ANCILLARY DEVELOPMENT IN INDIAN TELEPHONE INDUSTRIES

In this chapter (and the following one) we examine the ancillary development efforts in two large public sector undertakings (PSUs)\(^1\) in Bangalore. Here, we have used the term ancillarisation (or ancillary development) instead of sub-contracting since their effort at farming out of production in was consciously promoted by an official directive though many of them have attempted to develop sub-contracting even before the policy was introduced. As discussed in Chapter 1 PSUs have to promote exclusive ancillaries with assured orders, technical assistance, and priority in payment of bills. However even after implementing the policy a sizeable number of non-ancillary small firms continue to undertake sub-contract work for PSUs. Since our study is on sub-contracting, ideally we should have been able to capture both the ancillaries and non-ancillary firms undertaking sub-contracting work as per our analytical scheme outlined in Chapter 1. However, as the PSUs do not maintain systematic data on the non-ancillary sub-contractors our exercise got restricted to the ancillaries only.

Section 1

The setting

Introduction to the company:

Indian Telephone Industries (ITI), a public sector monopoly, manufacturing telecommunication equipment was set up in 1948 in Bangalore as a departmental undertaking of the central government. Two years later it was converted into a limited liability company under the Companies Act. ITI entered into a 15-year technical collaboration with the Automatic Telephone and Electric Co. of the UK to manufacture strowger type of telephone exchange equipment. After the expiry of the collaboration in 1963 the firm entered into a fresh agreement with Bell Telephone Manufacturing

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1. Public sector undertakings (PSUs), public sector enterprises (PSEs), and public enterprises (PEs) are used synonymously.
Company of Belgium to produce cross bar telephone switching equipment - which was then a more advanced technology. In the meantime ITI commenced production of long distance transmission equipment said to be based more or less on its own technology.

From a modest beginning with a gross block of Rs.85 lakhs in 1950-51, ITI has grown into a multi-plant and multi product enterprise employing as many as 27 thousand employees with a turnover of over Rs.180 crores and gross block of Rs.60 crores in 1983. Presently, it meets practically the entire requirement of telecommunication equipment of the country. The firm manufactures strowger, cross bar and electronic digital switching systems, telephone instruments, transmission equipment for earth stations (for satellite communication) and a variety of telecommunication requirements of the Posts and Telegraphs (P&T) department, defence, railways and private customers. However, nearly four-fifth's of ITI's output is used by the P&T department.

The seventies witnessed a spatial diversification of the firm's manufacturing operations. A small plant to make fuses and cords was set up in Srinagar (Jammu & Kashmir) in 1970. In the same year a transmission equipment manufacturing plant was set up in Naini (Allahabad) to supplement the Bangalore plant's output. A telephone instrument division was added in Naini during 1974-75. In 1976 a strowger switching equipment plant commenced production at Rae Bareli. Later a crossbar equipment plant was added there. Towards the end of the decade a small electronic switching equipment unit was set up in Palghat (Kerala). Currently, yet another very large sized electronic switching equipment plant is being set up in Manakpur (U.P.). However, in spite of these newer plants, the Bangalore complex continues to be the biggest with a turnover of Rs.180 crores in 1982-83 accounting for nearly two-thirds of the firm's output.

2. This is valid till the recent liberalisation when certain types of telecom equipment, mainly private user end, were thrown open to the private sector.

3. The break-up of value of production for different categories of items is not available.

4. A few years ago P&T has been bifurcated into two separate departments and since then ITI comes under the administrative control of the Department of Telecommunications. However for the sake of convenience we will use the term P&T to refer to ITI's "supervisory department" of the central government.
A public sector monopoly ITI has been following a "cost plus" pricing which enables the firm to record profits irrespective of its level of output. However, ITI's working capital position appears to get adversely affected by P&T's irregular payments resulting in a frequent cash flow problem, thereby adversely affecting the firm's functioning in a significant manner. Right from its inception, the Bangalore Complex has had a close technical and managerial relationship with its supervisory body.

The complex consists of four divisions: Strowger, Crossbar, transmission equipment and R&D. While the first two divisions make telephone exchanges using two different technologies, the transmission division manufactures communication earth stations. The R&D unit houses an R&D unit employing about 1700 persons in 1982. Strowger is the biggest and oldest one, is currently being phased out with the introduction of electronic switching system. At current prices the value of output of the Bangalore Complex has gone up from Rs.39 crores on 1972-73 to Rs.120 crores.

detailed discussion on this see Committee on Public Undertaking (COPU), Fifth Lok Sabha.

could not carry out an analysis of ITI's finances, the following quote from the statement of the executive director of the Bangalore Complex seems to bring out the validity of the proposition.

"The automatic cut by the P&T in the total allocation for payment to ITI had major impact and placed a financial burden since January 1983. This was partially overcome by making efforts to generate funds from other sources. Bangalore Complex : A Case Study, 9th April 1983, ITI, Bangalore.

The senior managerial personnel for a considerable period of time used to be drawn from the department. These cadres apparently brought with them the departmental administration which probably inhibited the firm to develop entrepreneurial attitude essential for a business organisation. However, over a period of time with the development of ITI's internal managerial capability, the role of "bureaucrats" appears to have declined.

ever, not considered a part of the complex for internal managerial
In 1982-83 (Fig. 5.1), in real terms the output seems to have doubled during the period implying a compound growth rate of 7.5 per cent per annum.¹⁰

Figure 5.1

Output of ITI, Bangalore complex, 1972-73 to 1982-83

Source: ITI Ltd. and Wholesale price index of India

The sharp decline in the output during 1978-79 and 1980-81 were on account of strikes.

We have deflated the value of output at current prices with price index of electrical machinery which is the closest available index.
The Bangalore complex is a very large factory, employing over 18 thousand persons. While the total employment has increased steadily since 1949 (Fig. 5.2) the number of 'operatives' (or workers) has slowed down since the mid-sixties and declined in absolute terms after 1978. The freeze on recruitment of workers conforms to the observed pattern in all the major factories in Bangalore, as discussed in Chapter 3.

Figure 5.2
Total number of employees and workers in the Bangalore complex, 1950-1982

Source: ITI Ltd.

11. Slowing down of the rate of recruitment of workers since the mid-sixties has perhaps little to do with the recessionary condition in the organised manufacturing sector. ITI never faced a demand constraint. On the contrary ITI's output has, plan after plan, fallen short of targets.

12. The rapid growth in managerial staff is partly attributable to a large scale promotion of senior 'operatives'. However, there is no denying that fresh recruitment of workers practically stopped in the seventies.
Section 2

Organisation of ancillary development

Genesis of farming out of production in ITI:

In the early fifties as Bangalore was industrially not very developed any large manufacturing plant had to necessarily manufacture a relatively larger share of components and sub-assemblies in-house, especially in the newer industries producing import substitute products like telecommunications equipment. This, among other reasons, probably accounts for a highly vertically integrated plant structure at ITI. For instance, ITI even has a captive facility to make wooden boxes for packing an activity that is remotely connected with the manufacture of telecommunications equipment. This is testified in the firm's Annual Report (1957):

"The factory continues to maintain satisfactory progress in all fields. In addition to making, as before, all the parts of telephone with the exception of two parts not ordinarily produced in a factory like ours we stepped up...the production of components of auto exchanges equipment..."

Realising the disadvantages of such an organization of production ITI made a modest beginning in sub-contracting by placing orders for simple components with the local small suppliers in the early sixties. Moreover, around the same time the company also promoted a women's cooperative constituted by the dependents of the ITI employees to undertake simple assembly work.

Though the advantages in farming out of assembly work to the cooperative was obvious, the management appears to have perceived it more as a social service activity than a conscious commercial venture. While the number of such cooperatives - called "social ancillaries" - increased over time their role remained very marginal and probably declined in the recent years. (More details about it later).

As the requirement of spares also increased rapidly, by about the late sixties ITI is said to have been unable to meet the growing requirement with the existing plant and machinery (and the given managerial practices). The firm was apparently averse to invest in simpler general purpose machines to make the spares as it was mooting

13. This is perhaps not peculiar to ITI. As Ishikawa has commented this appears to be true of all economies which made conscious attempt at rapid import substituting industrialisation. Due to lack of complementary industries and inadequate infrastructure these plants have necessarily got to be relatively more vertically integrated. The problem probably gets accentuated when the new manufacturing is taken up under public sector. See Ishikawa, (1983).
the idea of phasing out its equipment keeping in view of the technological changes sweeping the telecommunication industry the world over.

It was around this time, in 1971, that the Government of India announced the ancillary development policy (see, Appendix to Chapter 6). ITI perceived an opportunity in this as it could pass on the task of manufacturing spare parts to the ancillaries without committing any further capital investment on its own. The ancillary development programme was thus initiated in 1974 in collaboration with the state level industrial promotion corporations and the Small Industries Service Institute [SISI].

Selection of entrepreneurs:

Applications were invited from educated unemployed engineering graduates for the selection of entrepreneurs through an advertisement at SISI. However, ITI's request for allotting some ancillaries to its employees and officers having the required technical competence was also accepted. While in the first phase 35 ancillaries were promoted, after about two years, 15 more were added in the next phase wherein a few existing small scale units were also granted the exclusive ancillary status. The entrepreneur selected in the first phase were provided with industrial sheds in the ancillary estate an ownership basis for a nominal instalment of Rs.620 per month, charged from the second year of the commencement of production. Each ancillary was allotted a specific item for manufacture, on the basis of the project report preparation.

14. Whether the additional output could be produced by improving internal efficiency appears to have received little attention.

15. While the Karnataka Finance Corporation and the nationalised banks provided the fixed and working capital for the ancillaries, Karnataka State Industrial Development Corporation [KSIDC] developed an exclusive ancillary estate consisting of 35 sheds, at a distance of about 3km from the ITI plant. The estate has well endowed infrastructure including a post office and a branch of a nationalised bank. Thus ITI has no financial commitment in the programme.

Very surprisingly the estate does not have drinking water, which has been one of the grievances of the entrepreneurs. Apparently the ground water in that area is not potable.

16. A committee consisting of General Manager, ITI, Managing Director, KSIDC and Director, SISI selected the entrepreneurs in 1974.

17. It appears to have been a replication of the industrial licensing system at a micro level!
red by SISI. On an average, 90 per cent of the capital employed was provided by the public sector financial institutions and the commercial banks.

**ITI's assistance to the ancillaries:**

As per the agreement the parent firm is committed to provide assured orders (at least "one-shift load") at "a reasonable price" and accord them priority in payment of bills. These clauses in the agreement (See Appendix 5.3) are intended to protect the interest of the ancillaries from undue competition to enable them to learn the technology and to become efficient.¹³

Our detailed survey suggests ITI offered, in the spirit of the policy, considerable assistance to the ancillaries.¹³ A plant level committee was formed and separate ancillary administration was set up. The entrepreneurs were given a six month training to acquaint themselves with the technology, costing procedures, financial management, etc. The workers employed by the ancillaries were also offered technical training free of charge to impart the relevant skills.¹⁴ Moreover, the entrepreneurs were apparently provided with open access to all the facilities at ITI. The following extract from the company's internal note gives a more complete picture of firm's assistance:

1. "Suggestions and guidance in the preparation of project reports and selection of plant and machinery.
2. Transfer of complete technical know-how by providing component drawings, design detail specification of raw material, process layouts, tool drawings, costing methods, etc.
3. Assistance in the methods and processes of manufacture.
4. Provision of inspection instruments, tools and gauges on loans free of charge.
5. Supply of imported and scarce raw materials.
6. Help in procurement of critical items of raw materials and components."

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¹⁸ The ancillary development policy can be seen as an extension of the infant industry argument at the level of a small firm.

¹⁹ The ancillary entrepreneurs were given identity cards just like the ITI's employees and officers to enter the factory at their will and use all the facilities.

²⁰ Plant level committee consists of representatives of the ancillary entrepreneurs, Director SISI, Managing Director, KSIDC, a representative of the banks and the Chief Executive of the Bangalore complex.

²¹ We could not get any data to find out how many of them took part in this training.
Though the ITI officials who opted to set up the ancillaries had to seek voluntary retirement they were permitted to retain their jobs up to a period of 18 months from the time of allotment.

Information about the ancillaries:

The distribution of the ancillaries according to the background of the entrepreneurs shows that out of 50, ten were ex-ITI personnel, 12 were unemployed engineers, 24 chosen on the basis of open selection and three recommended by the banks. [more about it later].

As mentioned earlier, each ancillary is assigned a specific item(s) of manufacture/assembly. Therefore, depending on the use of the output the ancillaries are assigned to different divisions of the Bangalore complex. Out of 49 ancillaries (for which we have the data) 16, 10 and 20 of them are assigned to strowger, crossbar and telephone divisions respectively. The remaining three provide common services like tool making, electroplating and finishing.

Electro-mechanical telecommunication technology used in the Bangalore complex is a relatively simple one excepting for a few sensitive sub-assemblies like (in the telephone instrument) transmitter and receiver. The final products - be they telephone exchanges or telephone instruments - are assemblages of a large number of relatively simple components and assemblies - which permit considerable scope for farming out of production. ITI gets as many as 1500 types of piece parts from the ancillaries requiring fairly simple metal working facilities (and skills) in assembling electrical components.

22. These ancillaries do not manufacture any components or sub-assemblies but undertake repair work for ITI and the ancillaries.
Table 5.1: Distribution of ancillaries according to the nature of work done

<table>
<thead>
<tr>
<th>Type of work</th>
<th>No. of ancillaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Steel fabrication</td>
<td>5</td>
</tr>
<tr>
<td>2. Spares</td>
<td>13</td>
</tr>
<tr>
<td>3. Sub-assembly/assembly</td>
<td>19</td>
</tr>
<tr>
<td>4. Packing cases/wood works</td>
<td>3</td>
</tr>
<tr>
<td>5. Aids to ancillaries for finishing</td>
<td>1</td>
</tr>
<tr>
<td>6. Metal piece parts</td>
<td>5</td>
</tr>
<tr>
<td>7. Casting</td>
<td>1</td>
</tr>
<tr>
<td>8. Tools</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 50

Source: ITI, Bangalore

Note: Electro-mechanical technology used in ITI involves a very large number of small sized components and sub-assemblies. It is not easy to specify them in detail. For our purpose it is sufficient to know the categories listed in Tables 5.1 & 5.2

Table 5.1 shows, quite conforming to what we said above, assembly/sub-assembly is the single largest category of work done by the ancillaries. Table 5.2 describes the type of items manufactured by them. According to Table 5.3 nearly half of the ancillaries supply goods to ITI in the range of Rs.5 to Rs.20 lakhs.

Table 5.2: Distribution of value of supplies by ancillaries according to the major items during 1982-83

<table>
<thead>
<tr>
<th>Items</th>
<th>Value</th>
<th>Percentage (Rs. in lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Moulded items</td>
<td>52</td>
<td>11.9</td>
</tr>
<tr>
<td>2. Ringar/induction coil</td>
<td>44</td>
<td>10.9</td>
</tr>
<tr>
<td>3. Transmitters</td>
<td>43</td>
<td>9.8</td>
</tr>
<tr>
<td>4. PC assembly</td>
<td>43</td>
<td>9.8</td>
</tr>
<tr>
<td>5. Jack assembly/lamp panels/ alarm fuses, etc.</td>
<td>39</td>
<td>8.9</td>
</tr>
<tr>
<td>6. Receivers</td>
<td>35</td>
<td>8.0</td>
</tr>
<tr>
<td>7. Magnet coils</td>
<td>27</td>
<td>6.2</td>
</tr>
<tr>
<td>8. Iron work</td>
<td>23</td>
<td>5.3</td>
</tr>
<tr>
<td>9. Fasteners/metal piece parts</td>
<td>20</td>
<td>4.6</td>
</tr>
<tr>
<td>10. Switch mechanism</td>
<td>16</td>
<td>3.7</td>
</tr>
<tr>
<td>11. 3-watt generators</td>
<td>15</td>
<td>3.4</td>
</tr>
<tr>
<td>12. Relays</td>
<td>14</td>
<td>3.2</td>
</tr>
<tr>
<td>13. Dials</td>
<td>12</td>
<td>2.7</td>
</tr>
<tr>
<td>14. Wiper assembly</td>
<td>11</td>
<td>2.5</td>
</tr>
<tr>
<td>15. Reed relays</td>
<td>10</td>
<td>2.5</td>
</tr>
<tr>
<td>16. Cartons</td>
<td>9</td>
<td>2.3</td>
</tr>
<tr>
<td>17. Resistors/transformers</td>
<td>9</td>
<td>2.1</td>
</tr>
<tr>
<td>18. ATQ coils</td>
<td>5</td>
<td>2.1</td>
</tr>
</tbody>
</table>

Total: 438 100.0

Source: ITI, Bangalore

Note: From this data one cannot say anything about the value added in manufacture by the ancillaries.
It can be seen from Table 5.4 that the value of supplies from the ancillaries to ITI has gone up, at current prices, nearly 330 per cent from Rs.133 lakhs in 1974-75 to Rs.575 lakhs in 1983-84, with considerable year to year fluctuations. However, when measured as a proportion of the value of output of the Bangalore complex it remains just around five per cent indicating the limited extent of ancillarisation effected.

Table 5.3: Distribution of ancillaries according to their value of supplies in 1982-83

<table>
<thead>
<tr>
<th>Class interval (Rs. in lakhs)</th>
<th>No. of ancillaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.50</td>
<td>2</td>
</tr>
<tr>
<td>0.50 - 1.00</td>
<td>3</td>
</tr>
<tr>
<td>1.01 - 5.00</td>
<td>12</td>
</tr>
<tr>
<td>5.00 - 10.00</td>
<td>13</td>
</tr>
<tr>
<td>10.01 - 20.00</td>
<td>12</td>
</tr>
<tr>
<td>20.01 - 30.00</td>
<td>2</td>
</tr>
<tr>
<td>30.01 - 40.00</td>
<td>1</td>
</tr>
<tr>
<td>40.01 - 50.00</td>
<td>-</td>
</tr>
<tr>
<td>Above 50.00</td>
<td></td>
</tr>
</tbody>
</table>

Source: ITI, Bangalore

This figure, however, could be misleading. If one takes the supplies from ancillaries as a proportion of the total purchases made by the company, the figure has gone up from about 12 per cent in 1975 to 22 per cent in 1983 (Table 5.5). Moreover, the share is even higher if it is taken as a proportion of bought-out items. The procurement from ancillaries as a proportion of the total bought-out components went up from 24 per cent in 1976-77 to 31 per cent in 1978-79. Though data are not available for a long enough period to arrive at a hard inference it does seem to suggest that the contribution of the ancillaries may not be as insignificant as it does appear at first sight. However, it is not clear from the available data what proportion of the ancillaries' output is used as spares. We also do not have any idea as to the relative share of value added to value of output in ITI and the ancillaries.
Table 5.4: Value of supplies from ancillaries
(Rs. lakhs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Supplies from ancillaries</th>
<th>Production of Bangalore complex*</th>
<th>Value of ancillaries supply as % of the output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974-75</td>
<td>133</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1975-76</td>
<td>212</td>
<td>6287</td>
<td>3.4</td>
</tr>
<tr>
<td>1976-77</td>
<td>360</td>
<td>7259</td>
<td>5.0</td>
</tr>
<tr>
<td>1977-78</td>
<td>360</td>
<td>7131</td>
<td>5.1</td>
</tr>
<tr>
<td>1978-79</td>
<td>416</td>
<td>6956</td>
<td>6.0</td>
</tr>
<tr>
<td>1979-80</td>
<td>370</td>
<td>8146</td>
<td>5.0</td>
</tr>
<tr>
<td>1980-81</td>
<td>240</td>
<td>5302</td>
<td>5.0</td>
</tr>
<tr>
<td>1981-82</td>
<td>459</td>
<td>10766</td>
<td>4.3</td>
</tr>
<tr>
<td>1982-83</td>
<td>444</td>
<td>11981</td>
<td>4.0</td>
</tr>
<tr>
<td>1983-84</td>
<td>575</td>
<td>12290</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Source: ITI Bangalore.

Notes:* Production at Bangalore complex includes the output of spares also.

It is important to bear in mind that purchase from the ancillaries may not give a complete picture of the extent of sub-contracting in a public sector enterprise since the firm, as mentioned earlier, could be procuring a number of items from non-ancillary small scale units. The information available for ITI does not permit one to find out the nature and the proportion of (components and sub-assemblies) procured from (non-ancillary) small scale units nor whether there has been any definite trend towards substitution of one source for another.

Table 5.5: Percentage of supplies from ancillaries to total purchases by ITI

<table>
<thead>
<tr>
<th>Half-yearly ending</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 1975</td>
<td>12.2</td>
</tr>
<tr>
<td>September 1976</td>
<td>10.6</td>
</tr>
<tr>
<td>March 1977</td>
<td>13.8</td>
</tr>
<tr>
<td>September 1978</td>
<td>8.8</td>
</tr>
<tr>
<td>March 1979</td>
<td>18.4</td>
</tr>
<tr>
<td>March 1980</td>
<td>14.7</td>
</tr>
<tr>
<td>September 1981</td>
<td>15.5</td>
</tr>
<tr>
<td>March 1983</td>
<td>29.8</td>
</tr>
<tr>
<td>September 1983</td>
<td>22.2</td>
</tr>
</tbody>
</table>

Source: ITI.

Note: 1. Total purchase = indigenously bought out items + raw materials (indigenous & imported)

2. As mentioned in the beginning of the chapter the cash flow in ITI is severely affected by erratic payments by the P&T. High degree of fluctuations in purchase is probably a reflection of this problem.
Since the data on ITI's purchase from small scale units is maintained at the divisional level we do not have the aggregated information for the Bangalore complex as a whole. Moreover, even these data are available only for the last few years.\textsuperscript{23}

As on September 1983, ITI's strowger division had 197 small scale units as suppliers and the total value of their purchase was Rs.368 lakhs.\textsuperscript{24}

As can be seen from Table 5.6 in each quarter the purchase from small scale units is more than that from ancillaries. It seems to suggest that total sub-contracting by ITI could be much more than what is shown by the figure of quantum of purchase from ancillaries.

Table 5.6: Break-up of total purchases in Strowger Division of the Bangalore complex

<table>
<thead>
<tr>
<th>Period</th>
<th>Total value of purchase</th>
<th>Purchases from</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Inland</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ancillary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Small scale</td>
</tr>
<tr>
<td></td>
<td></td>
<td>units (excluding ancillaries)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium and large scale units</td>
</tr>
<tr>
<td>Jan.-March 1982</td>
<td>162.45</td>
<td>9.85</td>
</tr>
<tr>
<td>April-June 1982</td>
<td>327.55</td>
<td>6.25</td>
</tr>
<tr>
<td>July-Dec. 1982</td>
<td>493.96</td>
<td>69.28</td>
</tr>
<tr>
<td>April-June 1983</td>
<td>400.49</td>
<td>78.54</td>
</tr>
<tr>
<td>July-Sept. 1983</td>
<td>469.34</td>
<td>41.17</td>
</tr>
<tr>
<td>Oct.-Dec. 1983</td>
<td>302.42</td>
<td>51.89</td>
</tr>
</tbody>
</table>

Source: ITI, Bangalore

Note: We have no information of the nature of purchase from the medium and large scale units.

Ancillary administration procedure:

ITI has set up a Central Ancillary Administration (CAA), headed by a general manager, located outside the factory premises so as to facilitate freer access to the

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\textsuperscript{23} We cannot use the conceptual categories developed in the earlier chapter here since the information is not kept in a proper fashion.

\textsuperscript{24} We understand that the items procured from the small scale units are different from those supplied by the ancillaries.
The planning group in CAA has the following functions (as outlined in ITI's internal note):

1. "It looks after the policy matters.
2. Liaison with manufacturing units, shops within ITI, government agencies like SISI, BPE etc.
3. Maintaining/up-dating the latest market rates of raw materials/components.
4. Matters of plant level committee, etc.
5. Collecting/preparing the progress reports/problems/developmental activities and reporting the same to government agencies.
   a) History card of ancillary units indicating purchase orders/delivery schedules outstanding balance.
   b) Follow up meetings with ancillaries and other related departments to find out the bottlenecks, problems of supplies and to take remedial actions to achieve the supplies as per schedule".

As ancillaries are said to find it uneconomical to invest in expensive testing equipments, CAA provides a wide range of these facilities free of charge, which are used regularly.

**Production Planning:**

On the basis of the annual production programme the planning department of each division of ITI works out in detail the yearly requirement of each component/sub-assembly. The quantity to be purchased from the ancillaries is arrived at by subtracting the estimated internal production from the total yearly requirement. Purchase requisition are issued by the planning departments to the CCA to procure the required items from the ancillaries.

No attempt, apparently, is made at this stage by the planning departments to find out if the items earmarked for the ancillaries could be obtained from outside suppliers at a competitive price. Since ITI is committed by policy directive to

25. CAA is a fairly large establishment consisting of about 200 officials (managerial and non-managerial) meant for looking after planning of ancillary development, formulation of prices and executing ITI's requirement. CAA also has quality inspection wing.

26. The concerned officials were reluctant to spare this vital information.

27. These instruments are very expensive. No one could give a rough idea of the total investment in these facilities. Our rough estimate is that the investment would be of the order of at least Rs. 1 crore.

28. It is clear from our study that though the ancillaries were set up to cater to the requirements of spares they in fact produce for original equipment also.
provide one shift load\textsuperscript{29} to the ancillaries it places orders for what it cannot produce in-house at the existing levels productivity and work practices. Open tenders are invited only in situations when ancillaries are said to be unable to meet the requirement. Such instances seem to be, however, rare. Thus, the ancillaries are totally protected from open competition.

**Placement of orders:**

On receipt of the purchase requisitions, the commercial wing of CAA invites limited tenders from the ancillaries who have been allotted the items and those having the required facilities for manufacture.\textsuperscript{30}

Meanwhile the accounts department of CAA works out the rates at which ITI is willing to accept a particular item based on the pricing formula (discussed in the next section). These "worked-out" rates by ITI are then sent to the finance department of the concerned divisions for internal audit.\textsuperscript{31}

In the price negotiation committee meeting, convened by the general manager, CAA, the concerned ancillary entrepreneurs are invited collectively. The contract is awarded to the ancillary quoting the lowest price provided it is below the ITI's worked out rate. If however, other ancillaries are willing to undertake the job at the lowest rate then the total quantum of orders is split equally among them.

If the price quoted by them is higher than the ITI's worked out rates, then the ancillary entrepreneurs have to justify their price with a detailed cost break-up, their prices and quantities.\textsuperscript{32} The prices thus settled are valid for one year, subject to revision if costs go up by a large margin due to exogenous facts. Other

29. "One shift load" is one of the most commonly used term in respect of ancillaries. In fact, technically it is not possible to define this term with respect to machinery manufacturing.

30. The initial idea that each ancillary should produce a separate item was given up. A limited competition among the ancillaries was attempted to be introduced. Hence, quotations are usually invited from all the ancillaries which claim to have the necessary facilities.

31. This is to ensure that firm's internal financial norms have been followed by CAA in computing the rates.

32. If the general manager CAA is not satisfied with the justification provided by the entrepreneurs then the case is referred to the "management price negotiating committee" chaired by the executive director of ITI.
aspects such as packing charges, delivery schedules, applicability of taxes, past performance of the ancillary, etc., are taken into account to decide the value of purchase orders.

Price Fixation:

In a competitive set-up a buyer chooses a supplier who quotes the lowest price and/or offers most favourable terms. But ITI has a very different way of doing it. The firm's price (or "worked-out rate") for the ancillaries is its own cost of production minus its "social overhead costs", which include the expenditure towards the factory colony, hospital and transport. As long as the prices quoted by the ancillaries are lower than or equal to ITI's "worked-out rates" - the firm accepts the quotations. The "worked-out rates" are the sum of the following four cost elements.

(a) Material Costs: Since ancillaries purchase raw materials in smaller quantities the price they have to pay is considered to be higher. Therefore, to compensate for it a 10 per cent margin is allowed over and above the ITI's purchase price of the same material.

(b) Labour costs: ITI's productivity level as well as machine hour rate are used to arrive at labour costs in ancillaries. It assumes that productivity in ancillary is the same as in ITI. Table 5.7 provides data on these items for different divisions in ITI.

(c) Overhead costs: These are computed as a percentage of the sum of material and labour costs. The costing departments have worked out overheads for each machine in each shop in ITI. They range from 109 per cent to 160 per cent of the material plus labour costs. These overheads are exclusive of the social overhead costs, namely, colony, hospital and transport.

(d) Financial Charges: This is intended to cover interest charge for the ancillaries. It is computed as 3.2 per cent of the sum of above three costs elements is allowed.

33. All purchase orders over Rs.50,000 but less than Rs.10 lakhs are to be submitted to stores purchase committee for scrutiny. Orders with value over Rs.10 lakhs are to be approved only by the executive director of the Bangalore complex.

34. Where imported raw materials are to be used ITI supplies them to the ancillaries. At times tools, jigs and fixtures are also provided, hiring charges for which are deducted at the costing stage.

35. Productivity level refers to 'standard time'.

36. Costing for ITI's own output is done using these parameters. Since the ancillaries do not incur expenditure towards social overheads like ITI does, cost towards these is excluded in computing the worked out rates.
Table 5.7: Data on labour rate and overheads costs used for price fixation

<table>
<thead>
<tr>
<th>Division of ITI Bangalore</th>
<th>Range of labour rate per hour (in Rs.)</th>
<th>Range of overhead Costs (in percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strowger</td>
<td>4.21 - 5.64</td>
<td>79 - 260</td>
</tr>
<tr>
<td>Telephone</td>
<td>3.96 - 4.81</td>
<td>98 - 112</td>
</tr>
<tr>
<td>Crossbar</td>
<td>4.36 - 5.62</td>
<td>61 - 532</td>
</tr>
</tbody>
</table>

Source: ITI

Note: Overhead cost calculated is lower when ITI supplies the raw material.

Very interestingly, the pricing formula does not provide for profit margin, since it is assumed implicitly that the wage costs and overheads in the ancillaries would be substantially lower than those in ITI which would be the profits for the ancillaries.

Inspection:

ITI, in principle, has several stages of inspection depending upon the nature of the component or subassembly. CAA has an inspection squad which visit the ancillary estate everyday to keep a close watch on the execution of orders and to undertake process inspection (as different from production at the end of production). For this purpose the team of squads is supplied with a number of testing equipments. The items supplied by the ancillaries are first delivered at the stores for inspection. However, bills are paid only after the items are inspected once again in the assembly shops. P&T department has its own inspection squad which checks for the quality of spares supplied by the ancillaries. Prima facie the elaborate procedures for quality control appear impressive.

Payment of bills:

An internal study conducted by the firm showed that, for the strowger division during July 1982 to December 1982, only about 21 per cent of the bills were paid within 60 days, 39 per cent in 80 days and about 40 per cent had taken more than 90 days. Our computation from a random sample of 122 supply orders for the year 1984 for telephone division shows that on an average it took 66 days for payment of bills.

37. It may be recalled that in BE supplies from sub-contractors are sent directly to the assemble shops, without going through stores.
from the date of delivery of goods to ITI by the ancillaries, which is admittedly higher than the BPE norm of 30 days. But as mentioned earlier ITI apparently faces a peculiar problem of cash flow due to erratic payments by the P&T.

Mutual problems between ITI and its ancillaries:

Ancillaries are in an undoubtedly privileged position as compared to the general suppliers, especially the similar non-ancillary small scale units. As noted earlier, the former have an assured market; face, if at all, very restricted competition, obtain better payment terms; and receive technical help from the parent company as and when necessary.

The records suggest that the quality of products supplied by the ancillaries have been consistently very poor and rejection rate very high. ITI complains that despite considerable technical help, they have not installed all the necessary equipment and do not adhere to process specifications which appears to be the main reason for the poor quality of their output. For example, though a number of items required to be manufactured/assembled in dust-free, air-conditioned atmosphere, these conditions are rarely fulfilled. Another reason for the poor quality appears to be that the ancillaries systematically farm out production outside the estate which renders the elaborate process inspection by ITI rather superfluous.

In a recent study ITI's Managing Director gives a detailed instances of the problem of quality and has quoted the following statement by a senior P&T official to support his view. (ITI, mimeo)

38. Though we do not have data it is openly accepted in ITI that payments to small scale units (excluding the ancillaries) take on usually six months. Therefore, to that extent ancillaries are better off in payment of bills.

39. This could have had important bearing on the company's financial management and perhaps also for setting up such a highly vertically integrated plant. We will discuss this in Chapter 7.

40. Unlike in the previous case study we could not make any systematic assessment of the problem of quality partly on account of very complicated system of quality control adopted in ITI. For example, there is (i) process inspection, (ii) product inspection at the stores production plant, and (iii) a separate inspection for the spares supplied to P&T. Our observation in the text is based on the written record as well as on interviews with the concerned officials.
"Another area causing concern is the products from the ancillaries of ITI. The components and parts manufactured by these ancillaries are used in the equipment manufactured by ITI and are supplied as spares to P&T. Quality of the products from the ancillaries has been INDIFFERENT and INCONSISTENT. It is essential to look at the infrastructure available with the ancillaries to produce quality products and encourage only those who have proper infrastructure and quality assurance procedures."

T.S. Subramanian, Member, P&T Board of Director, ITI

According to the ancillaries, however, ITI applies a very rigid quality standard for them which are apparently not followed even for the firm's in-house production and contend that they cannot be expected to make heavy capital expenditure as they are small scale units. They further argue that all the operations cannot be done in the estate as they do not have the equipment and, hence, they resort to sub-contracting.

The association of ancillary units which was formed soon after the allotments were made in 1974 has been persistently pleading for larger quantum of orders, better prices but has vehemently opposed any move by ITI to bring about open competition. The firm claims that it has fulfilled the commitment of one shift load and has expressed its inability to 'feed' the ancillaries with orders while keeping its own resources idle. Regarding price, ITI, in turn, has been requesting the ancillaries to submit their audited balance sheet to ascertain if they are suffering losses. But right from the beginning, they have stubbornly refused to concede to this request, thus giving credence to the impression that the ancillaries are not making losses as they always claim.

Delay in inspection and payment of bills is another source of conflict. According to the ancillaries they borrow working capital at the rate of 18 per cent per annum from the banks, while ITI allows only 3.2 per cent towards the financial charges.

41. It is very difficult to verify such statements.

42. A very explicit record of the position taken by the ancillaries can be had from the extract of a letter from the State Bank of India's Regional Manager as a member to the Secretary of the Plant Level Committee of ITI. (See Appendix 5.1).
Table 5.8: Some information about the ITI’s ancillaries surveyed in 1982

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Main category</th>
<th>Name of the ancillary unit</th>
<th>Product</th>
<th>Persons employed</th>
<th>Investment values as per project report lies to (Rs lakhs)</th>
<th>ITI (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Spares</td>
<td>CSAID</td>
<td>Wiper assembly</td>
<td>22</td>
<td>70</td>
<td>52</td>
</tr>
<tr>
<td>2.</td>
<td>Spares</td>
<td>Mearwell Products</td>
<td>Receivers, magnetic desk telephones</td>
<td>29</td>
<td>2.22</td>
<td>12</td>
</tr>
<tr>
<td>3.</td>
<td>Spares</td>
<td>Industrial Aids</td>
<td>Transmitters, jacks mountings, wipers</td>
<td>na</td>
<td>2.6</td>
<td>19</td>
</tr>
<tr>
<td>4.</td>
<td>Sub-assemblies/ assemblies</td>
<td>Lakshmi Electronics.</td>
<td>Auto telex dialing unit</td>
<td>na</td>
<td>2.0</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Sub-assemblies/ assemblies</td>
<td>Mayatronics</td>
<td>Magnetic coils</td>
<td>na</td>
<td>0.46</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Sub-assemblies/ assemblies</td>
<td>Transphare</td>
<td>3-Watt generators</td>
<td>68</td>
<td>1.76</td>
<td>15</td>
</tr>
<tr>
<td>7.</td>
<td>Steel fabrication</td>
<td>Vasu Enterprises Telephone assembly</td>
<td>Magnetic coils</td>
<td>38</td>
<td>0.55</td>
<td>14</td>
</tr>
<tr>
<td>8.</td>
<td>Steel fabrication</td>
<td>Mark Industries Travelling ladders</td>
<td>na</td>
<td>2.77</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Metal price parts</td>
<td>Sabari Engineers Pvt. Ltd. Press components</td>
<td>na</td>
<td>2.42</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Packing wooden products</td>
<td>Trises Enterprises Cartons</td>
<td>40</td>
<td>1.63</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Source: ITI Bangalore.

A survey of ITI ancillaries:

It consists of detailed interviews with 10 out of 50 ancillary entrepreneurs (Table 5.8). No strict sampling procedure could be followed as many entrepreneurs refuse grant us interview. Unlike the sub-contractors to BE, as reported in the previous chapter, who were busy at their factories, the ITI ancillary entrepreneurs seem to hardly devote much time in their work place. There could be two reasons for it. One, the nature of work in ancillary perhaps does not warrant that much attention, greater effort being needed to “organise business” in ITI, and second, these entrepreneurs have several other business activities to look after, or both.

Considering these problems we interviewed those entrepreneurs who were willing to spare time for us. As the number of interviews are limited our reporting will be more qualitative. Four of the 10 entrepreneurs are ex-ITI engineers. Three units out of ten had been ‘sick’ but revived by new entrepreneurs. Two ex-ITI entrepreneurs received the entire capital investment as subsidy by the banks under the technocrat entrepreneurship programme.

Capital employed by these enterprises in their present value. ranges from Rs 46,000 to Rs 2.7 lakhs. employing 5 to 32 workers with turnover of Rs 8 to Rs 45
lakhs. All of them employ supervisors who are usually diploma holders. The wage rate for unskilled and skilled workers ranges from Rs.160-Rs.300 to Rs.500-Rs.600 per month respectively.

Our visits to the ancillary plants suggest that they undertake fairly simple metal working operations and a relatively greater amount of electrical assembly work. The latter is also evident from the fact that women form a substantial proportion of the workforce in the ancillaries. There is very little interdependence among the ancillaries as a large number of them have similar production capabilities. This lack of specialisation [resulting in increase in their costs of production] appears to have been the shortcoming of SISI at the stage of project preparation.

All of the ancillaries undertake sub-contract work for other large firms in the city, although the bulk of their output is supplied to ITI. Our survey reveals that most of them find profit margins and time taken for payment of bills are better in ITI compared to most other firms in Bangalore. Entrepreneurs agreed that the work done by them for ITI can be done by other small firms in the city and they also conceded that if thrown open to competition, quotations from non-ancillary would be certainly lower. Therefore to that extent the ancillaries are protected as result of the policy directive.

All the ancillaries in turn farm out production and assembly work to outside units as they find it much cheaper to do so. Since a large proportion of work done in them is of the nature of assembly, a sizeable proportion of the work is farmed out to workers who apparently do the job at their homes - with the help of the members of the households. It is said that the tendency of sub-contracting to small scale units has increased substantially after the strike in the estate a couple of years ago.

Nine out of ten ancillaries surveyed have put up newer manufacturing units outside the estate instead of expanding the existing plant. This could be on account

43. Although the ancillaries are supposed to produce different items of majority of them are essentially metal engineering workshop having similar physical facilities.

44. We could not get any quantitative idea of the extent of farming out of production. The entrepreneurs were not willing to talk in detail about it since this has been a sensitive issue in their relationship with ITI.
of two reasons: one, some of the entrepreneurs were "established" industrialists in
the city of some standing before they got the ancillaries; second, some of them
have consciously avoided expanding their units in the estate to avoid agglomeration
of workers.

Most of the ancillaries surveyed complained about delay in inspection and pay-
ment. According to them the ITI prices are getting increasingly unremunerative as the
firm is following the 1979 "shop-rates" and overhead costs to compute the price of
the ancillary products. Some of them also complained about the enormous "paper work"
that is associated with working for ITI. However almost every one agreed that produ-
c tivity of workers in their plants is much higher than that in ITI.45

A sizeable number of the ancillaries, 3 out of 10 in our survey, seem to have
gone sick - the reasons for which appear to be not easy to discern. Prime facia
there are reasons to believe that many of the allottees had neither the inclination
nor the entrepreneurial ability to start the ancillaries. As they had very little
financial stake in the units promoted by them they probably let them become sick.

Alternatively there are instances when the original allottee accepted a passive
role and allowed other partners, especially financiers, to manage the enterprise. In
effect, the original allottee draws "a rent" out of this "licence". As this
phenomenon is not insignificant, one is led to question the wisdom of the ancillary
development policy.

A number of entrepreneurs were candid in discussing the large scale gratification
that the ancillary development seems to have given rise to. As the officials con-
cerned appeared to be quite aware of the nature and magnitude of profits that these
ancillaries make mainly due to their protected status they would like to get a "cut"
for services rendered. Entrepreneurs told us how 'personal contacts' are the most
important 'asset' in working as an ancillary to ITI. In a number of instances, we
were told, ancillary entrepreneurs managed to get even the ITI's production schedule
dislocated so as to get the orders for themselves. It is said that they employ ITI

45. All the entrepreneurs unanimously agreed that productivity of their workers was
at least twice as high as in ITI if not more.

46. Interestingly Anne Krueger's (1974) concept of rent seeking behaviour seems to be
a fairly appropriate model to describe the situation in ITI.
workers, outside the regular working hours, not simply for their skills but to ensure that output is "passed" by the quality inspectors concerned without delay.

The social ancillaries:

As mentioned earlier in this chapter these ancillaries of ITI form a separate category, not administered by CAA, but managed by the divisions themselves. Although as early as 1961 attempts at farming out production were made by developing these ancillaries, they have remained rather insignificant in their contribution to bought-out items in ITI. All the advantages and attention was bestowed on the other category of ancillaries.

The social ancillaries they undertake only assembly work on a piece rate basis. ITI arranges to supply all the raw materials; and when work is completed output is inspected and transported back to the firm. Thus these ancillaries have no 'entrepreneurial' role.

Mahila Udyog Service Society (MUSS), the oldest ancillary of its kind, was set up to provide employment to the dependent women of ITI employees. Located in the employees' colony, adjacent to ITI factory, it has all the necessary infrastructure. Some of the retired ITI workers are reemployed by MUSS as supervisors and accountants to manage the society.

In 1984 MUSS employed 210 women, 12 office staff and two managers. The woman workers are paid daily wage of Rs 9.65 with a minimum guaranteed income of Rs 65 per month. At the time of our survey as the work load varied considerably all women did not get continuous employment.

In the initial years MUSS received substantial orders from ITI and was considered a "successful" venture. However over the years with the growth of other similar societies in Bangalore the orders for MUSS have dwindled. Phasing out of strowger division [which offered maximum work for the social ancillaries] also seems to have contributed to the decline in orders for the social ancillaries in recent years. However, we should not overlook another important reason for its decline.

47. We do not know what led ITI to enlist so many ancillaries which reduced the orders for the older ones. We can only conjecture that the management probably had no clear policy on social ancillaries and that it wanted to help as many social service organisation as possible.
With the introduction of an incentive bonus system\textsuperscript{48} in ITI about two years before our survey, workers in ITI find it remunerative to do a greater part of the work themselves rather than leave it for ancillaries and hence orders for the social ancillaries have come down. Therefore it seems to be an interesting case of reverse of anciliarisation where a greater part of the work is done in-house rather than by the ancillaries taking place, though its magnitude appears to be very limited.

Women’s Industrial Cooperative Society Ltd. [WICS] promoted by the Central Social Welfare Board in 1959, has also been doing a similar kind of work for ITI since 1962.\textsuperscript{49} It has 132 women members, belonging to “weaker sections” of society and is managed by a committee in which two of the workers are also represented.

WICS also undertakes simple assembly work on piece rate basis. The society guarantees a minimum wage of Rs 180 per month for each member-worker. However, they also have an incentive bonus system and the minimum monthly total earning is typically Rs. 350. In addition the workers get Rs. 25 transport allowance, Rs. 20 housing subsidy, two sarees per year and a ‘dividend’ of 6.25 per cent on their contribution to the capital of the cooperative.

ITI’s rate for assembly work by the social ancillaries is Rs. 4.95 per hour of work, which according to a reliable estimate, is at best 40 percent of the rate applicable in ITI for a similar work. WICS, for that matter no social ancillary, has any role in deciding these rates.\textsuperscript{50} In fact they have neither an idea as to how the rates are arrived at, nor did they display any inclination to know it, since the societies are not commercial but social service organisations.

\textsuperscript{48} Incentive bonus system is a widely practiced to encourage workers to increase their output - over and above the ‘normal’ level of productivity.

\textsuperscript{49} WICS is an independent society and has nothing to do with ITI’s workers or officers.

\textsuperscript{50} The two categories of ancillaries do not make any common items.
Section 3
Towards an assessment

An Appraisal of ITI's ancillary development:

The rationale for sub-contracting in manufacturing industries as discussed in Chapter 1, is to reduce costs of production by bringing in greater division of labour and specialisation and to impart flexibility to the parent firm. For a public enterprise, however, in addition to these considerations ancillary development is also expected to promote entrepreneurship in the small scale sector, diffuse technology and skills and create additional employment opportunity.

Prime facia ITI's effort seems to have by and large fulfilled many of these objectives. The firm has met the P&T's requirement of spares without additional capital expenditure (as the costs were borne by KSIDC, KSFC and the banks); promoted about 50 entrepreneurs (most of whom are supposed to be "first generation"); diffused the electro-mechanical technologies; and created, as per the official record, about 2500 additional jobs. However the question arises, even assuming the official claim to be correct, what are the real costs of this development - to ITI and to the economy. In other words, has the ancillary development effort in ITI been in conformity with the basic rationale of farming out of production and has it been in the long term interest of the corporate entity?

A closer look would seem to suggest that probably ITI's experiment has not yielded the desired result on account of a number of shortcomings both in the design and in the implementation of the policy. Based on our extensive discussions with a large number the company officials, a close examination of records made available to us in ITI, and the extensive interviews with the ancillary entrepreneurs we make a critical appraisal of the ITI's effort at ancillary development.

When the decision was taken to implement the policy in the early seventies, very little attempt seems to have been made to analyse what sort of ancillary relationship needs to be developed keeping in view the specific requirements of the firm, its environment and technology. This is particularly surprising since ITI had already initiated the social ancillaries and was consciously trying to secure economy in production and reduce its vertically integrated plant structure by developing sub-contracting with small firms in the city.
It is evident that the objective of the ancillary development policy was not to support an enclave of high profit making small firms drawing a "rent" out of the licence but to develop technically specialised small firms to secure flexibility and reduce costs of production. In other words the policy supported protection for a limited period with a few privileges to the ancillaries to enable them to learn the technology. ITI appears to have overlooked the principle of division of labour and specialisation underlying the policy. This can be illustrated by the fact that very simple and totally "unrelated" items like manufacture of wooden boxes which were being purchased on a open tender basis was included as an ancillary and accorded the protected status. Simple metal fabrication work for which by the early seventies, (unlike in early fifties), the technology was widely spread in Bangalore, were assigned to the exclusive ancillaries. On the other hand, relatively complicated sub-assemblies like receivers and transmitters which are said to be difficult to make to the required standards of quality even within ITI, were also farmed out.

Although originally they were intended to manufacture only spares [which apparently could not be produced within ITI without augmenting capital stock], in practice they were assigned to make parts for the original equipment as well. The ex-ITI ancillary entrepreneurs were apparently encouraged to take up manufacture of items with which they were familiar - without due consideration for economies of scale in production and technical difficulties in small scale manufacture. Thus there seems to have been total adhocism in deciding what items should be farmed out.

As a result, facilities developed in ancillaries are, for practical purpose perceived as "adjunct" to ITI's own capacity. Therefore whatever ITI could not produce to meet its target is offered to the ancillaries with seemingly total disregard to the costs of production as between in the ancillaries and outside.

At this stage it may not be inappropriate to pose a somewhat hypothetical question. Was the assumption of inability of ITI's capacity to meet the spares requirement without expansion valid? In our assessment the assumption was probably not quite correct. Even with the questionable assumption that all the output of ancillary is for spares, it forms just about five per cent of ITI's annual output. Anyone with some familiarity with manufacturing organisations would concede that a marginal increase in output of five per cent can be easily secured by introduction
of a suitable incentive system for workers and plant level rationalisation. Therefore there appears to be little economic or technical reason for developing the ancillaries to meet the spare requirement of P&T of unutilised capacity in ITI. Our arguments can be supported by the following observation:

"The committee have found that against the staff requirement of 15 officers and 1235 operatives and indirect staff for achieving 100 per cent efficiency envisaged in the Project Report for production of 1,00,000 lines, the company has as on 31-3-72 has a strength of 31 officers and 1401 operative and indirect staff whereas the production was only of the order of 80,000 lines. The committee have observed that the staff strength is much in excess of the requirements especially when the production has not reached 100 per cent level." Committee on Public Undertakings (COPU) Report No. 34 V Lok Sabha.

Having decided to develop the ancillaries, ITI's selection of the entrepreneurs appears to have been improper. Since KSIDC and the nationalised banks provided most of the capital invested, the ITI management appears to have been subject to considerable external political and bureaucratic pressures to allot the ancillaries to candidates recommended by them. In addition ITI management is said to have also faced internal pressures to accommodate the interests of senior executives. According to some close observers of the developments in ITI nearly fifty per cent of allotees had political/bureaucratic connection, and 40 per cent were ex ITI officers. It is widely believed that the last four allotments made during the second phase was made to retiring senior ITI executives. Moreover some of the allotees were not only "well connected" but were also well established businessman and small scale industrialists in the city. These politically powerful and articulate allotees, as mentioned earlier, formed an association even before they commenced production. It became a powerful pressure group constantly urging ITI for more orders, higher price and quicker payments. The association would independently complain to the BPE, Ministry of Communication, nationalised banks and state level industrial promotional agencies about the alleged inadequate order from ITI. The power of the association can be gauged from the fact, as noted earlier, that it has never agreed to

51. For example sons of B.D. Jatti former Vice-President of India and K.C. Reddy former Chief Minister of Kannada and a close relative of S.M. Krishna, former Union Minister were among the allotees.

52. Incidentally Government of Goa are also one of the allotees. With such state sponsored agents in the picture the relationship between the parent and the ancillaries acquire an extra economic dimension.
disclose audited accounts of members to ITI. The copious correspondence between the ancillaries and ITI management suggests that various governments agencies constantly demand explanation on behalf of the former from ITI as to why ancillaries were getting a "raw deal".

ITI's pricing policy for ancillaries as noted earlier is quite the opposite of conventional competitive bidding. Price quoted by the ancillaries are accepted as long as they are lower than the normative price which is computed based on costs of production in ITI. It is said that in the initial years ancillaries quoted fairly competitive prices - i.e. close to the rates one would get if there was open competition. But soon they realised that ITI's worked out rates - that the price ITI willing be offer - are very much higher and they also began to quote very high rates. The profit margins that ITI ancillaries could thus obtain were said to be very remunerative.

Realising the short comings ITI attempted to introduce some element of competition among the ancillaries. But the move appears to have not succeeded due to their collusive behaviour. We were told by some entrepreneurs that when an order for an item is shared among two or three ancillaries it is actually produced in one factory but supplied to ITI in two or three different labels. Thus the apparent competition between ancillaries is more often than not a stage managed affair. This has been confirmed beyond doubt in our survey.

It is widely believed that ITI's policy of free access has enabled the already powerful entrepreneurs to develop channels of informal contacts in ITI - at every level of the organisation - for their personal advantage and against the interests of the corporate body. For example, it is alleged that the entrepreneurs could even get machines and tools damaged in ITI to upset the production schedule that the same work can be executed in the ancillaries to meet the production targets. It is also

53. This was probably not too difficult considering the fact that the ancillaries had developed close links with managerial personal at various levels within ITI as a result of the policy of open access. In sharp contrast in B.E. sub-contractors are not allowed to meet anybody in the plant and in the office except the concerned official. The sub-contractors wait in the lounge and the concerned official comes out of his office to meet them there.
said that on a number of occasions the entrepreneurs manipulated internal functioning of the firm to get orders for them while ITI's resource remained under utilised."

The ITI management probably tolerated all these shortcomings and gross inefficiency since, among other things, they do not affect profits of the company due to its "cost plus" pricing principle. The COPU report precisely said this:

"...The Committee have observed that if in spite of low efficiency and low utilisation of capacity the Company is making profits, it is mainly because of the fixation of selling prices at much higher rates than what they should be. Under the procedure now followed by the company and recovery of additional costs from its main consumer - P&T and others the figures of profit shown by the company are not [a] true index of its efficiency. The committee have further observed that while the pricing procedure has enabled the company to present a better financial picture, it has really proved to be an extra cost on the exchequer." Committee on Public Undertaking (COPU) Report No. 34, V Lok Sabha.

If ancillarisation was a policy imperative on ITI then it could perhaps have been organised in a totally different and perhaps beneficial manner. Hypothetically one could argue that the firm could have substantially expanded the social ancillaries in which the company had already acquired some experience. Such a move could have resulted, in addition to cost reduction, a wide diffusion of skills in electrical assembly work especially among women belonging to the "weaker sections" of the society. Such skills could have formed a firmer basis for further industrial development of the city.

It is fairly evident that ITI's ancillary development effort has created a powerful pressure group which has resulted, to a certain extent, in curtailment of the autonomy of the company - instead of offering greater flexibility and securing cost reduction. It has also perhaps rendered management vulnerable to external pressures which seem to work against efficient functioning. The recent dispute about the impending derecognition of ancillaries appears to us to be a clear evidence of the problem.

54. These observations may appear to be journalistic allegations without concrete evidence. We can only say that it is impossible to get "hard evidence" for such a phenomenon. Moreover, these observations are made after a careful observation and discussions with a wide cross-section of persons involved with ancillary development at ITI.
Drama of derecognition:

In 1983, after the new managing director took charge, a major conflict broke out between ITI and its ancillaries in Bangalore over the future of their relationship, attracting the attention of the national press and political leaders. Since our study was conducted during this period, the issue dominated discussions with ITI officials and the entrepreneurs. Though the dispute was not the focus of our study we got to know, in some detail, about the problem and the positions taken by ITI on the one hand and the ancillaries on the other. Moreover we are inclined to believe that our detailed investigation provides some insight for understanding the present conflict in its proper context.

Telecommunication services in the country have been under constant public criticism for the wide and growing scarcity of supply relative to demand and for its poor quality. ITI's inability to meet the growing requirement and the obsolete technology are usually identified as the major reasons for this. In response to these criticisms ITI has been mooting a proposal for a change over to manufacture of electronic switching system in a big way and a phased replacement of electro-mechanical switching equipment - a trend world over since the early 1970s. ITI has been negotiating for import of technologies and also been attempting to indigenously develop them suited for local conditions.

Introduction of the newer technologies would, at least to begin with, mean phasing out of stronger equipment manufacturing, the biggest division in the Bangalore complex. As a result workers in this division would soon be redundant and the orders for the ancillaries from this division will also decline over a period of time.

Realising the imperatives ITI management informed its ancillary industries association about the impending technological change and announced its decision to derecognise the ancillaries in a phased manner. The firm argued that in the new system of manufacture such small scale ancillaries would have very little role as they will not be in a position to take up production of high precision, large volume and capital intensive component manufacturing. ITI further added that the past performance of the ancillaries left much to be desired and, moreover, the firm has
The ancillaries resented this move of ITI. Their association made a public issue of it by going to the press and appealing to the political leaders for protection. It was made out to be a case of 'exploitation' of small scale units by a large public sector enterprise.

In the background of our detailed study of the manner in which ancillary development has taken place it is perhaps not very difficult to understand the reason for the dispute. Given the fact that the ancillary entrepreneurs appear to be influential individuals and that they have emerged over the last decade as a major pressure group in ITI they appear to have sufficient political and bureaucratic clout to take up their cause. Statements by ITI and the ancillary association clearly suggest that the former seems to be 'fair' in informing the latter about the technological change in advance. The latter's argument that they have permanent right to the ancillary status is not consistent with the BPE guidelines either. The fact that ITI did not strictly review and renew the ancillary contract - which seems to be a clear reflection of poor management - the ancillaries have probably come to assume that it is their right to retain this status forever.

This brings out two important points. One, the management of the public sector does not seem to remain strictly in the domain of those assigned with the task. Two, the widespread interference seems to make the management of PSEs vulnerable to pressures originating in the larger socio-political set up resulting in the erosion of the corporate interests.

The reason for this clearly reflects managerial failure. However one may not be incorrect to relate the lack of management control to the nature of the firm's market. Since ITI is a public monopoly it can always report profits in the balance sheet and this becomes a camouflage for its inefficient operations. As we have seen the firm has made very little effort to find out if the items produced by ancillaries could be procured from the open market at competitive prices. Apparently the management was not particularly concerned about it since it is assured of its profit margin.

Thus the recent conflict appears to us to be a clear case of emergence of a pressure group which, instead of imparting efficiency and flexibility, has ended up effecting exactly the opposite.
Conclusion

In this chapter we inquired into ancillary development experience of the Bangalore complex of Indian Telephone Industries (ITI), a public sector monopoly in telecommunication equipment industry. Set up in the late forties ITI developed a fairly vertically plant structure which grew to employ over 18,000 persons by the early eighties.

The initial efforts at farming out of production to secure cost reduction in the early sixties by developing social ancillaries remained more of as a 'social service' activity of the firm. Conscious efforts to promote sub-contracting were made in the early seventies after the introduction of ancillary development policy of the government. However, this more or less coincided with ITI's apparent inability to meet the growing requirement of spares by P&T without augmenting capacity. The firm was not inclined to expand its capacity for making these relatively simpler spares as it was planning to change over to a newer technology.

ITI promoted, in all, fifty exclusive ancillaries in a phased manner in collaboration with the state level promotional corporations, commercial banks and SISI. As per the government guidelines ITI offered considerable technical assistance to the entrepreneurs, ensured adequate orders, and accorded them priority in payment. A unique pricing formula was evolved to ensure that the ancillaries secured "a fair" return on their capital.

On the face of it ITI's efforts appear to be successful; it has been able to meet its spares requirement without incurring any new capital investment; and at a lower cost (The cost saving is to the extent of reducing social overheads). The ancillarisation has led to growth of entrepreneurship and to a limited extent diffusion of engineering skills.

On a closer examination the experience does not appear not all that favourable. The first question that arises is whether it necessary to develop ancillaries since their output accounts for just about five per cent of ITI’s production. Could the requirement of spares not have been met within ITI by intensive use of its resources - by evolving an appropriate incentive scheme for workers and rationalisation of the plant? We are inclined to argue that ITI could have done it, though the officials
would not concede this point easily. It appears to us that ITI choose the softer option which also proved to be a convenient one.

Having decided to develop the ancillaries no attempt appears to have been made to find out, given the nature of technology, organisation of the firm and market condition, a suitable programme of ancillarisation. All along adhocism seems to have prevailed. Being a monopoly ITI seems to bother little about the costs of production.

Further no attempts were made to ascertain if the spares requirement could be met from other sources. On the contrary there are a number of unjustifiable instances where items procured from outside sources were brought under the category of ancillary. We consider this to be a serious error since, we believe, a large numbers of items assigned to the ancillaries could be procured from a number of small scale units in Bangalore at competitive rates.

ITI was satisfied as long as the price offered by the ancillaries is equal to or lower than its own normative price. Since the firm did not encourage open competition the ancillaries enjoyed monopoly profit. Such profits could perhaps be justified for a limited period of time provided the production involved high development costs, risk or innovation. But in this case we can say with a fair amount of confidence that items manufactured by ancillaries, excepting a few cases, are fairly simple.

However, ancillaries always complain about the uneconomic rates offered by ITI. But they have consistently refused to furnish their balance sheets or cost data for verification which makes one suspect that they are in fact making considerable profits. As the ancillaries have become a powerful lobby, they bargain for better margins profits (with no relation to the costs of production). ITI on its part did not enforce the five-year contract.

Another distressing feature of ITIs ancillary development is that a sizeable proportion of the original allottees have become "sleeping partners" in the enterprise and the firm are practically owned and operated by economically powerful financiers which negates the objective of the development of entrepreneurship through ancillaries. The entrepreneurs' involvement in production process appeared fairly minimal. Since the manufacturing is fairly simple they have employed supervisors to
look after the production, and very little effort has been made to improve technology. A large percentage of entrepreneurs' time is said to be spent in ITI socialising with the officials concerned.

A culture of business gratification seems to have taken very deep roots as a result of ITI's ancillary development programme. Entrepreneurs with right connections are said to secure large orders, quick inspection and prompt payments. We were also told of several instances where ITI's production/programmes were disrupted to favour certain individual ancillaries. Although in principle there are number of checks and balances, in practice there appear to be numerous ways of circumventing them.

The recent conflict between ITI and its ancillaries has to be seen against the background of the above discussion. It appears to us that the conflict is the culmination of the way ITI went about developing them right from the inception. While the firm was perhaps fair in cautioning the ancillaries not to be totally dependent on ITI, the association considers it as their right to have the protected status forever. As the association consisting of 'powerful' individuals resents the stand it brought forth political pressure on ITI to reconsider its decision.
Appendix - 5.1

Following is an extract from a letter from Regional Manager, the State Bank of India, Bangalore, dated 1st June, 1978, to the Secretary, plant level committee, ITI, Bangalore.

Sub:-Plant Level meeting

"With regard to the next meeting proposed to be held during the first week of July 1978, the following points may be included in the agenda for discussion. These points have been raised by the members of ITI Ancillary Association in the course of a meeting held with them during April 1978 and hence calls for a close examination.

1. General:
   (a) Pricing:
       Raw material costs : ITI costs + 10% extra under the discretion of discussions.
       Shop rate : ITI rate is acceptable
       Overheads : 500% of the shop rate
   (b) Loading:
       Minimum one shift load throughout the year, as per the original letter of indent.
   (c) Inspection and payment:
       Inspection to be completed within next three weeks from delivery at ITI and full payment within next three weeks.
       The raw materials could be inspection not desirable as production.
   (d) In-process inspection by ITI inspected but in-process it may hold up production.
   (e) Submission of financial statement : The ancillaries are not convinced.
Appendix 5.2: Flow Chart of ancillary administration

- Purchase Requisitions from Production Planning
- Release of tender Enq.
- Quotation opening and rates tabulation
- Price Negotiation
- Working of order value
- Cost work
  Cell of Accounts.
- Pre audit and Commitment by Accts
- Release of purchase orders
- Non-SPC cases
  Value (Rs. 50,000/-)
  Issue of raw materials/ components follow up of supplies
- SPC cases
  Value (Rs. 50,000)
  Issue of R/H and components and follow up
- EDR for Values more than 10 lakhs and less than 30 lakhs CM/HD more than 30 lakhs.

Source: ITI
Appendix 5.3
Licence Agreement Between ITI and its Ancillaries

AN AGREEMENT made on this BETWEEN INDIAN TELEPHONE INDUSTRIES LIMITED, having its Registered office and works at Dooravani, Bangalore- 560016 (hereinafter called the COMPANY which expression shall include wherever context so admits, its Administrators or Successors and Assign of ONE PART and............. having its Registered office at No.-- having its Registered Office at No. (hereinafter called the ANCIL UNIT which expression shall include wherever context so admits its Administrators, successors and Assigns) of the OTHER PART.

WHEREAS the ANCIL UNIT is desirous of setting up its business of manufacture of components, accessories etc., required by the COMPANY on the premises described in the Schedule to the agreement dated -............ entered into between Government of Karnataka and the said ................................ on the terms and conditions hereinafter stated

AND WHEREAS the COMPANY has agreed to assist the ANCIL UNIT in the setting up of its business on the terms and conditions hereinafter stated.

NOW THIS AGREEMENT WITNESSED AS FOLLOWS:

1. THE COMPANY AGREES :-

(a) To order on the ANCIL UNITS, at the discretion of the COMPANY, components and accessories etc., subject to the condition that the COMPANY should endeavour to offer work load to the ANCIL UNIT for a single shift capacity subject to the requirements of production and other exigencies but do not bind itself to place orders for its complete requirements on this ANCIL UNIT.

(b) to buy the components and accessories etc., ordered subject to inspection and rejection of products not conforming to the COMPANY'S standards and specifications at prices to be mutually agreed upon.

(c) to give assistance in the transfer of know-how, drawings, operational layouts, manufacturing processes and other technical information etc., to the ANCIL UNIT in respect of the work load ordered.

II. THE COMPANY will not assure supply of any raw-materials to the ANCIL UNIT from its own stock nor the COMPANY will provide tools and gauges to the ANCIL UNIT. The COMPANY may however, assist, to the extent possible, by issuing imported raw-materials subject to its availability against orders placed on the ancillary by the COMPANY and subject also to such other conditions that the COMPANY may prescribe.

III. THE ANCIL UNIT hereby agrees and convenants with the COMPANY as under:

1) To take up for manufacture the items or work that are farmed out by the COMPANY from time to time on first priority-basis and not to undertake any outside jobs, except with prior consent of the COMPANY, before completing the order/orders placed by the COMPANY to the satisfaction of the COMPANY.

2) To maintain the delivery schedule. Time being the essence of the contract, if the ANCIL UNIT is not able to maintain the delivery schedule, then without prejudice to the other remedies against the ANCIL UNIT, the COMPANY reserves the right to transfer the orders placed on the ANCIL UNIT to other sources of supplies and to recover from the ANCIL UNIT extra expenditure or loss/damages, if any, caused thereby to the COMPANY.

3) To maintain the standards of quality required.
4) To maintain all documents like drawings, specifications, etc., given by the COMPANY for the processing of the products ordered, in good order. Such documents and all information in respect of such documents shall be treated as strictly secret and confidential and shall not be copied or passed on in any manner to third parties without the written permission of the COMPANY. In the event of unauthorised leakage of any such information by the acts or omission of the ANCIL UNIT or his agents or employees, the licence shall be cancelled and the ANCIL UNIT shall be liable for payment of exemplary damages apart from other liabilities under the law.

5) To agree to the decisions of the COMPANY in regard to rejections on inspection of supplies effected by the ANCIL UNIT.

6) To account for the raw materials, components, tools, and gauges, if any, including the scraps, supplied by the COMPANY in special cases, and shall be liable to pay compensation or penalty for loss, damage or spoilt goods, at the rates assessed by the COMPANY.

7) To agree to keep the materials/components so supplied by the COMPANY, insured against all risks like fire, pilferage, loss in transit, etc., from the date of delivery by the COMPANY to the date the said components are delivered back to the COMPANY and shall deposit with the COMPANY all such insurance policies & receipts for payments of the premia in respect of the same.

8) Not to assign or part with his rights in the said premises under this licence to any person, firm or Corporation.

9) Not to change, or cause to be changed, the constitution of the UNIT by effecting any change in the composition of the partnership or by promotion of a company, private or public, or by the formation of any registered or unregistered body or association without the prior permission of the COMPANY.

10) The ANCIL UNIT agree and convenants that it shall not offer or sell the components, accessories etc., manufactured under these premises to the Indian P&T Department in view of the subsisting agreement between the Company and Indian P&T and shall not offer or sell them to any outside agencies without prior permission of the Company. The ANCIL UNIT further agrees that it shall not offer to export them except with the prior permission of the COMPANY in writing.

IV. THE ANCIL UNIT further agrees that in the event of its liability to maintain the quality, quantity and the delivery schedule specified by the COMPANY in the orders placed on them, the order shall be liable to be cancelled and further the ANCIL UNIT shall be liable to pay such compensation or penalty to the COMPANY as may be decided upon by the COMPANY and Government of Karnataka for cancellation of the allotment of the premises leased to the ANCIL UNIT by Government of Karnataka.

V. THE ANCIL UNIT shall at all times, make available the published balance sheet, profit & loss account etc., of the ANCIL UNIT to the COMPANY, its attorneys or duly authorised representatives and, in addition, such other information, data or clarifications as the COMPANY may call for, to enable the COMPANY to access the reasonableness or otherwise of the rate charged by the ANCIL UNIT and also the use to which the raw materials supplied by the COMPANY are put in and the ANCIL UNIT is bound to give such information, data or clarifications in full.

VI. It is hereby agreed between the COMPANY and the ANCIL UNIT that this agreement, subject to amendments, inclusions, deletions, if any, or all the terms and conditions contained in the agreement that are to be mutually agreed upon between the two parties shall commence from the date of execution hereafter and shall remain in force for a period of five years from the said date subject to termination under the terms and conditions hereinafter provided after the said period of five
years. The agreement may be renewed for a further period on the same terms and conditions of these presents terms and/or terms and conditions to be mutually agreed upon.

VII. In case of any dispute arising between the COMPANY and the ANCIL UNIT in respect of interpretation, conduct or performance of any term or condition of this agreement, the same shall be referred to the General Manager (Co-ordination) of the COMPANY whose decision thereon shall be final and conclusive and not open to challenge or review.

VIII. Stamp duty payable on this agreement shall be borne by the ANCIL UNIT. IN WITNESS WHEREOF the parties here into have set their hand on the date, month and the year first herein above written.

For and on behalf of
INDIAN TELEPHONE INDUSTRIES
LIMITED, BANGALORE - 560016
SECRETARY
Witness:
1) 1)
2) 2)