CHAPTER VIII
INFRASTRUCTURE FOR MODERNIZATION

It is an accepted fact that the role of the government and institutions sponsored by it is significant in the process of industrial growth in the developing and undeveloped economies particularly with respect to matters like transfer of technology, training of skilled labour, financial support and marketing assistance. The modernization of the leather industry since 1973 was under compulsion of the export policy of the Government of India which was described in Chapter III as the starting point of the analysis. The aim of this chapter is to assess the role of the institutions sponsored by the government in the modernization of the leather industry and to suggest measures where necessary for improving the situation so as to increase the pace of industrial modernization. The assessment of the role of these institutions is based mainly on the opinions expressed by the tanners interviewed for the study.

Institutions Assisting the Industry

The institutions set up by the Central and State governments to assist the development of the leather industry
are briefly described below.

**Bharat Leather Corporation**

The Bharat Leather Corporation was established by the Government of India in 1976 with its headquarters at Agra. Its object is "to promote, develop, aid, counsel and otherwise assist leather industries and provide them with means, resources, technical and managerial assistance to enable them to improve methods and techniques of production, management and marketing as well as to take steps for building the infrastructure for the development of leather and leather goods industry from start to finish".¹ The institution is just getting past its planning stage and has begun assisting leather goods cooperatives to market their products in the country. It has set up an emporium in New Delhi to sell leather goods. It has had very little impact on the tanners of North Arcot. In 1980, it has taken up for consideration a proposal to construct a common effluent treatment plant at Vaniyambadi. Many tanners interviewed suggested that this corporation should take over the functions of development and finance with the STC's Leather Development Fund transferred to it. The BLC should develop and finance leather units, help in effluent control and

and assist in internal marketing of footwear and leather goods.

The Leather Export Promotion Councils

The Leather Export Promotion Council (LEPC) was established in 1956 at Madras by the Government of India as one of a series of export promotion organizations for specific groups of products. The LEPC is to promote the exports of E.I. tanned hides and skins and tannery byproducts like wool and fleshings and tanning materials. Tanner exporters and merchant exporters are members of the Council. It acts as a connecting link between the trade and the government and between the Indian exporters and overseas buyers. One or more of the larger tanners of North Arcot have been among the office-bearers of the Council ever since its inception and through them the LEPC has been able to persuade the tanners in the area to gradually modernize their units. It has also been presenting to the Government of India the views of these tanners on the problems faced by the industry in the region.

The LEPC collects and tabulates market information from abroad and makes it available to its exporter members. It sponsors delegations and study-cum-sales teams to visit specific areas. It participates in international leather
fairs and exhibits the products of its members. It publishes a "Weekly Report on E.I. Vegetable Tanned Leathers" and a monthly "Leathers" which contains articles on the current problems of the leather industry and its exports and information relating to government regulations on exports and imports in India and abroad affecting the leather exporters in India and details of foreign enquiries regarding leathers made by them. It has also published a Directory of Indian Leather Exporters. It answers enquiries from foreign buyers and gets them into contact with its members.

The Export Promotion Council for Finished Leather and Leather Manufactures (LEXPORT) was set up in 1963 with Kanpur as its headquarters and with regional offices at Madras, Bombay and Calcutta. It has functions similar to the LEPC but relate to the export of chrome-tanned leather, finished leather and leather manufactures. Its magazine "Lexport Bulletin" is a bi-monthly. It has a scheme for subsidizing foreign advertisements by its members; and the large firms have used this facility. All the tanners in the study who make finished leathers are members of this Council as well as the LEPC.

The Seetharamiah Committee had suggested the merger of the two councils as there is no need to have a council
for promoting the export of E.I. leather when it is physically restricted by quotas and is subject to export duty. The tanners in Tamilnadu, who are the predominant exporters of leather are afraid that if the two are merged the headquarters of the merged council may be located at Kanpur and there may only be a regional office at Madras. In such a case they may not have the opportunity to be heard on matters relating to the industry as effectively as before, and so they have been pressing the Government to retain the LEPC at Madras and enlarge its functions to cover chrome-tanned and finished leather also, so that LEPORT will cover the exports of footwear and leather goods.

The small tanners in the study however generally feel that neither council has presented their problems to the government properly and both the councils are dominated by the larger tanners.

There is a third export promotion council looking after the export of sports goods including those made of leather.

The Central Leather Research Institute

The CLRI was established in Madras in 1953. As this institution has played the most significant role in the modernization of the industry, its working is discussed
in detail in the next section on transfer of technology.

**Leather Development Council**

The Development Council for Leather and Leather goods was set up by the Government of India in 1966 as a body to advise it on steps to be taken to develop the industry. Its members include government officers and entrepreneurs of the leather industry. T. Abdul Wahid, an early adopter in our sample was its vice-chairman in 1972 when the government introduced its policy of modernizing tanneries.

**The PDTC**

The National Small Industries Corporation set up the prototype Development and Training Centre in Madras in 1974 for the development of sophisticated machinery for the leather and footwear industries and for training workers for manufacturing and maintaining equipment and machinery for leather, footwear and leather goods industries. It has the technical collaboration of the Denmark Government's Development Agency for its functioning. It has developed machines like the hydraulic ironing and embossing press, splitting machine and clickers which are manufactured by engineering companies in the country.

In addition to the above specialized institutions, a few others look after the interests of the leather industry
along with those of other industries like the Small-scale Industries Development Organization (SIDO), the National Small Industries Organization (NSIC), the Khadi and Village Industries Commission (KVIC), the State Trading Corporation (STC), the Indian Standards Institution (ISI), state-level industrial financing and promotional institutions, and government corporations running production units making leather and leather goods.

**Non-specialized Institutions**

Of the above, the Small-scale Industries Development Organization runs the Small Industries Service Institute (SISI) at Madras and other centres, which provides guidance to entrepreneurs on technical matters and procedural formalities and runs motivation campaigns and entrepreneurial training programmes for educated and technically qualified persons. Two persons trained by the SISI have started leather firms in Madhavaram and Ranipet industrial estates. It runs a Central Footwear Training Centre at Madras which provides training to workers in making footwear.

The NSIC has supplied machinery on hire purchase to the leather industry and runs the Prototype Development and Training Centre at Madras. The KVIC looks after the rural leather industry.
The State Trading Corporation, a government-owned foreign trade organization exports leather and leather goods on its own, and E.I. leather exports of the country are canalized through it. The STC collects a cess on these canalized exports; a part of the cess goes into the Leather Development Fund. It has proposed to grant from this Fund finance for the construction of five service centres for leather finishing in different parts of the country. It has assisted the cooperative service centre at Vaniyambadi with a grant of Rs. 5 lacs for the purchase of machinery. The STC imports wattle extract and chemicals needed for leather finishing and machinery for leather, footwear and leather goods industries. The tanners generally consider it as their rival and due to psychological reasons therefore the assistance of STC to the modernization of the industry has been limited.

The ISI has helped to establish standards for different types of leather so that the fiscal policy of the Government can be administered properly. The state-level industrial promotion organization SIPCOT has promoted industrial estates including the general estate at Hanipet where a few leather units have come up and the specialized industrial estate for leather units at Madhavaram, Madras. The Tamilnadu Small Industries Corporation (TANSI) runs leather units making finished leather at Vinnamangalam in North Arcot.
as well as at Madras. The Vinnamangalam unit was started midway between Ambur and Vaniyambadi to function as a demonstration-cum-service centre for the tanners of these two places so that they could be assisted to finish leather. But as these tanners showed little interest in this unit it was converted into a finishing unit finishing and exporting leather on its own.

The role of state-level industrial promotion organizations in the matter of financing the modernization of the leather industry is presented in a subsequent section of this chapter.

Transfer of Technology

When the leather industry in India was required to switch over from vegetable and chrome tanning of semi-finished leather to the making of finished leather a transfer of technology had to take place from countries like England, the United States and Italy to the leather units in India. This study of the North Arcot tanners has revealed that the transfer of technology has taken place in the following ways. British firms in Madras like Gordon Woodroffe and Chrome Leather Company had technicians trained in England or by Englishmen. Some of these technicians got appointed in the leather firms run by Indian entrepreneurs and helped
to modernize them. Or, the foreign buyers of E.I. leather from India had sent their own technologists to the exporting firm and trained its local technicians, but this was only in relation to the specific products that they required. A third way the transfer took place was through foreign companies making chemicals and machinery. Their technologists supplied technical advice along with their firms' products to leather firms here and helped them to make finished leather. Fourthly, foreign firms had entered into technical collaboration agreements with Indian tanners to form new units or joint ventures to make finished leather, footwear and shoe uppers. This process was made use of by the large goat tanners of Ambur, particularly T. Abdul Wahid and A. Hafizur Rahman. The other three sources of technology from outside the country described above were also used mostly by the large tanners, particularly the early adopters and the innovator. A couple of small tanners in the sample have made use of technical advice from foreign chemical companies.

The Role of the CLRI

But the most important way technology transfer has taken place and an appropriate technology has been evolved for each unit has been through the efforts of the Central Leather Research Institute of Madras, and this applies to
both the early and later modernizers in the sample. In the case of one early adopter at Ambur, a CLRI technologist had resigned his job and taken up full time appointment with his leather firm and had helped to modernize it. Later he 'spun off' to form a firm of his own at Madras. The CLRI has helped the modernization of industry directly by offering information, advice and technical guidance through a number of its specialist scientists to the entrepreneurs of the leather industry and to the technicians of their units and indirectly by training the technicians themselves.

The Central Leather Research Institute was established in Adyar, Madras in 1953 as one in the chain of national laboratories in India. Its principal objective is to develop the leather industry by developing and transferring technology relating to the manufacture of different types of leathers and the chemicals and machines required in the preparation of finished leathers. It does technical trouble-shooting, trains personnel at all levels, prepares techno-economic and market survey reports relating to leather and leather products and conducts research on the fundamental aspects of leather science.

The transformation of the industry over the last 20 years from E.I. tanning to leather finishing and the
manufacture of leather products was very much due to the activities of the CLRI. The following is a list of some of its contributions to this effect. It has formulated a simple method of preservation of hides and skins applicable at the village level. It has worked out non-conventional uses for conventional raw materials like using buffalo hides to prepare light leathers. It has developed processes to use a number of slaughterhouse and tannery byproducts to make useful commodities like surgical sutures, violin strings, collagen sheets and tubes, glue and gelatin, leather boards and exotic leathers. It has worked out methods to treat tannery effluents and formulated floatless tannages for reducing the pollution load. It has been testing vegetable tanning extracts as substitutes for imported wattle extract. It has formulated new mineral tanning agents and syntans for different purposes. It has been constantly working out processes for quickening E.I. tanning.

In the sixties it started helping tanners to take up the manufacture of wet blue chrome and crust leathers. And when the industry decided to finish leather it started working out processes to make different kinds of light and heavy leathers and released the processes to the firms in the industry. To finish raw materials of inferior quality, it had evolved a number of special processes of printing leather. The
special processes evolved by the CLKI and which the large
tanners have used with advantage include the tie and dye,
screen printing, flock printing and PVC lamination. It
advises tannery technicians on how to get any required colour
or texture for their finished leather and how to remedy any
defects in finished leather. It has been preparing standard
recipes for using indigenous dyes to get different shades
for upper and suede leathers as this has been the most common
problem faced by technicians in the finishing units.

The CLKI has evolved processes to make auxiliary
chemicals like finishing agents and fatliquors and releasing
them to the chemical industry so that it could make them
commercially. In collaboration with the Prototype Development
Centre of the National Small Industries Corporation of the
Government of India it has developed a number of machines
for glazing, measuring, spraying, drying, splitting and
staking of leather and some of the above designs are being
used by machinery manufacturers in the country to make the
equipment for finishing leather. The CLKI offers advice on
the erection, repair and maintenance of tannery machines.

The CLKI has also designed and fabricated footwear
and other leather products like garments, handbags, ties
and jewel boxes so that prospective entrepreneurs can take
the designs up for manufacture and export.

The CLRI provides training for the personnel required by the leather industry at different levels. It provides ad hoc training for personnel from the leather and chemical industries, periodic short term courses for six months in leather manufacture, tanning, dyeing and finishing of leather and maintenance of machines, and refresher courses for employees in the industry to update their technical knowledge. The CLRI works in close cooperation with the FAUT (formerly with the University of Madras) for running the latter's undergraduate (B.Tech.) and post-graduate (M.Tech) courses in leather technology, and it is recognized as a research institute for the Ph.D. degree by many universities in India and abroad.

The existing entrepreneurs in the industry and new ones entering it as well as the leather processing units started by state governments are all using the CLRI for various types of technical and economic consultancy. The CLRI prepares techno-economic surveys of areas, and investment plans and feasibility reports for firms and units; it scrutinizes the feasibility reports of new units and their plan layouts prepared by other consultants and offers its advice on them; it sends its scientists to leather firms for
trouble shooting on the spot and thereby provides a quick solution to technical problems; it also solves the technical problems referred to it by using its own laboratory and model tannery at the Adyar campus at Madras and its extension centres at Bombay, Calcutta, Rajkot, Kanpur and Jullundur. Two of the tanners interviewed who were among the late majority felt that such extension offices and laboratories must be opened by the CLKI in every tanning centre in order to help the small tanners to solve their problems very quickly.

The industry in the southern states of Tamilnadu, Andhra Pradesh, Karnataka and Kerala has received substantial technical assistance from the CLKI. Over 30 tanneries in the region received complete technical assistance either for diversification or from starting from the scratch. The CLKI had conducted in the region nearly 600 demonstrations of improved tanning processes for the benefit of small and cottage sectors of the industry at the tanneries or in the colonies of tanners. The extension centres in other regions are providing similar services for the industry in the respective states.

All the new processes and findings of the CLKI are demonstrated at any time as required by the entrepreneurs at its tannery at Adyar, Madras. Regular demonstrations of
these are also held during the annual Tanners' Get-Together organized by the CLRI in collaboration with the other organizations representing tanners and exporters held usually for a week during the last week of January and the beginning of the first week of February. During this Leather Week, in addition to the above demonstrations, seminars are arranged in which technical experts, economists and men in the trade and industry discuss the problems facing the industry and offer solutions. A Leather Exhibition is also then held at Adyar and a fashion parade in a five-star hotel at Madras. Many foreign buyers, and manufacturers of machinery and chemicals in foreign countries visit Madras during the period; the manufacturers exhibit their machinery and try to contact buyers here; and the foreign buyers come to see the products displayed by the local tanners and makers of leather goods and contact the exporters to finalize deals.

The CLRI collects and publishes trade data and attends to enquiries from abroad and has built up a very useful library of books and journals on leather, chemicals and trade. The CLRI publishes its own magazines called Leather Science and Trends in the Leather World containing useful information about new processes and products and it publishes useful books on leather technology and leather business management.
The CIL tests products for the customs authorities, when they refer exported products to define their category for the purpose of levying duties or granting export incentives. Along with the Indian Standards Institution, the CIL has been responsible for evolving standards and definitions for various types of semi-finished and finished leather, which form the basis for government's industry promotion policy in this field.

Out of the 30 tanners in the study 25 expressed their grateful appreciation of the work of the CIL scientists and stated that they had been considerably benefited by consultations with them. The five who had not consulted the CIL scientists include 4 of the laggards, and one in the early majority, who, however, has a B.Tech. in leather technology as a partner and who produces only certain selected varieties of finished leather.

The twenty five tanners who had had frequent consultations with the CIL scientists received guidance regarding mechanization of E.I. tanning, chrome tanning, recipes for finishing leather, correct colour matching of finished leather, or making special types of finishes. All of them have one or more technicians in their firms who have had training in the CIL. The partners of some of them had done either the
short term course in leather manufacture or a degree course in leather technology and thus had been students of these scientists and it had resulted in close contacts with them later when they were looking after the production work in tanneries. Two large tanners have a contract with the CLRI under which the scientists who are specialists in the concerned fields visit their tanneries whenever required to do any trouble-shooting on the spot. And one of the large tanners in the sample is the first to build an effluent treatment plant the technical details of which were supplied by the CLRI.

Tanners' Suggestions regarding CLRI

It is the desire of the tanners who were interviewed that the CLRI should open its offices and laboratories in every tanning centre, extend its research activities to leather goods and footwear, study the marketing of leather and leather goods abroad and provide assistance to exporters in this field, provide regular training to technical staff in the footwear and leather goods industries, and evolve a solution that is not only adequate but also within the reach of small tanners for the problem of effluent treatment.

Other Institutions for Technology Transfer

While the CLRI is the main supplier of the technical
skill required for modernization of the leather industry, there are a few other institutions also that help in this regard. The Government of Tamilnadu runs a Leather Finishing Centre at Erode which conducts six month training courses in finishing leather. There is a Prototype Development and Training Centre of the National Small Industries Corporation at Madras which builds prototypes of leather machinery and trains workers in operating and maintaining all types of leather equipment and machinery. The Small Industries Service Institute of the SIDCO, Government of India runs a Central Footwear Training Centre at Madras which trains workers in making footwear. Colleges at Vaniyambadi and Visharam run by the tanners of the respective places offer Leather Chemistry as ancillary to the B.Sc. Chemistry main course, and Higher Secondary Schools at Hanipet, Ambur, Vaniyambadi and Dindigul offer leather technology as a subject in the higher secondary course.

In a very modern and highly industrialized society, probably, published work on technological research and practice may be adequate for transfer of technology. But in a country like India the easiest and most effective way of technology transfer is the personal contact for technical advice and problem solving service between the technician at the production unit and the technologist at the R and D institute like the
CLRI. Such contact helps them both to understand and appreciate properly each other's work, and further technological progress becomes easy. The spirit of cooperation and goodwill thus generated leads to the absorption of new ideas without hesitation by the industrialists, and the CLRI itself starts exploring new ways of serving the industry and improves its research so as to get results that are feasible commercially at the tannery level, and consequently appropriate technology with an excellent chance of commercial success is evolved.

In an old established industry, particularly in the developing countries unless the businessman is won over and is convinced that the advantages of modernization outweigh his existing returns and that such modernization is within his capacity he will not be tempted to absorb any new technology. And the CLRI deserves all credit for the way it has used a personal, persuasive, patient and educative approach and influenced a majority of tanners to modernize their units, and assisted them in this.

Finance for Modernization

A finished leather unit may need Rs 20 - 30 lacs for its machinery, equipment and buildings if it is to be self-contained. If the finished leather has to be of the sophisticated high quality varieties some of the machines
have to be imported, and then the capital cost would be higher than if the machinery is indigenous. Finance for expansion to this extent cannot be obtained from the owned funds of the existing semi-finished leather units unless they had been ploughing back a significant share of their profits over a number of years. Thus it is imperative that term lending institutions and banks have to assist these units in building up the necessary infrastructure for modernization.

None of the tanners interviewed felt that they had any difficulty in getting the required financial accommodation for their expansion. On the other hand the small tanners were not prepared to avail of these facilities and modernize fully. They were critical of the overborrowing by the larger tanners from financial institutions. The larger tanners had to pay a large sum as bank interest every year which was a fixed cost for them. So, they were quoting low prices for their finished leather in order to have a large enough turnover to provide adequate contribution to cover the fixed cost of bank interest. This made the prices of finished leather uneconomical for the small tanners who did not enjoy economies of scale and whose cost of production was higher.

The institutions providing financial assistance included
the TlIC and commercial banks. The STC has also a scheme to lend leather units funds for buying machinery to the extent of 70% of the cost of the machinery, from out of its Leather Development Fund which is built of the cess that the Corporation levies on the export of leather from India which is canalized through it. The rate of interest is 8% and the loan is repayable in half-yearly instalments with an obligation to export on STC account finished leather for five times the value of the loan. The corporation will also collect a charge on these exports by the party. But the tanners would not accept these conditions, and none of the tanners interviewed for the study has utilized this assistance.

TlIC assistance. State level industrial finance institutions like the Tamilnadu Industrial Investment Corporation (TIIC) and the State Industrial Promotion Corporation of Tamilnadu (SIPCOT) have also granted long term loans to leather units. 24 tanning units in the North Arcot district had borrowed a sum of ₹ 225 lacs from the TIIC by March 1976. These loans are repayable over periods ranging from 5 to 14 years, longer repayment periods being granted to firms in backward areas.

Some tanners appear to prefer commercial banks to the TIIC because they already have contact with the banks in the
course of their trade in E.I. leather when they have borrowed their working capital and it is more convenient to deal with them; further, loans from the TIIC cannot exceed ₹ 15 lacs for partnership and proprietorship concerns unless they convert themselves into limited companies when they could borrow upto ₹ 30 lacs. These limits have been fixed on the advice of the Industrial Development Bank of India. Tanners feel that the fixed capital needs of a finishing unit exceeds these limits in many cases and so these limits have to be revised upward in order that the TIIC scheme is really helpful to the industry.

Bank loans. Since the time the import of leather machinery was included under the Open General Licence in 1976, banks have been financing their purchase on terms upto 7 years, in addition to granting leather units their usual short-term finance. But the main difficulties faced by the tanners in the matter of their working capital finance related to the delays in sanctioning loans, the extent of the loan, the period of repayment and the security offered. The banks themselves have certain difficulties in this regard. The borrowing firms were not filing detailed project reports and expected cash flow statements because the export demand for leather is a highly fluctuating variable. Banks also felt that their loans on the security of machinery are not easily
recoverable if the borrowing units close down or stop producing finished leather, and that the cash flow of many finished leather projects submitted by tanners did not yield adequate funds for the repayment of the large term loans asked for after providing for the heavy working capital requirements. Also, the banks would prefer the existing partnership and proprietorship firms to convert themselves into limited companies, but the firms were averse to this idea.

Reserve Bank’s circular, November 1978. The tanners then made representations to the Reserve Bank of India that in view of the need to quickly modernize the leather industry, the banks should relax their terms. Consequently, the Reserve Bank of India directed commercial banks in November 1978 to relax their regulations governing the grant of working capital finance to the leather industry\(^1\). As the shift in emphasis from export of semi-finished leather to finished leather and products has led to the prolonging of the process time the units have to carry larger inventories. Considering this, the Reserve Bank advised commercial banks to make suitable relaxations in the present norms for borrowers relating to their inventory, asset and debt ratios. But the banks were directed to make sure that the borrowing units improve their

\(^{1}\text{Leather Processing. Nov. 1978. 'From the News Desk'. p. 11}
financial position by ploughing back profits, that their current ratios do not fall below 1:1 at any time, that the units submit monthly or quarterly information about their financial position regularly, and that cover is obtained from the Export Credit and Guarantee Corporation wherever possible. The banks were asked to consider sympathetically the requests from the units for term loans for making finished leather and leather goods.

Other financial assistance. Regarding other assistance the Central Government grants a cash subsidy of 15 per cent of the total fixed capital investment of the unit up to a limit of Rs 1 crore provided it is set up in a notified backward area. The subsidy grant is administered by the SIPCOT in Tamilnadu and is available only for registered units. All the mechanized tanneries of the entrepreneurs in the sample have received this subsidy except those in Pernambut which is not notified as a backward area. The Government of Tamilnadu also allows interest free sales tax loans to units in backward areas which has also been availed of by the tanners studied.

Among the tanners studied, T. Abdul Wahid and A. Hafeezur Rahman, goat tanners of Ambur were the first to make use of large scale bank finance and they had used it to full
advantage to modernize and expand their units. The other Ambur tanners followed their example and many of them have expanded their units by a judicious use of bank finance. By and large, availability of finance does not seem to be a factor that has affected the modernization of the industry but only a reluctance on the part of the tanners to make use of the available bank finance.

The Problem of Marketing

None of the tanners interviewed for the study felt that either transfer of technology or finance posed any problem for those who wished to modernize their firms. Their main difficulties related to marketing their product, solving the problem of controlling effluents from their tanneries, the absence of common facility service centres and the quality of raw materials and components. The problem of marketing is discussed in this section.

The export of semi-finished leather, particularly of E.I. tanned hides and skins has been going on for many years and the tanners have acquired a specialized knowledge of both its production and marketing, and its export was more or less under conditions of sellers' market, with the tanners using their respective trade marks for their products. Also, in the case of semi-finished leather,
say, E.I. tanned sheep skin, this is a single product and its quality variations are mostly related to the size and quality of the raw skin used. But in the case of finished leathers, there are many varieties like suede and nappa, aniline and resin finished, semi and full chrome, printed, glazed, etc. and they can be dyed in different shades of colour with different materials. And their demand depends on the ever-changing styles of products like garments and footwear which depend on the tastes and fashions of consumers in the different cities in the West. The European consumer, for example, may prefer shoes using synthetic material or rubber one year and get back to all-leather shoes the next year. Calf suedes may be preferred by garment manufacturers this year while sheep suede may be preferred the next year.

Further, the tanner who makes finished leather in India has intense competition from firms in the Western Countries themselves as well as from Japan, Taiwan, Korea or Pakistan in selling his products to the shoe or garment makers in the West. The firms in these countries have better chemicals and machinery and sometimes a better capacity to deliver the required products quicker and cheaper.

In the case of the larger tanners who are the leading
exporters, however, there has been little difficulty in getting market information necessary to plan their production; they have succeeded to a considerable extent by virtue of their popularity as leading exporters of semi-finished leather and their affluence which permits them to visit international leather fairs and get into personal contact with foreign buyers of finished leather\(^1\). The top hundred of the 400 tanners of Tamilnadu, for example, visited the Paris Leather Fair in 1978. But, for the small tanners, marketing is an important constraint. He is at the mercy of the local agents of foreign buyers and is almost unaware of the present international market conditions, prices and fashion trends.

Even the larger firms do no market research whatsoever. But they have technical collaboration agreements with large foreign buyers who provide the samples, the technical details of processing and the necessary technical advice and training to the staff in the tannery, finishing unit or shoe factory run by these large tanners, and to that extent they have no need for studying the market and finding its requirements. For the rest of their production capacity they are able to procure firm orders from foreign buyers because of their marketing ability.

The Leather Export Promotion Council and the Export Promotion Council for Finished Leather and Leather Manufactures receive enquiries and orders and visiting groups of buyers from foreign countries and the members of the councils are informed about it and meetings are arranged with the visiting groups and these members, and the Councils participate in International Leather Fairs by opening stalls in them, and the large tanners are benefited by these, as the orders that come out of these steps are bulk orders and the large tanners can execute them. But the small tanners do not benefit by this channel of contact.

The problem of marketing of finished leather and leather manufactures for the majority of small firms can be said to include the following main issues. There is no direct link between these firms and the foreign buyers. Their capacity to take up bulk orders against specifications is limited. Their competition reduces their bargaining power. To a certain extent they are exploited by the foreign buyers and their agents. Some of them are not able to maintain quality and delivery schedules in the case of their sales. They lack information about fashion trends abroad.

Probable Solutions to the Small Tanners’ Marketing Problem

The following are some of the ways by which the marketing problem may be solved for the smaller firms.
They may concentrate on the production of the standard varieties that are not fashion dictated, like brown or black skins which have a regular demand from footwear manufacturers. Each firm should specialize in certain specific leathers and obtain a very good quality in them.

**Consortium for marketing.** A number of small firms may form a consortium, say, a joint stock company and adopt a joint approach to marketing overseas. From a cooperative finishing service society a cooperative or a joint-stock marketing unit is only one step ahead. According to the exporters interviewed, there is a mark-up of more than 300% in shoes and leather goods by the present importers abroad when they sell the imported goods in their respective countries, and if the consortium company tries to make direct sales to wholesale dealers and department stores they can definitely make large sales. The consortium company can also open warehouses in the developed countries to make on the spot sales. The company should progressively start a close study of foreign fashions and enter into designing of shoes and garments itself. The consortium may also sign technical and marketing collaboration with a firm or two in each country. Such export marketing groups have been established in the Western European countries as well as in some developing countries like Singapore, Kenya and Argentina.
But when the consortium idea was suggested to the smaller tanners in the study none of them would agree that it will work, because of their traditional sense of independence and their hesitation to consider erstwhile competitors as partners in a venture. If LEPC, CHERI or a small group of influential small tanners would take an initiative in this matter it would bear fruit particularly because the recession in the market for the last two years has affected the business of the small firm in the industry very seriously and these small entrepreneurs have to find a way out of it.

Marketing by STC. Alternatively, the STC could try an aggressive export marketing of leather and its products, but as a state-owned organization, it has to get over its defects like the red-tapism and will have to take very quick decisions and execute them quickly too if it should succeed in its efforts. However, the STC has made a beginning in this regard. It arranges for fashion shows in centres like Rome in collaboration with buying firms in the respective countries exhibiting leather goods made in India. Its officers have toured foreign countries and have booked orders for garments, shoes and wallets and have distributed them to firms in India. But these steps have benefited mostly firms in Bombay, Delhi and Madras City. The tanners studied in this project have not been the beneficiaries of the STC.
orders except a couple of large tanners. The STC has also started its own garment factory at Madras in 1979.

While technology transfer and finance which are normally the main problems affecting modernization of any industry have not been a bottleneck in the case of the modernization of the leather industry, the main problem here appears to be marketing, particularly because both the quantum and value of the exports of the industry fluctuate considerably and the industry is noted for its periodical booms and depressions. After the Government of India announced its modernization policy in 1973, the industry had a boom with its peak in 1975-76 with prices and profits then ruling high and a depression in 1978-79 from which the industry has not yet recovered and the like of which the older tanners interviewed say they had not seen during the last thirty years.

The 1978-80 Slump

The announcement of the new leather policy by the Government of India encouraging the modernization of the industry in 1973 was followed by a five year period of prosperity for the industry. In some countries like Italy which were important buyers of E.I. leather from India the governments had ordered the closure of those tanning and finishing units which had not arranged for the treatment
of their effluents, and the cost of labour was also rising in these countries, and hence the manufacturers of shoes, garments and other leather goods there were more and more interested in finished leather from countries like India. The earlier modernizers got good prices for their finished leathers during this period. This boom lasted till 1978.

But a recession set in during the second half of 1978 adding a new dimension to the problem of modernization of the Indian leather industry. According to the tanners, the rapid inflation induced by rising oil prices reduced the consumer spending in the West on shoes and garments, and the demand for leather from India both finished and semi-finished started falling by the end of the year. The removal by Argentina of its ban on hide exports in 1979 and the use of pig leather as a substitute for sheep leather for making garments during the year further depressed the foreign prices of Indian leather.

In India, raw skin prices did not fall in proportion with the fall in the export prices of leather for a number of reasons. The supply of raw hides and skins was affected by factors like the ban on cow slaughter, local curbs on the goat population because of its deleterious effect on the existing vegetation, export of live animals, reduced
livestock farming on account of its rising cost, the reduction in grazing lands and drought in parts of the country and the reluctance of farmers to rear male calves of buffalo and cattle on account of their reduced importance as draught animals. At the same time, the demand for raw hides and skins was rising because of the starting of new tanneries and finishing units in states where the industry had not developed so far as well as in the industrial estates in states like Tamilnadu where the industry had already developed, and because of the entry into the leather industry by corporate giants in India like the Tatas since 1976.

Simultaneously, the cost of imported chemicals used by Indian tanners is also rising. Though indigenous chemicals are available their supply is inadequate and their quality not uniform and hence the import of both tanning chemicals like wattle extract and finishing chemicals like fatliquors and dyes is unavoidable, particularly if the quality of the finished leather is to be high. While the duty on certain imported machines has been reduced by the Government of India, the duty on their spare parts still remains high and the cost of machinery is also rising every year. The interest on bank credit borrowed to meet the heavy investment on buildings and machinery by the finishing units is a heavy fixed cost that may run to over a third of the cost of production.
On account of the above reasons the cost of leather finished in India remains high and it is being outpriced in the foreign markets. The export of both finished and semi-finished leather has been falling steadily during 1979-80 and 1980-81. In the case of the 30 exporters now studied only three had a rise in exports between 1979-80 and 1980-81. Four tanners including three laggards and one in the late majority have stopped exporting and sell their leather only to local buyers now. The fall in export of all the thirty tanners between 1979-80 and 1980-81 was 34%. The fifteen early modernizers suffered a fall of 31% in exports and the later modernizers and laggards had a fall of 50% in exports during the period, taking the export of leather only, which shows that earlier modernizers were able to stand the recession slightly better. The three large tanners of Ambur making leather footwear and uppers, however, were able to increase their export of these goods significantly between 1979-80 and 1980-81.

The smaller tanners who had modernized early and established a name for the quality of their finished leather were able to sell some of their production locally to firms in Bombay, Madras, Delhi, Agra and Bangalore which were making garments for export and shoes for export as well as domestic consumption. But the main problem here is that
the local sale prices were lower than what they would have earned by exporting, and sales were in smaller lots.

But the later modernizers and E.I. exporters have been badly hit by the depression.

One obvious lesson that one could learn from the effects of the recent slump is that there is immediate need for converting export of finished leather into export of shoes, garments and other leather goods. There would be less fluctuation in the demand for the latter than for E.I., wet blue or finished leathers. The larger firms making shoes and shoe uppers in North Arcot are doing well; and garment exports are also steadily rising. It is the export of semi-tanned and finished leather that has been affected by the slump. Government’s fiscal policy should in the future aim at conversion of more finished leather into finished goods like shoes, garments and leather goods. While negotiating trade pacts with other countries the Government of India may bargain for reduction of import duties on Indian leather products and for emphasizing on their purchasing finished goods from India. There should also be a stricter enforcement of export regulations and more effective pre-shipment inspection to prevent the export of crust leather as finished leather.
The Problem of Tannery Effluents

Another important problem is that of tannery effluents. A tannery which proposes to instal machinery, and which requires high-tension electricity or a leather firm which requires licence from the government for any purpose has to satisfy the health authorities that it has made adequate arrangements to treat effluents. Every tanner in the study is now deeply concerned with this problem which has so far eluded solution in the case of most of them.

The water that flows out of tanneries and finishing units is dirty in colour and foul-smelling and contains hair, fleshings, and chemical substances like salt, hydrogen sulphide, wasted chrome tanning material that has not been absorbed, and a considerable quantity of finishing chemicals and dyes. When let into streams the effluents affect their quality and make the water unfit for domestic or agricultural use in addition to killing any fish in them. When the effluents are let out on open lands they seriously affect the productivity of the surrounding soil and pollute ground water sources also. When let into sewers, the effluents form insoluble calcium carbide and choke the sewers. Thus the effluents of tanneries cause considerable social disutility and cost. At Vaniyambadi and Ambur, a majority of tanneries let their
effluents out into the sands of river Palar flowing beside them and they affect the quality of the drinking water pumped down-stream by townships and the irrigation water from wells beside the river.

During June 1976 tanneries and distilleries all over Tamilnadu were asked by the State Government to make adequate arrangement for treatment of their wastes and effluents within six months. This was in enforcement of state laws like the Public Health Act, the Municipalities Act and the Panchayats Act and followed the receipt of complaints from the public about the water resources polluted by the seepage of tannery effluents in North Arcot district in particular.

The Central Leather Research Institute constituted a task force for the purpose and it evolved certain methods for treating these effluents. The primary treatment, here, would consist of screening the effluents to remove coarse impurities and hair and allowing certain suspended items to settle down in sedimentation tanks. The settled vegetable tanning effluents can be dried on sand beds and used as manure; the sludge of waste chrome liquor mixed with waste lime liquor can be dried and used as a land fill. The secondary treatment involves detaining the wastes in an anaerobic lagoon first and in an aerated lagoon next for
treatment and solar evaporation for 10 and 6 days respectively.

The main problem here is not only finance for constructing the settling tanks and evaporation basins, pumps and equipment and for buying the required land, but also the problem of availability of the land itself next to the tannery. The Leather Development Council estimated that the investment for treating effluents for one kilogram of hide or skin per day would range from $85 to $165 depending on the size and magnitude of the plant and on an average each firm may have to invest $1.5 lakhs for this purpose. The UNIDO estimated the capital cost of the effluent treatment plant at nearly $3 lakhs for a unit processing 500 hides per day. A pilot plant based on the CLRT flow chart for effluent treatment was built at Ranipet for the tannery of Khizar Hussain, one of the early adopters in the study, in collaboration with the National Environmental Engineering Research Institute (NEERI) in 1976. The firm estimates the capital cost of the effluent treatment plant at $10 lakhs; it occupies 8 acres of land and employs 4 persons including a B.Tech. and has a 25 HP motor and 2 pumps.

Fortunately the Ranipet entrepreneur had the necessary land next to his tannery, but in places where a number of

tanneries are situated adjacent to one another such a solution is not possible. Only a collective approach of running a common effluent treatment plant for a number of units has to be tried, and no satisfactory blueprint for such a unit has yet been prepared. The tanners of Vaniyambadi would like the Government or the Municipality to run a common effluent treatment plant for the over thirty units that are situated in a row near the Palar river, and charge them individually on the basis of their respective quantities of effluents for such treatment. This way, they need not bear the capital cost but effluent treatment would involve only a recurring cost for them. Or, the Government may grant the necessary financial assistance for a tanners' cooperative which may be started to run the treatment plant. The tanners by and large do not disown their social responsibility in this regard.

The tanners of Tamilnadu were again served with notices from the Government of Tamilnadu in July 1977 asking them to take steps to solve the problem of effluents within one month failing which it threatened to cancel their licences. A few tanners in the district have built settling tanks and evaporation tanks if they had land nearby. Many could not or did not do even this, and their licences have been cancelled, though the Government had not closed them down
because it would mean unemployment of the tannery labour a majority of which consists of Harijans.

Not having an effluent treatment plant is a handicap to modernization of the firm today because units that require licences for production of finished leather or power connections have to apply to the concerned government authorities and they insist on the provision of a satisfactory effluent treatment plant before taking action on their applications.

Of the thirty tanners in the study, Khizar Hussain of Hanipet has built the pilot plant designed by CIL in collaboration with NERI and costing Rs 10 lakhs. The other large tanners of the district have built some settling tanks and installed equipment for aerating the effluents or they have submitted designs for their effluent plants to the Health Department of the Government of Tamilnadu and are expecting the approval of the latter. But neither the Government nor the tanners are certain about the standard level upto which the effluent should be treated, that is, how pure it should come out of the treatment ultimately before being let out into streams or river sands. Another difficulty seems to be the inadequacy of the size of the tanks built to hold the effluent water coming out of the tanneries, for, when 20,000 skins are tanned per day, the
effluent of the tannery may exceed 2 million litres.

Three of the smaller tanners in the study said that there is no effluent problem at all but it is a bogie raised by the politicians who play it up in order to win the support of the agriculturists. Ten of the others have built solar evaporation tanks but they do not use them as they are inadequate for the purpose. The rest of the tanners want the government to solve the issue by building a common plant or individual plants, they are, however, prepared to pay a fee for the treatment of their respective effluents to the organization that works the common effluent treatment plants. They feel that this problem cannot be solved by individual tanners; a few of the tanners interviewed pointed out that even in Italy, France and Germany the problem had defied solution and many tanneries had closed down in these countries consequently; and their closure has indirectly speeded up the modernization of the leather industry in India by creating a demand from their buyers of finished leather from India. Thus there has been a transfer of the pollution problem along with a transfer of technology to a developing country from those that are developed.
Other Infrastructural Facilities

Along with the problem of marketing the lack of adequate infrastructure for the industry in general and in the regions of its concentration in particular has been attributed by the tanners as an important factor that has prevented the laggards from modernizing their units and has accounted for the slower pace of modernization in certain areas relative to others. To remedy the situation the following measures were suggested by them.

Common facility service centres. Common facility service centres for leather finishing should be speedily set up and commissioned in places like Pernambut where the modernization has been very slow. Soft loans and technical assistance may be provided to technicians and engineers with some experience in the industry to set up independently private finishing service centres in places of concentration of the industry.

Functional industrial estates. Functional industrial estates may be started in places like Ranipet for leather goods, Ambur for shoes and Vaniyambadi for garments.

Quality of equipment and components. Immediate steps have to be taken to improve the quality of indigenous
finishing machinery and chemicals, tools and machinery for making shoes, garments and leather goods, shoe lasts, buckles, heels, insoles, toe puffs, counters, welts and zip fasteners.

**Improvement of raw hides and skins.** The state governments and the tanners' organizations should cooperate to improve slaughter-house practices and to spread the necessary knowledge and skill to villages so as to improve the quality of raw hides and skins that come out of them.

The adoption of the above measures regarding finance, marketing, technical assistance, effluent control and other infrastructural problems would improve entrepreneurial perception of the profitability of upward diversification of production and will help the industry to modernize quickly.

Apart from this, whether more innovative entrepreneurship can be directly developed by the state is another relevant question which is discussed in the following section.

**Entrepreneurial Development**

**Increasing the Supply of Innovating Entrepreneurs.**

Among the social psychological factors intrinsic to the entrepreneur like religion and traditionality, education, previous occupation, cosmopolitaness and achievement motivation, there is little that the government can do to immediately
improve the traits that will increase the entrepreneur's propensity to innovate even if we are able to identify them. The SISI at Madras and at other cities has attempted a number of entrepreneurial training programmes but these were mostly for educated unemployed, particularly technically qualified persons. Neither SISI nor any government organization has conducted any training programme for existing entrepreneurs aimed at increasing their innovativeness. There has been one such effort by a group of fertilizer companies in Tamilnadu which planned and implemented a programme to improve the innovativeness of fertilizer dealers in South Indian Villages with the assistance of Wayne G. Broehl (Jr) of Harvard University; it consisted of a set of innovation seminars and a follow-up programme¹.

There has never been an entrepreneurship training programme for the leather industry, and no tanner of North Arcot has sent any of his sons to attend the SISI's entrepreneurial training programmes. However, two trainees who are not from traditional tanning or leather business families are reported by the SISI to have started leather and leather goods units respectively in Ranipet and Madhavaram with

complete assistance by the SISI for project formulation, promotion and finance of their firms.  

Essentially, the slow pace of modernization seems to be the result of a lack of perception of leather finishing and leather goods manufacture as a more profitable and less risky alternative than making semi-finished leather, and it is doubtful if an entrepreneurial training or motivation programme by itself can alter this perception effectively and favourably unless the real problems faced by the entrepreneurs in the industry with respect to marketing and infrastructure are solved.

Education for entrepreneurship. However, the CLMI and other technical training institutions may increase the emphasis on training in production and marketing management and financial administration in their B.Tech., I.Tech. and Certificate courses, and B.Tech. students may be given an 'in-plant training' for 6 months in finishing and leather goods units as a condition for the award of the degree. The subject of Leather Technology ancillary to the B.Sc. course, and the B.Com. course in the colleges in the region where the leather industry is located should be so framed as to provide adequate  

1Interview with Mr. Balasugavanam, Leather Development Officer, SISI, Madras.
motivation to students taking these courses to develop into entrepreneurs. Such orientation of these courses may turn out students into entrepreneurs instead of mere technicians and office assistants.

Encouraging new entrepreneurs. Every social change does not find cent per cent acceptance in a society. When an industry is being modernized there are bound to be some marginal firms that may find the change unprofitable and may leave the industry in search of better opportunities and a few others who would pull on in the traditional way as long as they can.

So, instead of trying to convert every existing tanner into a leather finisher or leather goods manufacturer, new entrepreneurs may be encouraged to start units making finished leather or leather products. For it would take more time and effort to alter the perception of laggards among the existing tanners who are steeped in tradition and conservatism than to motivate new entrepreneurs to enter these fields. However, such entry of new entrepreneurs has been going on to a limited extent over the last eight years, and but for the recession over the last two years it would have gained further momentum. Seven units have been started in the Ranipet Industrial Estate by new entrepreneurs to finish
leather. At Madhavaram and other parts of Madras, many new entrepreneurs have started leather and leather goods units. And giant firms like the Tatas have entered the industry in other parts of the country. And new men have been found to be more innovative than hereditary tanners even among the tanners themselves.

**Conclusion**

The role of institutions like the CIRC, ELC, STC, LEPC, LEXPORT, SIDO, TIIC etc. set up by the government to assist industry in general or the leather industry in particular was examined in this chapter with respect to the modernization of the leather industry.

In the matter of entrepreneurial development, the social psychological traits of the entrepreneurs which may contribute to their innovativeness are beyond the control of the government. The best that can be done in this respect is to improve the courses on technology and commerce provided by colleges and universities in the area so as to motivate students to develop into good entrepreneurs. And new entrepreneurs may be encouraged to start leather finishing and leather goods units.

The functions of transfer of technology and training of skilled labour for modernization of the industry has been
adequately looked after by CLAH, and adequate finance has been coming forward from banks and specialized financial institutions and these have not been problems with respect to the finishing of leather by the tanners.

The main problem has been the difficulty of the tanners in marketing finished leather and leather goods. They require assistance in obtaining market information and protection from widely fluctuating demand and prices of finished leather and from their exploitation by middlemen. The 1978-80 slump has hit them badly. The STC and the LEPUC should improve their marketing assistance and the tanners may be encouraged to form a consortium for export purposes. Fiscal policy should now be tuned up to encourage the export of finished products in the place of finished leather as the former have more stable demand and earn more value.

There are some infrastructural problems that require early solution if modernization should be faster. For example, common facility service centres may be opened in places like Pernambut which have remained backward with respect to industrial modernization and functional industrial estates may be set up to manufacture leather goods in the district. The quality of indigenous equipment, components for finished products, chemicals and machinery and of raw hides and