes, furniture and fixtures, etc.) and final consumers should be able to take advantage of the situation.

As mentioned earlier, signs of an industrial recovery of the region is also perceived during 2000-04. About 25 factories have come up in the last three years with an average employment of about 100 workers. Most of them produce sponge-iron and ferro-alloy products, along with a few cement and polymer units also. IMS units having linkage with these sectors also face good future prospect provided they are able to nurture and strengthen those linkages.

Those units that have been able to upgrade their technology to incorporate more efficient production and modify their products to match the changing form and composition of market demand are also likely to be successful. In many cases, better packaging and customizing of products has been the key to success. Examples of such products are - Chemical products (specially soaps and detergents, phenyls, incense sticks, etc.), Paper products (especially office stationeries, offset printing and binding industry) and also modern Electrical and Electronic equipment (mostly computers and peripherals).

Nascent units that are set up to match the current demand composition and with comparatively newer technologies are also observed to be prospering.

Many of the products have experienced expanding demand because of the addition of newer markets outside Durgapur. Products like Food products (light snacks and bakery products), Fabrication (alimirahs, metal furniture), Textile products (ready-made garments) and Chemical products (paints, varnishes and candles) are being supplied to the surrounding areas in substantial quantity. These products, which have been able to retain or increase their market demand, no doubt represent the dynamic segment of the informal manufacturing sector in Durgapur.

Cutting across different activity groups, there is also a certain segment within the informal manufacturing sector that is flourishing. These units generally have the advantage of sufficient resource at their disposal. Consequently, they can take different steps for their improvement. They are able to upgrade their technology, diversify their products, pile up adequate and varied stock of products for customers' choice, extend credit to the purchasers and thereby maintain a regular turnover. This resource generation helps them to break the Low demand-Low resource trap. Some units also operate with the philosophy of low per unit profit and high sales. They do not compromise with the quality of their products and therefore cater to a selected but steady group of customers. These units are also observed to be sufficiently satisfied with their performance and are confident about their future prospects.

Thus, there are different segments of IMS in Durgapur that are likely to have good future prospect. Policies should be framed so that this focus group within IMS gets sufficient fillip and emerges as a catalyst of growth for the region (Table 10).

POLICY SUGGESTIONS

In light of the preceding discussion, various measures may be suggested to boost the dynamic segments of the IMS having good future prospect. These steps may also solve some of the problems of the ailing segments (Table 11).

Revival of Factory Sector

The foremost solution that would affect the regional economic scenario as a whole is a general revival of the formal sector in Durgapur. The problems of the slackening public sector units should be properly addressed at the macro level so that their economic health is revitalized. At the micro level, technology upgradation and capacity expansion may help them to regain the past glory, so that they can lead the economic revival of Durgapur. Some of the public sector units are terminally ill because the basic production process involved has become obsolete and highly cost ineffective. Similar products produced by newer technology are coming to the market at much lower prices and consequently, these units are out-competed. Moreover, in many cases, the difference between average cost and market price is so high that they are finding it less loss making to shut down production and continue paying wages to their employees. If these units are sold off along with their assets, substantial amount of resource can be recovered. The right step would be to reinvest these resources locally to set up new units producing currently demanded products with updated technology. In fact, it is heartening to note that private entrepreneurs have set up quite a few medium manufacturing units in Durgapur in the last two years. Given the locational advantage of the city and the well-developed infrastructural facilities available, it is quite natural that entrepreneurs will be attracted here.

However, these measures face few stumbling blocks also. Upgradation and outright sale of the public sector units are being vehemently opposed by the organized labour unions backed by the political parties. Many prospective private entrepreneurs are apprehensive of the alleged poor work culture of the local workers and have backtracked even after site selection and initial site development. There must be

a political consensus and the ruling government should ensure no hindrance to the industrial recovery of the region.

Strengthening Informal-Formal Linkage

Another major step should be to strengthen the linkage between the existing formal units and the local informal units. Outsourcing of purchases to firms outside Durgapur should be discouraged when comparable products are available locally. Even in cases when comparable products are not available, the formal units can have them custom-built by providing product specifications, designs and samples to the local informal units. Efficiency and price competitiveness should be the guideline for choosing the suppliers and not the clout between top officials of the factories and large business houses. It may be made binding on the formal units, and even the larger units within the informal sector, to purchase at least a certain minimum proportion of their requirements from the local informal sector units subject to quality assurance.

Ensuring Cheap Raw Materials

The local informal manufacturing units are finding it difficult to take advantage of cheap by-products and scraps sold off by the local factories even if they use these as inputs. The factories stipulate that only bulk orders will be entertained and the small informal manufacturers are not in a position to bid for such bulk purchases. Such stipulation should be waived and the local units should have certain quota in the purchase of such items. Additionally, they can form a group among themselves, purchase the scraps in bulk and distribute it among themselves.

Exploring New Markets

Existing informal units should be encouraged to venture out to newer markets to boost their demand, and given the well-developed transport system of this region, this should not pose a problem. If the entrepreneurs find it cost ineffective to hire individual vehicles, they may arrange for group transport vehicles or pool cars.

Resource Mobilization

The solution to the resource mobilization problem has different aspects. A major part of the entrepreneurs feel that adequate demand and regular turnover would automatically solve the resource problem. Apart from the demand-boosting measures suggested earlier, adequate turnover may be ensured

in other ways also. The units may find it worthwhile to complement their manufacturing activity with certain amount of trading of allied commodities that they do not produce. This will not only help them to generate some amount of additional regular turnover, but would boost the sale of their manufactured products also, as the customers will find complementary products under one roof. Most prominent examples are Repair service units trading in spare parts, Furniture manufacturing units trading in Fittings, Accessories and Upholstery, etc.

Credit Availability

Another major step would be streamlining of the credit system of the banks. Certain minimum fraction of the deposits generated in the region should be earmarked for advances to local informal manufacturers. The financial institutions sometimes complain about lack of credit-worthy projects. In this regard, they should take more active role in advising the entrepreneurs, revising and restructuring their plans, and making the project viable, rather than just ticking off projects as nonviable.

Skill Upgradation

A few segments within the informal sector are facing problems because their knowledge and skill have become outdated with the advent of new products and processes. Further training would make them familiar with these new products and processes and help them to regain their usefulness and boost their market demand. This is more true for the repairing units where the entrepreneurs are finding their knowledge inadequate to cope with the new products.

Other Measures

Other measures would include setting up of Information centres, Single Window Licensing centres and Marketing outlets for manufacturing products. The above measures are expected to solve the problems and mitigate the difficulties faced by the informal manufacturing enterprises in Durgapur up to a large extent.

CONCLUSION

It can thus be concluded that there has been a substantial expansion of informal manufacturing sector in Durgapur over the last two decades. There exists a strong positive association between the performance of the units and availability of resources indicated by capital intensity and capital per enterprise. While various Pull factors are responsible for setting up of DMEs, the OAMEs are predominantly motivated by

Distress or Push factors, though this compartmentalisation has been changing in recent times. In the eighties, activities with strong linkage with the local factories were emerging, but the linkage had substantially weakened in the nineties and units having link to final consumers expanded. However, given the hint of industrial recovery in the last few years, one can be optimistic about the future prospect of IMS in Durgapur, especially about those segments that have linkage with the organised sector. Major problems faced by this sector are low demand due to local industrial recession, resource problem due to low turnover and non-availability of credit due to institutional barriers. Chemical products (e.g. soaps, detergent, phenyls, incense sticks etc.), Paper products (e.g. office stationeries, teaching aids, offset printing and binding industry), Electrical and Electronic equipment (computer consumables and peripherals) and Food products (light snacks, bakery products, etc.) are likely to have good future prospect in the region. Revival of the local factories, smoothening the way for setting up of new factories, strengthening the formal-informal linkages, encouraging the informal manufacturers to venture into surrounding markets and facilitating credit availability to them are some of the steps that would facilitate further development of the informal manufacturing sector in Durgapur. These steps are likely to properly nurture the IMS so that it develops as a complementary to the organised sector and plays its role in optimal development of the region.

Table 1: Temporal Trend of Informal Manufacturing and Factory sector in Durgapur

Year	Enterprise Number			Employment		
	<i>Informal</i>	<i>Factory</i>	<i>Total</i>	<i>Informal</i>	<i>Factory</i>	<i>Total</i>
1971 Housing Tables	786	30		-	33779	-
1981 Housing Tables	811	64	875	-	66397	-
1991 Housing Tables	2566	79	2645	-	67047	-
2001 Pr. Survey & Economic Census	2657	62	2719	10683	48169	58852

Note: By 2004 factory sector employment has again crossed the 50,000 mark.

Source: GOI (1971, 1971a, 1981, 1991)

Table 2: Enterprises in Informal Manufacturing Sector in Durgapur – Survey Results 2001

Activity Groups	Population no. of Enterprises				Sample no. of Enterprises Surveyed			
	<i>OAME</i>	<i>NDME</i>	<i>DME</i>	<i>TOTAL</i>	<i>OAME</i>	<i>NDME</i>	<i>DME</i>	<i>TOTAL</i>
Food Products	80	156	195	431	4	8	10	22
Tobacco & Beverages	5	0	0	5	0	0	0	0
Cotton Textile	0	0	0	0	0	0	0	0
Wool & Silk Textiles	2	1	0	3	0	0	0	0
Natural Fibre Products	0	0	0	0	0	0	0	0
Textile Products	36	35	35	106	2	2	2	6
Wood Products	231	116	38	385	12	6	2	20
Paper Products	91	36	0	127	5	2	0	7
Leather Products	34	17	0	51	2	1	0	3
Basic Chemicals	0	65	0	65	0	4	0	4
Rubber & Plastic	0	0	2	2	0	0	0	0
Non-metallic Mineral	20	18	18	56	1	1	1	3
Basic Metal	0	2	1	3	0	0	0	0
Metal Products	39	152	57	248	2	8	3	13
Non-electrical Equipment	17	0	32	49	1	0	2	3
Electrical & Electronic Equip	0	17	0	17	0	1	0	1
Transport Equipment	0	3	2	5	0	0	0	0
Miscellaneous Manufacturing	40	200	40	280	2	10	2	14
Repair Services	318	422	84	824	15	20	4	39
All Industries	913	1240	504	2657	46	63	26	135

Source: Primary Survey.

Table 3: Estimated Employment (Total and Hired) in Informal Manufacturing Sector in Durgapur - 2001

Activity Groups	Total Employment				Hired Employment		
	OAME	NDME	DME	TOTAL	NDME	DME	TOTAL
Food Products	180	565	1872	2617	292	1462	1754
Tobacco & Beverages	10	0	0	10	0	0	0
Cotton Textile	0	0	0	0	0	0	0
Wool & Silk Textiles	4	3	0	7	2	0	2
Natural Fibre Products	0	0	0	0	0	0	0
Textile Products	90	105	262	457	70	192	262
Wood Products	558	502	285	1345	328	209	537
Paper Products	163	126	0	289	90	0	90
Leather Products	51	68	0	119	51	0	51
Basic Chemicals	0	292	0	292	211	0	211
Rubber & Plastic	0	0	14	14	0	10	10
Non-metallic Mineral	100	54	180	334	36	144	180
Basic Metal	0	8	8	16	6	6	12
Metal Products	39	570	475	1084	399	418	817
Non-electrical Equipment	34	0	224	258	0	160	160
Electrical & Electronic Equip	0	34	0	34	17	0	17
Transport Equipment	0	12	16	28	9	12	21
Miscellaneous Manufacturing	40	540	520	1100	300	480	780
Repair Services	551	1540	588	2679	865	462	1327
All Industries	1820	4419	4444	10683	2676	3555	6231

Source: Primary Survey.

Table 4: Reasons for Setting Up

Enterprise Type	% of Enterprises set up due to		
	Pull Factors	Push Factors	Distress Factors
All	50.4	35.6	14.1
OAME	30.4	45.7	23.9
NDME	50.8	38.1	11.1
DME	84.6	11.5	3.8

Source: Author's Calculation.

Table 5: Annual Values of Structural and Performance Parameters of IMS in Durgapur

Parameters	Enterprise Type			
	OAME	NDME	DME	All IMS
Fixed Capital per Enterprise (Rupees)	58993	206079	471346	207049
Working Capital per Enterprise (Rupees)	12650	49182	175173	60999
Total Capital per Enterprise (Rupees)	71643	255261	646519	268048
Capital Labour Ratio (Rs. per labour)	1811	3639	3783	3387
Value Added per Enterprise (Rupees)	27182	113276	224307	105324
Value Added per Labour (Rs. Per labour)	687	1615	1312	1331
Output per Enterprise (Rupees)	104426	331428	653076	316026
Profit per Family Labour	25760	74838	99692	59738

Source: Author's Calculation.

Table 6: Distribution of Enterprises by Dynamism

	% of Enterprises		
	Distress	Stagnant	Dynamic
All Enterprises	23.0	54.8	22.2
OAMEs	60.9	37.0	2.2
NDMEs	3.2	66.7	30.2
DMEs	3.8	57.7	38.5

Source: Author's Calculation.

Table 7: Dynamic and Distress Product Groups

Dynamic Groups	Distress Groups
Chemical Products, Electrical & Electronic Equipment, Food Products, Ornament Manufacturing	Wood Products, Earthen Potteries, Repair Services, Treadle Printing Press.

Source: Author's Calculation.

Table 8: Correlation Coefficient of Value Added per Enterprise and Labour Productivity with Structural Parameters

Type of Enterprise	Working Capital Per Enterprise		Fixed Capital Per Enterprise		Total Capital Per Enterprise		Capital Output Ratio		Capital Labour Ratio	
	VAPE	LP	VAPE	LP	VAPE	LP	VAPE	LP	VAPE	LP
All	0.43**	0.16	0.39**	0.15		-0.05		0.43**		0.43**
DME	0.22	0.14	0.14	0.11	-0.13	-0.06	0.03	0.06	0.031	0.05
NDME	0.40**	0.21	0.44**	0.26*	-0.09	-0.12	0.38**	0.49**	0.37**	0.48**
OAME	0.52**	0.35*	0.56**	0.41**	0.01	0.01	0.42**	0.70**	0.42**	0.70**

Note: VAPE – Value Added per Enterprise, LP – Value Added per Labour, ** Significant at 1 % level, * Significant at 5 % level.

Source: Author's Calculation.

Table 9: Problems Faced by IMS in Durgapur

Enterprise Type	% of Units facing Different Problems			
	No Problem	Resource Crunch	Demand Crunch	Both Demand & Resource Crunch
All Enterprises	11.3	6.8	22.6	59.4
OAME	10.9	10.9	4.3	73.9
NDME	12.9	3.2	22.6	61.3
DME	8.0	8.0	56.0	28.0

Source: Author's Calculation.

Table 10: Focus Groups within IMS in Durgapur

Paper Products -	Teaching Aids, Educational Products, Office Stationeries, Offset Printing and DTP;
Textile Products -	Readymade Dresses;
Chemical Products -	Paints, Varnishes, Soaps, Detergents, Phenyls, Incense Sticks;
Metal Products -	Metal Furniture;
Non-electrical Equipment -	Nuts and Bolts, Hand-tools;
Electrical & Electronic Equipment -	Computer Cosumables, Computer Peripherals, Electronic Components;
Food Products -	Light Snacks, Bakery Products;
Others -	Ornament Manufacturing;

Table 11: Policy Summary

Problems	Policy Suggestions
Demand Crunch -	<ul style="list-style-type: none"> • Revival of local organised sector • Strengthening formal-informal linkage • Exploring new markets
Resource Crunch -	<ul style="list-style-type: none"> • Expanding turnover • Complementing manufacture with trade in allied products • Streamlining credit availability to small enterprises • Formation of Co-operatives
Technical Problems -	<ul style="list-style-type: none"> • Training programmes for entrepreneurs • Apprenticeship in local factories • Technology transfer and design-specification

ENDNOTE

¹ For an extensive bibliography on informal sector refer to Kundu, 1993.

² Informal Manufacturing Sector in India has been generally conceptualised as consisting of the following three segments - a) Own Account Manufacturing Enterprises OAME - manufacturing enterprises operating with no hired worker employed on a fairly regular basis; b) Non-Directory Manufacturing Establishments NDME - units employing less than 6 workers including household workers; c) Directory Manufacturing Establishments DME - units employing 6 or more workers with at least 1 hired worker but not registered under the Factory Act.

³ OAME, NDME and DME.

⁴ This is a rough measure of the returns per capita obtained by the entrepreneur from the business.

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