Chapter IV

PROFILE OF THE RURAL INDUSTRIES AND MANPOWER INVENTORY

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PROFILE OF THE RURAL INDUSTRIES AND MANPOWER INVENTORY

4.1 BACKGROUND OF INDUSTRIALISATION IN INDIA

India has been very much ahead in the number of industrial enterprises and workers, the gross industrial output, the volume of the value added manufacture and in the degree of industrial diversification, compared with the other countries which are now referred to as developing. This is an indication of the advanced state of India's industrialisation. A characteristic feature of the economic structure of colonial India was in actual fact the overwhelming predominance of backward agriculture over an insufficiently and narrowly developed industry and the dependence of the reproduction of fixed as well as working capital on the foreign market. The census of 1951 revealed that only 13.35 million people or 9.6 per cent of the gainfully employed population were engaged in the various industries. The contribution of industry was dominated by lower forms of production. In 1951 the organised mining and manufacturing industries employed 3.5 million (2.59%) of all those engaged in industry, the remaining 9.9 million (74.1%) were employed in small-scale industries. Consequently on the eve of independence, the industrial revolution, which involves the transition from manual to machine production, was far from complete. It was in this fact that Indian Industry differed from the industry in the developed capitalist countries.

India's industry by the beginning of the 19th century consisted of village handicrafts, closely linked through a system of communalities with agriculture, as well as the handicrafts, cottage industries and small manual establishments in towns. The system of hereditary specialisation in a certain craft ensured good quality. Indian handicraft were noted for their low level of division of labour, and this was responsible for their low productivity. British colonial domination brought about the direct ruin of Indian handicrafts.
Analysing the development of machine production, Karl Marx (1872)\(^2\) paid special attention to the causes which were conducive to the survival of the capitalist cottage industry and manual establishments. He wrote "unlimited exploitation of cheap labour power is the sole foundation of their power to compete". This Marxian law found a different expression in India and other economically backward countries, due to agrarian over population and rapid growth of partially unemployed agricultural workers. The small entrepreneurs seized this opportunity to reduce wages ever beyond those national limits indicated by Karl Marx.

The second half of the 19\(^{th}\) century was marked by the exploitation of India as a raw material base for Britain and as a sphere of investment for British capital. By the end of World War I, Indian capital invested in industry exceeded British. The changes after World War I had a great effect on the development of the factory / industry. Between the two world wars, industrial development experienced the full impact of all these changes. Then realising the interests of the British capitalists, M.G. Ranade (1898)\(^3\) and G.K.Golchiae (1920)\(^4\) suggested that government should play an active role in developing the country's economy, protecting local production from foreign competition and encouraging private enterprise. Government should also directly participate in production. Poverty and economic backwardness could be eradicated only by rapidly developing industry, which would become the principle source of the National income.

It was probably M. Visveshwaraya (1934)\(^5\) a prominent engineer who in the late 1920's first used the term industrialisation with reference to India. He believed that industrialisation with the emphasis on the development of the heavy industries should be the main cause of the country's economic reconstruction. Even Gandhiji's followers found it advisable to give their support to the idea of industrialisation. Gandhiji opposed extensive use of machinery on the ground that, it led to pauperisation of villages and large scale unemployment. What Gandhiji wanted was
not mass production but production by masses, with the revival and development of cottage industries. Industrialisation came to be the main platform of the Indian National Congress. This party released official documents dealing with the state policy of industrialisation in 1948. The government's position on the subject was comprehensively set out in the Industrial policy resolution (1956) and later in the 2nd and 3rd five year plans. These documents interpreted the meaning of industrialisation and its sequence have been accepted in Indian circles. Dr.S.GuhanJ Professor Emeritus, Madras Institute of Development Studies, Chennai, reminds that the Report of the Economic Programme Committee (REPC) drawn by the AICC within weeks of gaining independence in 1947 to address itself to the great task of the establishment of a society based on social justice and equality, had submitted die report, die development philosophy in them recapitulated the following:

The principal objectives were: (1) to create a political system and a social structure that will provide an alternative to the economy of private capitalism and the regimentation of a totalitarian state' and (2) to assure a national minimum standard in respect of all the essential of physical and social well being to every family within a reasonable period. This was to be the practical goal of all schemes of development. The development strategy to realise these objectives was to be based on: (1) 'Full employment' of a kind which would draw out the best in every individual in the service of the community and for the highest development of his or her personality: (2) Growth i.e., an adequate and expanding volume of production based on "the maximum utilisation of material and manpower resources of the nation'. This was recognised as 'an indispenable pre-requisite' to the objectives of providing the minimum standard and full employment: (3) Equitable distribution of existing incomes and wealdi and the prevention of the growth of disparities during the progress of industrialisation. As impressive as the document itself was the failure of
the same leadership that drafted it and of their successors and lineage to translate the manifesto into reality.

As seen earlier, Gandhiji's emphasis on village and cottage industries were in line with those of Gunnar Myrdal (1968)<sup>8</sup>

RURAL INDUSTRIES - COMPOSITION AND CONTRIBUTION

The term rural industries has been in use in India for nearly seven decades. The scale of operation, the level of technology, the type of raw materials to be used and the size of investment mainly determine whether the venture would fall within the definition of rural industries. Essentially, the investment needed should be small; the technology to be applied should be simple and within the reach of the village. It should be capable of yielding reasonably quick returns; the raw materials to be utilised should be locally available; and the goods produced should generally be of popular use in the rural area.

From the wide spectrum of industries in our country which extends from the organised large and medium industries to the modern small scale sector and the unorganised traditional industries, the last two (i.e.) the modern Small Scale Industries and the unorganised traditional industries together constitute the Village and Small Industry (VSI).

Thus satisfying the various criteria, for 'Rural' industries discussed above, the village & small industries (VSI) sector consists broadly of (i) traditional industries (viz., Handlooms, Khadi & village Industries, sericulture, handicrafts and Coir) and (ii) modern small scale industries including 'tiny units' and powerlooms. While the traditional industries are generally artisan-based located mostly in rural and semi-urban areas, involve lower levels of investment in machinery and provide largely part-time employment, modern small scale industries and powerloom use mostly power-operated appliance and machinery, have some technological sophistication and
<table>
<thead>
<tr>
<th>Sub-sectors</th>
<th>Central assistance</th>
<th>State assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khadi &amp; Village Industries</td>
<td>Khadi &amp; Village Industries Commission (KVIC)</td>
<td>Khadi &amp; Village Industries Board (KVIB)</td>
</tr>
<tr>
<td>Handlooms</td>
<td>Development Commissioner, Handlooms</td>
<td>Director of Handlooms and textiles.</td>
</tr>
<tr>
<td>Handicrafts</td>
<td>Development Commissioner Handicrafts</td>
<td>Poompuhar Tamil Nadu Handicraft Development Corporation and Industries Commissioner and Director of Industries &amp; Commerce</td>
</tr>
<tr>
<td>Sericulture</td>
<td>Central silk board</td>
<td>Director of sericulture</td>
</tr>
<tr>
<td>Coir</td>
<td>Coir Board</td>
<td>Industries Commissioner and Director of Industries &amp; Commerce</td>
</tr>
<tr>
<td>Power loom</td>
<td>Textile Commissioner</td>
<td>Director of Handloom &amp; Textiles.</td>
</tr>
<tr>
<td>Small Scale Industries (SSI)</td>
<td>Development Commissioner Industries</td>
<td>Industries Commissioner and Directorate of Industries &amp; Commerce.</td>
</tr>
</tbody>
</table>
are generally located close to or in the urban areas including the large industrial centers. The growth in this sector has a preponderance of self employment, results in wider dispersal of industrial and economic activities and ensures maximum utilisation of local resources both men and material. The village and small industries sector has been divided into different sub-sectors for the purpose of administering various assistance programmes. Specialised institutions have been created to look after each of the sub-sector at the national level. These have been categorised in table 4.1.1.

The unorganised sector of the Indian Economy dominates the export scene of the country and accounts for about 60% of the country's total exports. After, SSI handicrafts play a very important role and make significant contribution to India's exports particularly through export of gems & Jewellery and hand knitted carpets.

Table 4.1.2

*Export performance of VSI Sector-1997-98 to 2000-2001*

<table>
<thead>
<tr>
<th>Category of Industries</th>
<th>1997-98</th>
<th>2000-2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSI</td>
<td>44,437</td>
<td>52,368</td>
</tr>
<tr>
<td>Hand loom &amp; Power looms</td>
<td>6,375</td>
<td>7,850</td>
</tr>
<tr>
<td>Handicrafts</td>
<td>26,688</td>
<td>29,204</td>
</tr>
<tr>
<td>Sericulture</td>
<td>926</td>
<td>1300</td>
</tr>
<tr>
<td>Coir</td>
<td>239</td>
<td>436</td>
</tr>
<tr>
<td>KVI</td>
<td>12</td>
<td>13.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>78,677</td>
<td>91,171.5</td>
</tr>
</tbody>
</table>

Source: YOJANA
4.2 THE MAGNITUDE AND COMPOSITION OF THE MANPOWER RESOURCE AVAILABILITY

The diversification in the structure of the manpower resource in our country and in more specific the rural work force have to be studied in order to learn how far they are organized, to confirm how far they can be brought under control for planning for effective utilisation. The composition of the workforce in terms of the nature of employment, sex, age and other available parameters have been given below.

ORGANISED AND UNORGANISED LABOUR

According to the 1991 census, out of the total labour force of 286 million about 27 million are in the organised sector and 259 million in the unorganised sector. The first National Commission on Labour (1966-69) defined unorganised labour as those who have not been able to organise themselves in pursuit of common objectives on account of constraints like casual nature of employment, ignorance and illiteracy, small and scattered size of establishments, and position of power enjoyed by employers because of the nature of industry etc.

In relative terms organised sector accounts for merely 9.4% of total workers whereas unorganised labour accounts for 90.6%. Out of the 191 million workers engaged in agriculture, forestry, fishery and plantation, about 190 million (92%) are in the unorganised sector. Among the unorganised agricultural workers, about 111 million are cultivators (58.4%) and about 25 million are agricultural labourers (39.5%).

Out of 28.9 million workers in the manufacturing sector only 25% (73 million) are in the organised sector and the balance 75% (21.62 million) are in the unorganised sector.
SECTORAL DISTRIBUTION OF THE WORKFORCE:

As seen in table 4.2.1 there has been a decline of around 11 percentage in the agricultural sector during three and a half decades, 1961 to 1994. The decline in the primary sector for males and females was 12.2 percentage points and 7.5 percentage points respectively. The diversification instead of into the secondary sector was to the tertiary sector. As a result the sector increased from 13.2 per cent in 1961 to 20.5 per cent in 1993-94. The share of industrial sector increased from 11.2 per cent to only 14.8 per cent during the same period.

DISTRIBUTION OF SELF EMPLOYMENT AND CASUAL WORKERS

The most prominent feature of the Indian employment situation is that a large number of workers are either self employed or causal labourers. The regular salaried employees / wage labourers form only a small portion of the total work force particularly in rural areas.

But the share of self employed workers has gradually come down as depicted in Table 4.2.2. In both rural and urban areas and for males and females, the data show a gradual increase in the proportion of causal labourers. Though casualisation per se may not lead to deterioration in condition of workers, empirical evidence shows that causal workers are the poorest among workers.
### Table 4.2.1

*Sectoral distribution of workers (in terms of Usual Status) by sex and residence, 1961 to 1999-2000. (in percentage)*

<table>
<thead>
<tr>
<th></th>
<th>Persons</th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary</td>
<td>Secondary</td>
<td>Tertiary</td>
<td>Primary</td>
<td>Secondary</td>
<td>Tertiary</td>
<td>Primary</td>
<td>Secondary</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>75.6</td>
<td>11.2</td>
<td>13.2</td>
<td>71.0</td>
<td>12.3</td>
<td>16.7</td>
<td>85.5</td>
<td>8.9</td>
<td>5.6</td>
</tr>
<tr>
<td>1972-73</td>
<td>73.9</td>
<td>11.3</td>
<td>14.8</td>
<td>68.8</td>
<td>12.8</td>
<td>18.4</td>
<td>84.3</td>
<td>8.2</td>
<td>7.5</td>
</tr>
<tr>
<td>1977-78</td>
<td>71.0</td>
<td>12.6</td>
<td>16.3</td>
<td>65.6</td>
<td>14.2</td>
<td>20.3</td>
<td>81.8</td>
<td>9.5</td>
<td>8.7</td>
</tr>
<tr>
<td>1983</td>
<td>68.6</td>
<td>13.8</td>
<td>17.6</td>
<td>62.1</td>
<td>15.7</td>
<td>22.2</td>
<td>81.2</td>
<td>10.3</td>
<td>8.5</td>
</tr>
<tr>
<td>1987-88</td>
<td>65.0</td>
<td>15.9</td>
<td>19.1</td>
<td>58.7</td>
<td>17.4</td>
<td>23.9</td>
<td>77.7</td>
<td>12.8</td>
<td>9.5</td>
</tr>
<tr>
<td>1993-94</td>
<td>64.7</td>
<td>14.8</td>
<td>20.5</td>
<td>58.3</td>
<td>16.5</td>
<td>25.2</td>
<td>78.0</td>
<td>10.9</td>
<td>11.1</td>
</tr>
<tr>
<td>1999-2000</td>
<td>62.7</td>
<td>16.8</td>
<td>20.5</td>
<td>53</td>
<td>17.8</td>
<td>29.2</td>
<td>76.6</td>
<td>13.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Rural India</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1961</td>
<td>85.8</td>
<td>7.6</td>
<td>6.6</td>
<td>83.7</td>
<td>7.8</td>
<td>8.5</td>
<td>89.7</td>
<td>7.2</td>
<td>3.1</td>
</tr>
<tr>
<td>1972-73</td>
<td>85.6</td>
<td>7.2</td>
<td>7.2</td>
<td>83.3</td>
<td>7.8</td>
<td>8.9</td>
<td>89.7</td>
<td>6.0</td>
<td>4.3</td>
</tr>
<tr>
<td>1977-78</td>
<td>83.4</td>
<td>8.0</td>
<td>8.6</td>
<td>80.7</td>
<td>8.8</td>
<td>10.5</td>
<td>88.2</td>
<td>6.7</td>
<td>5.1</td>
</tr>
<tr>
<td>1983</td>
<td>81.5</td>
<td>9.0</td>
<td>9.4</td>
<td>77.8</td>
<td>10.0</td>
<td>12.2</td>
<td>87.4</td>
<td>7.4</td>
<td>4.8</td>
</tr>
<tr>
<td>1987-88</td>
<td>78.3</td>
<td>11.3</td>
<td>10.4</td>
<td>74.6</td>
<td>12.1</td>
<td>13.3</td>
<td>84.8</td>
<td>10.0</td>
<td>5.2</td>
</tr>
<tr>
<td>1993-94</td>
<td>78.2</td>
<td>10.2</td>
<td>11.5</td>
<td>74.0</td>
<td>11.2</td>
<td>14.8</td>
<td>86.1</td>
<td>8.3</td>
<td>5.6</td>
</tr>
<tr>
<td>1999-2000</td>
<td>76.4</td>
<td>12.5</td>
<td>11.1</td>
<td>71.0</td>
<td>14.7</td>
<td>14.3</td>
<td>85.3</td>
<td>9.1</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Source: Visaria 1996 and compilation of Census Abstracts.
### Table 4.2.2

**Status distribution of workers (in terms of Usual status) by sex and rural-urban residence, 1972-73 to 1999-2000 (in percentage)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rural Males</th>
<th>Urban Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-employed</td>
<td>Regular</td>
</tr>
<tr>
<td>1972-73</td>
<td>65.9</td>
<td>12.1</td>
</tr>
<tr>
<td>1977-78</td>
<td>62.8</td>
<td>10.6</td>
</tr>
<tr>
<td>1983</td>
<td>60.5</td>
<td>10.3</td>
</tr>
<tr>
<td>1987-88</td>
<td>58.6</td>
<td>10.0</td>
</tr>
<tr>
<td>1993-94</td>
<td>57.9</td>
<td>8.3</td>
</tr>
<tr>
<td>1999-2000</td>
<td>57.2</td>
<td>6.5</td>
</tr>
</tbody>
</table>

### Female Employees

<table>
<thead>
<tr>
<th>Year</th>
<th>Rural Females</th>
<th>Urban Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-employed</td>
<td>Regular</td>
</tr>
<tr>
<td>1972-73</td>
<td>64.5</td>
<td>4.1</td>
</tr>
<tr>
<td>1977-78</td>
<td>62.1</td>
<td>2.8</td>
</tr>
<tr>
<td>1983</td>
<td>61.9</td>
<td>2.8</td>
</tr>
<tr>
<td>1987-88</td>
<td>60.8</td>
<td>3.7</td>
</tr>
<tr>
<td>1993-94</td>
<td>58.5</td>
<td>2.8</td>
</tr>
<tr>
<td>1999-2000</td>
<td>54.0</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Source: Compiled from Visaria, 1996 and Census abstracts.
COMPOSITION OF THE UNEMPLOYED

Table 4.2.3 shows unemployment estimates by sex and sector. The table shows that unemployment estimates have not increased over time. Female unemployment rates are higher than those for males and urban unemployment rates are higher than those for rural areas. The usual status unemployment rates are very low both for males & females in rural areas.

It should be noted that the concept of employment in NSS surveys is based on time criterion and does not reveal anything about income or productivity of the workers. The large differences between poverty and unemployment shows that incomes of those employed are very low. Similarly the concept of underemployment particularly in the case of the self employed cannot be captured in the time rate of unemployment measurement. Thus the problem of employment in India is one of low productivity employment.

Table 4.2.3

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1972-73</td>
<td>1.2</td>
<td>0.5</td>
<td>4.8</td>
<td>9.0</td>
<td>6.8</td>
<td>11.2</td>
<td>8.0</td>
<td>10.4</td>
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<tr>
<td>1977-78</td>
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<td>2.0</td>
<td>5.4</td>
<td>12.4</td>
<td>7.1</td>
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<td>1983</td>
<td>1.4</td>
<td>0.7</td>
<td>5.1</td>
<td>4.9</td>
<td>7.5</td>
<td>9.0</td>
<td>9.0</td>
<td>11.0</td>
</tr>
<tr>
<td>1987-88</td>
<td>1.8</td>
<td>2.4</td>
<td>5.2</td>
<td>6.2</td>
<td>4.6</td>
<td>6.7</td>
<td>6.7</td>
<td>14.5</td>
</tr>
<tr>
<td>1993-94</td>
<td>1.4</td>
<td>0.9</td>
<td>4.1</td>
<td>6.1</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>13.7</td>
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<td>1999-2000</td>
<td>1.7</td>
<td>1.3</td>
<td>4.2</td>
<td>5.9</td>
<td>5.7</td>
<td>5.1</td>
<td>4.5</td>
<td>12.7</td>
</tr>
</tbody>
</table>

Source: Key Results 50th Round of NSS, Revised Report No.406 and census abstracts.
EDUCATED UNEMPLOYED

Although the general unemployment rates are low, the educated unemployment rates are high in India. The reason can be attributed to the tendency of the educated to look for full time regular jobs rather than engage in work-sharing in low income household enterprises. Incidence of open unemployment among the educated continues to be high, though there has been a sharp long term decline in the rates.

The employment rates for rural educated females has declined from 45.7 per cent in 1977-78 to 25 per cent in 1993-94 and to 21 per cent in 1998-99. Overtime, however die share of educated among unemployed has increased. Therefore open unemployment problem is going to be basically for educated persons.

COMPOSITION OF MARGINAL AND MAIN WORKERS

The composition of marginal workers was introduced in the 1981 census. The category comprises people who reported work for some time during the year but not long enough to qualify as "main workers".

The 1991 census recorded a significant growth in the number of total female workers during 1981-91 viz. 40.4 per cent. The corresponding figure for males was 20.8 per cent only. As a result the percentage share of (total) female workers moved up from 19.7 to 22.3 while for male workers, it declined from 52.6 to 51.6. The opposite is true for males. The percentage of marginal workers however reveals declining trend.

To conclude the work participation rates by daily status has gone up, indicating an increase in demand for part time, sub-contracted jobs. Unemployment rates for women shows a decline, sharper in rural areas when compared to the urban areas.
POPULATION AND MAIN WORKERS IN TIRUCHIRAPALLI DISTRICT:

The population and distribution of the workforce into different categories in Tiruchirapalli district is given in table 4.2.4.

**Table 4.2.4**

*Population and Main Workers In Tiruchirappalli District*

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>31.90</td>
<td>36</td>
<td>41.30</td>
</tr>
<tr>
<td>Main workers</td>
<td>12.02</td>
<td>14.75</td>
<td>18.01</td>
</tr>
<tr>
<td>Percentage of main workers to total population</td>
<td>37.66</td>
<td>40.91</td>
<td>43.53</td>
</tr>
<tr>
<td>Male workers</td>
<td>7.83</td>
<td>10.30</td>
<td>12.00</td>
</tr>
<tr>
<td>Female workers</td>
<td>4.18</td>
<td>4.44</td>
<td>6.01</td>
</tr>
</tbody>
</table>


Table 4.2.4 shows that nearly 38 per cent of the total population constituted the working force in 1971, about 41 per cent in 1981, and more than 43 per cent in 1991. In the working force, die males accounted for nearly 67 per cent and female 33 per cent.

As shown in table 4.2.5 there is a pre-dominance of agricultural labour in this district. Thus agriculture provided subsistence to an overwhelming majority of the workforce. The percentage of women in the non-agricultural category has decreased, while there is an increase in this percentage in the agriculture category.
Table 4.2.5
Percentage Distribution of Working Population Occupation-wise and sex-wise in Tiruchirappalli District

<table>
<thead>
<tr>
<th>Categories of workers</th>
<th>1971 Male</th>
<th>Female</th>
<th>1981 Male</th>
<th>Female</th>
<th>1991 Male</th>
<th>Female</th>
<th>2001 Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Main workers</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Cultivators</td>
<td>45.42</td>
<td>29.09</td>
<td>42.79</td>
<td>30.51</td>
<td>35.32</td>
<td>29.46</td>
<td>29.8</td>
<td>29.0</td>
</tr>
<tr>
<td>Agricultural Labourers</td>
<td>19.83</td>
<td>54.40</td>
<td>21.20</td>
<td>54.62</td>
<td>26.15</td>
<td>55.71</td>
<td>29.0</td>
<td>55.4</td>
</tr>
<tr>
<td>Other workers</td>
<td>34.75</td>
<td>16.51</td>
<td>36.01</td>
<td>14.87</td>
<td>38.53</td>
<td>14.83</td>
<td>41.2</td>
<td>15.6</td>
</tr>
</tbody>
</table>

Source: Census of India, 1971 & 1981, Provisional population total series 20, Tamilnadu and Tamilnadu at a glance 1991 census (demography features) and District statistics office.
From table 4.2.6. depicting the sector-wise distribution of the workforce, it is seen that the primary sector absorbs nearly 70% of the labour force in this district. 12.28% are engaged in secondary sector and 17.87% are engaged in the tertiary sector. There is an increasing trend in the secondary and tertiary sectors. The importance of the primary sector has declined. The primary sector consists of (i) cultivators, (ii) agricultural labourers, (iii) livestock, forestry, fishing, hunting and plantations, (iv) orchards and allied activities, (v) mining and quarrying. The secondary sector included the (i) Manufacturing, processing, servicing and repairs in household industry (registered and unregistered) and (ii) constructions. The tertiary sector includes (i) trade and commerce, (ii) transport, storage and communications and (iv) other services.

Table 4.2.6

<table>
<thead>
<tr>
<th>Sector</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Sector</td>
<td>72.67</td>
</tr>
<tr>
<td>Secondary Sector</td>
<td>10.65</td>
</tr>
<tr>
<td>Tertiary Sector</td>
<td>16.68</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

4. 3 PROFILE OF RURAL INDUSTRIES - SMALL SCALE INDUSTRIES*

NATIONAL SCENARIO

In Industrial Economics, the definition of small-scale industry varies. The problem of defining a small-scale units is not only present in India, but has arisen in the past in foreign countries as well. A definition of small industry as including all manufacturing activities carried in a relatively small establishment is not very appropriate. The small industries are not the miniature large scale industries. They have a significance of their own. They are established in accordance with the unutilised physical and human resources.

The Fiscal Commission had defined a small-scale industry as one "which is operated mainly with hired labour normally numbering 10 to 50 hands."

The Director General of Supplies and Disposals held that the small-scale industries are those which do not ordinarily employ more than 100 persons without power or 50 persons with power and working capital of less than Rs.5 lakhs.

According to the Gazette order dated 10 Dec 1997, Ministry of Industry, a small scale Industrial undertaking is one Mn which the investment in fixed assets in plant & Machinery, whether held on ownership terms or on lease or on hire purchase, does not exceed Rs.3 crores. Subsequently the investment ceiling was brought down to Rs. 1 crore.

The small scale Industries sector plays an important role in the industrial development of the country. This sector contributes 40% to 45% of the industrial output apart from a major share in the export and employment. The great pressure of

** Information sources for this unit - References 10 to 15 of Chapter IV.
population, and the shortage of capital have all tended to direct attention towards the small-scale sector as a possible means of increasing output and employment in Indian Industry. The Government's supportive policies and the various incentives towards this employment-oriented small-scale segment requires a separate coverage to be drafted in detail.

The reformation in the Small Scale Industries sector through and after the 1991 liberalisation and deregulation policy needs to be mentioned. The SSI sector was deregulated and opened in July 1991 with the objective of providing incentives & facilities so as to make the small sector competitive vis-a-vis the large sector and also improve its competitiveness internationally. This spirit is reflected in the Eighth-five-year plan. Document and also the annual budgets presented thereafter of the different steps outlined by the Union Government to provide impetus to the sector, foremost is the upgrading of technology, involving technological information dissemination and technology transfer tie-ups. The policy of reservation for exclusive production by small units would continue despite liberalisation. The Government is also planning to introduce a comprehensive policy to give the sector a level playing field vis-a-vis large & medium industries, in respect of availability of raw materials, credit and infrastructure facilities. The SSIs in order to facilitate faster mechanism need not register with the Director of Industry or the Director General SSI. (for units employing less than 50/100 workers with / without power).

TAMIL NADU:

The relative performance of the SSI to medium and large industries in the state depicted in Table 4.3.1 is self-explanatory of its significance in the industrial arena of the state.

The small scale Industrial units constitute more than eighty-five per cent of the states total number of industrial units, producing more than fifteen per cent of the
### Table 4.3.1

**Industrial Profile of Tamil Nadu**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Indicator</th>
<th>Unit</th>
<th>Small Scale Industrial units</th>
<th>Medium and Large units</th>
<th>Total</th>
<th>Percentage for SSIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of factories</td>
<td>Nos</td>
<td>16515</td>
<td>2786</td>
<td>19301</td>
<td>85.57</td>
</tr>
<tr>
<td>2</td>
<td>Employees</td>
<td>Nos</td>
<td>549429</td>
<td>661495</td>
<td>1210924</td>
<td>45.37</td>
</tr>
<tr>
<td>3</td>
<td>Fixed Capital</td>
<td>Rs in lakhs</td>
<td>189203</td>
<td>2650127</td>
<td>2839330</td>
<td>6.66</td>
</tr>
<tr>
<td>4</td>
<td>Working Capital</td>
<td>Rs in lakhs</td>
<td>533175</td>
<td>779825</td>
<td>1313000</td>
<td>40.61</td>
</tr>
<tr>
<td>5</td>
<td>Wages</td>
<td>Rs in lakhs</td>
<td>65136.7</td>
<td>217302.5</td>
<td>282438</td>
<td>23.06</td>
</tr>
<tr>
<td>6</td>
<td>Total input</td>
<td>Rs in lakh</td>
<td>930684 1.23</td>
<td>4289342 1.3</td>
<td>5220026</td>
<td>17.83</td>
</tr>
<tr>
<td>7</td>
<td>Total output</td>
<td>Rs in lakh</td>
<td>1148994 0.48</td>
<td>5598838 1.18</td>
<td>6247835</td>
<td>17.03</td>
</tr>
<tr>
<td>8</td>
<td>Value added</td>
<td>Rs in lakh</td>
<td>196773</td>
<td>1123774</td>
<td>1320547</td>
<td>11.97</td>
</tr>
<tr>
<td>9</td>
<td>Net income</td>
<td>Rs in lakh</td>
<td>155123</td>
<td>817524</td>
<td>972647</td>
<td>15.95</td>
</tr>
</tbody>
</table>

Source: Extracted from Industrial Profile of Tamil Nadu, Department of Economics and Statistics, Chennai.
States output. Consuming roughly 18% of the states' industrial inputs, these units employ a little more than forty five per cent of the total employed in the state.

The output to input ratio is found to be higher in the case of SSI units (1.23 and 1.3 in the SSI and the large and medium units respectively). Wages constitute 7% and 5% of the total inputs in the case of SSI units and the medium and large units respectively. The capital intensity or the Fixed Capital to Number of employees ratio of the medium and large sector units are twelve times higher than the small scale units. (4.01 and 0.34 respectively). The above analysis confirms the labour intensive objective of the SSI units.

TIRUCHIRAPALLI DISTRICT:

The secondary sector, next to primary sector, makes effective use of available men and materials in the industrial activity and contributes substantially to the development of the district. The industrial sector motivates the people belonging to local as well as other parts of the country in investment; identifies the resources and infrastructure facilities available in a particular region and thereby assists exploitation and utilisation of resources available in the district. It paves way for the establishment of large, medium, small scale and ancillary units manufacturing various products and generates employment and income.

THE TRADITIONAL INDUSTRIES OF TIRUCHIRAPPALLI

Tiruchirappalli, traversed by the river Cauvery from west to east, has been a traditional agricultural district. The most important local industries were weaving and manufacture of cigars. Cigar was almost entirely confined to Tiruchirappalli town where from a large quantum of cigars was sent to all parts of India. The tobacco used was chiefly imported from Dindigul, as the local growth was coarse and inferior.
CIGAR UNITS:

Cigar manufacture was mainly based at Woraiyur in Tiruchirappalli. The Cigars were manufactured by hand rolling. The district had been exporting cigars in the past, but the trade has now been under decay. Non-availability of good quality tobacco leaves, lack of skilled manpower, inferior quality of wrapper, poor packaging led to diminishing trend in domestic consumption and also in exports over the years. These factors caused the decline of the industry and now it is on the verge of extinction. With non-availability of skilled manpower it is viewed that the business will vanish in about 10 years from now. The competition from cigarettes and the dislike by the younger generation have left the trade in lurch. The demand for Cheroor is more in coastal districts of Tamil Nadu and the patronage is only from the older generation.

This district has made spectacular development in the small scale sector, with more concentration in and around Tiruchirappalli. Since the establishment of District Industries Centre in Tiruchirappalli in October 1979, the growth of small scale sector is stupendous. The number of small scale industries registered has grown from a meagre 798 units to 9622 units in 1997 to 12,556 units 1998. After the advent of the prestigious Bharat Heavy Electricals Limited in Thiruverambur, there was a spurt in the development of light engineering industries in and around Tiruchirappalli town. This district is noted for some specialised industries such as synthetic gem cutting and polishing, leather tanning, textile products, mosquito nets out of monofilament yam and mechanised Korai mat weaving. Leather tanning is mostly based on vegetable tanning in the district.

GEM CUTTING UNIT:

Tiruchirappalli is considered as one of the biggest centres in South East Asia for synthetic gem cutting and polishing activities. It is estimated that around 50,000
workers are engaged in this labour oriented industry. Further, to augment the skills of the artisans engaged in this trade and to make them to produce quality products by using simple machines the Tiruchi Gem Park, a unit of Diamond and Gem Development Corporation Limited, Bombay, is imparting training to the artisans. It also supplies the required machineries and raw materials to the artisans and also assists them in marketing their products to get reasonable price.

SYNTHETIC GEM INDUSTRY IN TIRUCHIRAPPALLI DISTRICT:

Right from the Chola days, Tirachirappalli has been a main centre for gold jewellery involving die use of gems. The lapidists in Tiruchirappalli use bowles, both indigenous and imported ones. Tiruchirappalli has emerged as a main centre for synthetic gem trade in Tamil Nadu. The salient feature of this gem industry is its low capital base. Excepting a few partnership concerns the synthetic gem units in Tiruchirappalli have an investment ranging from Rs.3,000/- to 15,000/- For the purposes of power supply these units are categorised as small cottage industrial units. The number of workers in each unit ranges between 3 to 15. The units are invariably in the residential houses of the entrepreneurs or in rented buildings in residential areas. The entrepreneurs who produce synthetic gems of different colours, sell their gems to the dealers in gems and producers-cum-exporters. These dealers after purchasing gems from different entrepreneurs grade, brand and price them accordingly. The price depends upon the quality, size and brand name of the gems.

About one tonne of cubic zirconia and one tonne of synthetic corundum are produced every month in Tiruchirappalli and the value of finished goods is around Rs.20 crores per annum.

A Training and Entrepreneurship Development Cell is functioning in the Gem Park in association with the Department of Science and Technology, Government of India, exclusively for training artisans and entrepreneurs in synthetic gem cutting and
polishing. It is intended to give training to over 50,000 persons, over a period of five years.

KORAI MAT UNITS:

Korai grass is cultivated in about 2000 hectares in Musiri taluk and in about 500 hectares in Kulithalai taluk which yield 60,000 tonnes of Korai grass per annum valued about Rs.1.2 crores. Korai mat units, which are mainly concentrated in these two taluks gradually spread in other taluks of this district, providing employment opportunities to about 10,000 persons.

Korai mat are ideal for the people who are accustomed to squat and sleep on the floor, since it is cheap, could be folded and carried easily when spread on the floor. The korai grass mat provides a soothing, cooling effect during the hot season, and a natural warmth, during winter months. There is a steady market for mats both in rural areas and urban centres. It is patronised by poor and lower middle class families. Later it had to face the twin problem of increased competition from the multicoloured nylon mats, which has an initial appeal to die consumers and all round rise in wages of farm labour and rural labour, which made mat weaving far from attractive. The fall in demand for mats on the one hand due to the competition from nylon mats, and the poor wage rates resulted in a fall in mat production.

It was at this time that die mechanised loom for mat weaving was first introduced from Japan. The loom was suitably modified to suit Indian conditions and the productivity of the mat weavers increased many fold, giving an income of about Rs.30/- per day. The loom provided job to about 15 persons per day in mat making and allied work and was thus highly labour intensive. It needs only a little effort to operate the loom and die skill could be mastered so easily that even rural women started learning the craft. When the demand for the nylon mats had started falling after the initial attraction, once again demand for the eco-friendly korai mat started
increasing. A large number of small artisans started installing the mechanised looms, which cost about Rs.70,000/-.  

The mechanised loom mats are sold at prices ranging from Rs.40/- to Rs.95/- depending on the designs and quality of the grass (The finer it is superior). But still the demand for hand women mats with intricate designs, for special festive occasions exists.

The mechanised looms increase productivity and improve the income of the weavers. About one lakh persons are earning their livelihood from Korai mat weaving.

APPARELS AND READYMADE GARMENTS MAKING:

The cottage type apparels and readymade garments making units are functioning throughout the district with more concentration in Manapparai taluk. As many as 381 such cottage type industries have been identified by the District industries Centre. These industries mainly employ womenfolk.

LEATHER GOODS:

Leather goods, mainly leather foot wears, belts, purses, etc., making is one of the common categories of cottage industries found in almost all the places in this district. This industry is mostly carried on by Arunthathiar sect. Nearly 21 of these cottage industries have been registered by this District industries Centre.

There are over 730 SSI units in the district (1999-2000) employing about 1489 persons with a total investment of Rs. 812.01 lakhs in Plant and Machinery and Rs. 943.41 lakhs in Land and Building. These units registered have been categorised by the District Industries Centre into more than 100 categories and coded, with the
first two numbers indicating the main category based on the product it produces and the third number indicating the sub categories.

Tiruchirapalli being a primary-sector based agricultural district, more than ten per cent of the industries registered belong to the food processing categories. (Categories 20 and 21 in table 4.3.2). Over twenty five per cent of the industries registered are agro-dependent or forest-dependent industries, indicating the utilisation of the available raw material resources by die industries in this district. Moreover out of more than 100 coded categories of the SSI units in the District Industries Centre only about one-fifth of the categories, (about 18 categories) have been found to be registered and functioning in this district. The agriculture oriented nature, contributing a major influence on die industries.

There seems to be a heavy discrepancy between the numbers of SSI units registered in the District Industries Centre and those continuing to function (permanent SSI units). Table 4.3.3. shows die permanent SSI units in die district which is only thirty per cent of die registered units, indicating an misuse of financial benefits by the beneficiaries of the programmes for development of entrepreneurs in die district.

The Small Scale Industries have been found to be supported not only by the various industries development institutions but also by the district administration. Every year 35 to 40 entrepreneurs are identified and given one month practical training under the Entrepreneurs Development Programme. They are also paid a stipend of Rs.200/- per month. The National Small Industries corporation and The Tamil Nadu small Industries Development Corporation assist die entrepreneurs and artisans by providing marketing support. The District Advisory committee under the chairmanship of the Collector every month, scrutinises the problems of the SSI units and the entrepreneurs. Apart from this the single window clearance committee under the chairmanship of die district Collector, helps the units in getting clearance from
### Table 4.3.2

**Product wise details of registered SSI units as on 31.3.2000 in Tiruchirappalli district**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Industry Code</th>
<th>Product produced</th>
<th>No.of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20 &amp; 21</td>
<td>Food Products</td>
<td>1414</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>Beverages and tobacco</td>
<td>90</td>
</tr>
<tr>
<td>3</td>
<td>23</td>
<td>Cotton textiles</td>
<td>381</td>
</tr>
<tr>
<td>4</td>
<td>26</td>
<td>Hoisery garments</td>
<td>970</td>
</tr>
<tr>
<td>5</td>
<td>27</td>
<td>Wood products</td>
<td>289</td>
</tr>
<tr>
<td>6</td>
<td>28</td>
<td>Paper products &amp; printing</td>
<td>699</td>
</tr>
<tr>
<td>7</td>
<td>29</td>
<td>Leather products</td>
<td>248</td>
</tr>
<tr>
<td>8</td>
<td>30</td>
<td>Rubber &amp; plastic products</td>
<td>341</td>
</tr>
<tr>
<td>9</td>
<td>31</td>
<td>Chemical &amp; chemical products</td>
<td>391</td>
</tr>
<tr>
<td>10</td>
<td>32</td>
<td>Non metallic &amp; mineral products</td>
<td>659</td>
</tr>
<tr>
<td>11</td>
<td>33</td>
<td>Basic metal industries</td>
<td>101</td>
</tr>
<tr>
<td>12</td>
<td>34</td>
<td>Metal products</td>
<td>686</td>
</tr>
<tr>
<td>13</td>
<td>35</td>
<td>Machinery &amp; machinery tools and parts</td>
<td>902</td>
</tr>
<tr>
<td>14</td>
<td>36</td>
<td>Electrical machine &amp; Spare parts</td>
<td>304</td>
</tr>
<tr>
<td>15</td>
<td>37</td>
<td>Transport equipments</td>
<td>187</td>
</tr>
<tr>
<td>16</td>
<td>96 &amp; 97</td>
<td>Personal repairing &amp; servicing</td>
<td>911</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>8173</strong></td>
</tr>
</tbody>
</table>

Source: District Industries Centre, Tiruchirappalli.
Table 4.3.3  
Abstract of SSI industries for the year 1999-2000- Tiruchirappalli district

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the corporation / Municipality</th>
<th>No. of SSI units</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Panchayat union (2)</td>
<td>(3)</td>
</tr>
<tr>
<td>1.</td>
<td>Tiruchirappalli corporation</td>
<td>347</td>
</tr>
<tr>
<td>2.</td>
<td>Thuraiyur Municipality</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>Manapparai Municipality</td>
<td>157</td>
</tr>
<tr>
<td>4.</td>
<td>Andanallur Panchayat union</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Manikandam panchayat union</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Thiruvverumbur panchayat union</td>
<td>35</td>
</tr>
<tr>
<td>7.</td>
<td>Lalgudi Panchayat union</td>
<td>12</td>
</tr>
<tr>
<td>8.</td>
<td>Pullambadi Panchayat union</td>
<td>6</td>
</tr>
<tr>
<td>9.</td>
<td>Manachanallur Panchayat union</td>
<td>15</td>
</tr>
<tr>
<td>10.</td>
<td>Thuraiyur Panchayat union</td>
<td>11</td>
</tr>
<tr>
<td>11.</td>
<td>Uppillyapuram Panchayat union</td>
<td>6</td>
</tr>
<tr>
<td>12.</td>
<td>Musiri Panchayat union</td>
<td>62</td>
</tr>
<tr>
<td>13.</td>
<td>Thathayanger pettai Panchayat union</td>
<td>9</td>
</tr>
<tr>
<td>14.</td>
<td>Thottiyam Panchayat union</td>
<td>23</td>
</tr>
<tr>
<td>15.</td>
<td>Manapparai Panchayat union</td>
<td>15</td>
</tr>
<tr>
<td>16.</td>
<td>Marungapuri Panchayat union</td>
<td>6</td>
</tr>
<tr>
<td>17.</td>
<td>Vaityampatti Panchayat union</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>730</strong></td>
</tr>
</tbody>
</table>

Source: District Industries Centre, Tiruchirappalli.
the local bodies and other agencies quickly and aids in quick procurement of power etc. Under the Prime Minister's Rozgar Yojana (PMRY) financial assistance to the educated unemployed is being provided since 1993 for setting-up of industries, services and business.

4.4 PROFILE OF THE HANDLOOM INDUSTRY *

THE NATIONAL SCENARIO

The handloom industry is the largest cottage industry in our country. Its position comes only next to agriculture in providing livelihood to the masses. Thus it has a vital impact on rural employment and income. Hand-woven textiles of India have a long and glorious history. The wide range of products, from the functional and utilitarian, to the unique and exotic, have helped to carve a niche for the Indian hand-woven goods in the world Market. Today more than 120 countries are buying Indian handlooms. Cotton handloom export is the back-bone of the Indian Handloom exports.

The "handloom" is quite simply, a loom operated by hand, relying solely on human metabolic energy. It requires a space of barely 10 sq. mts. And is not demanding on the environment.

About half of the country's total cloth requirement is provided by the handloom industry. It is a labour-intensive industry, with the contribution of women in a large way. Handloom as a cottage industry is spread throughout the Indian subcontinent. There are more than 4 million handlooms in the country. Generally weaving is a family activity, with each member contributing in the production of the

* Sources of information in this unit - References 10, 15 and 16 of Chapter IV
cloth. In this way, more than 15 million men, women and children are involved in hand loom weaving, their efforts resulting in the production of 4200 million metres of cloth each year.

A major problem affecting this industry is the stiff competition from the products of well-organised mill-made sector. In recent years the power looms have posed a serious problem to the handlooms. Non-availability of raw materials in the right quality and at reasonable rates is another major set back for this industry. The industry yarn made of cotton, wool, silk or synthetic fibres and dyestuffs are the major raw materials of this industry. Inability to produce up-to-date according to changing consumer behaviour is another factor that influences the growth of this industry.

The vital role played by this industry in the National economy has received proper attention in all the Government plans. The All-India Handloom Board and the Development Commissioner for Handlooms adopt a number of schemes to encourage the handloom sector. The various measures provided during the Five-year plans are presented below:

(a) Co-operative spinning mills to supply yam and other essential materials at reasonable rates: The National Handloom Development Corporation facilitates the supply of yam and other essential raw materials. The National Co-operative Development Corporation provides assistance to set up co-operative spinning mills to increase the supply of yam to the weavers.

(b) Improved skills through training in improved equipments and appliances: A chain of 25 weavers service centre located in different states and three Indian institutes of Handloom Technology, located in Salem, Varanasi, and Guwahati to provide technical personnel, new designs, colour combinations, new methods of processing, weaving and loom development.
(c) Credit for working capital to handloom cooperatives through state co-operative banks.

(d) Expansion of export of handloom fabrics.

(e) Reservation for the Handloom sector. The cotton mill industries are prohibited to produce these materials including certain varieties of cloth, sarees of certain type, dhothis of certain widths and borders, etc.

Encouragement to adopt the co-operative method of organisation in the handloom sector following the recommendations of the Sivaraman Committee on Handlooms, lakhs of weavers have become members of weaver's co-operatives.

The impressive performance in the sector is obvious from the steady rise in production of the industry from about 700-800 million metres in 1950-51 to more than 5,000 million metres by 1992 and to 9300 million metres by 1997, and 14,300 million metres by 2000. Today more than one crore persons depend on this sector for their livelihood. Export earnings from handloom also has vastly gone up from Rs.1 16 crores in 1966-67, to Rs.450 crores in 1991-92, and Rs.508 crores in 1997. The Handloom products from India are exported to more than 60 countries of the world.

Thus the National scenario shows a established growth, with appropriate schemes to allieviate the problems identified. With proper utilisation of the schemes the handloom sector has vast potential for employment and increased standard of living of die artisans in this sector.

HANDLOOM INDUSTRY IN TAMIL NADU

The Handloom Industry in Tamil Nadu can be categorised into the organised sector, including the weavers cooperative societies and the unorganised sector consisting of die independent weavers, master weavers and handloom factories and
partnership firms maintaining separate brand names. A good majority of die unorganised weaving is undertaken under the master weavers.

Nearly one half of the weavers according to the Economic Review of handloom industries in Tamil Nadu, (Directorate of statistics, Chennai), are working under the co-operatives and nearly thirty per cent under the master weavers. Nearly twenty per cent weavers are weaving on their own (independent weavers) and the remaining (about four per cent) are working in factories. The organised sector of the industry earlier included three categories of co-operative societies - The Primary weaver's cooperative society (cotton), The Industrial weaver's co-operative society, and the Silk weaver's cooperative society'.

With the exception of silk weaving the handloom industry in the state can be said to have a recession, with the closure of the societies (Table- 4.4.1) increasing due to heavy losses incurred by them. Hence an expected decrease in the number of looms.

It can be observed from the table that the production of handlooms do not correspond directly with the increase or decrease of the number of looms. With fluctuations in between, both the production of handloom cloth and the number of looms employed have decreased, the former from Rs.411.61 crores in the 1994-95 to Rs.400.06 crores in 1999-2000. It is be noted that the sales performance for the year 1998-99 has witnessed a enormous leap from an average of less than 1.5% per year to about 18%.

Thus there has been a constant increase in the sales of the Handloom products while there has been a constant decline in the production, inspite of increase the number of looms in the year 1997-98. Continuous disturbances in the government policies, like revision of rebate, lack of continuous availability of raw materials can be seen as reasons for this declining trend.
### Table 4.4.1


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Primary weavers co. operative societies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>No. of societies</td>
<td>NA</td>
<td>NA</td>
<td>1439</td>
<td>1386</td>
<td>1382</td>
<td>1371</td>
</tr>
<tr>
<td>2.</td>
<td>Number of looms (in lakhs)</td>
<td>NA</td>
<td>NA</td>
<td>3.45</td>
<td>3.67</td>
<td>3.44</td>
<td>3.21</td>
</tr>
<tr>
<td>3.</td>
<td>Handloom cloth production (in crores of rupees)</td>
<td>411.61</td>
<td>408.33</td>
<td>405.29</td>
<td>398.20</td>
<td>401.97</td>
<td>400.06</td>
</tr>
<tr>
<td>4.</td>
<td>Handloom cloth sales (in crores of rupees)</td>
<td>415.83</td>
<td>416.47</td>
<td>422.56</td>
<td>431.66</td>
<td>510.62</td>
<td>512.30</td>
</tr>
<tr>
<td>B.</td>
<td>Industrial weavers co. operative society:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Number of looms</td>
<td>NA</td>
<td>NA</td>
<td>12,600</td>
<td>14,717</td>
<td>11,014</td>
<td>10,704</td>
</tr>
<tr>
<td>2.</td>
<td>Production value (in lakhs of rupees)</td>
<td>2212.23</td>
<td>2104.05</td>
<td>2093.00</td>
<td>1868.51</td>
<td>1954.28</td>
<td>1921.50</td>
</tr>
<tr>
<td>3.</td>
<td>Sales (in lakhs of rupees)</td>
<td>2312.04</td>
<td>2251.00</td>
<td>2299</td>
<td>2033.08</td>
<td>2306.11</td>
<td>2477.31</td>
</tr>
<tr>
<td>C.</td>
<td>Silk weavers co. operative society:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Number of looms</td>
<td>NA</td>
<td>NA</td>
<td>53789</td>
<td>56677</td>
<td>56997</td>
<td>57022</td>
</tr>
<tr>
<td>2.</td>
<td>Production value (in lakhs of rupees)</td>
<td>10992.43</td>
<td>11012.32</td>
<td>11472.55</td>
<td>12749.93</td>
<td>16033.30</td>
<td>18560.50</td>
</tr>
<tr>
<td>3.</td>
<td>Sales (value in lakhs of rupees)</td>
<td>12787.48</td>
<td>13107.37</td>
<td>13567.60</td>
<td>13623.94</td>
<td>18724.48</td>
<td>20555.30</td>
</tr>
</tbody>
</table>

**Source:** Assistant Director, Handloom and Textiles, Tiruchirappalli.

**Note:** NA denotes statistics not available.
A similar decline in production has been recorded by the Industrial weavers cooperative societies (these societies provide workshed to their weavers) which have witnessed a 15% decline from the year 1994-95, excepting 1998-99, with a increase of about 5% of production against the declining trend.

The silk weaver's cooperative societies unlike the cotton weaver's societies, have recorded more than 50% increase in the production and a steady increase in sales during the same period.

HANDLOOM INDUSTRY IN TMUCHIRAPPALLI:

The handloom industry forms an important part of the industrial profile of the State, and the industry has been a traditional occupation of this district. In the state, Tiruchirappalli district ranks third in the production of handlooms, next only to Coimbatore and Periyar districts, which specialise in production of cotton fabrics. The handloom weavers constitute roughly five per cent of the total working population of the district. This industry flourishes mainly in Thuraiyur, Urayur and Thattaayyangarpettai, major towns of the district. There were 32,185 handlooms in the district as on 31 December 1981 of which 31,851 were cotton weaving looms and the rest were silk weaving looms. The total number of weavers Co-operative societies in the district was 91 with a total number of 19,263 looms. Number of looms within the cooperative fold constituted 58 per cent of the total looms in the district. (Details in table 4.4.2) Members are admitted on one-loom-one-membership basis. As on 31 December 1991, there were 33,251 handloom and 2395 power looms.

Sticking fastidiously to traditional weaving, the weavers had started to face the decline in the industry almost from 1996. The performance of the industry in terms of production and sales, shown in Table 4.4.3 shows a sharp decline also in the number of weavers societies, the number of active looms and the number of members
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the place</th>
<th>Total handlooms</th>
<th>Handlooms Under cooperative fold</th>
<th>Handlooms outside the cooperative fold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tiruchirappalli Panchayat Union</td>
<td>1329</td>
<td>995</td>
<td>334</td>
</tr>
<tr>
<td>2.</td>
<td>Muširi</td>
<td>653</td>
<td>595</td>
<td>58</td>
</tr>
<tr>
<td>3.</td>
<td>Kulithalai</td>
<td>631</td>
<td>631</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Krishnarayapuram</td>
<td>395</td>
<td>395</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Thottiam</td>
<td>2044</td>
<td>1515</td>
<td>529</td>
</tr>
<tr>
<td>6.</td>
<td>Manachananallur</td>
<td>496</td>
<td>496</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Lalgudi</td>
<td>247</td>
<td>150</td>
<td>97</td>
</tr>
<tr>
<td>8.</td>
<td>Pultambadi</td>
<td>92</td>
<td>92</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>Thathiangarpetrai</td>
<td>2550</td>
<td>1665</td>
<td>885</td>
</tr>
<tr>
<td>10.</td>
<td>Thuraiyur *</td>
<td>527</td>
<td>527</td>
<td>-</td>
</tr>
<tr>
<td>11.</td>
<td>Thuraiyur Municipality *</td>
<td>430</td>
<td>430</td>
<td>-</td>
</tr>
<tr>
<td>12.</td>
<td>Uppliliyapuram *</td>
<td>241</td>
<td>241</td>
<td>-</td>
</tr>
<tr>
<td>13.</td>
<td>Perambalur *</td>
<td>103</td>
<td>103</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Place Name</td>
<td>1991</td>
<td>1993</td>
<td>Total</td>
</tr>
<tr>
<td>---</td>
<td>-----------------</td>
<td>------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>14.</td>
<td>Veppur *</td>
<td>138</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Veppanthamai *</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Thirumanur *</td>
<td>119</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Andimadam *</td>
<td>2181</td>
<td>1837</td>
<td>344</td>
</tr>
<tr>
<td>18.</td>
<td>Jayankondam *</td>
<td>3735</td>
<td>3330</td>
<td>405</td>
</tr>
<tr>
<td>19.</td>
<td>T.Palur *</td>
<td>809</td>
<td>755</td>
<td>54</td>
</tr>
<tr>
<td>20.</td>
<td>Sendurai *</td>
<td>957</td>
<td>707</td>
<td>250</td>
</tr>
<tr>
<td>21.</td>
<td>K.Paramathi *</td>
<td>2497</td>
<td>2106</td>
<td>391</td>
</tr>
<tr>
<td>22.</td>
<td>Karur Panchayat Union *</td>
<td>8124</td>
<td>6820</td>
<td>1304</td>
</tr>
<tr>
<td>23.</td>
<td>Karur Municipality *</td>
<td>942</td>
<td>692</td>
<td>250</td>
</tr>
<tr>
<td>24.</td>
<td>Thanthoni *</td>
<td>3655</td>
<td>3455</td>
<td>200</td>
</tr>
<tr>
<td>25.</td>
<td>Aravakurichi *</td>
<td>306</td>
<td>257</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>33251</td>
<td>28101</td>
<td>5150</td>
</tr>
</tbody>
</table>


Note: Places marked with * do not belong to the district after the 1998 triforestation.
Table 4.4.3


<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Year</th>
<th>No. of societies</th>
<th>No. of members</th>
<th>No. of Active looms</th>
<th>Production (metres in lakhs)</th>
<th>Value (Rupees in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
<tr>
<td>1.</td>
<td>1990-91</td>
<td>98</td>
<td>30889</td>
<td>17,804</td>
<td>82.29</td>
<td>1229.29</td>
</tr>
<tr>
<td>2.</td>
<td>1991-92</td>
<td>114</td>
<td>31960</td>
<td>18,214</td>
<td>81.72</td>
<td>1454.04</td>
</tr>
<tr>
<td>3.</td>
<td>1992-93</td>
<td>112</td>
<td>34530</td>
<td>17104</td>
<td>66.46</td>
<td>1426.55</td>
</tr>
<tr>
<td>4.</td>
<td>1993-94</td>
<td>109</td>
<td>36420</td>
<td>17712</td>
<td>504.5</td>
<td>1384.79</td>
</tr>
<tr>
<td>5.</td>
<td>1994-95</td>
<td>111</td>
<td>37115</td>
<td>15667</td>
<td>47.55</td>
<td>1354.56</td>
</tr>
<tr>
<td>6.</td>
<td>1995-96</td>
<td>125</td>
<td>33639</td>
<td>18199</td>
<td>44.65</td>
<td>1499.07</td>
</tr>
<tr>
<td>7.</td>
<td>1996-97</td>
<td>120</td>
<td>30276</td>
<td>16230</td>
<td>44.20</td>
<td>1349.17</td>
</tr>
<tr>
<td>8.</td>
<td>1997-98</td>
<td>100</td>
<td>27276</td>
<td>15625</td>
<td>39.75</td>
<td>1266.23</td>
</tr>
<tr>
<td>9.</td>
<td>1998-99</td>
<td>23</td>
<td>6819</td>
<td>3906</td>
<td>11.87</td>
<td>446.14</td>
</tr>
<tr>
<td>10.</td>
<td>1999-2000</td>
<td>22</td>
<td>6705</td>
<td>1369</td>
<td>9.52</td>
<td>357.71</td>
</tr>
</tbody>
</table>

in these societies. The production has declined by more than seventy per cent from Rs.1229 lakhs in 1990-91, to Rs.358 lakhs in 1999-2000. The 22 societies functioning in the district were functioning at loss. Some of the societies, unable to compete with die powerloom & mill goods, have resorted to exports.

Table 4.4.4 shows the number of families involved and the number of looms in the district, revenue division-wise as per the findings of the "Hand loom survey 1996'.

The cooperative societies were supposed to be the best institutional agencies for providing necessary facilities to enable the member-weavers to get continuous employment throughout the year. The apex Handloom Weavers Cooperative Society popularly known as 'COOPTEX' is providing marketing support to its affiliated primary weavers Cooperative societies to the extent of about fifty per cent of the production. There were 13 power loom cooperative societies in the district in 1981 having 94 power looms. An export production project is functioning at Karur with an installed capacity of 942 looms. This project was set up by the Tamil Nadu Government at a cost of Rs.40.75 lakhs.

Major items of production by the weavers of the cooperative societies consist of cotton sarees and dhothies of 80,100 and 120 counts. They are famous for their dexterity and variety. Carpets, druggets and blankets, which are special varieties of handloom cloth, are woven in Thottiam and Uppiliapuram blocks. Lungies, towels, piece goods, janatha drill, bed sheets and pillow covers were also produced.

With the twin objectives of providing continuous and an assured income to the handloom weavers in the State, the Government of Tamil Nadu has been implementing the following Handloom development Programmes in the district.
<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Division</th>
<th>No. of families</th>
<th>No. of looms</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td></td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>1.</td>
<td>Tiruchirappalli corporation</td>
<td>433</td>
<td>515</td>
</tr>
<tr>
<td>2.</td>
<td>Lalgudi</td>
<td>243</td>
<td>165</td>
</tr>
<tr>
<td>3.</td>
<td>Manachanallur</td>
<td>268</td>
<td>413</td>
</tr>
<tr>
<td>4.</td>
<td>Pullampadi</td>
<td>188</td>
<td>162</td>
</tr>
<tr>
<td>5.</td>
<td>Kadavur &amp; Marungapur</td>
<td>452</td>
<td>333</td>
</tr>
<tr>
<td>6.</td>
<td>Muziri</td>
<td>609</td>
<td>787</td>
</tr>
<tr>
<td>7.</td>
<td>Thathayanarpettai</td>
<td>1,396</td>
<td>3,165</td>
</tr>
<tr>
<td>8.</td>
<td>Thottiam</td>
<td>1,397</td>
<td>2,422</td>
</tr>
<tr>
<td>9.</td>
<td>Thuraiyur district</td>
<td>590</td>
<td>318</td>
</tr>
<tr>
<td>10.</td>
<td>Thyraiyyur*</td>
<td>980</td>
<td>316</td>
</tr>
<tr>
<td>11.</td>
<td>Uppiliyapuram *</td>
<td>150</td>
<td>168</td>
</tr>
<tr>
<td>12.</td>
<td>Andhanallur *</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>13.</td>
<td>Manikandam *</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>14.</td>
<td>Tiruverumbur *</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>15.</td>
<td>Manaparai *</td>
<td>25</td>
<td>36</td>
</tr>
<tr>
<td>16.</td>
<td>Marungapuri *</td>
<td>27</td>
<td>38</td>
</tr>
<tr>
<td>17.</td>
<td>Ayyampatti *</td>
<td>60</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>5,869</td>
<td>9,019</td>
</tr>
</tbody>
</table>


Note: The divisions * marked do not come under the Tiruchirappalli district jurisdiction after to trifurcation of the district.
SHARE CAPITAL, LOAN:

This scheme is implemented to strengthen the share capital of members of the weaver's cooperative societies as well as the total share capital of the society. Under the scheme, a share capital loan of Rs. ISO/- per member in the case of cotton weavers cooperative society and Rs.225/- lor silk weavers cooperative society is sanctioned.

STATE PARTICIPATION:

The Government of Tamil Nadu identifies lic weak weavers cooperative societies and invests a sum of rupees one lakh in the share capital structure and strengthens lic share the capital, to make them viable.

MODERNISATION SCHEME:

This scheme envisages the weaving methods of the weaver members of the societies and thereby increase (he production of cloth. Under this scheme, loan and subsidy are sanctioned to the needy societies for the purchase of improved weaving appliances in order to distribute them to the weaver members. The amount required by the society for such appliances is provided by the Government, towards loan and subsidy i.e, 2/3 and 1/3 respectively. Loan and subsidy are sanctioned for the purchase of new looms, Jacquard box, dobby box, reeds and healds and for erection of modernised equipments. The modern appliances enable the weavers to weave innovative design and varieties, increase the production, and avoid wastages.

The project package scheme is offered to help the weavers to switch over to new products and designs in handlooms. This diversification would help weavers obtain higher wages, made possible by producing marketable products. It starts with a training that is given at cent per cent subsidy (50% each borne by central and State Government). Followed by the training, looms are provided along with accessories to
evolve new designs and create attractive fabrics that would go in line with the tastes and needs of the consuming public. Work shed subsidies are also given to accommodate the looms and equipments. Margin Money Assistance is given to the society in the form of share capital of the society. The working capital is financed by the Central Bank of the concerned district.

WEAVERS HOUSING SCHEME:-

Under this scheme, weavers are provided with a house-cum-workshed. They are given a total amount of Rs. 50,000 for the construction of house-cum-workshed of which the sum of 25,000/- is loan from HUDCO, and the remaining sum of Rs.25,000/- is granted as subsidy body by State and Central Governments. Detail of disbursements given in Table 4.4.5.

*Table 4.4.5*

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Year</th>
<th>No. of Beneficiaries</th>
<th>Amount disbursed (in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1997-98</td>
<td>100</td>
<td>Rs.23.00 (subsidy)</td>
</tr>
<tr>
<td>2</td>
<td>1998-99</td>
<td>18</td>
<td>Rs.4.50 (subsidy)</td>
</tr>
<tr>
<td>3</td>
<td>1999-2000</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Assistant Director, Handlooms and Textiles, Tiruchirappalli.

WEAVER'S WORKSHOP DEVELOPMENT SCHEME:

50% loan and 50% subsidy are given towards building of workshops to accommodate the looms, (details in Table 4.4.6.)
WEAVERS WELFARE SCHEME

CO-OPERATIVE HANDLOOM WEAVERS' SAVING AND SECURITY SCHEME:

A welfare scheme called the Cooperative Handloom Weavers' Savings and Security Scheme is implemented for the benefit of the handloom weavers within the cooperative fold in Tamil Nadu. A weaver who is a member of the scheme contributes 8% of the wages and 4% of the wages is contributed by the state government and 4% by the central government. Details of the amount allocated are given in table 4.4.7.

Table 4.4.6

<table>
<thead>
<tr>
<th>S.No</th>
<th>Year</th>
<th>No.of beneficiaries</th>
<th>No.of looms</th>
<th>Amount allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rural (4)</td>
<td>Urban (5)</td>
</tr>
<tr>
<td>1.</td>
<td>1998-99</td>
<td>248</td>
<td>220</td>
<td>19</td>
</tr>
<tr>
<td>2.</td>
<td>1999-2000</td>
<td>56</td>
<td>34</td>
<td>22</td>
</tr>
</tbody>
</table>

Source: Assistant Director, Handlooms and Textiles, Tiruchirappalli.

Showroom subsidy of 50% is also given. They are given upto 1 lakhs rupees for purchase of up-dated designs and 50% of the project cost as subsidy for dye houses.
Besides, the Government pays 7 per cent interest every year on the accumulations under the fund and the interest amount is also credited to the weavers' account. The entire accumulation under the fund will be paid to the weaver member on his attaining the age of superannuation, i.e., 58 years. If the weaver-member dies in harness his nominee gets a sum of Rs. 50,000/- as insurance cover from L.I.C. of India, and Rs. 10,000/- from Co-optex, in addition to the accumulation in his fund account.

The central Thirft Fund Scheme provides a subsidy of three paise per rupee of wages earned by the weaver, subject to a ceiling of Rs.90 per weaver per annum. The Central assistance is sanctioned to all weavers, in the ratio of their contribution under the Savings and Security Scheme.

REBATE SCHEME

With a view to enable the handloom sector in cooperative fold to compete with the mill sector, the Government of India introduced the system of allowing rebate on

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### Table 4.4.7

**Disbursement towards savings and security scheme Tiruchirappalli district (1995-2001).**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Year</th>
<th>No.of Beneficiaries</th>
<th>Amount disbursed (in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1997-98</td>
<td>1,911</td>
<td>12.20</td>
</tr>
<tr>
<td>2.</td>
<td>1998-99</td>
<td>2,602</td>
<td>4.97</td>
</tr>
<tr>
<td>3.</td>
<td>1999-2000</td>
<td>2,520</td>
<td>8.50</td>
</tr>
<tr>
<td>4.</td>
<td>2000-2001</td>
<td>2,603</td>
<td>15.00 (provisional)</td>
</tr>
</tbody>
</table>

Source: Assistant Director, Handlooms and Textiles, Tiruchirappalli.
the sale of handloom cloth. For handloom goods, government allows a rebate of 20 per cent for 100 days in a year. Discount is permitted considering the age and stock of the society. The details of the rebate given during the years 1997-2000 are given in table 4.4.8.

**Table 4.4.8**

*Amount allocated for Rebate in Tiruchirappalli district (1996-2001)*

<table>
<thead>
<tr>
<th>Years</th>
<th>No. of Societies</th>
<th>Amount of Rebate allowed (in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-98</td>
<td>100</td>
<td>123.63</td>
</tr>
<tr>
<td>1998-99</td>
<td>23</td>
<td>33.50</td>
</tr>
<tr>
<td>1999-2000</td>
<td>22</td>
<td>37.36</td>
</tr>
<tr>
<td>2000-2001</td>
<td>22</td>
<td>40.00 (provisional)</td>
</tr>
</tbody>
</table>

Source: Assistant Director, Handlooms and Textiles, Tiruchirappalli.

The members of the society are provided with Rs.190/- for eye tests, Rs. 1,500/- for asthma and tuberculosis and Rs.500/- as maternity benefit. (Details in table 4.4.9). An amount of Rs.35,000/- is allocated for digging tube wells Rs. 1,00,000/- for building Primary Health Centres.

CHILDREN'S EDUCATION SCHEME:

The member weavers are provided Rs.2000/- to 5000/- to assist their children's education from Dr. M.G.R. Trust.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Beneficiaries</td>
<td>Amount disbursed</td>
<td>Beneficiaries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1.</td>
<td>Spectacles</td>
<td>475</td>
<td>90250</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Maternity</td>
<td>55</td>
<td>27500</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Family planning</td>
<td>15</td>
<td>1500</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>For digging tubewells</td>
<td>7</td>
<td>2,45,000</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Tuberculosis, Asthma</td>
<td>-</td>
<td>-</td>
<td>575</td>
</tr>
</tbody>
</table>

Source: Assistant Directors Handlooms & Textiles, Tiruchirappalli.
4.5 PROFILE OF THE COM INDUSTRY *

NATIONAL SCENARIO:

Coir is a natural vegetable fibre extracted from coconut husk. It is a very important hard fibre from economic point of view. There are two types of fibres, the white fibre and the brown fibre. White fibre is extracted by the retting process from green husks while brown fibre is produced by the mechanical process.

Coir is a versatile material which finds use in a variety of applications due to the intrinsic characteristics of the fibre. It is a multi-cellular fibre with cellulose and lignin as the major constituents. The high lignin content contributes to the hard and rigid nature of the fibre. It's damp and rot resistant nature, with capacity to absorb and retain colouring material coupled with resilience, makes it so eminently suited for use in the manufacture of brush, mats, carpets, mattings and floor furnishing materials. The low heat conductivity of coir and its sound modulating characteristics prompt its use in thermal insulation and acoustic control.

India has the distinction of having the monopoly for supply of coir fibre, coir yam, mats, mattings and carpets of superior quality to world markets. With the advent of synthetics, Indian export of coir and coir products has met with serious set backs. In international markets, coir exports from India face competition from synthetics. Grass mats originating from China and South east Asian countries offer serious competition to Indian coir products. Synthetic products are sold at half the price of the coir products. Grass mats are priced at about 1/3 price of coir products. The labour intensive nature of the traditional coir industry concentrated in Kerala and

Information sources for this unit - References 10,15 & 17 to 20 of Chapter IV
the low productivity of the manufacturing technique of coir extraction and further processing of fibre into yam and products have stood in the way of manufacturing coir products at reduced cost. There is an apprehension of displacement of labour on a large scale by the adoption of power based but more productive and efficient methods which have stalled the progress of the traditional coir industry.

Coconut husk, the raw material for coir industry, is a renewable agro-waste arising out of extraction of coconut. Coir industry provides employment to about one million poor people, mostly women in the rural sector. At the current level of production, only 25% of husk available is consumed by coir industry in the country. Therefore there exists vast potential for stepping up production of coir fibre and value added coir production thereby providing better employment and higher income to the people engaged in the coir industry. There is growing demand for coir products such as coir geo-textiles, rubberised coir, coir pith etc. and good potential for new applications and end uses which depend on the unique, natural properties of coir fibre.

The production of coconuts in our country is about 13980 million nuts per year, the third position in the production of coconuts world over (details in table 4.5.1).

Of the total production of 13,980 million nuts in India, 42 per cent is utilised for edible, religious and other uses and 40 per cent for the production of milling copra, 15 per cent as tender coconuts and die remaining 3 per cent is utilised for the production of non-traditional products.

The extraction of Coir from coconut husk is done by two methods, natural method and the mechanical fibre extraction method. In the natural method, as the name implies, fresh coconuts are dehusked, and the coconut husks soaked in saline backwaters for 6 to 8 months, after which they are beaten with wooden mallets to
Table 4.5.1

*Area, production and productivity of coconut in the different coconut growing countries. (1996).*

<table>
<thead>
<tr>
<th>Sl. No. (1)</th>
<th>Country (2)</th>
<th>Area (000ha) (3)</th>
<th>Percentage share (4)</th>
<th>Production in million &amp; nuts share (5)</th>
<th>Qty (nuts/ha) (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>T.S. Micronesia</td>
<td>17</td>
<td>0.15</td>
<td>40.00</td>
<td>2353</td>
</tr>
<tr>
<td>2.</td>
<td>Fiji</td>
<td>65</td>
<td>0.56</td>
<td>196.40</td>
<td>3022</td>
</tr>
<tr>
<td>3.</td>
<td>India</td>
<td>1796</td>
<td>15.51</td>
<td>13986.00</td>
<td>7777</td>
</tr>
<tr>
<td>4.</td>
<td>Indonesia</td>
<td>3745</td>
<td>32.35</td>
<td>13595.00</td>
<td>3630</td>
</tr>
<tr>
<td>5.</td>
<td>Malaysia</td>
<td>280</td>
<td>2.42</td>
<td>722.00</td>
<td>2579</td>
</tr>
<tr>
<td>6.</td>
<td>Papua New Guinea</td>
<td>260</td>
<td>2.25</td>
<td>960.00</td>
<td>3692</td>
</tr>
<tr>
<td>7.</td>
<td>Philippines</td>
<td>3093</td>
<td>26.71</td>
<td>11935.00</td>
<td>3359</td>
</tr>
<tr>
<td>8.</td>
<td>Solomon islands</td>
<td>59</td>
<td>0.51</td>
<td>287.60</td>
<td>4875</td>
</tr>
<tr>
<td>9.</td>
<td>Srilanka</td>
<td>419</td>
<td>3.62</td>
<td>2546.00</td>
<td>6076</td>
</tr>
<tr>
<td>10.</td>
<td>Thailand</td>
<td>377</td>
<td>3.26</td>
<td>1130.00</td>
<td>2092</td>
</tr>
<tr>
<td>11.</td>
<td>Vanuatu</td>
<td>96</td>
<td>0.83</td>
<td>346.00</td>
<td>3604</td>
</tr>
<tr>
<td>12.</td>
<td>Vietnam</td>
<td>190</td>
<td>1.64</td>
<td>1065.00</td>
<td>5605</td>
</tr>
<tr>
<td>13.</td>
<td>Samoa</td>
<td>75</td>
<td>0.65</td>
<td>160.00</td>
<td>2133</td>
</tr>
<tr>
<td>14.</td>
<td>Palau</td>
<td>14</td>
<td>0.12</td>
<td>70.00</td>
<td>5000</td>
</tr>
<tr>
<td>15.</td>
<td>Others</td>
<td>1092</td>
<td>9.43</td>
<td>6576.55</td>
<td>6022</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>11578</strong></td>
<td><strong>100</strong></td>
<td><strong>53597.55</strong></td>
<td><strong>4629</strong></td>
</tr>
</tbody>
</table>

extract the fibre. During the mechanical extraction process the green or dried, soaked husks are fed into machines also known as decorticator, in which iron rods fixed at a particular angle on a rotating bar at high speed thrashes out the husks, and fibre is separated, (beating method.)

In the combing method, die dried husk is fed into defibring machine through wire rope or rotating wheels with catching arrangements to hold die husks subjecting it to the highly rotating combing drums with hard steel spikes which will comb the husks and remove the binding materials around the fibres, namely the pith. The long stapled fibre called bristle fibre falls at one end of die combing machine. This combing method is also used in India for fibre extraction from green husks.

Depending upon the method of extraction, coir fibres are divided into 2 basic varieties viz, White and Brown fibre. White fibre or retted fibre, which is more suited for spinning coir yarn, is extracted mostly by traditional method from husk of 10/11 months old coconuts retted in brackish water for about 6 to 10 months. This method is commonly followed in the State of Kerala where lagoons and brackish water sources are available in abundance. This fibre is more suited for producing yarn for coir mats and mattings of superior quality.

Brown fibre comprising of bristle fibres, which are the coarser thicker and longer staples, and mattress fibres, which are finer and shorter staples, is extracted through mechanical process from husk of coconut, left to dry before dehusking for copra and manufacture of desiccated coconut.

Out of the total world production of about 3,50,000 tonnes of coir fibre about 1,30,000 tonnes are white fibre, nearly all of which is manufactured in Kerala. Total brown fibre production is about 2,20,000 tonnes, out of which about 1,23,000 (60%) is produced in India and is used for the manufacture of rubberised coir goods, coir
rope and upholstery industries. A part of it is used for producing coir yarn and finished products, though on a limited scale only.

Production of white fibre from retted husk is envisaged to shrink on account of the wide use of "Coirret". Therefore the increase in production is envisaged in brown coir only. With the introduction of coirret for converting mechanically extracted green husk fibre into retted white fibre die difference between white fibre and brown fibre would become less pronounced. The availability of husk and fibre produced in India is given in Table 4.5.2

**Table 4.5.2**

*Annual Production of nuts and Coir in India*

<table>
<thead>
<tr>
<th>State</th>
<th>Area under Coconut cultivation(000's ha)</th>
<th>Annual Production of nuts (million)</th>
<th>Husk Utilisation(%)</th>
<th>Production of Coir Fibre (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>79.9</td>
<td>1103.5</td>
<td>14</td>
<td>11800</td>
</tr>
<tr>
<td>Karnataka</td>
<td>252.2</td>
<td>1340.8</td>
<td>20</td>
<td>20000</td>
</tr>
<tr>
<td>Kerala</td>
<td>881.6</td>
<td>5586.4</td>
<td>31</td>
<td>140000</td>
</tr>
<tr>
<td>Orissa</td>
<td>38.4</td>
<td>219.5</td>
<td>13</td>
<td>2200</td>
</tr>
<tr>
<td>Tamilnadu</td>
<td>270.3</td>
<td>3281.9</td>
<td>23</td>
<td>60000</td>
</tr>
<tr>
<td>West Bengal</td>
<td>21.1</td>
<td>310.3</td>
<td>11</td>
<td>3500</td>
</tr>
<tr>
<td>Others</td>
<td>88.1</td>
<td>512.6</td>
<td>7</td>
<td>2600</td>
</tr>
<tr>
<td>Total</td>
<td>1631.6</td>
<td>12355.0</td>
<td></td>
<td>239100</td>
</tr>
</tbody>
</table>


The spinning sector converts the coir fibre into coir yarn. Spinning is done by hand or the ratt (Wheel spinning). Hand spun yarn accounts for about 30 to 35 per cent of the total coir yam produced and the rest are wheel spun. Women predominate
the hand spinning units. It is estimated that there are about 80,000 handspinning units and 25,000 ratt spinning units most of which are located in Kerala.

The manufacturing sector transforms the yam and coir into products like coir mattings, rugs carpets, mattresses and other miscellaneous items like table mats etc. The manufacturing sector is largely a cottage industry in India and is predominated by small scale units. The sector, it is estimated, engages about 0.4 lakh workers and is perhaps die only industry which gives employment to a huge mass of workers with little capital investment.

Coir products like mat, carpet, rug, rope, twisted coir and geo-fabrics manufactured from white/brown coir do not cause any environmental pollution as coir is 100% natural, and bio-degradable.

In rubberised coir the non coir constituents are rubber latex and small quantities of binding chemicals. The rubber latex is a natural product and binding agent does not amount to over 5% of the content of rubberised coir. The product is fully bio-degradable and rubberised coir mattresses would be substituting polyurethane foam and polypropylene. The polyurethane foam is injurious to health and emits dangerous toxic gases when burnt.

Since coir geo-textiles is good environment friendly substitute for synthetic products it has been widely accepted for various civil engineering practices connected with soil management, erosion control etc. The production and use of coir material will not only help preserving the environment but also promote value added export of coir from India.

The coir mattings are made on handlooms of sturdy construction and requires the skill of the crafts man to get the finishing of the final products. Power looms for mattings is a recent development in India. Though the quality and texture of the
finished products are very superior, there are only a handful of powerloom units producing mattings in this state. The main reason can be attributed to the heavy investment and also the need for skilled labour.

Coir mattings are used as floor furnishing materials in halls, auditoriums, offices and even stairs and corridors. Coir rugs made from cutting the coir mattings into specified lengths are loved by die interior decorators for their shades, patterns and colours. The coir mourzouks are suitable where heavy and durable floor covering is required. During weaving of these mourzouks the warp is concealed by the weft which actually forms the surface design or pattern and on completion of weaving, the ends of the warp are drawn back into the fabric to make it strong and straight-edged.

Coir ropes are used for towing barges, boats and ships and for binding the tarpaul in heavy duty vehicles (lorries trucks and trailers). Roughly around 36,400 tonnes of coir rope are produced and consumed in India. Rubberised coir is used in pillows, cushions, mattresses, automobile cushioning, package moulds etc. Around 14,000 tonnes of rubberised coir are produced and consumed in this country. Coir brushes are used for cleaning in residence, office premises, wagons and cars. Needled coir are used in air filters, acoust controls, upholstery padding and samatha mattresses. The Coir Industry is a labour intensive industry the employment potential is much more in the cottage industries than those using automatic machines, employing 25 times more labour when compared to the large scale industry. Out of half a million poor people employed in the coir industry, women constitute the major chunk of about 80%.
DEMAND FOR COIR

Increasingly, India has been using its white and brown fibres within die internal market. The factors that contribute to increase die export opportunities for coir today are the rising cost of synthetic substitutes, a shift in tastes and preferences in favour of natural materials and a greater appreciation of the environmental implication of using natural vis-a-vis synthetic materials that include problems of recycling, fire hazards, health hazards and biodegradability. A recent development of interest to Indian coir industry is the growth of the market in Europe and America with consumers demanding materials for use to prevent soil erosion and promote revegetation, an effective soil conditioner and biodegradable moisture retaining growth medium which would find extensive application in greening projects, horticultural and flori-cultural operations. This market sector is valued annually several billions of dollars and it is growing rapidly the world over, particularly in the USA and West Europe.

Table 4.5.3

Distribution of Coir Workers among the various activities of the Coir Industry.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total workers</th>
<th>Women workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibre extraction</td>
<td>98,800</td>
<td>55,000</td>
</tr>
<tr>
<td>Spinning</td>
<td>3,50,400</td>
<td>3,30,000</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>29,900</td>
<td>5,000</td>
</tr>
<tr>
<td>Other work related to coir sector</td>
<td>20,900</td>
<td>10,000</td>
</tr>
<tr>
<td>Total</td>
<td>5,00,000</td>
<td>4,00,000</td>
</tr>
</tbody>
</table>

Source: Coir Board, Cochin, India.
The potential for world trade in such value added coir products is estimated to be of the order of US$ 250 million. The current market for value added coir products is below US$ 1 million.

An increase in volume of domestic consumption and value added export would not only enhance the current earnings of coir producing industries several fold, thereby strengthening their viability and expansion, but would also improve the income and living standards of thousands of rural workers engaged in the industry.

COIR INDUSTRY IN TAMIL NADU

Tamil Nadu is the largest producer of Coir fibre after Kerala in India. There are 684 units engaged in the extraction of coir fibre. Tamil Nadu accounts roughly for 60 per cent of the total brown coir produced in India. At 50% utilisation of coconut husk, coir fibre potential in the State is estimated at 65,000 tonnes.

Tamil Nadu ranks the second longest coconut growing state in our country next to Kerala. Production of coconut has registered a significant growth during the last decade in Tamil Nadu. This production has contributed more than Rs.500 crore to the state domestic products. About 60% of total coconut production is consumed directly and 35% is converted to coconut oil. Thus almost the entire production of coconut is absorbed by the market itself.

The consumption pattern influences the availability of husks for coir fibre production. Only 76 per cent of the total coconut harvested is marketed. The remaining 24 per cent is used for domestic and religious purposes. Therefore it can be concluded that among the usable, only around three-fourth of the coconut husks are left for coir production.

Tamil Nadu is the second largest producer of Coir fibre in the country. In the brown fibre sector Tamil Nadu occupies the pride of place as being the single largest producer of brown fibre contributing about 60% of the total production in the brown
fibre sector. The activities of the coir sector in Tamil Nadu are coordinated by the Department of Industries and Commerce. The Coir Board has started the Regional Coir Training and Development Centre at Thanjavur which serves as the nerve centre for promotion of Coir Industry in the State. The Centre is working in close association with the District Industries Centres.

PRODUCTION

Extraction of brown fibre from coconut husk by mechanical process is the main activity in coir Industry in Tamil Nadu. Retting of green husk is done on a limited scale by coir artisan families in the coastal areas. Scope for extraction of retted fibre of standard quality and its further processing is not found to be an economically viable activity on account of the inadequate quantities of green full husk made available to the industry. Hence, the line of manufacture of coir products has to be confined to brown fibre available in large quantity for commercial exploitation.

Extraction of brown fibre is in the form of bristle, mattress and decorticated fibres. Spinning of fibre into yarn, rope, curled coir, manufacture of coir products out of yarn and rubberised coir items are the main activities in the coir product sector. There are 5567 coir establishments including 5 rubberised coir factories in Tamil Nadu. 74 Coir cooperative societies are also functioning in the State, out of which 71 are Coir production societies and the other 3 are marketing societies.

There are 10,729 families engaged in Coir activities, mainly spinning and rope making. On an average the production of coconut per year in Tamil Nadu is estimated at 2700 million nuts. A portion of the coconut production is sold outside the State. These coconuts are partially dehusked leaving considerable quantity of fibrous material on the nut itself in order to save the nuts from possible breakages during transit and also to preserve the coconut for a long period. This shows that a good quantity of fibrous portion of husk is not available for the coir Industry in
TamilNadu. The semi-peeled husk available for the extraction of fibre is quantifiable in terms of number of husks or in terms of lorry loads in which it is purchased.

*Table 4.5.4*

**Percentage of coconuts consumed and sold by coconut growers in Tamil Nadu.**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Items</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Domestic Consumption</td>
<td>11.48</td>
</tr>
<tr>
<td>2</td>
<td>Religious purposes</td>
<td>2.34</td>
</tr>
<tr>
<td>3</td>
<td>Extracting Oil</td>
<td>1.86</td>
</tr>
<tr>
<td>4</td>
<td>Sold</td>
<td>84.32</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Annual Report, Coir Board.

The production of fibre in TamilNadu by the end of 2000 was around 59473 tonnes per year at an estimated value of Rs. 1783.42 lakhs. Of the above, 53526 tonnes were brown fibre and only 5947 tonnes were white fibre. This is further classified into 2978 tonnes of bristle fibre, 5989 tonnes of mattress fibre and 50506 tonnes of decorticated fibre.

Thus, as mentioned earlier in the private sector, there are 5493 coir factories in TamilNadu. Our of these units, 674 were engaged in production of fibre, 4 in Production of rubberised coir products, 35 in production of curled coir, 3 in the Production of mat and mattings, 2284 units manufacturing ropes and 2493 units Manufacturing coir yam. There are 71 industrial cooperative societies in the state engaged in the production of coir fibre yarn and products. Industrial Cooperative societies are functioning in the fibre, yarn and product sectors.
The unorganised sector consists of 443 household units. There were 20046 artisans engaged in different processing activities such as retting, extraction of fibre, spinning of yam, rope making etc. following traditional methods of processing.

Another remarkable feature of Coir Industry in Tamil Nadu is the participation of workers in the Coir Industrial Cooperative Societies. In Thanjavur District the Mallipattinam Coir Workers Society and Muthupettai Coir Workers Coop. Society were started as early as 1940. Financial assistances from Coir Board, State Government THADCO and TABCEDCO and the National Cooperative Development Corporation are now being extended to the coir Industrial Cooperative Societies in Tamil Nadu.

The Government of Tamil Nadu has also organised the following 3 societies exclusively for marketing of coir products in Tamil Nadu:- Kanyakumari District Central Coir Industrial Cooperative Marketing Society at Nagerkoil, The Sales Central Coir Marketing Industrial Cooperative Society at Salem, The Tamil Nadu State Coir Industrial Cooperative Marketing Society at Chennai.

FIBRE EXTRACTION

Coir fibre from coconut husks is extracted with the aid of different kinds of machinery. Fibre extraction units in organised sector possess machinery required for the production of bristle, mattress and decorticated fibre. Crushing machine, defibiring drums, disintegrator, burstor, decorticator, beater, sifter, etc. are used in fibre production. Willowing machine, slivering machine and automatic spinning machines are used in the manufacture of machine spun yarn which is very rare. Conversion of fibre into coir yarn and processing into value added products like mats and mattings are still in the nascent stage in the state. There are about 4,000 traditional ratts /spinning ratts engaged in the production of coir yarn. However, the Production of fine variety of yarn using improved techniques which will be ideal for
conversion of fibre into value added products is rather limited. Nearly 25000 tonnes of coir fibre is transported from the state for supplementing the production of white fibre in Kerala state. Curling machine and hackling machine are used in manufacture of curled rope. Spinning wheels are used for spinning coir yam and rope making machine for manufacture of coir rope. For the manufacture of coir mats, frames and looms are used. Coir mattings are produced with the aid of looms.

EMPLOYMENT

The total number of workers-full time and part time-employed in the coir industry in Tamilnadu was estimated at 33553. The composition of employment shows that women workers constitute 16392 of the total employment in the industry men workers 13004 and children 4157. Nearly 20046 workers belong to unorganised sector. The coir cooperatives and private factories employ 1328 workers and 12179 workers respectively. Nearly 28683 of coir workers are full time workers and 4870 are part-time workers.

Coir workers in the state are mainly engaged in defibiring of husk, retting/beating, yarn spinning, rope making, weaving and curling. The spinning sector accounts for 4156 of the workers. Fibre production sector accounts for 19288 workers, rope making sector 8081 workers, weaving sector 103 workers, curing sector 1659 workers and rubberised coir 266 workers. 8674 of the coir workers are concentrated in Kanyakumari district. Salem district comes second with 8411 coir workers. The average monthly income, of a coir worker was the lowest in the Cooperative sector-Rs.465/-, Rs. 475/- in the organised sector and Rs.560/- in the unorganised (house hold) units.

Based on the international absorption and trade trend of the domestic market, selling of coir fibre will continue to grow in the main coir-fibre producing countries like Sri Lanka and India.
To promote the sale of coir and coir products the coir board extends financial assistance to accredited dealers of the coir board in important market locations. Rebate for coir yam and coir products sold by co-operative and public sector Institutions is another support provided by the coir board.

TIRUCHIRAPALLI DISTRICT:

The organised sector of Coir industry in this district consist of about 11 units mainly engaged in the extraction of fibre from coconut husk. Two of these units produce curled coir from the fibre. Informations from the personal survey indicate the withdrawal of more than 10 to 15 units in the organised sector, located in the urban and suburban areas of the district due to high labour cost, including 2 units producing curled coir and 5 units producing mats and mattings. About 30 households involved in the coir-based activities form the unorganised sector, mainly involved in production of rope from the fibre. In all about 740 workers are engaged in coir activities in the district.

Coconut is cultivated in about 9285 hectares with an estimated annual production of 824 lakh nuts. Out of an estimated 3131 tonnes of fibre produced annually, 155 tonnes of yarn and rope and 180 tonnes of curled coir are being produced. Thus the units engaged in manufacturing coir products utilise only about 10% of the fibre produced. The remaining fibre is traded out to the neighbouring districts and a major portion of this raw fibre is sold to Kerala, where it is processed to finished goods.

Almost all the household units and the private firms use traditional technology, to utilise the cheap labour. Lack of the required skills is also an important factor that Withholds the adoption of modernised techniques that might reduce time, and labour requirements to a considerable extent.
The Combing method is found to be adopted by the fibre extracting units. Some of the units produce both fibre and yarn. The machinery involved in the extraction is found to be basically simple and does not call for very high skills.

Crushers, defibring machines, screeners and turbo cleaners are used in sequence to separate the fibre from the husks. The husks are first fed into the crushers and removed to be soaked for a week. This stage requires one operator and 2 to 4 labour to transport the husks and soak them. The defibring machine requires 2 skilled operators and 2 unskilled labour. The soaked husks in this machine are torn and the fibre along with the pith is given out which is fed into the screens which separate the pith from the fibre. The turbo cleaner perfects the separation of the fibre from the pith. The separated fibre are then pressed into bundles.

In all 15 to 20 labour are required in the whole process, out of which atleast 2 of them are skilled. Most of the above activities are done by women. Experience seems to be the only source of training for these workers. Eventhough the regional coir Training and Development centre located in the neighbouring district of Thanjavur is found to train around 60 artisans every year, apart from voluntary institutions which propagate the message of improved technology to the rural artisans, the process of technological progress seems to be at a very low pace.

The process of spinning converts the fibre into yarn or rope. "Hand spinning" involving die pressing of the fibre in between the bare hands of the labour involved is still continued to be the method adopted by most of the artisans in the unorganised sector. Traditional ratts involving 3 members each are mostly used in the units of the organised sector to produce yarn/ropes. Curled coir is produced by subjecting the fibre sifted, further into another machine which requires skilled manpower.

More than 700 artisans are reported to be employed in this district which still continues to employ traditional methods of processing of husks and manufacturing of
coir based products. The unskilled / semi skilled labour on average are paid Rs.25/- to Rs.35/- per day while the skilled operators are paid up to Rs.50/- per day.

Thus there seem to be vast scope for increasing both the number of coir units and also the volume production in these units, in this district. Training in semi automatic or motorised rats for spinning, and automatic looms to produce value added products like mats, and mattings would prove to make the industry more productive and more lucrative.

The Regional coir Training & development centre, Coir Board, at the neighbouring Thanjavur district established for provides training (since 1979) and is taking efforts to train and induce the population involved in the coir industry to take up affordable, modernised techniques, for all the stages of the process of converting the raw material husks into the finished products.

Every year around 200 members get trained in the technology course, course for artisans and the Mahila coir Yoiana schemes. Adding to this, 3 mobile training units help to train around 180 members per year. The process of training the population is given durust by NGO's which induct trained women from these institutions, who in turn train the coir artisans and rural entrepreneurs.

Extraction of fibre from husk leaves coir pith or coir dust as waste. Extraction of 1kg fibre generates 2kgs of coir pith. It occupies large space polluting the environment. Its disposal is a big problem. The simplest and effective solution to this problem is to convert coir pith into organic manure by composting it with pith plus. Pith plus comports pith within 30 days into organic fertilizer useful for all crops. A waste disposal problem is turned into a money maker. Apart from experimentation, the units have not gone fully into this venture.
4.6 PROFILE OF THE KHADI AND VILLAGE INDUSTRIES (KVI) SECTOR*

THE NATIONAL SCENARIO

Since freedom revitalisation of the village industries has been given a major thrust in all the rural development programmes. Many types of resources are available in the countryside. There are agricultural products, forest products and minerals etc., available in plenty. There is no shortage of energy as well. The rural areas are rich in wind, water, solar and other forms of energies. The Khadi & Village Industries are highly instrumental in utilising these resources and helping the rural, poor, by solving their social and economic problems through decentralisation of industries. Thus it enables a large part of the population to be absorbed in non-agricultural operations.

Khadi has been defined as "cloth woven in India on handlooms from yarn spun by hand, from cotton, wool, silk or a mixture of these fibres. Khadi is a hundred per cent village industry. Hand-spinning has been one of the oldest of cottage industries in the country. Its raw material cotton, is grown and spun in villages. The village industries as mentioned earlier, means any industry located in a rural area (population of which does not exceed 20,000 and which produces any goods or renders any service with or without use of power and in which the fixed capital investment per head of an artisan or a worker does not exceed Rs. 50,000. The detailed list of industries that constitutes the Khadi and Village Industries framed by the Khadi & Village Industries Commission has been enclosed as annexure 1.1.

These village industries mostly employ family labour. Production is usually carried on in the place of residence. The worker need not migrate to a distant place.

* Information source for this unit - references 10, 15 and 21 and 22 of Chapter IV
Production is mainly organised through manual labour. The market for the products of these industries is usually localised. Out of die various village industries some, like making of gur, khandsari, palm gur, collection of forest seeds for neo-soap making, etc., are seasonal in character. Otherwise most other industries provide full-time employment.

PROGRAMME FOR THE DEVELOPMENT OF KHADI AND VILLAGE INDUSTRIES:

The Khadi and village industries enjoy a crucial position in the Indian economy. The Khadi and Village Industries Commission was set up in 1957 on a statutory basis, as a result of die merger of die All India Village Industries Association and die All India Spinners Association. The KVIC at present covers Khadi and 115 specified village industries. The commission works as an apex organisation. There are 28 Khadi and Village Industries boards (KVIBs), 1,138 registered institutions, 31,000 industrial co-operatives, 147 departmental units and 13,000 sales outlets, through which the programmes of the KVIC are implemented. Its activities extend to about 1.5 lakh villages.

The Commission was responsible for planning, organising and implementing programmes for the promotion and development of these industries. The commission provides financial assistance towards working capital, for production and sales. It also provides assistance for capital expenditure on land, building, workshed, tools, implements, etc. The rate of interest charged is usually low, (1% to 4%). The commission provides management grant to new institutions, technical assistance grant and promotional grant in the form of sales, rebate etc. It provides training for rural artisans engaged in die production in die Khadi and Village industries.
The commission also engages in improving the tools and equipments through research and field trials. Research and development activities have been going on for more than three decades, with emphasis on upgradation of technology.

The performance of the Khadi and Village Industries sector has been quite impressive, especially in the years 1990-91 and 1991-92. The Khadi Industries had grown by about 93% in the years 1990-99 from 328.6 crores to 635.9 crores, while the village Industries had registered an 90% growth in production from production of 1994 crores to Rs. 4476 crores during the same period. (Table 4.6.1).

An analysis of the production industry-wise (Table 4.6.2.) indicates that some of the village industries under the KVIC have performed better than others. The biogas plants, village oil units, gur and khandsari industries, etc., have grown at a faster rate than certain agro based industries like beekeeping, fruit processing, leather and tanning industries, pottery articles, aluminium utensils etc. which show fluctuating or relatively slow growth rates. Diversifications like polyvastra, electronic goods, etc., have shown rapid expansion indicating the need to encourage high level of need-based and consumer-based diversification in the activities of the village industries.

Analysis of the figures in Table 4.6.3 indicates that the growth in production in these industries has not been commensurate with the employment generated. Thus there is an indication of underutilisation of manpower in these units. The employment generation in the agro based and food industry seems to be impressive while the employment in cotton khadi industries was rather discouraging, as they were much below the expected.

These Khadi and Village Industries provide more of part-time employment than full-time employment. This proves that these industries play an important role as a subsidiary source of income to the rural people. Efforts taken specially to convert
### Table 4.6.1

**Production and employment of Khadi and Village industries (1960-1999) (Value in lakh rupees, Employment in lakh persons)**

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<tr>
<td>Production</td>
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<td>32863.30</td>
<td>32863.30</td>
<td>35348.99</td>
<td>35727.96</td>
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<td>52223.14</td>
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<td>II. Village</td>
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<td>Production</td>
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<td>18.10</td>
<td>32.42</td>
<td>35.96</td>
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<td>52.50</td>
<td>53.28</td>
<td>53.46</td>
<td>56.72</td>
<td>58.17</td>
<td>42.49</td>
<td>58.29</td>
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**Source:** Annual Reports, Khadi and Village Industries Commission
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<td>1217.93</td>
<td>1308.61</td>
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<td>1397.39</td>
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<td>4.</td>
<td>Silk</td>
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<td>8309.47</td>
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<td><strong>TOTAL KHADI</strong></td>
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<td>35727.96</td>
<td>38970.41</td>
<td>52223.14</td>
<td>62640.30</td>
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</table>

### II. VILLAGE INDUSTRIES

#### 1. MINERAL BASED INDUSTRY

- (a) Cottage Pottery: 14935.99
- (b) Lime Manufacturing: 4745.76

#### 2. FOREST BASED INDUSTRIES

- (a) Cottage match: 1525.28
- (b) Agarbatti: 731.92
- (c) Handmade paper: 73.76
- (d) Shellac: 7.71
- (e) Bamboo and Cane: 5797.24
- (f) Katha: 414.37
- (g) Gum Rosin: 135.62

#### 3. AGRO BASED AND FOOD

- (a) Beekeeping: 2626.04
- (b) Ghani oil: 27808.43

### Year-wise and industry-wise production of KVI (1989-1997) (Values in lakhs of rupees)
<table>
<thead>
<tr>
<th></th>
<th>2004-5</th>
<th>13352.93</th>
<th>14593.08</th>
<th>16235.52</th>
<th>19422.96</th>
<th>21288.29</th>
<th>22480.11</th>
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<td>(c) Canegur and khandsari</td>
<td>12016.16</td>
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<td>14593.08</td>
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<td>(d) Pnaragur</td>
<td>9215.46</td>
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<td>(e) P.C.P.I.</td>
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<td>15800.07</td>
<td>21336.19</td>
<td>2173.72</td>
<td>25160.18</td>
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<td>(f) Forest medicinal plants</td>
<td>377.15</td>
<td>396.03</td>
<td>447.13</td>
<td>505.56</td>
<td>602.23</td>
<td>656.32</td>
<td>702.36</td>
<td>945.18</td>
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<td>(g) Fruit processing industry</td>
<td>1043.80</td>
<td>1327.41</td>
<td>1562.36</td>
<td>1770.41</td>
<td>2333.74</td>
<td>2964.45</td>
<td>3712.90</td>
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<td>(h) Fibre</td>
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<td>7887.10</td>
<td>8828.24</td>
<td>10573.07</td>
<td>11224.86</td>
<td>12246.13</td>
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4. POLYMER AND CHEMICAL BASED INDUSTRIES

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<tr>
<td>(a) Cottag Soap</td>
<td>4628.31</td>
<td>4989.73</td>
<td>5787.39</td>
<td>6515.45</td>
<td>6828.21</td>
<td>7634.01</td>
<td>8481.61</td>
<td>10047.44</td>
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<tr>
<td>(b) Cottag leather</td>
<td>29051.99</td>
<td>34577.59</td>
<td>39229.20</td>
<td>41692.37</td>
<td>50003.62</td>
<td>53343.63</td>
<td>57445.38</td>
<td>63679.72</td>
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<tr>
<td>(c) Rubber goods</td>
<td>-</td>
<td>-</td>
<td>68.51</td>
<td>131.44</td>
<td>266.62</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(d) Polymer</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>738.45</td>
<td>1039.24</td>
<td>1398.60</td>
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5. E.N.C.E. INDUSTRY

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<td>(a) Bio-gas</td>
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<td>(b) Rural engineering</td>
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<td>42790.42</td>
<td>47090.58</td>
<td>51518.05</td>
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<td>(c) Aluminium utensils</td>
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<td>693.32</td>
<td>1262.63</td>
<td>1476.09</td>
<td>855.50</td>
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<td>(e) Brass, Copper, Bell metal</td>
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<td>443.45</td>
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6. TEXTILE INDUSTRY

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<th>3333.08</th>
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<th>4241.91</th>
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<td>(a) Polyvasara</td>
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<td>2906.71</td>
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<td>4845.75</td>
<td>5076.22</td>
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<td>(b) Other Textiles</td>
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7. SERVICE INDUSTRY

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</table>

TOTAL KVI | 19631.72 | 228001.76 | 259279.37 | 287694.11 | 323383.53 | 360246.08 | 402654.63 | 451625.53 |

Source: Annual Reports, Khadi and Village Industries Commission.
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cotton</td>
<td>10.39</td>
<td>10.65</td>
<td>10.67</td>
<td>10.76</td>
<td>10.38</td>
<td>10.01</td>
<td>10.61</td>
<td>11.18</td>
</tr>
<tr>
<td>2.</td>
<td>Woollen</td>
<td>2.53</td>
<td>2.50</td>
<td>2.52</td>
<td>2.63</td>
<td>2.51</td>
<td>2.21</td>
<td>2.29</td>
<td>2.49</td>
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<td>3.</td>
<td>Muslin</td>
<td>0.30</td>
<td>0.31</td>
<td>0.33</td>
<td>0.33</td>
<td>0.33</td>
<td>0.29</td>
<td>0.29</td>
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<td>4.</td>
<td>Silk</td>
<td>0.70</td>
<td>0.69</td>
<td>0.68</td>
<td>0.69</td>
<td>0.65</td>
<td>0.68</td>
<td>0.73</td>
<td>0.83</td>
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<tr>
<td><strong>II. VILLAGE INDUSTRIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.</td>
<td>MINERAL BASED INDUSTRY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(a) Cottege pottery</td>
<td>3.88</td>
<td>4.28</td>
<td>4.62</td>
<td>4.94</td>
<td>5.02</td>
<td>5.13</td>
<td>5.50</td>
<td>5.66</td>
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<tr>
<td>(b) Limestone manufacturing</td>
<td>0.63</td>
<td>0.70</td>
<td>0.77</td>
<td>0.80</td>
<td>0.84</td>
<td>0.97</td>
<td>1.02</td>
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<tr>
<td>2.</td>
<td>FOREST BASED INDUSTRIES</td>
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<td></td>
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</tr>
<tr>
<td>(a) Cottege match</td>
<td>0.22</td>
<td>0.20</td>
<td>0.19</td>
<td>0.22</td>
<td>0.23</td>
<td>0.23</td>
<td>0.18</td>
<td>0.19</td>
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<tr>
<td>(b) Agarbatti</td>
<td>0.12</td>
<td>0.13</td>
<td>0.13</td>
<td>0.16</td>
<td>0.16</td>
<td>0.18</td>
<td>0.18</td>
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<tr>
<td>(c) Handmade paper</td>
<td>0.05</td>
<td>0.06</td>
<td>0.07</td>
<td>0.07</td>
<td>0.10</td>
<td>0.12</td>
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<td>(d) Shellac</td>
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<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td><em>a</em></td>
<td><em>a</em></td>
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</tr>
<tr>
<td>(e) Bamboo and Cane</td>
<td>1.88</td>
<td>1.81</td>
<td>1.93</td>
<td>2.16</td>
<td>2.39</td>
<td>2.52</td>
<td>2.50</td>
<td>2.29</td>
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<tr>
<td>(f) Khadi</td>
<td>0.08</td>
<td>0.06</td>
<td>0.07</td>
<td>0.08</td>
<td>0.10</td>
<td>0.10</td>
<td>0.12</td>
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<tr>
<td>(g) Gum resins</td>
<td>0.01</td>
<td>*</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.04</td>
<td>0.04</td>
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<tr>
<td>3.</td>
<td>AGRO BASED &amp; FOOD INDUSTRY</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(a) Beekeeping</td>
<td>2.43</td>
<td>2.42</td>
<td>2.26</td>
<td>2.19</td>
<td>2.23</td>
<td>2.29</td>
<td>2.73</td>
<td>2.56</td>
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<tr>
<td>(b) Ghanai oil</td>
<td>0.92</td>
<td>0.97</td>
<td>0.92</td>
<td>0.93</td>
<td>0.95</td>
<td>0.98</td>
<td>0.88</td>
<td>0.85</td>
<td>0.82</td>
</tr>
<tr>
<td>(c) Camonar and khandsari</td>
<td>1.56</td>
<td>1.69</td>
<td>1.80</td>
<td>2.10</td>
<td>2.14</td>
<td>2.14</td>
<td>2.49</td>
<td>2.43</td>
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Table 4.6.3

YEARWISE AND INDUSTRYWISE EMPLOYMENT UNDER KVI

(Emp. in lakh Persons)
<table>
<thead>
<tr>
<th>Industry</th>
<th>7.29</th>
<th>7.44</th>
<th>7.72</th>
<th>7.75</th>
<th>7.89</th>
<th>7.89</th>
<th>8.00</th>
<th>8.52</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Palm oil</td>
<td>1.47</td>
<td>1.80</td>
<td>2.03</td>
<td>2.04</td>
<td>2.14</td>
<td>2.21</td>
<td>2.27</td>
<td>2.40</td>
</tr>
<tr>
<td>(e) P.C.I.</td>
<td>0.53</td>
<td>0.54</td>
<td>0.55</td>
<td>0.56</td>
<td>0.67</td>
<td>0.42</td>
<td>0.45</td>
<td>0.51</td>
</tr>
<tr>
<td>(f) Forest medicinal plants</td>
<td>0.13</td>
<td>0.16</td>
<td>0.17</td>
<td>0.22</td>
<td>0.25</td>
<td>0.28</td>
<td>0.30</td>
<td>0.31</td>
</tr>
<tr>
<td>(g) Fruit processing industry</td>
<td>2.74</td>
<td>2.65</td>
<td>2.73</td>
<td>2.87</td>
<td>2.88</td>
<td>3.02</td>
<td>3.08</td>
<td>3.08</td>
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</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>1.16</th>
<th>1.46</th>
<th>1.16</th>
<th>1.32</th>
<th>0.99</th>
<th>1.52</th>
<th>1.58</th>
<th>1.40</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Cottage soap</td>
<td>3.82</td>
<td>4.35</td>
<td>4.56</td>
<td>4.61</td>
<td>5.45</td>
<td>4.93</td>
<td>5.31</td>
<td>5.36</td>
</tr>
<tr>
<td>(e) Cottage leather</td>
<td>-</td>
<td>-</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(f) Rubber goods</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>(g) Polymer</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>0.26</th>
<th>0.28</th>
<th>0.37</th>
<th>0.37</th>
<th>0.29</th>
<th>0.40</th>
<th>0.47</th>
<th>0.69</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Biogas</td>
<td>2.82</td>
<td>3.04</td>
<td>3.23</td>
<td>3.43</td>
<td>3.91</td>
<td>3.96</td>
<td>4.24</td>
<td>4.26</td>
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<tr>
<td>(b) Rural engineering</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
<td>0.07</td>
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<td>0.08</td>
</tr>
<tr>
<td>(c) Aluminum utensils</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>(d) Electronics</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(e) Brass, Copper, Bell metal</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>0.24</th>
<th>0.28</th>
<th>0.38</th>
<th>0.43</th>
<th>0.44</th>
<th>0.44</th>
<th>0.46</th>
<th>0.46</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Polyesters</td>
<td>0.04</td>
<td>0.10</td>
<td>0.13</td>
<td>0.19</td>
<td>0.20</td>
<td>0.29</td>
<td>0.33</td>
<td>0.45</td>
</tr>
<tr>
<td>(b) Other textiles</td>
<td>0.04</td>
<td>0.07</td>
<td>0.11</td>
<td>0.19</td>
<td>0.22</td>
<td>0.36</td>
<td>0.39</td>
<td>0.42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry</th>
<th>0.04</th>
<th>0.07</th>
<th>0.11</th>
<th>0.19</th>
<th>0.22</th>
<th>0.36</th>
<th>0.39</th>
<th>0.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Polyesters</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>(b) Other textiles</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>TOTAL VILLAGE INDUSTRIES</td>
<td>32.14</td>
<td>32.42</td>
<td>35.96</td>
<td>38.05</td>
<td>31.41</td>
<td>40.27</td>
<td>42.75</td>
<td>43.38</td>
</tr>
<tr>
<td>GRAND TOTAL I+II</td>
<td>46.26</td>
<td>48.57</td>
<td>50.16</td>
<td>52.50</td>
<td>53.28</td>
<td>53.46</td>
<td>56.27</td>
<td>58.17</td>
</tr>
</tbody>
</table>

* -Less than 500 Persons

Source: Annual Reports, Khadi and Village Industries Commission.
these industries as a source of full-time occupation would be an effective step towards utilisation of both the abundant manpower and other resources.

Analysing the employment potentials industry-wise technology betterment (aimed to improving the productivity in these units) had a negative influence on industries like ghani oil, where the employment absorption has declined while changing consumer beliefs and perception have affected traditional industries like forest-based medicines. Tuning new product developments based on consumer tastes and needs on the other hand, have had a obvious influence on the growth of the employment potentials in industries like bamboo and cane, cottage pottery and polyvastra. Growing demand for these traditional, aesthetic products in the foreign market can also be a reason for this boost in die employment in these industries.

In order to exploit the increase in demand for some of the industrial produces, and increase die employment opportunities, the Khadi and Village Industries Commission has developed various training programmes. It has its own multi-industrial or unitary training centres at convenient places, apart from financing the institutions and co-operatives imparting such training. The commission has successfully trained more than 8 lakh persons by the end of the eighth plan (1992-93 to 1996-97).

The training programmes during die eighth plan ending 1996-97 has been unique in providing the required marketing and entrepreneurial inputs that were very much required for the expansion of these industries and also enable them to cope with the produce of the modern sector. Efforts were taken to ensure fuller employment in their present occupations and to prevent displacement from the existing activities.

The Khadi and Village Industries Review Committee (KAVIRC) set up under the chairmanship of Sri.M.Ramkrishnayya, former Deputy Governor of Reserve
Bank of India, had gone into the workings of the KVIC and suggested measures for improving the operational efficiency of the commission. With a firm policy support, the KVIC would play a more dynamic role in promoting employment opportunities in the non-farm sector for the rural poor.

TAMIL NADU:

Table 4.6.4 shows the performance of the Khadi & Village industries in Tamil Nadu in terms of production and employment. The performance has been compared with that of the south zone (including Andhra Pradesh, Karnataka, Kerala, Lakshwadeep, and Pondicherry) and the All-India performance.

The relative performance of the industry with the south zone, in terms of production shows a 5.62% growth in the years 1961-1991, having increased from 45.17% of the zonal total to 50.19% and thereafter declined by about 2.36% receding from 50.19 per cent to 47.83%. The employment contribution of the state over the zonal total had also increased by 4.73% in the 30 yrs 1961-91 and thereafter decline by 1.16% in the 6 yrs 1991-97.

When the relative performance of the Khadi and Village Industries in Tamil Nadu over all the other states in the country put together is considered, the relative percentage of production had increased by about 5.61% in the 30 yrs 1961 to 1991 and decreased by 2.09% in the 6 yrs 1991-92. But changes in the employment scenario in the same yrs were very discouraging from the productivity point of view, since the increase in the relative performance was about 10% in the 30 yrs 1961-91 and there was a increase in the 6 yrs 1991-97 by 0.29%.

In other words when the relative performance with the All-India records were considered, after 1991, the production had decreased while the employment had increased, indicating less effective utilisation of manpower. Thus comparatively the
### Table 4.6.4

**Production and employment - Khadi and Village Industries in Tamil Nadu**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Khadi</td>
<td>V.I.</td>
<td>Total</td>
<td>Khadi</td>
<td>V.I.</td>
</tr>
<tr>
<td><strong>A. PRODUCTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1. Tamil Nadu Total</td>
<td>154.12</td>
<td>255.93</td>
<td>451.05</td>
<td>482.19</td>
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<tr>
<td>2. South Zone Total</td>
<td>421.02</td>
<td>577.57</td>
<td>998.59</td>
<td>722.69</td>
<td>1593.57</td>
</tr>
<tr>
<td>3. Percentage over South Zone</td>
<td>46.10</td>
<td>45.17</td>
<td>62.40</td>
<td>46.80</td>
<td>51.12</td>
</tr>
<tr>
<td>4. All-India Total</td>
<td>1423.29</td>
<td>3315.65</td>
<td>4739.14</td>
<td>2584.61</td>
<td>8560.34</td>
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<tr>
<td>5. Percentage over All-India Total</td>
<td>13.6</td>
<td>7.7</td>
<td>9.52</td>
<td>18.66</td>
<td>10.86</td>
</tr>
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<td><strong>B. EMPLOYMENT (Persons in lakhs)</strong></td>
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<tr>
<td>6. Tamil Nadu Total</td>
<td>N.A</td>
<td>2.27</td>
<td>2.27</td>
<td>3.14</td>
<td>4.80</td>
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<tr>
<td>7. South Zone Total</td>
<td>N.A</td>
<td>4.23</td>
<td>4.23</td>
<td>4.23</td>
<td>4.23</td>
</tr>
<tr>
<td>8. Percentage over South Zone</td>
<td>-</td>
<td>52.66</td>
<td>53.66</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9. All India Total</td>
<td>17.4</td>
<td>6.98</td>
<td>24.13</td>
<td>9.42</td>
<td>9.80</td>
</tr>
<tr>
<td>10. Percentage over All-India Total</td>
<td>-</td>
<td>32.52</td>
<td>9.41</td>
<td>17.62</td>
<td>32.04</td>
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<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Khadi</td>
<td>VI</td>
<td>Total</td>
<td>Khadi</td>
<td>VI</td>
</tr>
<tr>
<td><strong>A. PRODUCTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Tamil Nadu</td>
<td>6216.63</td>
<td>35691.06</td>
<td>42007.69</td>
<td>6797.53</td>
<td>38669.80</td>
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<td>2. South Zone total</td>
<td>10431.65</td>
<td>72960.83</td>
<td>83092.48</td>
<td>11264.55</td>
<td>77840.72</td>
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<tr>
<td>3. Percentage over South Zone</td>
<td>60.33</td>
<td>49.12</td>
<td>50.56</td>
<td>60.34</td>
<td>49.08</td>
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<td>4. All-India Total</td>
<td>35548.99</td>
<td>252345.12</td>
<td>287604.11</td>
<td>32727.96</td>
<td>287657.57</td>
</tr>
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<td><strong>B. EMPLOYMENT</strong> (Persons in lakh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6. Tamil Nadu</td>
<td>.83</td>
<td>9.15</td>
<td>9.98</td>
<td>.85</td>
<td>9.49</td>
</tr>
<tr>
<td>7. South Zone Total</td>
<td>1.75</td>
<td>15.33</td>
<td>17.08</td>
<td>1.77</td>
<td>15.58</td>
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<tr>
<td>8. Percentage over South Zone</td>
<td>47.43</td>
<td>59.69</td>
<td>58.43</td>
<td>48.03</td>
<td>60.91</td>
</tr>
<tr>
<td>9. All India Total</td>
<td>14.43</td>
<td>38</td>
<td>52.45</td>
<td>13.87</td>
<td>59.36</td>
</tr>
<tr>
<td>10. Percentage over All-India Total</td>
<td>5.74</td>
<td>24.03</td>
<td>19.03</td>
<td>3.60</td>
<td>24.11</td>
</tr>
</tbody>
</table>

**Source:** Annual Report, Khadi and Village Industries Commission

**Note:** N.A - Not Available.
KVI industries in Tamil Nadu were less productive when compared with the overall performance of the industries in the country since 1990-91.

Khadi of all the products produced by the Khadi and Village industries had come to face heavy competition from highly cheaper mill varieties which were also offered in more varieties, many of the KVI units had thereafter shifted to production of polyester based textiles. Thus though Khadi was more durable and made of pure hand spun yarn and also hand-made, the changing consumer behaviour had a considerable influence on the industry.

**KHADI AND VILLAGE INDUSTRIES - TIRUCHIRAPPALLI**

In Tiruchirapalli district, the KVI schemes are implemented by the Assistant Director Khadi and Village Industries Board at Tiruchirapalli. The Khadi and Village Industries Board has set up cotton based units, rural textile centres and subcentres, Khadi cloth production units Khadi Krafts, and Village Industries such as soap units, hand made paper units, mat weaving, carpentry and blacksmithy.

Under cotton production a carding unit and a sericulture unit were set up in 1983 and 1988 respectively. The carding unit alone functions now.

**RURAL TEXTILE CENTRES:**

Out of the 16 Rural Textile Centres (RTCs) set up between 1971 and 1991, only 9 are functioning at present.

**KHADI PRODUCTION:**

Out of the two Khadi production units in the district, only the Main cotton production centre functions. The visiting centre at Nallampalayam is not functioning. The main production centre has been functioning since 1958. Nepali loom Centre:
Only two Nepali loom centres, at Karungulam and N. Poolampatti are functioning. The NLC, at Olaiyur, Olaipadi, Muthuservamadam and Utkottai have been closed down.

There is a soap unit at Khandalur and a hand made paper unit at olaipadi. The Hand made paper unit has been closed. Under Cooperative sector, a leather society at Timchirapalli, village industries society at Poovalur, Carpentry society at Ariyalur and Karungulam, tannery society at Sembattu and Potters society at Elakuriclii and cane and bamboo society as Thiravanai koil were established. The village industries society and the potters society have been closed down.

KHADI KRAFTS:

Six Khadi Kraft units are functioning in the District located at lalgudi, Timchirapalli, Thillainagar, Palakkarai, Srirangam and Tiruverambur. They are purely sales outlets for the produce of the KVI units.

Table 4.6.5 shows the production details of the KVI units in Tiruchirapalli district in the years 1996-99.

These KVI units at the KVI Board employ around 20 daily wage workers and 170 piece rate workers.

4.7 PROFILE OF THE SERICULTURE INDUSTRY *

Sericulture, a cottage industry, is one of the most labour oriented sector of the Indian economy, combining the characteristics of both agriculture and industry. The

* Sources of information for this unit - References 10, 15 & 23 to 30 of Chapter IV
### Table 4.6.5

The KVI production at Tiruchirapalli district (1996-99)

<table>
<thead>
<tr>
<th>St.No</th>
<th>Name of the Unit</th>
<th>1996-97</th>
<th>97-98</th>
<th>98-99</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1.</td>
<td>Carding unit, Trichy (in lakh kg)</td>
<td>1.40</td>
<td>0.65</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>Rural Textile Centre:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Karungulam-1</td>
<td>0.95</td>
<td>0.50</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>Karungulam-2</td>
<td>1.04</td>
<td>0.63</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>Kallathupatti</td>
<td>0.40</td>
<td>0.30</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>Vellalapatti</td>
<td>1.00</td>
<td>0.61</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>Ayyanperuvai</td>
<td>0.44</td>
<td>0.33</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>N.Poolampatti</td>
<td>1.02</td>
<td>0.52</td>
<td>0.19</td>
</tr>
<tr>
<td></td>
<td>Malaiadipatti</td>
<td>0.46</td>
<td>0.47</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>Ellanga Kuruchi</td>
<td>0.78</td>
<td>0.48</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>6.09</td>
<td>3.84</td>
<td>1.50</td>
</tr>
<tr>
<td>3.</td>
<td>Khadi Production:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The main Production</td>
<td>0.12</td>
<td>0.05</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Centre, Trichy (in lakh metres)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Nepali loom Centre:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Karungulam</td>
<td>0.22</td>
<td>0.16</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>N.Poolampatti</td>
<td>0.21</td>
<td>0.20</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>0.43</td>
<td>0.36</td>
<td>0.42</td>
</tr>
<tr>
<td>5.</td>
<td>Khadi Sales</td>
<td>79.09</td>
<td>125.56</td>
<td>49.16</td>
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<tr>
<td>6.</td>
<td>Village industries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Products Sales</td>
<td>53.86</td>
<td>21.21</td>
<td>12.80</td>
</tr>
<tr>
<td>7.</td>
<td>Soap unit</td>
<td>30</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Samayapuram (tonnes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Honey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Collection Centre) (tonnes)</td>
<td>2.96</td>
<td>3.04</td>
<td>1.52</td>
</tr>
</tbody>
</table>

Source: The office of the Assistant Director, Khadi and Village Industries Board, Tiruchirappalli.
production of cocoons is agriculture in character but the reeling of raw silk and production of hand-spun silk yarn are essentially cottage-based activities in rural and semi urban centres, employing hand or power-driven appliances with skilled labour.

India is the second largest producer of silk next to China, currently producing 15,000 tonnes of silk. It has the unique distinction of being the only country in the world producing all the commercially known varieties of silk viz, mulberry, tropical, tasar, temperate tasar (oak), eri and muga. About 90 per cent of the production is mulberry silk. Tasar, eri and muga silks are produced in comparatively low quantities. The basic edifice of Indian sericulture industry has been built on its strong home demand. But while the home consumption of silk products has been growing at a rate of about 9.5 per cent per annum, the home production has not been able to keep pace with it in terms of both quantity and quality. In particular, warp quality silk for power is not yet being produced in required quantities in the country.

This subsidiary occupation of the agriculturist involves low investment and provides high employment opportunities. In a way it has paved the way for rural employment as well as rural development. There are four important functions in sericulture. They are, mulberry plantation, silk worm rearing, cocoon production and silk reeling.

The sericulture industry is entrenched in Karnataka, Andhra Pradesh, Uttar Pradesh and Manipur. States like Karnataka, Andhra Pradesh, Jammu and Kashmir, Tamil Nadu and West Bengal are producing mulberry silk while other states produce the tasar variety.

The Indian silk industry is slowly but steadily growing in the several years as shown by the increase in production, depicted in Table 4.7.1, in comparison with the major silk producing countries in the world. There is a healthy increase of 50% compared to 1988. The increase is almost uniform and fairly stable. Almost 100% of
the production is emanating from the rural sector. The main advantage the industry enjoys is the existence of a strong domestic market. The usage of silk is related to the traditional and cultural heritage of India.

The silk consumption in India is more than what it produces and is steadily increasing. The consumption of silk for the year 1999-2000 stood at about 18000 tonnes. The increased demand was met by the import of raw silk from other countries. India also exports silk goods to the tune of 2700 tonnes. The market continues to maintain a gap between demand and supply and this trend would continue in the coming years also.

Thus, it can be seen that the conditions are in favour for further growth of the industry in India. The export scenario also indicates a high growth potential of this industry. The silk goods are being exported from nine export centres. Viz New Delhi, Bombay, Calcutta, Bangalore, Madras, Bhagalpur, Varanasi, Srinagar and Hyderabad. Bangalore, the 'silk capital' of India ranks second in the nine export centres. Different varieties of mulberry, tasar and mixed/blended silk goods are exported. At present the export potential is considerable for superior items such as crepe-de-chine, heavy leaf tatas georgette etc. The main markets for these goods are South Oman, the USA, the UAE, France, Japan, the UK, Saudi Arabia, Mauritius, Malaysia, and Canada.
The total exports of silk yam, ready made garments, fabrics, and Made-ups, and silk carpets have grown from a record of about 85,000 lakhs (of rupees) in 1994-95 to about 116,590 lakhs in the year 1998-99, (Table 4.7.2).

Thus the demand for the various silk goods both in the domestic and foreign markets shows a continuous, steady growing trend, which can be cashed in, if the necessary manpower and material resources are made available through coordinated efforts between the various agencies involved in the promotion of this sector.

Table 4.7.1
(Unit in tonnes)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHINA</td>
<td>34380</td>
<td>40800</td>
<td>48460</td>
<td>54480</td>
<td>64900</td>
<td>72000</td>
<td>77900</td>
<td>59000</td>
<td>55177</td>
<td>49430</td>
<td></td>
</tr>
<tr>
<td>INDIA</td>
<td>9300</td>
<td>10020</td>
<td>10200</td>
<td>10800</td>
<td>12600</td>
<td>12900</td>
<td>12884</td>
<td>12927</td>
<td>14048</td>
<td>14000</td>
<td></td>
</tr>
<tr>
<td>JAPAN</td>
<td>6840</td>
<td>60900</td>
<td>5700</td>
<td>5520</td>
<td>5100</td>
<td>4200</td>
<td>39200</td>
<td>3240</td>
<td>2580</td>
<td>1620</td>
<td>1080</td>
</tr>
<tr>
<td>BRAZIL</td>
<td>1740</td>
<td>1680</td>
<td>1680</td>
<td>2100</td>
<td>2280</td>
<td>2340</td>
<td>2520</td>
<td>2468</td>
<td>2270</td>
<td>2120</td>
<td>1821</td>
</tr>
<tr>
<td>UZBEK</td>
<td>4020</td>
<td>4020</td>
<td>4020</td>
<td>4020</td>
<td>2150</td>
<td>1800</td>
<td>1800</td>
<td>1320</td>
<td>2500</td>
<td>2000</td>
<td>1500</td>
</tr>
<tr>
<td>VIETNAM</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>2100</td>
<td>1500</td>
<td>834</td>
</tr>
<tr>
<td>THAILAND</td>
<td>NA</td>
<td>NA</td>
<td>381</td>
<td>385</td>
<td>423</td>
<td>427</td>
<td>396</td>
<td>750</td>
<td>600</td>
<td>500</td>
<td>400</td>
</tr>
<tr>
<td>IRAN</td>
<td>NA</td>
<td>NA</td>
<td>381</td>
<td>385</td>
<td>422</td>
<td>421</td>
<td>396</td>
<td>750</td>
<td>600</td>
<td>500</td>
<td>400</td>
</tr>
<tr>
<td>S.KOREA</td>
<td>1320</td>
<td>1200</td>
<td>780</td>
<td>910</td>
<td>910</td>
<td>840</td>
<td>491</td>
<td>346</td>
<td>146</td>
<td>146</td>
<td>146</td>
</tr>
<tr>
<td>N.KOREA</td>
<td>1000</td>
<td>1000</td>
<td>1200</td>
<td>1300</td>
<td>1200</td>
<td>1200</td>
<td>600</td>
<td>360</td>
<td>230</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>OTHERS</td>
<td>2660</td>
<td>2120</td>
<td>1719</td>
<td>1615</td>
<td>1677</td>
<td>2801</td>
<td>3504</td>
<td>2217</td>
<td>2165</td>
<td>1666</td>
<td>1438</td>
</tr>
<tr>
<td>TOTAL</td>
<td>61260</td>
<td>66900</td>
<td>70983</td>
<td>76732</td>
<td>82419</td>
<td>97337</td>
<td>10038</td>
<td>85192</td>
<td>79590</td>
<td>71727</td>
<td></td>
</tr>
</tbody>
</table>

Source: DESCDO, ZURICH

NA : Not Available
THE NATIONAL SERICULTURE PROJECT (NSP)

To strengthen sericulture the government had introduced the National Sericulture Project (NSP), in the year 1989, when the World Bank and the Swiss Development Corporation had lended their assistance. The projects implementation which was spread over 7 years, included components for infrastructure, R&D and silk worm seed aimed at vertical and horizontal growth of this unassuming, cottage industry. Extension support in terms of technology transfers was to play a key role in realizing the projects objectives.

The project was introduced in 17 states in the country, involving a total outlay of Rs. 5,500 million (jointly funded by the World Bank and the Swiss Development Bank). The basic objectives of the project were, to improve raw silk output and develop new areas suitable for sericulture. The Research Institutes including the Universities, had taken up to create and improve the awareness about the intricacies in the problems attached with sericulture, and suggest remedial measures to develop new areas suitable for sericulture. Table 4.7.3 shows the achievement of the targets fixed for the five major silk producing states. The performance of NSP has been

<table>
<thead>
<tr>
<th>Year</th>
<th>Natural silk yarn</th>
<th>Readymade garments/Fabrics, made-ups</th>
<th>Silk carpets</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994-95</td>
<td>51363.11</td>
<td>28934.57</td>
<td>3810.27</td>
<td>84107.95</td>
</tr>
<tr>
<td>1995-96</td>
<td>44540.32</td>
<td>34775.81</td>
<td>5664.73</td>
<td>84890.86</td>
</tr>
<tr>
<td>1996-97</td>
<td>45719.48</td>
<td>27515.30</td>
<td>6876.77</td>
<td>80111.55</td>
</tr>
<tr>
<td>1997-98</td>
<td>65571.61</td>
<td>35701.62</td>
<td>10949.82</td>
<td>111593.05</td>
</tr>
<tr>
<td>1998-99</td>
<td>76380.22</td>
<td>31222.77</td>
<td>9086.62</td>
<td>116689.55</td>
</tr>
</tbody>
</table>

Source: The Indian Silk Exports Promotion Council, (SEPC), Mumbai.

THE NATIONAL SERICULTURE PROJECT (NSP)

Table 4.7.2

Silk export performance 1994-99 (Unit in: Lakh Rs.)
excellent in Andhra Pradesh. The gap between the target and actual could be bridged by finding out the solutions for the pertinent problems faced in sericulture, involving the research institutes and motivating the potential entrepreneurs and extending training facilities to them.

SERICULTURE INDUSTRY IN TAMIL NADU

The sericulture Industry in the state can be found to be consisting of the following major activities namely, cultivation of mulberry, silk worm seed production, rearing of silk worms / cocoons, and silk reeling which involves the production of raw silk. The silk yarn activities are undertaken by the state and central governments and private sector units in the state.

Though Tamil Nadu is one of the major silk producing states in our country, the growth of the sericulture industry in the state can be said to show a declining trend. As seen in table 4.7.3, mulberry cultivation and expansion were not achieved as per the plan targets.

Table 4.7.3

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>State</th>
<th>Project Target (in acres)</th>
<th>Achievements</th>
<th>Percentage of Achievement over targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Karnataka</td>
<td>37500</td>
<td>29500</td>
<td>79</td>
</tr>
<tr>
<td>2</td>
<td>Andhra Pradesh</td>
<td>25000</td>
<td>65717</td>
<td>262</td>
</tr>
<tr>
<td>3</td>
<td>Tamil Nadu</td>
<td>28650</td>
<td>16414</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>West Bengal</td>
<td>18000</td>
<td>9820</td>
<td>55</td>
</tr>
<tr>
<td>5</td>
<td>Jammu &amp; Kashmir</td>
<td>6875</td>
<td>3172</td>
<td>46</td>
</tr>
</tbody>
</table>

Source: Director, Sericulture, Salem.
Mulberry cultivation activities are found to be dominated by males and undertaken on a total of 27,382 acres of land in the state, (irrigated land 26181.78 acres and 1201.05 acres of rainfed land). A total of 40,121 farmers including 34903 men and 5213 women are employed in this agricultural activity of the silk industry. The Dharmapuri pocket including Hosur, Denkanikottah, Dharmapuri, Krishnagiri and Pennagaram lead in the cultivation of mulberry in the state.

A glimpse of the silk worm seed production in Tamil Nadu during the years 1990-2000 (depicted in Table 4.7.4.) shows that the industry is showing signs of decline. It has to be remembered that this decline in the performance is registered, despite the Central Government sponsored National Sericulture Project (NSP) that was implemented for development of the industry, including silk worm seed development as one of its major objectives. The production of silk worm seeds had decreased overall by about 44% in the 10 yrs, 1990-2000, and the years 1994-97 have recorded a deep recession in production, achieving less than 50% of the targets.

In production of silk cocoons again the state's production records shows a negative trend, reducing to nearly half of its production from about 13,000 tonnes in 1991-92 to about 8790 metric tonnes in the year 1995-96 and 7256 metric tonnes in the year 1996-97 (Table 4.7.5).

Similarly silk production in the state by reeling using charkas, cottage basins and multi- end reeling units (depicted in Table in 4.7.6) have declined from about 11 lakh kgs in 1990-91 to about 7 lakh kgs. in 1999-2000, the average production being 8.7 lakhs kgs per year.

In total 193 units are involved in the production of silk from cocoons in the various districts of the State. 15 of the above units are from the Government sector, while the remaining 178 units are from the private sector.
Table 4.7.4

Silk worm seed production for the years 1990-2001 in Tamil Nadu (in lakh Disease Free Layings)

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Year</th>
<th>State sector grainages</th>
<th>Central sector grainages</th>
<th>Private sector grainages</th>
<th>Total Production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1.</td>
<td>1989-90</td>
<td>100.00</td>
<td>89.01</td>
<td>50.00</td>
<td>71.02</td>
</tr>
<tr>
<td>2.</td>
<td>1990-91</td>
<td>110.00</td>
<td>85.72</td>
<td>50.00</td>
<td>67.71</td>
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<tr>
<td>3.</td>
<td>1991-92</td>
<td>13.00</td>
<td>80.60</td>
<td>30.00</td>
<td>35.09</td>
</tr>
<tr>
<td>4.</td>
<td>1992-93</td>
<td>150.00</td>
<td>98.81</td>
<td>40.00</td>
<td>32.75</td>
</tr>
<tr>
<td>5.</td>
<td>1993-94</td>
<td>130.00</td>
<td>67.63</td>
<td>45.00</td>
<td>28.99</td>
</tr>
<tr>
<td>6.</td>
<td>1994-95</td>
<td>110.00</td>
<td>53.91</td>
<td>50.00</td>
<td>34.00</td>
</tr>
<tr>
<td>7.</td>
<td>1995-96</td>
<td>110.00</td>
<td>47.05</td>
<td>50.00</td>
<td>36.42</td>
</tr>
<tr>
<td>8.</td>
<td>1996-97</td>
<td>110.00</td>
<td>47.42</td>
<td>50.00</td>
<td>28.06</td>
</tr>
<tr>
<td>9.</td>
<td>1997-98</td>
<td>81.30</td>
<td>63.16</td>
<td>25.00</td>
<td>24.04</td>
</tr>
<tr>
<td>10.</td>
<td>1998-99</td>
<td>76.00</td>
<td>64.94</td>
<td>50.00</td>
<td>23.41</td>
</tr>
<tr>
<td>11.</td>
<td>1999-2000</td>
<td>80.00</td>
<td>60.08</td>
<td>20.00</td>
<td>20.14</td>
</tr>
<tr>
<td>12.</td>
<td>2000-2001</td>
<td>80.00</td>
<td>56.60</td>
<td>20.00</td>
<td>13.210</td>
</tr>
</tbody>
</table>

Source: Director Sericulture, Salem.
Table 4.7.5

*Cocoon Production for the years 1990-2001 in Tamil Nadu*

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Year</th>
<th>Target (in lakh kilograms)</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1989-1990</td>
<td>88.00</td>
<td>99.80</td>
</tr>
<tr>
<td>2.</td>
<td>1990-1991</td>
<td>108.00</td>
<td>118.00</td>
</tr>
<tr>
<td>3.</td>
<td>1991-1992</td>
<td>124.00</td>
<td>130.80</td>
</tr>
<tr>
<td>4.</td>
<td>1992-1993</td>
<td>133.38</td>
<td>141.00</td>
</tr>
<tr>
<td>5.</td>
<td>1993-1994</td>
<td>148.00</td>
<td>74.99</td>
</tr>
<tr>
<td>6.</td>
<td>1994-1995</td>
<td>105.00</td>
<td>71.61</td>
</tr>
<tr>
<td>7.</td>
<td>1995-1996</td>
<td>134.37</td>
<td>87.88</td>
</tr>
<tr>
<td>8.</td>
<td>1996-1997</td>
<td>97.99</td>
<td>73.50</td>
</tr>
<tr>
<td>9.</td>
<td>1997-1998</td>
<td>57.60</td>
<td>57.05</td>
</tr>
<tr>
<td>10.</td>
<td>1998-1999</td>
<td>81.87</td>
<td>58.00</td>
</tr>
<tr>
<td>11.</td>
<td>1999-2000</td>
<td>60.00</td>
<td>63.83</td>
</tr>
<tr>
<td>12.</td>
<td>2000-2001</td>
<td>61.851</td>
<td>45.663</td>
</tr>
</tbody>
</table>

Source: Director, Sericulture, Salem
**Table 4.7.6**

*Raw silk production in Tamil Nadu – 1990-2001*

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Year</th>
<th>Target (in lakh kilograms)</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1989-1990</td>
<td>7.62</td>
<td>8.64</td>
</tr>
<tr>
<td>2.</td>
<td>1990-1991</td>
<td>9.82</td>
<td>10.72</td>
</tr>
<tr>
<td>5.</td>
<td>1993-1994</td>
<td>14.12</td>
<td>7.82</td>
</tr>
<tr>
<td>6.</td>
<td>1994-1995</td>
<td>11.05</td>
<td>7.53</td>
</tr>
<tr>
<td>8.</td>
<td>1996-1997</td>
<td>12.90</td>
<td>7.74</td>
</tr>
<tr>
<td>9.</td>
<td>1997-1998</td>
<td>6.00</td>
<td>6.00</td>
</tr>
<tr>
<td>11.</td>
<td>1999-2000</td>
<td>6.50</td>
<td>6.72</td>
</tr>
<tr>
<td>12.</td>
<td>2000-2001</td>
<td>6.50</td>
<td>4.81</td>
</tr>
</tbody>
</table>

Source: Director, Sericulture, Salem
About 64 per cent of the private sector units and 60 per cent of the Government sector units employ cottage basins to reel silk, while the technologically improved multi-end basins have been used only by about 2% of the private sector units and 20% of the Government sector units. In all 140 charkas, 782 cottage basins and 37 multi-end basins have been employed in the state, (as on 1.4.2000).

In TamilNadu, a competitive market for cocoon is available only in Salem. The Tamil Nadu cooperative Silk producers Federation Limited (TANSILK) has been established in Kancheepuram (a popular centre for silk sarees in India) to market silk yarn. This organization produces and also procures silk yarn and distributes it to silk weavers, Cooperative societies, Khadi and village industries boards and Sarvodhaya Sanghs. Tansilk has established branches in Kumbakonam, Madurai, Salem, Coimbatore and Ami for extending services to the silk reelers and consumers. Though Tansilk functions well in Tamil Nadu, more than 70 per cent of the silk yarn requirements of Kumbakonam (a renowned centre for silk sarees) is fulfilled by private entrepreneurs from Kamataka. Silk yam produced by Karnataka is utilised by silk handloom centres of Tamil Nadu as well.

TIRUCHIRAPALLI:

Tiruchirapalli district was one of the ten World Bank Project districts for the implementation of sericulture scheme which was started during the year 1989-90. Mulberry cultivation and cocoon rearing are undertaken as a commercial activity by about 300 farmers in this district. Apart from them the Government Training Cum Demonstration Centres also contribute towards the total cocoons produced in this district. Silk worm seed production and silk reeling or production of raw silk from the cocoons are undertaken only by the Government units.

The planting of mulberry commences in the month of June and it leads up to November every year. The district gets maximum rainfall during September and
October when mulberry plantation is cultivated in large areas. In hot summer, the temperature in this district is very high and most of the farmers are advised to adjust the pruning schedule of mulberry garden so as to avoid silkworm rearing in the months of April and May.

There are 25 field staff in this department for expansion of sericulture activities. They identify the farmers with suitable land with irrigation facilities and guide them in getting better cocoon yield. After planting mulberry, the farmers are given training in silkworm either in the nearby government farms or private mulberry garden. There after, they are allowed to rear the silkworms in their own rearing house. New sericulturists are guided by the field staff in getting good cocoon harvest. Sericulturists are given training and are given Rs.150/- as stipend and Rs. 150/- worth rearing tools. Improved varieties of mulberry rooted saplings are given to the sericulturists on subsidies through banks every year. All sericulture works are under the control of the Assistant Director, Tiruchirapalli, who is under the controls of the Regional Deputy Director, Tiruchirappalli.

There are three Demonstration-cum-Training centres located at Uppiliapuram, Manikandam and K. Paramathy. These centres impart training to the new farmers in mulberry cultivation as well as in silk worm rearing, besides supplying die mulberry rooted saplings to the new farmers.

There are two model mulberry plantation farms functioning at Kalingampatty and Karukkamadai. These farms help the new farmers in mulberry cultivation and supply them seed cuttings. They act as a demonstration farm for the new farmers and impart practical training in improved package of practices. Three technical service centres had been established at Palaiyur, Musiri and Karar.
THE NATIONAL SERICULTURE PROJECT

As mentioned earlier this district was one of the districts selected for the implementation of the sericulture scheme. The performance of the industry in this district during the programme period, 1989-90 to 1996-97 is detailed in table 4.7.7.

As shown in the table the project can be said to be successful to a considerable extent in expanding the mulberry acreage. But little progress had been made in the silkworm seed production and cocoon production. By the end of the programme in 1996-97 the total production had come down by 48% and 27% respectively. Climatic conditions of the district and lack of adequately skilled labour can be attributed to this unimpressive performance of the scheme. But the seeds of training inputs given to farmers during the programme period can be seen to yield the fruits in the post programme period.

CURRENT PERFORMANCE

From Table 4.7.8 depicting the performance of the sericulture Industry in Tiruchirappalli district during the years 1996-2000, it is clear that though the mulberry acreage had declined steeply from nearly 1170 acres in 1996-97 to a low record of about 354 acres, the farmers have been more effective in increasing their output rates. This can be seen from the increasing productivity recorded by the 'Layings per acre' and the 'Cocoon production per acre' which had progressed by about 74% and 45% respectively during these four years. This productivity has been recorded inspite of a decline in the total layings harvested by about 48% from 1.63 table to 98000, and a decline by about 27% in the total cocoons harvested from 62000 kgs to 39000 kilograms in these four years 1996-2000. Thus it can be taken that more number of farmers have been discouraged from continuing to undertake the sericulture activities year after year while those who have been continuing to perform the activities are making more productive efforts. The training inputs given during
### Table 4.7.8


<table>
<thead>
<tr>
<th></th>
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</thead>
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<td>(1)</td>
<td></td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>1.</td>
<td>Net area under mulberry cultivation (in acres)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Tiruchirappalli</td>
<td>1166.55</td>
<td>195.35</td>
<td>370.55</td>
<td>405.40</td>
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<td></td>
<td>Tamil Nadu</td>
<td>40705.60</td>
<td>18220.02</td>
<td>23728.13</td>
<td>25220.30</td>
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<tr>
<td>2.</td>
<td>Layings harvested (in Lakh numbers)</td>
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<tr>
<td></td>
<td>Tiruchirappalli</td>
<td>1.63</td>
<td>0.75</td>
<td>0.64</td>
<td>0.984</td>
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<td></td>
<td>Tamil Nadu</td>
<td>214.42</td>
<td>139.67</td>
<td>139.58</td>
<td>135.631</td>
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<td>3.</td>
<td>Layings / Acre (in lakh numbers)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td>140</td>
<td>381</td>
<td>171</td>
<td>243</td>
</tr>
<tr>
<td></td>
<td>Tamil Nadu</td>
<td>527</td>
<td>967</td>
<td>588</td>
<td>538</td>
</tr>
<tr>
<td>4.</td>
<td>Cocoon Production (in lakh kilograms)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tiruchirappalli</td>
<td>0.62</td>
<td>0.29</td>
<td>0.25</td>
<td>0.393</td>
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<td>87.74</td>
<td>57.05</td>
<td>58.00</td>
<td>55.752</td>
</tr>
<tr>
<td>5.</td>
<td>Cocoon Production / Acre (kilograms)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Tiruchirappalli</td>
<td>53.15</td>
<td>148.45</td>
<td>64.55</td>
<td>76.94</td>
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<tr>
<td></td>
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<td>215.55</td>
<td>313.10</td>
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<td>221.06</td>
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<tr>
<td>6.</td>
<td>Yield / 100 dfls (kilograms)</td>
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<td></td>
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<tr>
<td></td>
<td>Tiruchirappalli</td>
<td>38.04</td>
<td>38.93</td>
<td>40.00</td>
<td>39.94</td>
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<td>40.92</td>
<td>40.95</td>
<td>41.55</td>
<td>41.11</td>
</tr>
<tr>
<td>7.</td>
<td>Raw Silk Production (in lakh kilograms)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tiruchirappalli</td>
<td>.02570</td>
<td>.03053</td>
<td>.02632</td>
<td>.04137</td>
</tr>
<tr>
<td></td>
<td>Tamil Nadu</td>
<td>7.74</td>
<td>6.00</td>
<td>6.11</td>
<td>6.72</td>
</tr>
</tbody>
</table>

Source: Director of Sericulture, Salem.
the scheme period shown in Table 4.7.7 has to be taken as a contributing factor. It should also be noted that the decline in die cocoon silkworm seeds and silk production in this district is a reflection of the state performance.

From the details collected at the primary sources it has been found that 1 acre of mulberry cultivated per year could provide 120 mandays of employment and 100 layings about 92 mandays. The silk reeling activity could provide 3.5 mandays per kg in tills district.

Silk reeling activity undertaken by the Government unit in this district employed around 10 labourers, all of diem women. Cottage basins (5 Nos) were installed to reel an average of about 1.3 lakh kg of raw silk per year. The raw material cocoon was obtained from die Governments own cocoon farms and from private cocoon producers, who were farmers. Only about 30% of the cocoons produced in the district was utilised for production since the capacity utilisation in the unit was very low due to lack of fresh water supply, which was very essential for effective reeling and also due to lack of skilled labour. The manpower employed for the reeling activity which required very high experience and skill lacked formal training inputs. Moreover the cocoons from the district were migrated to salem and other cocoon markets where they could fetch a better return, when compared to the cocoon market at Trichy.

The grainage has a production capacity of 2 lakh dfls but was running at a loss of about Rs. 2,40,000/- as on march 2000 (the target fixed for the year was 4,00,000 dfls).

The two model centres on average produced 200 to 210 legs of cocoon per year from about 520 to 600 dfls harvested in their own farms at an average efficiency of 4.895 mandays per kg of cocoon.
4.8 PROFILE OF THE HANDICRAFTS INDUSTRY

Handicrafts stand for aesthetic or utility objects produced by hand with great skill. Handicrafts represent our rich cultural heritage and tradition. They reveal the creative urge of the community.

Handicrafts are different from other products of cottage industries. They are unique objects of beauty. Besides, the handicrafts are individualistic and local. The handicrafts of different regions vary in design, tradition, and mode of production. They are the products of manual skill, which is the result of long practice and training. Handicrafts call for great sensitivity, patience and service before results are produced. Indian handicrafts enjoyed an international reputation even in the distant past. However, with the passage of time and under British colonialism, the local interest in them gradually declined. As princely States are abolished and aristocracy lost its importance, the handicrafts were deprived of rich local market. The artisans also could not rapidly adjust themselves with changing circumstances.

Our handicrafts are the products of skill and experience of centuries. Handicrafts have a large variety and richness. The amount of capital needed is very negligible. They can provide full-time as well as part-time employment opportunities to the rural folk. Often they use local resources, such as leather, wool, soft wood, stone, horn, etc. A sizable section of handcraft artisans belong to the weaker sections. Women and labour also constitute a large part of the work force. They are also decentralised throughout the country. The artisans can work in their own natural setting. The income generated by the development of handicrafts industries would be dispersed more widely in the community than income generated in a few big enterprises. Development of handicrafts industries would bring about greater equality.

* Information sources for this unit - References 10, 15 and 31 to 35 of Chapter IV.
of income distribution to improve the rural standard of living. This would also encourage their habits of thrift and investment in rural areas.

Handicrafts comprise a wide range of artistic products such as carpets, ivory products, metalwares, silver filigree, hand-printed textiles, dolls, toys and woodwares etc.

South India holds, for instance, a prominent place in the history of Indian metalcraft. The cire perdue or "lost wax' process of casting copper or bronze was perfected in the South. The largest metal ware output of the South has been in the field of the images of God " Siva' and his consort " Parvati'. " Siva' is the Lord of the Dance (Nataraja). The images are originally made of an alloy of gold, silver, copper, lead and tin. Today, only copper is used.

South Indian craftsmen have also excelled in the art of making elaborate lamps for ceremonial use in temples or at home. They display superb craftsmanship combining utility with aesthetic qualities. In South India, many places are well known for painted or lacquered articles. The South Indian craftsmen generally prefer floral designs. Palm-leaf, paper or cloth fans beautifully denguered are a speciality of the South.

Mat-weaving in quite prevalent in Tamil Nadu. Coconut-palm and date-palm leaves, bamboo, grasses, reeds and cane are used for making mats in the state. Bamboo mats known as 'darma' are used as walls of cottages and huts. But the better mats are made of 'sitalpati' grass (Maranta dichotoma) called cool-mats or of 'madur' grass (cyperus tegetum).

Again, craft like carpet- weaving is not confined to Northern India alone. In the South, the art has made a headway and the chief carpet-producing centres are Chennai, Machilipatnam, Eluru, Vellore, Bangalore, Aurangabad, Hyderabad, Warangal and Ayyampet, and Manahnedu in Thanjavur District. Vellore, near
Madras, has also been a centre of fine woollen carpets once. Today, however, the quality varies according to demand. In the carpets made here the warp and the weft are of cotton, hemp or jute.

Handicraft industries are "labour intensive" and "capital light". They generate more employment opportunities to a large number of rural people and would thus, counteract the seasonal unemployment in agriculture. Further, they would encourage large scale self-employment, which would be a strong base for overall development.

Handicraft industries play a significant role in India's national economy. In 1969-70 about 90 per cent of the registered units in India, with about 35 per cent of their total employment, were handicraft and cottage industries. The number of registered units went up from 36, 199 in 1961 to 4.09 lakhs in 1974, 9.86 lakhs in 1985, 17.67 lakhs in 1995, and 18.04 lakhs in 1998. The total employment provided by the handicraft and cottage industries rose from 27 lakhs in 1965, to 33 lakhs in 1971, 45 lakhs in 1973, 85 lakhs in 1985, 101.67 lakhs in 1995 and to 111.67 lakhs in 1998.

The total value of production which stood at Rs.3,500 crores in 1984-85 went up to Rs.29,620 crores in 1996-97. Handicrafts exports which stood at Rs.1,700 crores in 1984-85 went up to Rs.9,215 crores in 1991-92 and Rs.27,915 crores in 1996-97.

The handicrafts suffered from the problem of lack of finance. This often drove the artisans to the aims of the middlemen. They provide the needed finance to the artisans. But they take away their products at a nominal rate. In the process the artisans are exploited. Today the State Governments are encouraging the production of handicrafts on co-operative line.

This higher cost of production and sub-standard quality of the products were the other problems. Lack of supply of quality raw materials also added to their
problems. Lack of proper marketing has been another problem of the handicrafts. In the past a high proportion of the handicrafts used to be marketed by the private agencies. This also led to exploitation. The artisans lacked the bargaining capacity. As they were poor, they are unable to hold on to their products till they find a fair price.

The All-India Handicrafts Board was established in 1952. Its main task was to advice die Central Government on die problems of handicrafts mid suggest appropriate measures. Utmost importance is given to improve the quality of die handicrafts. The craftsmen are provided with technical guidance. Training programmes are conducted for die artisans jointly by the All-India Handicrafts Board and State Handicrafts Corporations. Efforts are made to improve the designs. To suit modern tastes traditional designs are improved upon. Regional Design and Technical Development Centres have been started at different places to acquaint artisans with modern designs. Research is carried on to introduce improved tools and equipments in die production process. Procurement of raw materials, development of new designs and sale of handicraft items, etc. are to be organised through co-operatives.

TAMIL NADU:

TamilNadu has given birth to and carefully nurtured many traditional handicrafts, and has been the seat of ancient civilisation noted for the practice of arts of luxury and refinement. In its chequered history of the various dynasties like the Cholas, Pandyas, Cheras and the Vijaya nagara kings who were patrons of art, architecture and crafts, various handicrafts were luxuriously nurtured in the ancient past. The British interface had brought an heavy downfall in the growdi and employment of this industry.
The central and state governments had after Independence, geared enormous support to revive the industry back to its vitality and succeeded to some extent. The number of cooperatives has grown from 6 in the first plan to 84 in the fourth plan and to 102 in the eighth plan, covering more than 60 crafts. The number of persons benefited out of the various schemes increased from about 165 persons in the first plan to about 13,660 persons during the seventh plan. The value of goods produced by the industry rose from Rs.4.32 lakhs during the first plan, to 25.00Lakhs during the fourth plan, to about Rs.80 lakhs during the seventh plan and to about Rs.97 lakhs during the eigth plan.

Thus in TamilNadu it is estimated that about 1 lakhs people are employed both in the cooperative and private sectors producing about Rs.80 lakhs of goods per year. Thus this sector provides spare time employment to the peasant and his family supplementing their income, apart from full time artisans. This is particularly relevant in the context of seasonal unemployment in the agricultural sector. The above data shows that there has been a steady growth of Handicrafts in the state.

As per the directives of the All India Handicrafts Board, cooperative organisation has been adopted as the pattern of development in the handicrafts sector and almost all the crafts have been brought under the cooperative fold or departmentally organised units and the benefits in the shape of general services and facilities are sought to be imparted to the artisans through these units. Besides these cooperatives which come directly under the plan programme, there are 100 other industrial cooperatives coming under the handicrafts category consisting mostly of matmakers cooperatives, potters cooperatives, cane and bamboo cooperatives, and tailoring and embroidery cooperatives, which are administered under the community development programme. Central Government financial assistance is the most important form of help rendered to the handicrafts cooperatives. They use this aid to
increase their production and also avail subsidies towards managerial assistance as per the pattern formulated by the government of India.

Common facility centres are being set up to encourage handicrafts industries. Eight crafts in the State have availed of this facility. The common facility centres are designed to provide ideal conditions of work, facilities of small machines including lathes, shaping and buffing machines, looms and tools, dyeing and carding equipment, etc., besides, space for storage and display as well as facilities for training. Even though these centres are placed at die disposal of the Handicrafts Cooperatives, the facilities available in these centres are thrown open to the artisans outside the cooperative fold also.

Training of artisans has been an essential feature of the programme of development in the handicrafts sector. The training programme has a two-fold objectives, viz., the revival of traditional crafts and training of artisans to meet effective demand. Advanced training in designs and production techniques are given to artisans through locally conducted training schemes. Special care is taken towards training artisans in crafts like art metal, printing and artistic wood work which have an export potential.

In order to give a fillip to the production of these crafts, an export section was started to function at Chennai as an adjunct to the Government Handicrafts and Cottage Industries Emporium. Through this section direct exports of the handicrafts of this State were being undertaken. The non-plan sector in Tamil Nadu State consists of sales emporia engaged in the marketing of handicrafts.

To mention the surviving handicrafts of the state, making of musical instrument known as Nathaswaram' of Narasingampet, which has a wide reputation, the making of pith temple models and garlands, wood-carving of a very find quality by a class of workmen called car-carpenters, who carve images on temple cars at
Thanjavur, making jewellery like gold snuff boxes, pearl pendants, etc., painting wooden tables or glass with a paste of powder and gum, ornamenting with glass and precious stones, and unique craft practised by a class of people called the "Rasus' of Thanjavur, wax-printing at Kumbakonam, the weaving of pure silk by "Pattunulkarars' (Sowrashta Brahmins in Thanjavur and Kumbakonam) and making bronze icons and art metal plates by "Stapathis' and Tathars' in Swamimalai and Thanjavur respectively, and making vessels out of brass, copper, tin and bell-metal for domestic use and for export in Nachiarkoil and Kumbakonam areas.

The brass and bell metal-ware of the industry is one of the oldest surviving handicrafts of this State. The most noted centres for this work are Kumbakonam and Nachiarkoil situated in Kumbakonam Taluk in Thanjavur District. Nachiarkoil village is especially famous for it's bell metal "Koojas' and native lamp stands.

Art Plate, a famous handicraft item of Thanjavur, is made of brass with the relief work made of copper and silver sheets on it. These are some of the crafts that have gained repute and survived in the state.

The bronze icons are produced by a complex process by the craftsmen called "Sthapathis" using the traditional 'Madhu Christian' on "Cire Resdue casting technique. Silk sarees of Kumbakonam have a steady and ready market both in India and abroad.

Another handicraft prepared out of locally available raw material is the fine mat, prepared out of special grass called "Korai' (available in plenty in the banks of the river cauvery). Thiruthuraipoondi is a reputed village for this craftwork.

The druggets and carpets of Manalmedu made out of plucked wool and also mixed wool (added with lime wool) is a very attractive product that has a steady market all over the world. Spinning is done mostly by the women folk of the "Naicker' and Muslim Community.
Palm-leaf wares are very popular and comparatively easy to make. As this trade does not demand much skill, a number of men, women and children are actively employed in the work.

The main materials needed for the manufacture of folding fans are tender palm leaves, bamboos, necessary colours and paints and thread and steel wire. The manufacturing process is very simple and involves no complication, whatsoever.

TDRUCHIRAPPALLI:

The development of handicrafts is based on two factors. Firstly, it is due to the demand by common people for comparatively plain objects of utility value mostly living in and around the centres of production and secondly due to the demand by aristocrats and export markets for the more sophisticated products and choice of gift articles and also objects of artistic value. Though complicated in the matter of production involving numerous processes each craft is individualistic and local in appearance. The District Industries Centre identifies local craftsmen and rural artisans in the manufacture of various handicrafts in this district, registers them and assists them in getting the required finance.

The Handicrafts industry in this district mainly comprises of the 65 odd handicrafts units and unorganised units distributed among a handful of crafts. The TamilNadu Handicraft Development Corporation does not have a production centre in this district. Handicraft emporiums and showrooms of the corporation indirectly support these units by absorbing a part of the produce of these units (on condition that it suits their norms and expectations).

Basket making, mat making, bricks and tiles manufacturing were carried out as in other parts of the State. Building stone and stone useful for road metalling, including limestone and laterite minerals were available and mineral based industries sprang-up for exploiting these products, of economic value. Most temples of the
period had stucco works. They were made by a special proportion. The paste was moulded into desired shape and style and over that suitable natural colours were painted.

Many old time industries had to face competition from the modern industries producing quality products at lesser cost. Competition from machine made goods, deficiency of raw materials, lack of support and initiative from local people, want of marketing and insufficiency of income of artisans engaged in the occupation caused the decline of many old time industries.

Tiruchirappalli district has long been known for artistic textiles, viz., silk sarees with exquisite zari designs. Some of these products have captured good markets throughout the country. The embroidery works produced takes its inspiration from the nature and the products reflect the colour of the flora and fauna of this region.

Elegant simplicity and superb craftsmanship are the characteristic of the jewellery in this district. Another category of the handicrafts industry is the semi precious stones and synthetic gem cutting and polishing. The hand made bead garlands of different colours and designs to cater to the needs of modern markets and changing moods for fashion creators are manufactured by the womenfolk of Narikuravas. They are marketing these products throughout India. One hundred and eighty one such handicraft artisans are identified by this District Industries Centre and issued handicrafts certificate. They are living in Devarayaneri village near Tiruverambur. These handicraft artisans are assisted in marketing their products in various exhibitions conducted in the State throughout the year. They are introduced to the Tamil Nadu Handicraft Development Corporation for marketing through the Poompuhar Sales Emporia.
The Tamil Nadu Handicrafts Development Corporation, promotes, establishes and operates sales offices such as emporia, showrooms, publicity offices, exhibitions, stall centres and thus paves way for improving the marketability of handicrafts anywhere within and outside India.

The showroom renders assistance to the local artisans by way of procuring handicrafts goods from them every year to the value of Rs.50,000/-

Though the sales figure in the showroom for the year 1999-2k is as high as Rs.46,94,189. (Table 4.8.1), only articles valued to a total of about 1 lakh are procured from the artisans and craft workers in the district. The remaining chunk of the demand is met by procuring the required crafts works mainly from the production centres of the corporation in the neighbouring districts.

Art plates are procured from Tanjore, bronze pieces from swamimalai, bronze lamps from Nachiarkoil (Madurai) Ayyakudi (near Tirunelveli) and Vajaikulam, Sandal wood, and wood carvings from Vallalcuruchi (South Arcot district) and Kalankari paintings from Kuinbakonam. Only the miscellaneous handiworks like those made of bamboo, papermesh, P.O.P, paintings, Pith work, and easternware are bought from the local artisans. The network (Pith work) of the Rockfort of Tiruchirapalli is a reputed handicraft that has good demand throughout the year, bought especially by the tourists. But of late, these artisans it is learnt have migrated to the neighbouring district of Thanjavur.

It is to be noted that of the odd 20 to 25 artisan families ekking out their living from working on these handicrafts in this district, a handful of them stand high repute for their high specialisation in their skill and also because they are almost monopolist in their respective handicraft productions. For example, 75 years old Mr. Govinda sawmy Naidu and his three sons are the remaining few of the group of artisans in this district, who were engaged in the Applique work craft that are
Table 4.8.1

The articles procured and Sold at Poompuhar Showroom Tiruchirappalli 1999-2k (Value in lakhs rupees).

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Name of the Handicraft (2)</th>
<th>Articles available in the Handicraft (3)</th>
<th>Value of articles provided (4)</th>
<th>Value of articles sold (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wood works</td>
<td>Sandal, Rosewood products etc.</td>
<td>15.40</td>
<td>9.02</td>
</tr>
<tr>
<td>2.</td>
<td>Metal items</td>
<td>Bronze and Brass products etc.</td>
<td>13.75</td>
<td>22.06</td>
</tr>
<tr>
<td>3.</td>
<td>Fibres</td>
<td>Baf.</td>
<td>0.08</td>
<td>0.026</td>
</tr>
<tr>
<td>4.</td>
<td>Textiles</td>
<td>Bed spreads, screen</td>
<td>4.56</td>
<td>4.07</td>
</tr>
<tr>
<td>5.</td>
<td>Gems and Jewellery</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Painting</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7.</td>
<td>Others</td>
<td>Garlands, Carvings etc.</td>
<td>15.05</td>
<td>11.76</td>
</tr>
</tbody>
</table>

Source: District Statistics Office, Tiruchirappalli
traditionally used to decorate the chariots, and as huge decorative hangings in shamianas and 'Pandals' daring religious and social functions. The 'Thembai', 'Asanjadi' and 'The Kalasams' are all huge textile made decoratives in dark shades that are used to decorate the chariots. Assisted by unskilled artisans who join to learn the craft and then assist the 'Asaan' or the guru in production, Mr. Govindasamy hopes that at least a few of the trainee artisans, most of whom are women, would continue to propagate the art of producing these exquisite Applique works to the future generation.

A couple of families engaged in pidiwork model of temples and structures like Taj Mahal were, as mentioned earlier the remaining few of the families who had engaged in this handicraft traditionally.

Migration into more diversified occupations offered by the urban industries for better, and established returns for their livelihood seem to be the major reasons for the slow but steady disintegration of these traditional occupations. Some of the handicraft products continue to be a extravagance and as such the industry depends very much on the appreciation for aesthetic value in these products. The purchase-making decision is thus highly whimsical and hence the unsteady returns from this occupation.
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