

USE OF RESOURCES BY MICRO MANUFACTURING ENTERPRISES

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1. INTRODUCTION

It is the policy of the government that those units should be encouraged which can draw upon the locally available resource. The primary objective of rural industrialization is the utilization of locally available resources by setting up of rural industries in the village itself. Therefore, a modest attempt is made to examine empirically the extent of use of locally available resources by micro manufacturing enterprises. The universe of the study is Chittoor district. Of the categories of manufacturing micro enterprises, as classified by the District Industry Centre, for a meaningful analysis of cross sectional data 25 units from each category is purposely brought into sample frame. Stratified sample technique is conveniently adopted. The data has been collected from the respondents through questionnaire specially designed for the purpose.

2. RAW MATERIALS

It can be observed from the Table1 that, if the units of all the categories are taken as a whole, the highest, 28.80 per cent have acquired raw materials locally while others from places throughout Andhra Pradesh (AP) i.e. from AP as well as outside the state (24 per cent), outside state (12.80 per cent), within the mandal (12 per cent), within the district (10.40 per cent) within the state (9.60 per cent), both local and outside AP (1.60 per cent) and mandal and outside the state (0.80 per cent). In the case of glass and ceramics, 40 per cent, 32 per cent and 28 per cent have purchased the raw materials locally, from within the district and from within the mandal respectively. With regard to paper, the highest 64 per cent obtained from both within and outside the state, 16 per cent local, 8 per cent each within the state and outside the state, the rest, 4 per cent, mandal and outside the state. In the case of mechanical and metallurgical, the highest, 48 per cent, procured locally. They are followed by 16 per cent from outside the state, 12 per cent within the state and the remaining, 8 per cent within the district. With regard to chemical, plastic and rubber and agro, food and allied, the highest 36 per cent and 28 per cent have purchased

Table 1: Raw Materials Source wise Classification of Sample Units

Source	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Local	5(20.00)	12(48.00)	5(20.00)	10(40.00)	4(16.00)	36(28.80)
Mandal	7(28.00)	-	1(4.00)	7(28.00)	-	15(12.00)
District	1(4.00)	2(8.00)	2(8.00)	8(32.00)	-	13(10.40)
State	5(20.00)	3(12.00)	2(8.00)	-	2(8.00)	12(9.60)
Outside state	1(4.00)	4(16.00)	9(36.00)	-	2(8.00)	16(12.80)
Local and outside state	-	-	2(8.00)	-	-	2(1.60)
Mandal and outside state	-	-	-	-	1(4.00)	1(0.80)
State and outside state	6(24.00)	4(16.00)	4(16.00)	-	16(64.00)	30(24.00)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note : Figures in parentheses indicate the percentage to total ,

Source: Compiled from field data.

materials from the outside state and within the mandal sequentially. The least 4 per cent in the former and the latter have procured them from within the mandal and outside the state serially. At the aggregate level, when

mandal including local are taken together, nearly 41 per cent have acquired raw materials. Among the industrial categories, the aforesaid have constituted 68 per cent and 48 per cent each under glass and ceramics and mechanical and metallurgical and agro, food and allied.

A look at the Table 2 shows that if all the sample respondents are put together, those who have obtained from small producers (42.40 per cent) ranked first followed by medium producers (32.80 per cent), farmers (7.20 per cent), big producers (6.40 per cent), farmers as well as small producers (4.80 per cent), medium and big producers (3.20 per cent) and each of 1.60 per cent from small and medium producers and farmer and medium producers. It can be observed that, in respect of paper, the requirements were availed from each of small and medium producers (44 per cent), big producers (8 per cent) and medium and big producers (4 per cent). The agro, food and allied units respondents have obtained their requirements from farmers, small producers, medium producers and farmers and medium producers only. Their share was 32 per cent, 28 per cent, 20 per cent, 16 per cent and 4 per cent serially. In the case of chemical, plastic and rubber, the respondents who obtained from small, medium and big producers and farmers and small

Table 2: Segregation of Respondents on Seller Category Wise Obtaining Raw Materials

Category wise sellers	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Farmers	8(32.00)	-	-	1(4.00)	-	9(7.20)
Small producers	7(28.00)	15(60.00)	13(52.00)	7(28.00)	11(44.00)	53(42.40)
Medium producers	4(16.00)	5(20.00)	9(36.00)	12(48.00)	11(44.00)	41(32.80)
Big producers	-	2(8.00)	2(8.00)	2(8.00)	2(8.00)	8(6.40)
Farmers and small producers	5(20.00)	-	1(4.00)	-	-	6(4.80)
Farmers and medium producers	1(4.00)	-	-	1(4.00)	-	2(1.60)
Small and medium producers		1(4.00)		1(4.00)		2(1.60)
Medium and big producers	-	2(8.00)	-	1(4.00)	1(4.00)	4(3.20)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note : Figures in parentheses indicate the percentage to total

Source : Compiled from field data.

Producers have constituted 52 per cent, 36 per cent, 8 per cent and 4 per cent sequentially. With regard to mechanical and metallurgical, 60 per cent have obtained from small producers, 20 per cent from medium producers, 8 per cent from big producers and 4 per cent from both the small and medium producers. In respect of glass and ceramics, the highest, 48 per cent have obtained raw materials from medium producers followed by small producers (28 per cent), big producers (8 per cent) and each of 4 per cent from farmers, farmers and medium producers, small and medium producers and medium and big producers.

A glance at the Table 3 indicates that, all the sample units in mechanical and metallurgical, glass and ceramics and paper have utilized the raw materials which are available throughout the year. This is so because these categories produce products which use such raw materials throughout the year. In the case of agro, food and allied, 52 per cent have availed raw materials which are available throughout the year and the remaining, 48 per cent procured seasonally available materials. With regard to chemical, plastic and rubber, 96 per cent have

Table 6: Distribution of Respondents According to Seasonal Availability of Raw Materials

Availability	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Seasonal	12(48.00)	-	1(4.00)	-	-	13(10.40)
Continuous	13(52.00)	25(100.00)	24(96.00)	25(100.00)	25(100.00)	112(89.60)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note : Figures in parentheses indicate the percentage to total.

Source : Compiled from field data.

utilized materials that are available throughout the year and the remaining, 4 per cent seasonally available materials. If all the respondents are put together, 89.60 per cent and 10.40 per cent account for the former and latter serially.

A perusal of the Table 4 show that, of the units in glass and ceramics, the highest, 52 per cent buy raw materials weekly, 44 per cent monthly and the rest, 4 per cent weekly and monthly. None of the units have acquired daily, quarterly and yearly. In the case of chemical, plastic and rubber, those who have acquired daily, weekly, monthly and quarterly formed 12 per cent, 32 per cent, 48 per cent and 4 per cent sequentially. In respect of paper, 4 per cent, 48 per cent, 40 per cent and 8 per cent are found in the said frequencies serially. With regard to mechanical and metallurgical the aforesaid have constituted 8 per cent, 48 per cent, 36 per cent and 4 per cent serially. Further, weekly and monthly purchased have accounted for the rest, 4 per cent. The respondents in agro, food and allied units are spread over in all the frequencies of buying of raw materials in varying proportions without any exception. Those who have purchased daily share 12.

Table 4: Frequency of Buying of Raw materials by Sample Respondents

Frequency of buying	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Daily	3(12.00)	2(8.00)	3(12.00)	-	1(4.00)	9(7.20)
Weekly	8(32.00)	12(48.00)	8(32.00)	13(52.00)	12(48.00)	53(42.40)
Monthly	3(12.00)	9(36.00)	12(48.00)	11(44.00)	10(40.00)	45(36.00)
Quarterly	1(4.00)	1(4.00)	1(4.00)	-	2(8.00)	5(4.00)
Yearly	2(8.00)	-	-	-	-	2(1.60)
Weekly and monthly	3(12.00)	1(4.00)	-	1(4.00)	-	5(4.80)
Monthly and quarterly	3(12.00)	-	-	-	-	3(2.40)
Monthly , quarterly and half yearly	2(8.00)	-	-	-	-	2(1.60)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note : Figures in parentheses indicate the percentage to total,

Source : Compiled from field data.

per cent, weekly 32 per cent, monthly 12 per cent, quarterly 4 per cent, yearly 8 per cent, each of weekly and monthly and quarterly and monthly 12 per cent and monthly, quarterly and half yearly 8 per cent. When all the respondents are put together, the highest, 42.40 per cent, have acquired raw materials on weekly basis followed by

36 per cent monthly, 7.20 per cent daily, 4.80 per cent weekly and monthly, 4 per cent quarterly, 2.40 per cent monthly and quarterly and 1.60 per cent each yearly and monthly, quarterly and half yearly. The variations in the frequency of buying may be on account of availability of raw materials as and when required, availability of cash and credit facility, financial strength of buyer and seller, discounts and scale of operations.

It can be observed from the Table 5 that, at the aggregate level, 55.20 per cent have procured raw materials from the place of availability to the location of unit through light mini vehicles like tempos, mini lorries, autos etc. Heavy vehicles like Lorries are used by 42.40 per cent of respondents. Those who have used both the mini and heavy vehicles formed 1.60 per cent and trains 0.80 per cent. It can be noted that, the highest percentage of respondents in chemical, plastic and rubber and 64 per cent in each of paper, mechanical and metallurgical, agro, food and allied have employed mini vehicles.

Table 5: Means of Transportation Employed in Procurement of Raw Materials by Samples

Transportation	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Mini vehicles	16(64.00)	16(64.00)	17(68.00)	4(16.00)	16(64.00)	69(55.20)
Heavy vehicles	7(28.00)	9(36.00)	7(28.00)	21(84.00)	9(36.00)	53(42.40)
Trains	-	-	1(4.00)	-	-	1(0.80)
Mini and heavy vehicles	2(8.00)	-	-	-	-	2(1.60)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note : Figures in parentheses indicate the percentage to total

Source : Compiled from field data

Those who have used heavy vehicles were 28 per cent and those who used both the means of transport were 8 per cent in agro, food and allied. In the case of chemical, plastic and rubber, the former have accounted for 28 per cent and 4 per cent used trains. With regard to mechanical and metallurgical, those who employed heavy vehicles constituted 36 per cent. In respect of glass and ceramics, those who have used heavy vehicles formed 84 per cent and the remaining, 16 per cent used mini vehicles.

In the case of glass and ceramics, 76 per cent have paid cash immediately after purchase of raw materials whereas 24 per cent both cash and credit (see Table .6).

Table 6: Terms of Payment for Purchase of Raw Materials by Sample Respondents

Payment method	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Cash	8(32.00)	6(24.00)	12(48.00)	19(76.00)	12(48.00)	57(45.60)
Credit	2(8.00)	1(4.00)	-	-	4(16.00)	7(5.60)
Cash and credit	15(60.00)	18(72.00)	13(52.00)	6(24.00)	9(36.00)	61(48.80)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note: Figures in parentheses indicate the percentage to total,

Source: Compiled from field data.

None of them had acquired on credit basis alone. A similar situation prevails in chemical, plastic and rubber category but the proportion varies. Fifty two per cent have purchased on cash as well as credit basis whilst 48 per cent on cash basis. In the case of mechanical and metallurgical, 24 per cent, 4 per cent and 72 per cent have purchased raw materials on cash, credit and both the bases respectively. With regard to agro, food and allied, the

aforesaid constituted 32 per cent, 8 per cent and 60 per cent respectively. In respect of paper, 48 per cent, 16 per cent and 36 per cent made payment on the spot, enjoyed credit facility and both cash and credit facilities serially.

3.LABOUR

If all the units are considered as a whole, the highest, 52 per cent have drawn hired labour locally, 14.40 per cent from mandal, 12 per cent from the district, 7.20 per cent local and outside the state, 5.60 per cent from within the state, 3.20 per cent each from within the state and state and outside the state, 1.60 per cent from district and outside the state and 0.80 per cent mandal and outside the state (see Table 7). In the case of paper, 56 per cent, 24 per cent and 20 per cent of hired labour belonged to local, mandal and district respectively. With regard to agro, food and allied and chemical, plastic and rubber more than 72 per cent and 56 per cent are serially drawn from local sources. In respect of mechanical and metallurgical, 28 per cent are local, 24 per cent are from district, each of 16 per cent mandal and state and 4 per cent each from outside the state

Table 7: Hired Labour Source- wise Distribution of Sample Units

Source	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Local	18(72.00)	7(28.00)	14(56.00)	12(48.00)	14(56.00)	65 (52.00)
Mandal	3(12.00)	4(16.00)	2(8.00)	3(12.00)	6(24.00)	18(14.40)
District	1(4.00)	6(24.00)	3(12.00)	-	5(20.00)	15(12.00)
State	1(4.00)	4(16.00)	2(8.00)	-	-	7(5.60)
Outside state	-	1(4.00)	-	3(12.00)	-	4(3.20)
Local & outside state	2(8.00)	1(4.00)	3(12.00)	3(12.00)	-	9(7.20)
Mandal & outside state	-	-	1(4.00)	-	-	1(0.80)
District & outside state	-	-	-	2(8.00)	-	2(1.60)
State & outside state	-	2(8.00)	-	2(8.00)	-	4(3.20)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note: Figures in parentheses indicate the percentage to total .

Source: Compiled from field data.

and local and outside the state. With regard to glass and ceramics, 48 per cent have employed labour locally, 12 per cent each mandal, outside the state and local and outside the state and 8 per cent each district and outside the state and within the state and outside the state. Those exclusively drawn from the district are absent in glass and ceramics. A similar situation emerges with regard to those drawn from the state in glass and ceramics and paper categories. The hired labour exclusively hailing from outside the state are nil in agro, food and allied, chemical, plastic and rubber and paper. An identical trend exists in paper.

A perusal of a Table 8 shows that, in the case of agro, food and allied, 68 per cent of units have employed labour on regular basis, 24 per cent regular and piece rate wise and the balance, 8 per cent piece rate basis. Those of regular and out workers are absent. With regard to mechanical and metallurgical, 44 per cent are regular, 36 per cent piece rate, 12 per cent regular and piece rate and the remaining, 8 per cent regular and out workers. In respect of chemical, plastic and rubber, these have constituted 64 per cent, 16 per cent each and 4 per cent sequentially. In the case of glass and ceramics, 72 per cent are piece workers, 16 per cent regular and piece workers and the least, 12 per cent regular. The regular and out workers are absent in it. The regular employees formed 52 per cent, piece rate 24 percent, regular and piece rate 20 per

Table 8: Nature of Employment wise Segregation of Samples

Nature of employment	Agro, food and allied	Mechanical and metallurgical	Chemical, plastic and rubber	Glass and ceramics	Paper	Total
Regular	17(68.00)	11(44.00)	16(64.00)	3(12.00)	13(52.00)	60(48.00)
Piece rate	2(8.00)	9(36.00)	4(16.00)	18(72.00)	6(24.00)	39(31.20)
Regular and piece rate	6(24.00)	3(12.00)	4(16.00)	4(16.00)	5(20.00)	22 (17.60)
Regular and out workers	-	2(8.00)	1(4.00)	-	1(4.00)	4(3.20)
Total	25(100.00)	25(100.00)	25(100.00)	25(100.00)	25(100.00)	125(100.00)

Note : Figures in parentheses indicate the percentage to total.

Source : Compiled from field data.

cent and regular and out workers 4 per cent in the paper category. If all the units are put together, 48 per cent have provided employment on regular basis, 31.20 per cent piece rate, 17.60 per cent regular and piece rate and the remaining, 3.20 per cent regular and out workers.

It can be observed from the Table 9 that, the males have formed 49.37 per cent, females 45.09 per cent and children the rest, 4.54 per cent. The females are the highest in agro, food and allied (57.44 per cent) followed by chemical, plastic and rubber (55.51 per cent), paper (53.28 per cent), glass and ceramics (10.11 per cent) and mechanical and metallurgical (9.38 per cent). The males dominate the scene in glass and ceramics and mechanical and metallurgical with a share of 89.89 per cent and 76.79 per cent serially. The proportion of males was 44.67 per cent in

Table 9: Sex-wise Classification of Total work force in Respondent Units

Name of category	Male	Female	Children	Total
Agro, food and allied	369(35.45)	598(57.44)	74(7.11)	1041 (50.58) (100.00)
Mechanical and metallurgical	172(76.79)	21(9.38)	31(13.84)	224 (10.88) (100.00)
Chemical, plastic and rubber	117(43.01)	151(55.51)	4(1.47)	272 (13.22) (100.00)
Glass and ceramics	249(89.89)	28(10.11)	-	277 (13.46) (100.00)
Paper	109(44.67)	130(53.28)	5(2.05)	244 (11.86) (100.00)
Total	1016(49.37)	928(45.09)	114(5.54)	2058 (100.00) (100.00)

Note : Figures in parentheses indicate the percentage to total.

Source : Compiled from field data.

paper, 43.01 per cent in chemical, plastic and rubber and 35.45 per cent in agro, food and allied. The proportion was 13.84 per cent in mechanical and metallurgical, 7.11 per cent in agro, food and allied, 2.05 per cent in paper and 1.47 per cent in chemical, plastic and rubber. These are absent in glass and ceramics. This is due to the fact that the products are to be handled with care and children are unsuitable to take up such activities.

A look at the Table 10 shows that, the skilled persons are the highest in glass and ceramics (48.74) followed by mechanical and metallurgical (45.98), chemical, plastic and rubber (30.51 per cent), paper (29.92 per cent) and agro, food and allied (26.32 per cent). The semi-skilled came first in agro, food and allied (50.05), paper (43.44

per cent), glass and ceramics (35.38 per cent), chemical, plastic and rubber (34.56 per cent) and mechanical and metallurgical (34.38 per cent). The unskilled in the aforesaid categories are 23.63 per cent, 26.64

Table 10: Skill Composition of work force in the Sample Units

Name of category	Skilled	Semi-skilled	Unskilled
Agro, food and allied	274(26.32)	521(50.05)	246(23.63)
Mechanical and metallurgical	103(45.98)	77(34.38)	44(19.64)
Chemical, plastic and rubber	83(30.51)	94(34.56)	95(34.93)
Glass and ceramics	135(48.74)	98(35.38)	44(15.88)
Paper	73(29.92)	106(43.44)	65(26.64)
Total	668(32.46)	896(43.54)	494(24.00)

Note : Figures in parentheses indicate the percentage to total.

Source : Compiled from field data.

per cent, 15.88 per cent, 34.93 per cent and 19.64 per cent respectively. When all the units are considered together, the proportion of semi-skilled is 43.54 per cent, skilled 32.46 per cent and unskilled 24 per cent.

4. Conclusions

The proportion of units which have utilized materials from within the mandal are less when compared to the remaining which refutes the general assumption that a majority of the micro enterprises draw raw materials from local sources. This may be on account of paper, chemical, plastic and rubber where their requirements are not met locally. The reasons for this situation are not far to seek. In paper and chemical, plastic and rubber, these have utilized 16 per cent and 20 per cent of materials acquired locally only. Nearly 77 per cent of sample units have obtained their raw materials from small and medium producers. Nearly 90 per cent of units utilized materials which are available throughout the year. Fifty per cent of respondents have purchased raw materials on weekly as well as daily basis. A majority of units have employed mini vehicles in transporting raw materials due to small quantity of purchases made at a time. A majority of units have employed mini vehicles in transporting raw materials due to small quantity of purchases made at a time. Those who have purchased materials on cash are 45.60 per cent, credit 5.60 per cent and 48.80 per cent on both the bases. Majority of categories have employed local labours. More than 50 per cent of units provide employment on regular. Nearly 50 per cent of work force is male. The semi-skilled persons are more when compared to skilled and unskilled.

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