

**GROWING INDUSTRY, SICK WORKERS: A STUDY OF  
THE LEATHER TANNING INDUSTRY OF DINDIGUL  
FROM AN OCCUPATIONAL HEALTH PERSPECTIVE**

**SYNOPSIS**

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## **A Synopsis**

### ***Introduction***

The leather industry is one of the major export earning industries of India contributing nearly 7 to 8 percent of total value of exports. The industry also ranks high being among the top four foreign exchange earners for the country (Rao et.al. 1992). The value of exports rose from Rs. 1841 million in 1972-73 (when industry underwent major policy changes) to Rs. 41393 million (\$1319.17 million) in 1993-94, thus growing at an annual average rate of 16 per cent (The Economic Times, 1995). In 1997-98 the total value of leather exports was Rs. 54622.78 million (\$1469.75 million) (The Economic Times, 1999). In Tamilnadu the leather industry plays a pivotal role. Tamilnadu exports 55 percent of the total leather exported from India (Tamilnadu, Government of. 1986), further 70 percent of the hides and skins produced are tanned and finished in Tamilnadu (Working Group, 1989).

Under the 'export-or-perish' policy of the Government of India, leather tanning has been identified as a thrust area for further promotion and growth. However, the singular focus of this policy is on increasing the value addition of the products exported, without providing a better deal to the workers employed in this growing export - oriented industry. It is our submission that the present drive to increase India's share of the global market from 3.3 percent to 10 percent of global trade for leather products by 2000 A.D. (The Economic Times, 1993) - cannot but spell disaster to those employed in this industry. This is primarily because the

quantity and value of leather exported has a lot to do with quality of tanning. And tanning is the most polluting, hazardous as well as the most labour intensive of the three segments making up the leather industry.

The organisation of production characterising the leather industry is very hierarchical. Of the three segments of the industry, namely, raw to semi-finish (that is tanning), semi-finish to finish, and manufacture of leather products, the tanning segment is the least 'organised' with much of the production taking place in the 'unorganised' units of production. This, despite the fact that this segment is extremely crucial since subsequent operations (in the other segments) depend on the quality of the output from tanning. The extremely heterogenous nature of the raw materials used in tanning (namely hides and skins) makes the introduction of standardised technology to that extent very difficult. Hence this segment of the industry relies heavily on the inherent and acquired skills of the population (read traditional community) doing this work, some of them over several generations.

The focus of our thesis is on the tanning segment of the leather industry. Within this we hope to capture as concretely as possible the health outcomes (largely based on workers' perception) for workers directly involved in various stages of the production process in the tanning industry.

### *Statement of the problem*

A study of the tanning industry from an occupational health perspective seems necessary to us for the stark manner in which it throws up the question of the 'costs' of indiscriminate economic growth. Broadly, costs, in this case, can be studied either

in terms of the costs of the environment (tanning being an extremely polluting industry) and/or the costs to the health of workers (tanning also being an extremely hazardous industry and designated as such by the Factories Act way back in 1934 itself).

Our broad objective is to understand what the leather tanning industry has meant to workers employed in the industry. Within this we have chosen to focus on Occupational Health (OH) issues for several reasons:

- (a) Most studies (Usha P 1984; Sengupta J 1985; Rajajee M.S. 1989; Sinha and Sinha 1992) relating to the leather industry (including tanning) concentrate largely on the commercial aspects of the industry, namely, nature of exports, trends in the world market for leather goods, technological developments in the industry, etc. with limited emphasis on the nature of employment generated by this industry.
- (b) Studies (Robert M Adam 1973; Decoufle Pierre 1979; Nandakumar N V and B M Backiyavathi 1990) done by the medical community (doctors, health workers etc.) generally begin with the assumption that workers in leather industry are prone to a particular illness/disease, the presence/absence or the degree of such illness/disease among the workers, using generally a 'case-control' approach. These studies do not link the work process with health and/or also do not look into other illnesses/diseases that may be associated with the job.

- (c) Those reports that have largely focused on workers in the leather industry (particularly the Labour Bureau studies, Annual Survey of Industries, Census of India) generally focus on conditions of employment in terms of nature of employment of labour (contract, casual, permanent), facilities provided in the units, wages generally paid to the different categories of staff, violation (if any) of the provisions of the Factories Act etc., without locating these aspects within the organisational structure of the industry.

Using the knowledge gained from the above studies and in an effort to contribute further to our existing limited knowledge of OH of workers (particularly those employed in the informal sector), we have identified the following as our specific objectives:

- (a) to map out the organisation of the production process of the industry;
- (b) to understand the employment pattern within this organisation;
- (c) to explore the gender issues in operation in the industry, which manifest itself in several ways; in the way in which labour is recruited, in the manner in which the terms of employment are drawn up, in the way in which women are confined to certain operations which are designated as unskilled and therefore less paid;
- (d) to examine the manner in which the Factories Act has operated in the area both with regard to production and labour; and

- (e) to capture the health perception and outcomes for workers (across different processes) who are forced to work within the above framework of the industry.

### ***Area of Study***

Dindigul in Tamilnadu is the area of our study. Over the years several pockets in Tamilnadu have come to specialise in particular production processes. We have chosen to concentrate in particular on Dindigul mainly for the reason that the bulk of the tanning process (from raw hides and skins to semi-finished leather) is done at Dindigul. Of the three segments making up the leather industry, the most important in our opinion is the tanning part, since, as already mentioned, the quality of leather products depends crucially on the quality of tanning. However, in the production hierarchy, characterising the three segments, Dindigul emerges as the least formalised (in terms of both units of production and labour employed). The nature of the industry (that is, tanning) being such, Dindigul is also one of the most polluted of the leather pockets in Tamilnadu not only from an environmental angle but also from an occupational hazard angle. Historically and upto the present Dindigul continues to occupy a prominent position as far as tanning is concerned. Hence our interest in studying this area.

### ***Methodology and Scope***

In our view the different methodologies in vogue to capture work related outcomes require, at the minimum, sophisticated data systems and techniques. Hence these are not amenable for application in the context of developing countries characterised by poor data systems and large number of workers employed informally. We have

therefore had to resort to a combination of methods to net as much information as possible relevant to the theme of work-related health outcomes.

The methodology we have adopted in our study of the tanning industry at Dindigul departs from other studies on Occupational Health in the following manner:

Since our objective is to link the pattern of development in general to the production structure and the labour process characterising the industry, we have to detail the work processes and to identify workers with each process, and the consequent impact on their health. Specifically we:

- (a) Begin with the components that make up the tanning industry, the processes involved in each of these components, and the environment in which workers in each of these components have to function.
- (b) We have independently collected information on the raw materials and chemicals used (with their toxic contents) in each of these processes, the likely hazards of these chemicals on workers' health and other physical hazards.
- (c) Our field work is a cross-sectional study covering workers in different tanning units - females and males; physicians and health workers; officials of the labour and health departments, tanners, persons associated with labour unions and voluntary organisations.



- (d) Given our interest in capturing gender issues, we lay special emphasis on identifying men and women workers along with their work processes and have interviewed them fairly intensively.
  
- (e) Data collected through oral interviews were corroborated with information on chemical hazards obtained from organisations like the Indian Toxicology Research Centre, Lucknow, and observations from other studies done by agencies like, National Institute of Occupational Safety and Health, USA; International Agency for Research in Cancer; International Labour Organisation; etc.

Apart from the primary data collected from the field, we are using data from secondary sources like Archival sources, Census Reports, Report of the Working of the Factories Act, Reports of various Committees and Commissions, publications of the Central Leather Research Institute, etc.

In the absence of official information on the exact number of units in operation we were forced to conduct a census. At the time of our field work, 61 units were in operation out of the 90 units that we came across. These 61 units form our informational base; they cover both hides and skin tanning units, and employ different methods of tanning.

We have interviewed 106 workers (both males and females) in Dindigul. These workers have been chosen so as to cover different categories of activities in all the processes of tanning. In order to understand whether work process and workers'

conditions are unique (common) in Dindigul, we undertook a quick survey of other tanning pockets in Tamilnadu, namely, Vellore and Thiruchchirapalli interviewing 92 workers in the process.

### *Scheme of chapters*

#### **CHAPTER I - INTRODUCTION**

This chapter combines a review of existing literature with an overview of issues covered in subsequent chapters. Concepts of formal/informal, organised/unorganised, skill/unskilled etc., have been extensively dealt with by many authors at various points of time and in varied contexts. We have refrained from getting into the debates and controversies surrounding these different concepts. However, we have made use of the knowledge gained from this literature to understand the phenomenon of growth, development, employment pattern, gender issues, health status of workers etc., of the tanning industry at Dindigul.

#### **CHAPTER II - GROWTH AND DEVELOPMENT OF LEATHER INDUSTRY: AN OVERVIEW**

This chapter traces in some detail the historical development of the leather industry particularly in Tamilnadu. In the pre-independence phase the growth of the industry was largely driven by external factors - the World Wars, and the demand for leather in the international market. This demand was also largely responsible for making the colonial government intervene (to a limited extent) to address the issue of methods of tanning for improving quality. In the post-independence phase, again, the intervention of the national government was largely aimed at increasing the value addition of exports. It is in this context of growth of the industry that we address the issues relating to workers - the particular communities who have traditionally been

involved in this work, the conditions of employment of labour, the provision of the Factories Act, etc.

### **CHAPTER III - ASPECTS OF PRODUCTION AND EMPLOYMENT IN LEATHER TANNING INDUSTRY: IMPLICATIONS FOR GENDER AND HEALTH**

This chapter begins by outlining the production structure, namely, the various technical processes involved in the conversion of raw hides and skins into semi-finished and/or finished leather. An important institution characterising the production structure of the tanning industry is job work which has, to a large extent, done away with the need to either own units formally and/or employ labour formally. The nature of organisation of the industry and its functioning have significant implications for gender which gets manifested in the way labour is recruited, definitions of skill, avenues for promotion, etc. The discussion of the nature of organisation of the industry is also important because it has significant implications for the health of the workers. The industry is inherently polluting and hazardous in nature and thus these workers are exposed to a whole host of industry-related diseases. However, the informal nature of the industry and employment and the collusion on the part of the different actors to maintain it as such (government, employers, trade unions, etc.) makes it impossible to institute any kind of method to capture impact with some level of authenticity.

### **CHAPTER IV - OCCUPATIONAL HEALTH ISSUES IN LEATHER TANNING INDUSTRY**

Here we have put together available information from a variety of sources to give a picture of the health issues relating to work in tanneries. For convenience of analysis, the health hazards in tanneries are grouped into three - physical, chemical and

biological. Data on health hazards from secondary sources have been supplemented with intensive field work (process wise and gender wise) using the above groups. Since conducting clinical examination of workers was beyond our scope, we collected information from a variety of personnel associated with this industry. This in turn also helped us in cross-checking information gathered from diverse sources.

## CHAPTER V - CONCLUSION

This chapter brings together the different aspects discussed in the previous chapters and also raises questions stemming from the study of the leather industry, namely, the politics of a growth paradigm that is premised on an export-oriented growth strategy without any consideration to what it does to the health and well-being of the worker in the process.

### *Limitations of the study*

Our broad aim in this thesis has been to question the ‘produce/ export-or-perish’ philosophy underlying the nature of economic development pursued in the country with little or no concern for the quality of employment being generated by this development. As an illustration we have studied the work related health outcomes for workers engaged in the tanning industry at Dindigul. However, given the extremely informal nature of functioning of the industry coupled with the near total absence of data (official and otherwise) relevant to our theme, we have had to improvise and adopt a combination of methodologies to substantiate our thesis problem. Nevertheless, a number of limitations still remain.

In the first place, being an individual researcher and social scientist by training, the question of personally undertaking a clinical examination of workers covered by the study and/or an epidemiological survey did not arise. Consequently we are in no position to establish definitive causality between a specific health outcome and the task that a worker is engaged in.

While we physically undertook to conduct a census of the units of production, the same exercise could not be repeated to get an idea of the number of workers (directly and indirectly) employed in the industry. Hence the workers that we have interviewed were not selected on the basis of sampling techniques; rather care was taken to include as many categories of workers spread across different processes of production, age, sex, marital status, status of employment, etc. Information collected from individual workers was corroborated through discussions with employers, officials, health workers, trade unions, and NGO's.

It has not been possible to tap the medical community as a source of information for our study for several reasons. Most of the private doctors are in the employ of the tanners and hence are reluctant to certify illness as being an outcome of work in tanneries. The doctors at the public hospitals are equally reluctant to go into broad questions of whether, and if so, why workers in Dindigul are prone to certain categories of illness. We were also (incidentally) informed that most medical institutions did not include systematic training in occupational health as part of the regular medical course.

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