INTRODUCTION

1.1 INDIAN ECONOMY AT THE CROSS-ROADS

Though the present study is related to only the leather industry in India, it is necessary to have some insight into the development process of the Indian Economy in general. No industry can prosper in isolation in the absence of overall socio-economic development. As the International Labour Organisation has rightly observed, poverty anywhere is a threat to prosperity elsewhere and everywhere. Market for products of one industry is determined by the growth in employment and incomes in the other sectors of the economy. The modern technique of input output analysis at empirical level and the concept of General Equilibrium at the theoretical level tells that all things hang together. Hence, in this section an attempt has been made to highlight the main features of the Indian Economy and the major structural changes it has undergone during the planning period.

(A) Demographically, India has a large pool of human resources with a size of population as large as 846 millions as per the Census of 1991\(^{(1)}\). Since then, the population growth has continued at the annual rate of more than 2%. Before the end of this millennium, India’s population is projected to cross 1000 million. Presently, India is only second to China in terms of the size of population. However, the present rate of population growth in China has been brought down to about 1%. If this disparity in the growth-rate persists, India may overtake China in the first quarter of the 21st Century.

The problem of population explosion in India is a major stumbling block in the growth process in India. Inspite of the average annual rate of economic growth at 4% during the planning period, India’s per capita income is one of the lowest in the world. In 1994, real per capita GDP of India, in terms of purchasing power parity with U.S.$ was 1348 U.S.$ with India’s 143rd rank among the 175 nations covered by the Human Development Report published by the UNDP\(^{(2)}\). In the same year, per capita GDP of Pakistan was 2154 U.S.$, Sri Lanka 3277 U.S.$, Japan, the most developed economy in Asia, has its per capita GDP 21,581 U.S.$\(^{(3)}\), which is 1500% more than
that of India’s. Inspite of a massive increase in GDP during the planning period, per capita GDP has crawled ahead only at snail’s pace - a fact attributed to mounting burden of over-population.

The population explosion has taken its toll on the quality of population. Therefore, Human Development Index, which takes into account the life expectancy at birth, adult literacy rate along with per capita GDP, is only 0.446 with 138th rank among 175 nations(4). In 1994, life expectancy of India was about 61 years and adult literacy rate was about 51%. This is in sharp contrast with highest HDI of 0.96 for Canada(5). Of course, the situation has improved during the planning period. For example, life expectancy was only 27 years and literacy rate 20% in 1951.

The demographic changes that have occurred in India have some important implications for the industrial growth. The absolute size of market is growing. It is estimated that the number of higher middle class people in India is larger than the entire population of Australia. This class, mostly settled in urban areas can be a potential market for leather products. Besides, changes in the age structure of the population along with those in sex-ratio, urban population ratio can ignite a process of demand induced production-growth in leather industry) Of course, ultimately growing population can turn into actual buyers only if they have sufficient purchasing power which is possible only through persistent economic growth.

(B) Planning period in India till 1991 is often considered to be an era of missed opportunities in terms of slow economic growth. While China and a number of South Asian Nations have often shown double digit rate of growth in GDP, India had remained content with barely 4% growth rate. Economic reforms initiated in 1991 have raised hopes for higher growth rate. With initial slow-down in growth rate in 1991-92, GDP has risen at the rate of 5.1%, 5%, 6.3% and 6.6% in 1992-93, 1993-94, 1994-95 and 1995-96 respectively. In 1990-91, GDP at constant prices was about Rs.2,12,253 crores while in 1995-96 it climbed up to Rs.2,67,461 crores. In absolute terms, this increase in GDP is larger than total GDP of many more developed but small sized nations. Per capita income at constant prices was Rs.2,175 in 1991-92 and Rs.2,506 in 1995-96. Such rise in real purchasing power and steady decline in percentage of population below poverty line is expected to cause robust growth in demand for many non-food items of consumption, including leather products.
Liberalisation of foreign trade, encouragement to foreign private investment and reduction in fiscal deficit bringing down both rate of inflation and real rate of interest, improvement in current account balance of payment with deficit less than 1.5% of GDP,\textit{\textsuperscript{[b]}} overflowing foreign exchange reserves,\textit{\textsuperscript{[b]}} structural reforms in financial sector and in general more competitive environments are positive developments destined to improve efficiency in production process in which incompetent entrepreneurs will wither away, but those who have sound technical and financial foundations can reap a rich harvest.

\textbf{(C)} \textit{\textsuperscript{[C]}} It is an essential characteristic of modern economic growth that the economic growth results into relative decline in the share of primary sector including agriculture and corresponding rise in share of secondary and tertiary sectors in total GDP. India also bears testimony to this tendency. Agriculture alone had contributed 50% of GDP in 1951, whereas by 1996 its share was just above 26\%\textsuperscript{[b]}. If we consider the trend since 1980-81, one can notice a marked structural transformation of the Indian economy. This is illustrated in the following table.

\begin{table}[h]
\centering
\caption{GDP at Factor Cost by Source of Origin\hspace{2cm}(at 1980-81 Prices)}
\begin{tabular}{|c|c|c|c|c|}
\hline
\textbf{S.No.} & \textbf{Sector} & \textbf{1980-81} & \% share in total & \textbf{1995-96} & \% share in total \\
\hline
1. & Primary & 48,536 & 39 & 79,388 & 29.0 \\
2. & Secondary & 29,828 & 24 & 77,098 & 28.8 \\
3. & Tertiary & 44,063 & 37 & 110,975 & 42.2 \\
\hline
\textbf{Total} & & 1,22,427 & 100 & 2,67,461 & 100 \\
\hline
\end{tabular}
\end{table}

Notes: Primary sector includes agriculture, forestry, fishing, mining and quarrying.
Secondary sector includes manufacturing, construction, electricity, gas and water supply.
Tertiary sector includes services like transport, communication, trade, real estate, community and personal services.


The table clearly indicates that traditionally held view that Indian economy is predominantly an agricultural economy is no longer true at least in terms of GDP contribution. Service sector has emerged as the leading sector while industrial sector
has caught up to match agricultural sector. This structural change is indicative of changing pattern of both demand and production activity. It is, however, ironical that unlike other developed countries, India has not witnessed corresponding change in the occupational distribution of working population. Even today more than 60% of India’s labour force is engaged in agriculture, whose contribution to GDP is barely 26%. This highlights dualistic character of Indian economy with abject poverty in the rural part as a result of low labour productivity in agricultural sector. In India, unorganised sector of leather industry representing a large number of cobbler households have roots in rural India. Any improvement in living standards of these cobblers can help the cause of alleviation of mass poverty.

(D) Sustainable economic growth requires high ratio of saving and investment. India has achieved a growth-rate of more than 5% per annum during the decade starting from 1980-81. The Sixth and Seventh Five Year Plans of India definitely fared better on the front of growth rate, but the decade experienced almost stagnant ratio of saving to GDP, thereby increasing fiscal deficit as well as current account deficit in balance of payment. In 1980-81, gross domestic saving was 21.2% of GDP, in 1985-86 with 19.8% and in 1989-90 with 22.4%. However, in 1994-95 it is estimated to be almost 25% and by 1997-98, it may well be around 27%. Aggregate investment has also increased from 23.3% in 1980-81 to 25.9% in 1994-95. Foreign resources which were as large as 3.4% of GDP in 1990-91, came down to only 1% in 1994-95. This points at relatively less dependence on foreign resources to finance domestic investment. At macro-level, the gap between saving and investment is matched by import-export gap in ex-post sense. Thus, closing down saving-investment gap since 1991 has manifested itself in less trade deficit in balance of payment. In fact, it is a curious happening that banks are flushed with liquidity and credit off-take has failed to pick up in 1996-97. This suggests the possibility of sizable portion of saving remaining idle without entering into productive channels of investment.

In the period prior to 1991, external resources raised by India were mostly in the form of external debt. The debt-servicing ratio had soared to the level of 35% of export earnings in 1990-91. Since then, the government has pursued policies to attract foreign direct investment (FDI) as well as portfolio investment from foreign
institutional investors. Consequently, the debt-service ratio has now declined to the manageable level of 26.4% in 1995-96. Debt stock was 41.1% of GDP in 1991-92, while it dropped to 28.9% in 1995-96. This qualitative change in the flows of external resources can reduce cost of capital for Indian entrepreneurs. India already has comparative advantage in terms of cheap labour. Now, cheap capital can further consolidate India's position vis-a-vis other countries and allow quantum jump in exports. The leather industry in India can also avail of these opportunities to realise higher value added to their products.

(E) **Gains of economic reform since 1991:** Various economic reforms undertaken since 1991 have led to revival of strong economic growth, rapid expansion of productive employment, reduction in poverty, a substantial boom in exports and decline in inflation. The full dimensions of the recovery produced became evident only after 1993-94. Growth of GDP was just 0.8% in 1991-92. It reached to 5.1% in the following year. It was maintained at 5% in 1993-94 and in 1994-95 it attained 6.3% rate which was almost sustained in 1995-96. Thus, in spite of crisis of 1991, average growth in 8th Plan was about 5.7% which was higher than the Plan target. Even this performance is compared with other countries, the achievement is impressive by international standards.

What is more important is that the economic growth is now much more sustainable. The growth recovery is combined with lower current account deficit and record decline in rate of inflation, much below the historical average of 8% per year. Gross primary fiscal deficit is found to be lowest since 1980-81. Thus, introduction of fiscal stabilisation measures and other reforms have started yielding rich dividends to the Indian economy.

It is true that immediately after reforms there was some setback to the poverty alleviation programme and other social welfare measures. However, over a longer period there is beneficial impact on living standards and many social indicators. In the crisis year of 1991-92, the real wages of unskilled agricultural labourer had declined by 6.2%. However, in the following three years, they have increased at the average rate of 5.1%. It is estimated by the Planning Commission that percentage of people below poverty line was just 26% of total population in 1993-94. Annual growth of
employment is estimated to be about 6.3 million jobs per year, as compared to 4.8 millions in 1980s.

There is broadening and deepening of economic growth since reforms. The recorded growth includes the rate of industrial growth at 11.8% in 1995-96, as compared to 9.4% during 1994-95. In 1994-95, food production registered a little fall. Yet it was still around 190 m.tonnes and the government stocks of foodgrains continued to remain comfortably large because of steady performance of agricultural sector.

On the price front, there was higher rate of inflation in 1994-95 but since then the rate has declined from a peak of 17% in 1991-92 to less than 5% in 1996-97. This is made possible by arresting the growth of money supply and with the help of better supply management. As government had bufferstock of foodgrains about 36 m.tonnes in 1995 and 28 m.tonnes in 1996, it was possible to intervene in the market to prevent any increase in the prices of essential commodities.

Along with agriculture, the industrial sector has surged ahead with the growth rate of 8.6% in 1994-95 and 11.8% in 1995-96. The composition of industrial output shows that in 1994-95, the capital goods sector recorded fastest growth rate of 25%. Along with 9% growth rate in manufacturing sector, power generation went up by 8.5% and mining sector growth by 6.5%. Thus, the growth was broad based. Even in 1995-96, the capital goods sector recorded high growth rate of 18.2%. It has exploded the myth that the liberalisation of imports would be detrimental to domestic production of capital goods. Moreover, small scale industries sector grew faster than the industrial sector in general. It has dispelled the fear that competitive reforms would ruin the growth of small industries. This observation is particularly important for leather industry which is dominated by a large number of small industrial units.

The improved performance of industrial sector is attributed to the following reforms undertaken since 1991:

a) Industrial licensing controls are mostly dismantled. Industries which still require licence represent less than 15% of value added in the manufacturing sector.

b) The number of industries reserved for public sector is reduced to only six. They include defence production, atomic energy, coal, mineral oil, railway transport and a few other minerals.
c) The large industrial houses no longer require clearance under the MRTP Act to start new industrial undertakings.

d) There is automatic approval of foreign investment up to 51% of share capital for 35 priority industries which represent 50% of value added in manufacturing sector. The list of such industries is continuously expanded to attract large inflow of foreign direct investment.

e) There are less price controls on industries like drugs and pharmaceuticals, which is expected to increase corporate funding for R&D.

f) Government has revised national mineral policy. Many mines are open to private investment. In all, 13 minerals which were earlier reserved for public sector are now open to private sector.

Development of both agriculture and industry can be sustained only with better performance of infrastructure sector. This sector has performed well till 1994-95 as compared to its lukewarm performance during pre-reform period. Basic inputs like electricity, coal, steel, cement and petroleum products have a combined weightage of 29% in total industrial production. They recorded a growth rate of 8% in 1995-96. Steel and cement production went up by 9% and oil production by 10%. New telephone connections showed impressive rise by 30% and goods handled by major ports went up by 11%. The railway traffic also increased by more than 6.3%.

Government has initiated a number of measures to allow private enterprises in areas of infrastructure reserved till recently for public sector. There is an attempt to restructure power sector to build long term financial institutional and operational viability. The state Electricity Boards are reconstituted to shed their losses. The national telecommunication policy - declared in 1994 allowed private sector to provide basic telecom services. Government has given licence to about 25 private airlines to operate air traffic services on the domestic routes. Government has also amended National Highway Act so that there can be a levy of toll on the users of national highways. This is expected to attract private participation in construction and maintenance of roads. No doubt, there are still many bureaucratic constraints on the development of infrastructure sector. Any future growth of agriculture and industry will not be possible without massive investment in infrastructural projects. In fact, in 1996-97, there were signs of industrial recession mainly because of drying up of...
public sector investment by government. Some economists have questioned the wisdom of restrictive monetary and fiscal policy and have advocated Keynesian pump-priming measures to give boost to aggregate demand.

1.2 A PROFILE OF THE ECONOMY OF TAMIL NADU

The state of Tamil Nadu with a population of 5.58 crore in 1991 can be rated to be among the top 5 fastest growing states in India. During the period between 1989-90 and 1994-95, the state has recorded average annual rate of economic growth at 6 to 7%. There are only two states having a growth rate of more than 7% per year, namely Delhi and Arunachal Pradesh. Delhi is mostly a city-state and its performance can not be considered relevant for the inter-state comparison. Arunachal Pradesh is sparsely populated in the North-Eastern Region, hardly of any significance in the national economy. Thus, performance of Tamil Nadu is almost on par with Maharashtra, the most industrialised state in India.

During the period 1989-90 to 1994-95, the annual growth rate of the state was 7.1% for agriculture, 8.2% for mining, but only 2.2% for manufacturing. This highlights sectoral imbalance in the state, thus suggesting that industrial sector has failed to keep pace with the growth rate of agriculture. In 1994-95, the share of agriculture in the State Domestic Product (SDP) of Tamil Nadu was 24% while that of manufacturing was 19.9% as compared to All India figures of 29.2% and 19.6% respectively. Thus, it is evident that Tamil Nadu has relatively less share of agriculture in the domestic product, suggesting higher degree of industrialisation in the state.

To understand the importance of Tamil Nadu in the Indian Economy as a whole, it is necessary to examine its share in All India SDP. In 1989-90, it was 6.3% and it went up marginally to 6.9% in 1994-95. As per this criterion, Tamil Nadu ranks fourth in the country, only to be overshadowed by Maharashtra (15.8% share), Uttar Pradesh (11.1% share) and West Bengal (7.9% share).

As per the data available for 1992-93, Tamil Nadu had 17,720 factories employing 10,67,977 workers with a fixed capital of Rs. 15,545 crore and value of output of Rs. 37,986 crore, as well as value added of Rs. 7,303 crore. In the same year, the State had the second largest number of industrial workers, only next to Maharashtra as well as the second largest net value added by the industrial sector.
Thus, the state is destined to play a key role in the national drive for rapid industrialisation.

An indication of how far the agriculture is geared up to new methods of production, the criterion of per hectare consumption of fertilizers can be used. In this respect, the state has recorded such consumption of 106.89 Kg. per hectare in 1995-96, which is lesser than what is recorded for Punjab, Haryana and Andhra Pradesh\(^{11}\). It is interesting to note that while for the state of Maharashtra, most of the economic growth is attributable to modern industrialisation in Mumbai-Pune industrial belt, it is much more widely diffused in the state of Tamil Nadu.

As an indication of deepening of financial sector in Tamil Nadu, it is possible to trace performance of banking industry in the State. In March 1996, the state had 4,567 branches with aggregate deposits of Rs.29,052 crore\(^{12}\). Thus, credit deposit ratio was 101.2% highest among all the states in India, as compared to 61.9% for the nation as a whole. The state could secure a credit of Rs.6.44 crore and deposits of Rs.6.37 crore per branch office of the banks. It is interesting to note that the banks in the state had 36.92% priority sector advance as compared to the national average of 32%. As far as financial assistance sanctioned by All India level financial institutions is concerned, Tamil Nadu ranks third in India with a cumulative total of Rs.8,388 crore till March 1995. The state had about 8.63% share in total assistance provided by such institutions\(^{13}\).

Tamil Nadu has a creditable record of social services with 275 hospitals and 295 dispensaries in 1995-96. There are 39,448 hospital beds available and population covered works out to 1,464 per bed. There were 30,471 primary schools, 5,569 middle schools and 5,909 higher secondary schools, with a student enrolment of 57.78 lakhs for primary schools, 31.96 lakhs for middle schools and 50.66 lakhs for higher secondary schools. Number of villages with drinking water facility was 66,477, out of a total number of 66,631 villages in the state\(^{14}\). Thus, almost 100% of villages can claim to have this facility. Besides, rural electrification is almost 95%. The Human Development Index of Tamil Nadu was 0.448 as compared to All India average of 0.423. The state has 9th rank in the HDI, life expectancy at 62.4 years, literacy rate of 63% and infant mortality rate 57 per thousand\(^{15}\). Thus, the state is slightly better than
majority states in such social achievements but not commensurate with the degree of industrialisation achieved so far.

It is against this backdrop of the Indian economy in general and Tamil Nadu economy in particular, that the study of the leather industry in India has been attempted.

1.3 SIGNIFICANCE OF THE PROPOSED STUDY

The planning period in India has witnessed an onward march of the leather industry across the country. In recent times, the leather industry has surged ahead in terms of the volume of output, the total value added, employment and exports. From macro-economic point of view, the industry is not as significant as other industries like Iron and Steel, Textiles, Cement and Sugar. In the computation of the Index Number of industrial production, statistical weightage for leather and fur industry is only 0.5 per cent. In the construction of Index Number of price-level, its weightage is a little higher at 1.018%.

Of course, this relatively small share of leather industry in India’s national output does not undermine its importance. The Indian leather industry derives its strength mainly because of favourable endowment in terms of huge livestock resources available in India. The estimates made by Central Leather Research Institute (CLRI) indicate that livestock population of India is more than 300 millions. India ranks first in the world in terms of livestock population. It is true that quality of livestock resources in India is not as high as one found in developed countries. Bauer and Yamney have pointed out that livestock resources in under-developed countries are assets whose net marginal product can be negative. It often does not make economic sense to possess and maintain such livestock resources. Yet, the very presence of such livestock population can be a potential source of the basic input required by the leather industry. If this input is properly harnessed in productive process, the leather industry can stand at a bright prospects level for sustained development.

Besides, leather industry has emerged as a key segment in the Indian Industrial Sector, because of its export orientation. Its share in total annual exports has recorded a steady increase during the planning period. In 1995, the leather industry was ranked fourth in the commodity exports from India. The provisions of the 8th GATT are
destined to open gates of the global market for the Indian leather products. Since 1991, India has embarked upon the path of economic liberalisation with conscious efforts to integrate the Indian economy with the global economy. Under such dynamic environments of export-led economic growth, leather industry has exciting prospects in terms of widening and deepening of its market in the foreseeable future. It has already emerged as an important source of foreign exchange earnings. At the same time, its export orientation has exposed it to the vagaries of volatile global market, posing some peculiar problems for the production and pricing of leather products.

There is yet another socially relevant angle to the study of leather industry. In the traditional set up of the Indian society, the community of cobblers belong to the under-privileged strata, exposed to exploitation and deprivation at the hands of upper-caste people. As cobblers derive their livelihood from unorganised sector of leather industry, their economic betterment hinges upon just and orderly development of the industry. In India’s commitment to economic growth with social justice, promotion of leather industry can make sizeable contribution to economic welfare of masses through employment and income generation.

For all these reasons, a critical and objective study of the historical development of the leather industry in India becomes imperative. It is necessary to probe into the factors which have contributed to the past growth of the industry and to foresee likely obstacles that can hinder its future sustained development. The study unfolded in the following chapters has endeavoured to examine the success or bottlenecks of the Indian leather industry and to recommend concrete measures for its future development. It is earnestly hoped that such a study can be useful to other developing countries which are endowed with large livestock resources. Republic of Sudan is one such country where there is a state initiative to develop leather industry by using its rich and highly diversified animal kingdom. Sudan is probably passing through a stage underwent by the Indian leather industry a decade ago. A study like this can throw some light on the policy that a country like Sudan should formulate and pursue it to smoothen and accelerate the development of its leather industry.

1.4 NATURE AND SCOPE OF THE STUDY

The leather industry in India is spread across the country with a bewildering variety in the size of units, the type of activity and nature of technology. It is,
therefore, not possible to cover all units and all aspects of the industry within the
compass of the present study. The locational scope of the study proposes to focus
attention on some case studies of the leather industrial units in the state of Tamil
Nadu, to elicit primary information about various facets of the industry. Choice of
Tamil Nadu is guided by the fact that the leather industrial units in the state have
demonstrated some solid gains on the export front. The All India Survey on Capacity
Utilisation and Scope for Modernisation of the Tanning Industry carried out by CLRI
has observed that Tamil Nadu has captured more than 50% share in total export
earning of leather and leather products by India. Besides, CLRI, a premier research
organisation is located in Chennai, the capital of Tamil Nadu. While studying the
leather industry in the state and by taking a case study of CLRI, there is an attempt to
find out synergic link between the Institute and the industry and how far their
proximity has helped to improve the qualitative performance of the leather units in the
state. It is hoped that conclusions based on the leather industrial units in the state
would be relevant and can be broadly applied to the industry in other states as well to
enable the whole leather sector to play its role in the economy of the country.

The study is constrained to select only the period from 1986 to 1996, to trace
historical development of the industry. The choice of this period is prompted by the
fact that it covers the era before and after the liberalisation with 1991 as the landmark
year. Thus, it may be possible to collect and analyse statistical information about the
impact of liberalisation measures initiated since 1991 on the performance of the
leather industry and structural changes in it. Time series data of the output, sales,
exports, employment, investment and profitability of leather industrial units during
this period can be a useful guide to establish trend for the future growth and to make
plausible forecasts about the performance of the industry in the next decade.

1.5 OBJECTIVES AND HYPOTHESES OF THE STUDY

As mentioned earlier, the main objective of the present study is to trace
historical profile of the Indian Leather Industry with a focus on its development
process during the period from 1986 to 1996. The study is specifically interested in
pursuing the objective of examining the role played by CLRI in providing technical
know-how and managerial expertise to the entrepreneurs in the leather industrial units.
The study further aims at micro-level case studies of specific leather industrial units in the state of Tamil Nadu, regarding their present position, future prospects and problems. In this respect, the study has tried to make a comparison between the production units in the organised and unorganised sectors of the industry.

While pursuing these objectives, the study has tried to test the validity or otherwise of the following hypotheses:

1. A relatively faster growth of leather industry in the state of Tamil Nadu as compared to other Indian States is made possible by its proximity with CLRI.
2. Emergence and spread of export oriented industrial units in the field of leather and leather products have encouraged the process of technological and managerial upgradation of leather industry in India.

1.6 METHODOLOGY OF THE STUDY

As the study is mainly concerned with the historical profile of the Indian Leather Industry, it has been decided to adopt the methods suited to such study in which a limited period of the recent past has been covered in the case of certain points, while in the case of others, the tracing of historical events has gone beyond that. In order to get a more clear picture about the progress of the industry and relative performance of different units in different states, the study used both time series data and cross-section data from various sources. The statistical information about the performance of the Indian leather industry has been mainly based on the sources of secondary data while the primary data were collected from certain leather industrial units in the state of Tamil Nadu by using various methods of collection of such data. As far as the overall methodology of the present study is concerned, the following observations are worth noting.

a) The background data based on the available publications on leather industry is used to obtain information about size, structure and composition of the leather industry as it grew in the past.

b) A structured interview method has been used to solicit information from the experts in the field of leather industry so as to have a proper understanding of the problems faced by the industry and possible solutions.
c) A comprehensive questionnaire has been prepared and administered to the executives of the leather industry in Tamil Nadu in order to obtain both quantitative and qualitative information on the working of the industry.

d) With the paucity of time and other resources, in addition to the limitations of the local language as well as the unreadiness of the industrialists to disclose detailed information about their units, it had not been possible to undertake a full survey of the leather sector even in Tamil Nadu. Therefore, only very limited and specified number of case studies were taken up to understand and know the situation at micro level, in order to supplement the heavy reliability on the secondary sources.

e) An elaborate study of the working of CLRI has been undertaken to find out the role it has played in the development of leather industry and to examine the performance of the Institute in terms of its specified objectives.

f) The most important part of the methodology is the introduction of a new analytical approach dealing mainly with the problems of the Indian Leather Industry, the first step followed in this approach is the identification of the stresses of this sector from the existing available literature, viz. the survey reports prepared by CLRI. Here, the stress statements are described along with the supportive quantitative and qualitative indicators. Then, the stress linkage matrix has been formulated that helped in the identification of the most serious stress/es. After the stresses analysis, the identified stresses were converted into problems along with their potentials that help in solving them and the constraints that hamper the attainment of the solutions. Based on the formulated problems of the leather sector, the action areas were identified including the needs, existing status, lacks, gaps and mismatches. This helped in drawing a comparative picture about the prevalent situation and the desired state of improvement through solving the problems of the sector or at least reducing its impact. Towards this end certain inputs/schemes were listed out in a very systematic manner to deal with the problems. The format for this include, inputs/schemes, coverage in terms of area and people, time frame, cost, main and the supportive actors involved in the implementation, in addition to the estimation of the likely output and the expected outcome of it. All the above mentioned elements constituted the programme abstract of the analysis process.
1.7 **TIME FRAME WORK**

The study is undertaken according to the following Time Plan.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Period in Weeks</th>
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<tbody>
<tr>
<td>Planning and Admission Procedure</td>
<td>1 - 30</td>
</tr>
<tr>
<td>Literature Review</td>
<td>30 - 85</td>
</tr>
<tr>
<td>Field Study and initial analysis of data</td>
<td>85 - 105</td>
</tr>
<tr>
<td>Final analysis of data, preparation of the thesis and submission</td>
<td>105 - 190</td>
</tr>
<tr>
<td>Examination of the thesis and viva voce</td>
<td>190 - 205</td>
</tr>
</tbody>
</table>
1.9 LIVESTOCK RESOURCES IN INDIA

Hides and skins form the major raw materials for leather industry. They are derived mainly as by-products of livestock management and meat production. The four major livestock species which supply hides and skins are cattle, buffaloes (bovine), goats and sheep (ovine). These species are reared for different purposes other than the production of hides and skins: cattle is maintained mostly for draught purposes; buffaloes for milk; and goats and sheep mainly for meat purposes (CLRI, 1995). The other sources for hides and skins are pigs, horses, camels and wild animals such as Crocodiles, Snakes, Foxes etc. However, processing and use of wild animals skins is prohibited on ecological grounds. India is the leading livestock-holding country in the world. In terms of number, India holds first rank in Cattle, Buffaloes and Goats whereas in Sheep it holds fifth place in the world, possessing 200.2 million cattle, 84.2 million buffaloes, 111.5 million goats and 45.8 million sheep respectively (1992). Similarly, in terms of shares, India possesses 59% of buffaloes, 18.8% of goats, 15.5% of cattle of the total world, but in case of sheep it possesses hardly 4% of world sheep population,(CLRI, 1992). The livestock vs. human population ratio shows that India with 15.8% of world human population, possesses 13.7% of the total world livestock population.

The quinquennial livestock census carried out throughout the country revealed major trends taking place in different species during the last two decades which is clear from the following table.

Table 1.2: Trends in Livestock Population (Figs. in million heads)

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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cattle</td>
<td>175.6</td>
<td>178.3</td>
<td>192.4</td>
<td>195.9</td>
<td>0.44</td>
<td>200.2</td>
</tr>
<tr>
<td>2.</td>
<td>Buffalo</td>
<td>51.2</td>
<td>57.4</td>
<td>69.8</td>
<td>76.8</td>
<td>1.92</td>
<td>84.2</td>
</tr>
<tr>
<td>3.</td>
<td>Goat</td>
<td>60.9</td>
<td>67.5</td>
<td>95.2</td>
<td>99.4</td>
<td>2.43</td>
<td>111.5</td>
</tr>
<tr>
<td>4.</td>
<td>Sheep</td>
<td>40.2</td>
<td>40.0</td>
<td>48.8</td>
<td>44.8</td>
<td>0.44</td>
<td>45.8</td>
</tr>
</tbody>
</table>

1.9.1 Cattle

Cattle population has increased from 175.6 million in 1961 to 195.9 million in 1987 recording a sluggish growth rate of 0.44 per annum as compared to other species and if this trend continues, cattle population would reach 207.3 million by 2000 A.D. According to CLR1, factors such as mechanisation of agriculture, disposal of unproductive animals by farmers, neglect of female (cow) calf and male cross-bred cow calf due to uneconomic returns, dairy development programmes favouring buffalo, shortage of grazing lands and fodder supplies and indiscriminate slaughter of productive animals to meet the internal and export demand for meat - all these factors should have apparently reduced the average life span and thereby, correspondingly contributed in the short run to the seemingly large volume of production of hides and calf skins, but this phenomenon is to be viewed as detrimental in general to cattle economy and also to the long term prospects of supply of hides. On the other hand, according to CLRI, there is another view which says that, India holds at present the largest cattle stock which the country cannot afford to maintain efficiently and as such their numbers must be reduced through systematic slaughter to eliminate unproductive stocks and only to retain viable size of productive animals that could be rotated to ensure optimum production of various livestock products and services. This view is not tenable in the Indian context, where animals of different economic values and of different productivity levels are maintained by livestock owners of different income groups. A particular animal which is unproductive or less productive to a particular farmer in relation to his means of maintaining such animal and its expected returns, the same animal works out to be productive to another farmer when it is acquired at a reduced price and maintained by the latter. In other words, the productivity is a relative term which should be viewed in relation to its economic price and also in relation to the expected income for a given input. Thus, it is neither desirable nor feasible to eliminate the so called unproductive or less productive stock through massive and organised slaughter.

1.9.2 Buffalo

Buffalo population has increased from 51.2 million in 1961 to 76.8 million in 1987 recording an impressive annual growth rate of 1.92%. Assuming that the same trend continues, it may reach 97.5 million by 2000 A.D. Buffalo is the major milch
animal in India (1992). Buffalo milk accounts for 60% of the total milk production of 86 million tonnes in India (CLRI, 1995). In recent years, buffalo is considered as a multi-purpose animal - supplier of milk and meat and a source of draught power. According to an estimate (CLRI), about 1.2 lakh tonnes of buffalo meat representing 14% of the total red meat is produced in India annually, but the production is mainly from the slaughter of the old animals and consequently makes the quality of the meat inferior. Under the present circumstances of shortage of meat and of the restriction on slaughter of cattle in many northern states, buffalo meat production has gone up in a big way and it is likely to increase in the years to come. In the buffalo resource, India enjoys a place of pride both in terms of numbers and quality breeds such as Murrah, Surti, Nite-Ravi, Jafarabadi and Nagpuri (CLRI, 1995). According to CLRI experts, the buffalo should be seen as an animal not of the past but for the future as it has phenomenal productive potential which can be greatly developed.

1.9.3 Goat

Goat population has increased from 60.9 million in 1961 to 99.4 million heads in 1987 recording the highest annual growth rate among the four species of livestock. At this rate of growth, goat population may reach 134.1 million by 2000 A.D. Goat occupies an important place in Indian rural economy and its rearing has been an important avocation for traditional herdsmen. That is mainly due to its effective economic contribution through its high reproductivity and production of milk, manure, skin and hair and at the same time goat is labelled by many as an enemy to the farmers and to the forest and yet its numbers are at a high rate of increase. According to CLRI, the important favourable factors contributing to its promotion are, higher reproductivity and greater resistance to diseases compared to sheep, survival-ability to thrive on any green and dry fodder and bush, adjustability to tropical conditions and its high acclimatisation, quality to adjust itself to diversified agro-climatic conditions. Economically, goat is ideally suited for marginal and landless labourers by its low cost of maintenance and comparatively high returns within short duration with a low risk capital investment; on the other hand, the limiting factors are its uncontrolled grazing and browsing habits which may destroy the vegetation and contribute to the soil erosion, if it is not properly regulated (CLRI, 1995).
1.9.4 Sheep

Sheep population during the reference period mentioned has increased from 40.2 million to 44.8 million in 1987 thus recording a sluggish growth rate of 0.44% per annum. In fact, during the reference period, sheep population decreased from 48.8 million in 1982 to 44.8 million in 1987 recording a negative growth rate of 1.64% per annum. Keeping in view the overall growth rate for the reference period, it is assumed that sheep population may reach 47.4 million by 2000 A.D. According to an estimate of CLRI, the major reasons for sluggish growth rate in sheep are the lower economic returns as compared to those in the case of goat and the higher mortality rate due to diseases compared to goat, the productivity of sheep is lower, yet it received better attention under various development programmes pursued in the country as well as at the farmers' level which is mainly due to its dual importance both as a meat and wool producing animal in addition to its dependable source of raw material for leather industry. However, according to some experts of CLRI, the recent development such as increasing slaughter rate, disposal of animal due to maintenance and labour problems, decreasing grazing lands and recurring droughts in certain states, etc. indicate that its future is not so optimistic.

1.9.5 Other animals

There are other species in India such as camel, deer, rabbit, crocodile, snake and fur-bearing animals but no reliable statistical data are available about them and on the other hand they are not at all considered to be important for the leather industry in view of their limited and occasional supply of hides and skins. However, killing of some of the species like deer, crocodile etc. is banned under conservation of wild animals act and hence no details are provided herewith about these animals.

1.10 AVAILABILITY OF HIDES AND SKINS

As mentioned earlier, hides and skins are by-products of meat industry and they are mainly derived from cattle and buffaloes, goats and sheep respectively, the availability of which is largely determined by the demand for meat and the mortality among animals. In India, hides and skins derived from the slaughter of animals are known as "slaughtered" and those derived from dead animals are known as "fallen". Thus, the sources of supply of hides and skins for the leather industry in India could
be classified into mainly two categories, the first from the fallen animals, dying of natural causes and the second category from the slaughterhouses.

In India, the availability of cattle in relation to human population is less compared with many livestock holding countries. Data on the magnitude of slaughtered hides and skins and those of fallen animals were also not available. Realising the importance of reliable data in respect of raw material resources, a Nationwide Survey was carried out by the CLRI in 1986 on raw hides and skins. The survey revealed that production of cattle hides in the year was 21.7 million and 15.7 million buffalo hides produced in the country. The fallen category was 48.6%. Production of goat and sheep skins were 75.4 million and 31.4 million respectively. In other words, 37 million hides and 107 million skins are available per annum.

As per the information provided by CLRI, the availability of hides and skins in India is scattered and diffused throughout the country and their collection practices vary from region to region due to the absence of recorded and maintained data on natural death, recovery of hides and skins and on slaughter of animals. The survey revealed that the important states for the production of cattle hides are Uttar Pradesh (2.3 million), Bihar (2.3 million), Madhya Pradesh (2.1 million) and Kerala (2.0 million); together they account for 8.7 million hides representing 40% of the total availability from such category. With regard to buffalo hides, Uttar Pradesh (4.4 million), Andhra Pradesh (1.3 million) and Gujarat (1.3 million) and together they account for nearly 45% of the total availability of buffalo hides. The important states for the production of goat skins are Bihar (12.1 million), Maharashtra (10.4 million) and Uttar Pradesh (9.3 million); together these states account for 42% of the total availability and the major states for sheep skins production are Andhra Pradesh (5.3 million), Maharashtra (5.0 million) and Tamil Nadu (4.4 million); together these three states account for 47% of the total availability of sheep skins in the country.

The following table illustrates clearly the availability of hides and skins in India in 1986.
Table 1.3
Total Availability of Hides and Skins - All India (1986)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Fallen ('000)</th>
<th>% share in the total</th>
<th>Slaughtered ('000)</th>
<th>% share in the total</th>
<th>Total ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cattle hides</td>
<td>10,911</td>
<td>50.2</td>
<td>10,809</td>
<td>49.8</td>
<td>21,720</td>
</tr>
<tr>
<td>2.</td>
<td>Buffalo hides</td>
<td>7,612</td>
<td>46.7</td>
<td>8,064</td>
<td>51.4</td>
<td>15,676</td>
</tr>
<tr>
<td>3.</td>
<td>Goat skins</td>
<td>6,533</td>
<td>8.7</td>
<td>48,863</td>
<td>91.3</td>
<td>75,396</td>
</tr>
<tr>
<td>4.</td>
<td>Sheep skins</td>
<td>3,565</td>
<td>11.4</td>
<td>27,878</td>
<td>88.6</td>
<td>31,443</td>
</tr>
</tbody>
</table>


Based on the above table, the slaughter category for both goat and sheep constitutes 91.3% and 88.6% which indicate that the fallen category in total supply of skins with respect to goat and sheep is very insignificant. In the case of hides, the share of fallen category among total cattle hides was 50.2% whereas in buffalo hides it was 48.6% which together constitute a very significant share in total hides produced. Despite the fact of the huge livestock resources of India, its share in the world production of hides and skins was low. According to estimates made by the Food and Agriculture Organisation (FAO) of the United Nations, India’s share in the world production was 13% for the cattle hides, 3% for sheep skins and 19% for goat skins.

This phenomenon therefore calls for an urgent need to work out a suitable measure in the country so as to utilise the available resources to their fullest advantage, giving due attention to the sustainable growth of such resources and at the same time minimising the losses by increasing the efficiency of carcass recovery.

1.11 HISTORICAL PROFILE OF THE INDIAN LEATHER INDUSTRY

It is extremely difficult and beyond my reach to trace fully the historical profile of the Indian Leather Industry and to know exactly when was the first initiative taken and the succeeding scenario after that. This is mainly, because of the fact that some of the most important dates in the history of mankind will never be known. For example, when did people first use fire? When was salt first used? Or when did cooking first start? Thus no one known the true answer, nor does anyone know exactly when people in India or else where first began to make leather which
undoubtedly is one of the most important items in prehistoric civilisation, as many centuries of leather making and using passed before the days of written historical records. However, it is imperative at this juncture to highlight the recent historical profile of the Indian leather industry so as to know the development process that has taken place over the years.

The history of leather manufacture in India can be traced back to ancient times as is evident from the frequent references to it in the vedic literature and reports from Marco Polo\(^{(17)}\), but such industry began in its modern form to develop only after the outbreak of world war I. When demand for leather and leather goods increased considerably. Apart from this the leather articles produced in India were highly appreciated by many foreign travelers such as Marco Polo who visited the country many centuries ago\(^{(18)}\). The twentieth century marked a new period in the trade history of the Indian Leather Industry. During 1900-1914 the export scene was dominated by Calcutta and Madras with the former exporting raw goods and the latter tanned ones\(^{(19)}\). In 1912-13, the total export of hides / skins amounted to Rs. 8 crore as against Rs. 4 crore from Madras\(^{(20)}\). This was because 17 of the 22 organised tanneries were in Madras and the rest remained scattered in Bengal, Bihar, Orissa and Bombay\(^{(21)}\). World war II gave an impetus to the development of leather and leather goods industry in India. While in 1923-14 only 25 large units, employing 2,753 workers, were established, by 1941, the number of units had increased to 114 and the workers to 26,056\(^{(22)}\). Before 1947, though the British had shown considerable interest in leather manufacturing in India and had even established some tanning units in Bengal, India mainly exported raw hides and skins. After independence, planned efforts were made by the government of India to promote and develop export trade by the adoption of Export Policy Resolution in 1970 and implementing the recommendations of the Seetharamiah Committee. This led to standardisation of material and the development of the tanning industry, that helped in the growth of the small scale leather product industry in a highly scattered and decentralised manner, aided by the Government of India’s policy to reserve the leather products for the small scale sector. In 1973\(^{(23)}\), Dr. Seetharamiah Committee made a comprehensive study of the leather industry of its tremendous export potential and recommended ban on export of raw hides and skins and gradual restriction on the export of semi-finished hides and skins. This was with a view
to encourage more capacity for finishing of leather. Most of the growth (over 50% of the existing units) of the industry can be attributed to the post 1973 period\(^\text{(24)}\). The direction of the growth has, however, been preferred towards conversion of raw hides and skins directly into finished leathers. India by this time received recognition as a leading country in leather manufacturing, from the position of an exporter of raw hides and skins in the 1950s the country has come a long way and is now poised to be a major player in the global leather and leather products trade. The development of the leather sector from a mere trade in raw hides and skins at the time of independence to the fourth largest foreign exchange earner for the national economy today is indeed legendary. The image of the country as a supplier of raw hides and skins and E.I.tanned leather has been left far behind, in its place, products, such as leather footwear, leather garments and various goods have found wide acceptance even in quality conscious markets such as Germany, USA, Japan and France. The Leather Industry in India has earned a special status in the national economy as the fourth largest foreign exchange earner, a vast employment generator and a socio-economic benefactor for the country. This has been possible largely due to the potential availability of raw material, far sighted policies of the Government of India and the initiatives from the Industry. The following chapters of the present study will clearly verify the above stated points.

1.12 LEATHER INDUSTRY IN TAMILNADU STATE

Tamilnadu occupies an important and unique place in the leather map of India. The all India survey on capacity utilisation and modernisation conducted by CLRI revealed that, Tamilnadu has a share of over 50-60 per cent of the export earnings of leather and leather products exported from the country. This mainly due to the heavy concentration of leather processing and manufacturing units in the state with regards to tanning activity, Tamilnadu has the share of over 50 per cent of total tanning units of the country which could be illustrated with the help of the following Table.
Table 1.4
Statewise Distribution of Tanning Units

<table>
<thead>
<tr>
<th>Type of Units</th>
<th>India</th>
<th>Tamilnadu</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGTD Units (Large Scale)</td>
<td>75</td>
<td>41</td>
<td>55</td>
</tr>
<tr>
<td>SSI Units</td>
<td>1008</td>
<td>536</td>
<td>53</td>
</tr>
<tr>
<td>Total</td>
<td>1083</td>
<td>577</td>
<td>53.3</td>
</tr>
</tbody>
</table>


It appears clearly from the above table that Tamilnadu occupies a prominent position in the country’s leather processing industry, but despite its leading position in the tanning sector, the availability of raw hides and skins locally is very negligible as the states possesses less number of livestock resources as compared to other states. Therefore, it is quite common that, the states always supplement the local inadequacies of raw material by the incoming quantities from other states. In this respect the local tanners have established their own collection centres and agency system to help them in collecting and accumulating the scarce raw material from all over the country. The tanning industry got itself established and concentrated in Tamil Nadu mostly due to (a) the enterprise of the pioneers who hailed from this region (b) natural causes like prevalence of sunny climate without much variations throughout the year and (c) availability of tanning materials like avarum bark, Konnam bark and myrobalam. Finally if the tanning industry in Tamilnadu presents a rosy picture, it has its thorns too, as stated earlier despite the heavy concentration of the tanning industry in the state, the state production of raw hides and skins is inadequate which led to the continuous dependence caused by the industry and the inability of many small tanners to bear the cost of effluent treatment plants.

As for as the leather industry in the state is concerned, the strong base of tanning industry has played a significant role in helping leather products such as footwear, leather garments and leather goods to flourish and concentrate heavily in the
state as well. The following table details out the statewise distribution of leather products units in the country.

Table 1.5
State Wise Distribution of Leather Products Manufacturing Units

<table>
<thead>
<tr>
<th>State</th>
<th>Footwear Units</th>
<th>Leather Garments Units</th>
<th>Leather Goods Units</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamil Nadu</td>
<td>148</td>
<td>151</td>
<td>138</td>
<td>437</td>
</tr>
<tr>
<td>Karnataka</td>
<td>16</td>
<td>40</td>
<td>18</td>
<td>74</td>
</tr>
<tr>
<td>West Bengal</td>
<td>10</td>
<td>24</td>
<td>133</td>
<td>167</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>38</td>
<td>13</td>
<td>40</td>
<td>91</td>
</tr>
<tr>
<td>Orissa</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>3</td>
<td>12</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Haryana &amp; Punjab</td>
<td>23</td>
<td>12</td>
<td>7</td>
<td>42</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>118</td>
<td>5</td>
<td>32</td>
<td>155</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>4</td>
<td>--</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>North Region</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>New Delhi</td>
<td>29</td>
<td>46</td>
<td>6</td>
<td>81</td>
</tr>
<tr>
<td>Others</td>
<td>11</td>
<td>7</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>310</td>
<td>591</td>
<td>1101</td>
</tr>
</tbody>
</table>


It is evident from the above data that, Tamil Nadu state occupies a prominent position in the leather manufacturing sector of India that comprises of footwear, leather garments and leather goods.

**Footwear:** In this sub sector out of the 400 small scale and medium/large units in the country, Tamilnadu state possesses the lion’s share with 148 units that qualifies the state to top the list of all the states in India. In Tamilnadu the footwear manufacturing units concentrated mainly in cities like Ambur, Ranipur and Chennai, footwear manufacturing is well developed in Tamilnadu as the state is producing all kinds of leather that are required in the production process of footwear that contributes significantly to export basket of leather products from India.

**Leather Garments:** Since the leather processing as shown earlier is concentrating mainly in Tamilnadu, a congenial atmosphere has been prepared for the growth of leather
products such as leather garments. Out of the total 310 leather garments units in India, Tamilnadu alone with 151 units that constitutes 48.7 per-cent. These units are mainly located in Chennai contributing largely to export market.

**Leather Goods**: The manufacturing of leather goods is widespread also in the state. According to the table shown earlier, the share of Tamil Nadu in the total number of units in the country is very considerable with 138 out of the total 391 units. The availability of skilled labour and abundant supply of raw material in the state seem to be the principal causes for the growth of leather goods industry. The state specialises in the production of general articles such as suit cases, hand bags, folio cases, money purses, key chains, wallets and all types of fancy leather goods, these items are mainly produced in Chennai\(^{29}\), with a fair contribution to export market.

**Concluding Remarks**

To conclude, Tamil Nadu in the general scenario of leather processing and manufacturing in India has established itself firmly as a major producer of leather and leather products that contributed a great deal to export and hard currency earnings. In these aspects Tamilnadu state has been enjoying certain advantage, but according to the scientists of CLRI, the state may not continue to have the same advantage in the near future at all- India-level with regard to the manufacturing of value added leather products, as simultaneously many new states have shown tremendous growth in the products manufacturing activity and there appear to be a gradual shift in activity to other states like Delhi, Maharashtra and West Bengal. Hence, the policy makers as well as the persons involved in leather industry of the state, should not remain complacent and rest on past laurels and glory; it is absolutely necessary for them to realise the fact of changing trends and make concerted efforts to become more active in the product sector so as to maintain the present position of the state, otherwise their failure to react adequately will push down the position of the state in the leather map of the country.
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